

# **Victorville Connection**

NOISE IMPACT ANALYSIS CITY OF VICTORVILLE

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13078-05 Noise Study



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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 <sub>eq</sub>	Equivalent continuous (average) sound level
L <sub>max</sub>	Maximum level measured over the time interval
mph	Miles per hour
PPV	Peak Particle Velocity
Project	Victorville Connection
REMEL	Reference Energy Mean Emission Level
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 Victorville Connection development ("Project"). The Project site is located on the north side of Bear Valley Road between 2nd Avenue and 3rd Avenue in the City of Victorville. The Project as proposed consists of a gas station with convenience store, fast food restaurants with drive thru, commercial retail space, medical office space, general office space and multi-family residential land use. This noise study has been prepared to satisfy applicable City of Victorville noise standards and significance criteria based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1)

The results of this Noise Impact 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.

Anakusia	Report	Significance Findings			
Analysis	Section	Unmitigated	Mitigated		
Off-Site Traffic Noise	7	Less Than Significant	-		
On-Site Traffic Noise	8	Less Than Significant	-		
Operational Noise	10	Less Than Significant	-		
Construction Noise	11	Less Than Significant	-		
Construction Vibration	11	Less Than Significant	-		



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## 1 INTRODUCTION

This noise analysis has been completed to determine the noise impacts associated with the development of the proposed Victorville Connection ("Project"). This noise study briefly describes the proposed Project, provides information regarding noise fundamentals, sets out the 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 and vibration impacts.

### 1.1 SITE LOCATION

The proposed Project is located on the north side of Bear Valley Road between 2nd Avenue and 3rd Avenue in the City of Victorville, as shown on Exhibit 1-A. The site is currently zoned as General Commercial Transitional (C-2T) and classified as Commercial in the City of Victorville General Plan Land Use and Zoning District Map. The proposed project land use is permitted in the zone and does not require a zone change or General Plan amendment. The project site is currently vacant. The area surrounding the Project Site consists mostly of rural residential homes to the north and west, with the Victor Elementary School District Building and Desert Valley Hospital located east of the Project site.

### **1.2 PROJECT DESCRIPTION**

The proposed Project will consist of the following land uses as shown on Exhibit 1-B.

Parcel A

• 16 pump gas station with 3,500 square feet convenience store

Parcel B

• 4,400 square feet fast food with drive thru.

Parcel C1

- 6,100 square feet of commercial retail space
- 6,600 square feet of fast food with drive thru

Parcel C2

- 55,989 square feet of commercial retail space Parcel C3
- 10,080 square feet of medical office space Parcel D
- 376 dwelling unit multi-family residential complex

Parcel E

- 10,000 square feet of general office space
- 139,091 square feet of storage space.

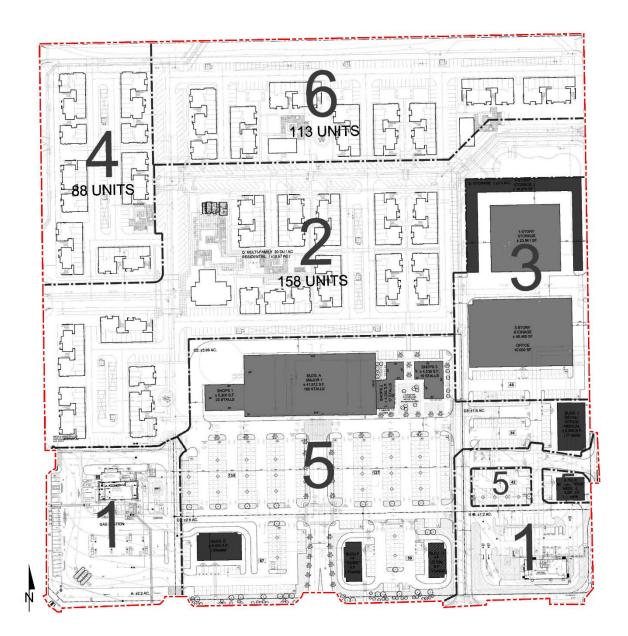




#### **EXHIBIT 1-A: LOCATION MAP**



EXHIBIT 1-B: SITE PLAN





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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			
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	VERT FAINT		

#### 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 100 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 figure 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 additions are made to account for the noise sensitive time periods during the evening and night hours when sound appears louder. CNEL does not represent the actual sound level heard at any time, but rather represents the total sound exposure. The City of Victorville relies on the 24-hour CNEL level to assess land use compatibility with transportation related noise sources.

### 2.3 SOUND PROPAGATION

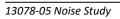
When sound propagates over a distance, it changes in level and frequency content. The way noise reduces with distance depends on the following factors.

### 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.

### 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 be high enough and long enough to block the path of the noise source. (4)



### 2.6 LAND USE COMPATIBILITY WITH NOISE

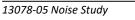
Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are more sensitive to noise intrusion than are commercial or industrial developments and related activities. As ambient noise levels affect the perceived amenity or livability of a development, 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. (5)

### 2.7 COMMUNITY RESPONSE TO NOISE

Community responses to noise may range from registering a complaint by telephone or letter, to initiating court action, depending upon everyone's susceptibility to noise and personal attitudes about noise. Several factors are related to the level of community annoyance including:

- Fear associated with noise producing activities;
- Socio-economic status and educational level;
- Perception that those affected are being unfairly treated;
- Attitudes regarding the usefulness of the noise-producing activity;
- Belief that the noise source can be controlled.

Approximately ten 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 will occur. Twenty-five percent of the population will not complain even in very severe noise environments. Thus, a variety of reactions can be expected from people exposed to any given noise environment. (6) Surveys have shown that about ten percent of the people exposed to traffic noise of 60 dBA will report being highly annoyed with the noise, and each increase of one dBA is associated with approximately two percent more people being highly annoyed. When traffic noise exceeds 60 dBA or aircraft noise exceeds 55 dBA, people may begin to complain. (6) 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 are considered *barely perceptible*, and changes of 5 dBA are considered *readily perceptible*. (4)





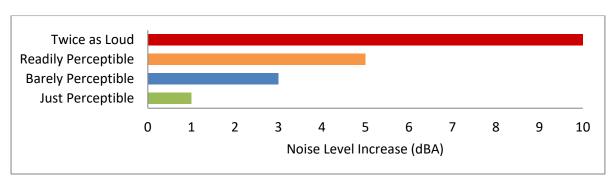


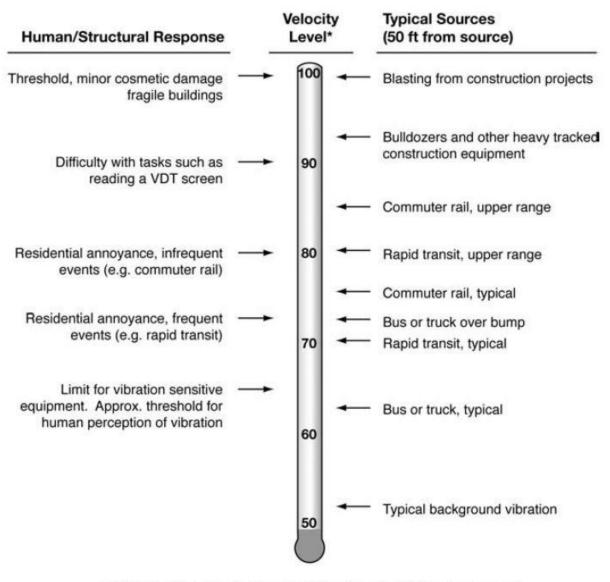
EXHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION

### 2.8 VIBRATION

Per the Federal Transit Administration (FTA) *Transit Noise Impact and Vibration Impact Assessment Manual* (7), 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<sup>-6</sup> 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). (8) 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.

### 3.1.1 RESIDENTIAL CONSTRUCTION

The State of California's noise insulation standards for all residential units are codified in the California Code of Regulations (CCR), Title 24, Building Standards Administrative Code, Chapter 12, Section 1206. These noise standards are applied to new construction that contains dwelling units or sleeping units, such as residential and hotel or motel uses, in California for controlling interior noise levels resulting from exterior noise sources. For new buildings, the acceptable interior noise limit is 45 dBA CNEL in habitable rooms (9).

### 3.1.2 NON-RESIDENTIAL CONSTRUCTION

The State of California's Green Building Standards Code contains mandatory measures for nonresidential building construction in Section 5.507 on Environmental Comfort. (10) These noise standards are applied to new construction in California for controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when non-residential structures are developed in areas where the exterior noise levels exceed 65 dBA CNEL, such as within a noise contour of an airport, freeway, railroad, and other noise source. If the development falls within an airport or freeway 65 dBA CNEL noise contour, buildings shall be construction to provide an interior noise level environment attributable to exterior sources that does not exceed an hourly equivalent level of 50 dBA L<sub>eq</sub> in occupied areas during any hour of operation.



### 3.3 CITY OF VICTORVILLE GENERAL PLAN NOISE ELEMENT

The City of Victorville General Plan Noise Element is intended to limit exposure of the community to excessive noise levels. (11) The City of Victorville General Plan Noise Element land use compatibility standards specify the noise levels allowable for new developments impacted by transportation noise sources. The City's compatibility criteria, found in Table N-3 of the General Plan, identify the criteria for the multi-family and commercial land uses such as the Project, as shown on Exhibit 3-A. For the multi-family residential land use, exterior noise levels of less than 65 dBA CNEL are considered normally acceptable, conditionally acceptable with exterior noise levels above 70 dBA CNEL. For the planned commercial land use. For the commercial land use, exterior noise levels above 70 dBA CNEL are considered normally acceptable, and conditionally acceptable with exterior noise levels above 70 dBA CNEL are considered normally acceptable, and conditionally acceptable with exterior noise levels above 70 dBA CNEL are considered normally acceptable, and conditionally acceptable with exterior noise levels above 70 dBA CNEL are considered normally acceptable, and conditionally acceptable with exterior noise levels of less than 70 dBA CNEL are considered normally acceptable, and conditionally acceptable with exterior noise levels between 70 to 75 dBA CNEL, and normally unacceptable with exterior noise levels above 75 dBA CNEL.

Table N-3 Victorville Land Use Compatibility S	tand	arde					
Victor vine Land Use Compatibility C	Community Noise Exposure Ldn or CNEL, dB				1		
Land Use Categories	55	60	65	70	75	80 +	
Residential - Low Density, Single Family, Duplex, Multi- family, Mobile Home	1	1	2	2	3	4	4
Transient Lodging - Motels, Hotels	1	1	2	2	3	3	4
Schools, Libraries, Churches, Hospitals, Nursing Homes	1	1	2	3	3	4	4
Auditoriums, Concert Halls, Amphitheaters	2	2	3	3	4	4	4
Sports Arena, Outdoor Spectator Sports	2	2	2	2	3	3	3
Playgrounds, Neighborhood Parks	1	1	1	2	3	3	3
Golf Courses, Riding Stables, Water Recreation, Cemeteries	1	1	1	2	2	4	4
Office Buildings, Business Commercial, Retail Commercial and Professional	1	1	1	2	2	3	3
Industrial, Manufacturing, Utilities	1	1	1	1	2	2	2
Agriculture	1	1	1	1	1	1	1
<ol> <li>Legend:</li> <li>NORMALLY ACCEPTABLE: Specified land use is satisfact that any buildings involved are of normal conventional con noise insulation requirements.</li> <li>CONDITIONALLY ACCEPTABLE: New construction or dev only after a detailed analysis of the noise reduction require braries, Churches, Hospitals, Nursing Homes 1 needed no in the design. Conventional construction, with closed windo or air conditioning will normally suffice.</li> <li>NORMALLY UNACCEPTABLE: New construction or devel couraged. If new construction or development does proceed noise reduction requirements must be made and needed r in the design.</li> <li>CLEARLY UNACCEPTABLE: New construction or develop</li> </ol>	struct velopr ment bise ir bws a opme ed, a noise	ion, v ment s is n nsula nd fr nt sh detail	witho shou nade tion f esh a ould ed ai ation	ut an Id be and eatur ir su gene nalys featu	y spe unde Scho res in pply s rally is of ires in	ecial ertake ols, L clude syster be dis the nclude	en i- ed ms S-

#### EXHIBIT 3-A: LAND USE NOISE COMPATIBILITY CRITERIA

Source: City of Victorville General Plan Noise Element, Table N-3.



### **3.4 OPERATIONAL NOISE STANDARDS**

To analyze noise impacts originating from a designated fixed location or private property such as the Victorville Connection Project, stationary-source (operational) noise such as the expected roof-top air conditioning units, drive-thru speakerphones, trash enclosure activity, parking lot activity, loading dock activity, car wash tunnel, car wash vacuum, and gas station activity are typically evaluated against standards established under a jurisdiction's Municipal Code.

Section 13.01.030 of the City of Victorville Municipal Code, establishes the noise level standards for stationary noise sources. For residential properties, the exterior noise level shall not exceed 65 dBA  $L_{eq}$  during the daytime hours (7:00 a.m. to 10:00 p.m.) and 55 dBA  $L_{eq}$  during the nighttime hours (10:00 p.m. to 7:00 a.m.). (12) Since the Project land use will potentially impact noisesensitive non-residential commercial uses such as the Victor Elementary School District and Desert Valley Hospital in addition to noise-sensitive residential uses in the Project study area, this noise study relies on the exterior noise level standards for all land uses identified by the City of Victorville Municipal Code. For commercial uses, exterior noise levels shall not exceed 70 dBA  $L_{eq}$  at any time. For the industrial uses the exterior noise levels commercial uses shall not exceed 75 dBA  $L_{eq}$  at any time. The operational noise level standards are shown on Table 3-1.

Land Use	Exterior Noise Levels (dBA L <sub>eq</sub> ) <sup>2</sup>				
Land Use	Daytime (7am-10pm)	Nighttime (10pm-7am)			
Residential	65	55			
Commercial	7	0			
Industrial	7	5			

TABLE 3-1: OPERATIONAL NOISE STANDARDS

<sup>1</sup> City of Victorville Municipal Code, Section 13.01.030 (Appendix 3.1).

 $^{2}$  L<sub>eq</sub> represents a steady state sound level containing the same total energy as a time varying signal over a given period.

### 3.5 CONSTRUCTION NOISE STANDARDS

Section 13.01.060.9 of the City of Victorville Municipal Code, provided in Appendix 3.1, indicates that construction activity is considered exempt from the noise level standards on private properties that are determined by the director of building and safety to be essential to the completion of a project. However, neither the City of Victorville General Plan or Municipal Code establish numeric maximum acceptable construction source noise levels at potentially affected receivers, which would allow for a quantified determination of what CEQA constitutes a *substantial temporary or periodic noise increase*. Therefore, a numerical construction threshold based on Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* is used for analysis of daytime construction impacts, as discussed below.

According to the FTA, local noise ordinances are typically not very useful in evaluating construction noise. 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. Due to the lack of standardized construction noise thresholds, the FTA provides guidelines that can be considered reasonable criteria for construction noise assessment. The FTA considers a daytime exterior construction noise level of 80 dBA L<sub>eq</sub> as a reasonable threshold for noise sensitive residential land use. (7 p. 179).

### **3.6 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. (7)

To analyze vibration impacts originating from the operation and construction of the Victorville Connection, vibration-generating activities are appropriately evaluated against standards established under a City's Municipal Code, if such standards exist. However, the City of Victorville does not identify specific vibration level limits. Therefore, for analysis purposes, the Caltrans *Transportation and Construction Vibration Guidance Manual*, (13 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).



## 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 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 the noise impact significant.* (14) This is primarily because of the wide variation in individual thresholds of annoyance and differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted—the so-called *ambient* environment.

In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will typically be judged. The Federal Interagency Committee on Noise (FICON) (15) 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 ( $L_{eq}$ ). The FICON guidance provides an established source of criteria to assess the impacts of substantial temporary or permanent increase in 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 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 noisesensitive uses. These levels of increases and their perceived acceptance are consistent with guidance provided by both the Federal Highway Administration (4 p. 9) and Caltrans (16 p. 2 48).



### 4.2 VIBRATION (THRESHOLD B)

As described in Section 3.6, the vibration impacts originating from the construction of the Victorville Connection, 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)

CEQA Noise Threshold C applies when there are nearby public and private airports and/or air strips and focuses on land use compatibility of the Project to nearby airports and airstrips. The Project site is not located within two miles of an airport or airstrip. The closest airport is the Southern California Logistics Airport located roughly 9 miles northwest of the Project site. As such, the Project site would not be exposed to excessive noise levels from airport operations, and therefore, impacts are considered *less than significant*, and no further noise analysis is conducted in relation to Appendix G to the CEQA Guidelines, Noise Threshold C.

### 4.4 SIGNIFICANCE CRITERIA SUMMARY

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

Amelyaia	Condition(a)	Significance Criteria			
Analysis	Condition(s)	Daytime	Nighttime		
	If ambient is < 60 dBA CNEL	≥ 5 dBA CNEL Project increase			
Off-Site Traffic <sup>1</sup>	If ambient is 60 - 65 dBA CNEL	≥ 3 dBA CNEL Project increase			
manie	If ambient is > 65 dBA CNEL	≥ 1.5 dBA CNE	L Project increase		
On-Site	Exterior Noise Compatibility Criteria <sup>2</sup>	See Exhibit 3-A			
Traffic	Interior Noise Level Standard <sup>3</sup>	45 dBA CNEL			
	Exterior Noise Level Standards <sup>4</sup>	See Table 3-1			
Onerational	If ambient is < 60 dBA Leq <sup>1</sup>	≥ 5 dBA L <sub>eq</sub> Project increase			
Operational	If ambient is 60 - 65 dBA Leq <sup>1</sup>	≥ 3 dBA L <sub>eq</sub> Project increase			
	If ambient is > 65 dBA Leq <sup>1</sup>	≥ 1.5 dBA L <sub>eq</sub> Project increase			
Construction	Noise Level Threshold <sup>5</sup>	80 dBA L <sub>eq</sub>			
Construction	Vibration Level Threshold <sup>6</sup>	0.3 PPV (in/sec)			

<sup>1</sup> FICON, 1992.

<sup>2</sup> City of Victorville General Plan Noise Element Land Use Compatibility Standards (Table N-3).

<sup>3</sup> California Code of Regulations (CCR), Title 24, Building Standards Administrative Code, Chapter 12, Section 1206.

<sup>4</sup> City of Victorville Municipal Code, Section 13.01.030 (Appendix 3.1).

<sup>5</sup> Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual.

<sup>6</sup> Caltrans Transportation and Construction Vibration Manual, April 2020 Table 19.

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



## 5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, 24-hour noise level measurements were taken at five locations in the Project study area. The receiver locations were selected to describe and document the existing noise environment within the Project study area. 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 Wednesday, June 30, 2021. Appendix 5.1 includes study area photos.

### 5.1 MEASUREMENT PROCEDURE AND CRITERIA

To describe the existing noise environment, the hourly noise levels were measured during typical weekday conditions over a 24-hour period. By collecting individual hourly noise level measurements, it is possible to describe the equivalent daytime and nighttime hourly noise levels. The long-term noise readings were recorded using Piccolo Type 2 integrating sound level meter and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (17)

### 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. (7)* 

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. (7) 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 hourly energy average 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 <sup>1</sup>	Description	Energy Average Noise Level (dBA L <sub>eq</sub> ) <sup>2</sup>		
		Daytime	Nighttime	
L1	Located on the northern edge of the Project Site near a single-family residence at 16557 Jasmine Street.	46.7	46.9	
L2	Located east of the Project Site on Second Avenue near Desert Valley Hospital at 16850 Bear Valley Rd.	65.4	62.8	
L3	Located south of the Project Site near 20 High Desert Funeral Chapel & Cremation at 16545 Bear Valley Road.	72.3	69.6	
L4	Located west of the Project Site on Third Avenue near a single-family residential at 12219 Jason Lane.	52.3	50.9	

#### TABLE 5-1: AMBIENT NOISE LEVEL MEASUREMENTS

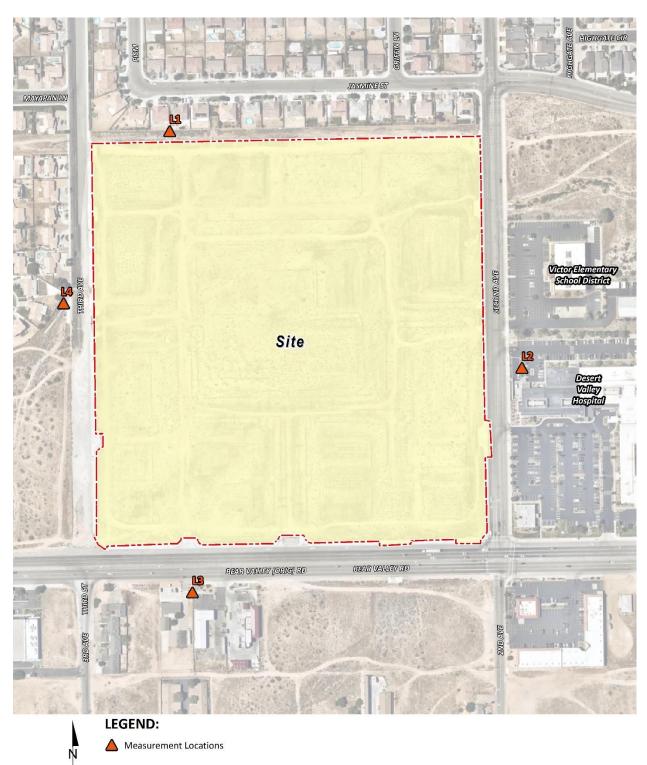
<sup>1</sup> See Exhibit 5-A for the noise level measurement locations.

<sup>2</sup> 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 of the daytime and nighttime hours.





#### **EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS**



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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 the City of Victorville *Land Use Compatibility Standards* guidelines outline on 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. (18) 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. (19) 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. (20)

### 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 receiving land use based on the functional roadway classifications per the City of Victorville General Plan Circulation Element, and the vehicle speeds. The ADT volumes used in this study are presented on Table 6-2 are based on the *Bear Valley Marketplace Traffic Impact Analysis* prepared by TJW Engineering, Inc. for the following traffic conditions:

- 1. Existing Without Project
- 2. Existing With Project (EP)
- 3. Project Opening Year (2023) Without Project (OYNP)
- 4. Project Opening Year (2023) With Project (OYWP)
- 5. Future Year (2033) Without Project (2033 NP)
- 6. Future Year (2033) With Project (2033 WP)



ID	Roadway	Segment	Classification <sup>1</sup>	Centerline Distance to Receiving Land Use <sup>2</sup>	Vehicle Speed (mph)
1	3rd Ave	n/o Silica	Arterial	50'	45
2	3rd Ave	s/o Bear Valley	Arterial	50'	45
3	2nd Ave	n/o Jasmine	Arterial	50'	45
4	2nd Ave	n/o Bear Valley	Arterial	50'	45
5	2nd Ave	s/o Bear Valley	Arterial	50'	45
6	Hesperia	n/o Jasmine	Super Arterial	62'	45
7	Hesperia	s/o Jasmine	Super Arterial	62'	45
8	Jasmine	e/o 2nd Ave	Arterial	50'	45
9	Bear Valley	w/o 7th Ave	Super Arterial	62'	45
10	Bear Valley	e/o 7th Ave	Super Arterial	62'	45
11	Bear Valley	w/o 3rd Ave	Super Arterial	62'	45
12	Bear Valley	e/o 3rd Ave	Super Arterial	62'	45
13	Bear Valley	e/o 2nd Ave	Super Arterial	62'	45

#### TABLE 6-1: OFF-SITE ROADWAY PARAMETERS

<sup>1</sup> City of Victorville General Plan Circulation Element

<sup>2</sup> Based upon the right-of-way distances for each roadway classification provided in the General Plan Circulation Element.

	Roadway		Average Daily Traffic Volumes <sup>1</sup>						
		Segment	Existing		OY 2023		2033		
ID			Without Project	With Project	Without Project	With Project	Without Project	With Project	
1	3rd Ave	n/o Silica	4,380	4,790	4,130	4,540	4,560	4,970	
2	3rd Ave	s/o Bear Valley	1,890	2,300	1,560	1,970	2,320	2,730	
3	2nd Ave	n/o Jasmine	3,000	3,410	3,240	3,650	3,700	4,110	
4	2nd Ave	n/o Bear Valley	4,600	6,850	4,980	7,230	5,710	7,920	
5	2nd Ave	s/o Bear Valley	1,590	2,000	1,720	2,130	2,000	2,380	
6	Hesperia	n/o Jasmine	19,650	20,880	21,270	22,500	24,220	25,450	
7	Hesperia	s/o Jasmine	20,040	20,860	21,680	22,500	24,700	25,520	
8	Jasmine	e/o 2nd Ave	3,760	4,170	4,060	4,470	4,630	5,040	
9	Bear Valley	w/o 7th Ave	34,880	37,410	38,010	40,540	42,960	45,490	
10	Bear Valley	e/o 7th Ave	35,490	38,360	38,530	41,400	43,720	46,590	
11	Bear Valley	w/o 3rd Ave	35,740	38,630	38,690	41,640	44,020	46,910	
12	Bear Valley	e/o 3rd Ave	35,710	37,190	38,660	40,140	44,000	45,470	
13	Bear Valley	e/o 2nd Ave	34,780	37,240	37,640	40,100	42,830	45,290	

#### TABLE 6-2: AVERAGE DAILY TRAFFIC VOLUMES

<sup>1</sup> Bear Valley Marketplace Traffic Impact Analysis, TJW Engineering, Inc.



The ADT volumes vary for each roadway segment based on the existing traffic volumes and the combination of project traffic distributions. In addition, the off-site traffic noise analysis is based on a PM peak hour to average daily traffic (peak-to-daily) relationship of 10%. Table 6-3 provides the time of day (daytime, evening, and nighttime) vehicle splits and Table 6-4 presents the traffic flow distributions (vehicle mix) used for this analysis. The vehicle mix provides the hourly distribution percentages of automobile, medium trucks, and heavy trucks for input into the FHWA noise prediction model.

Vahiele Tures		Total of Time of		
Vehicle Type	Daytime	Evening	Nighttime	Day Splits
Autos	77.50%	12.90%	9.60%	100.00%
Medium Trucks	84.80%	4.90%	10.30%	100.00%
Heavy Trucks	86.50%	2.70%	10.80%	100.00%

TABLE 6-3: TIME OF DAY VEHICLE SPLITS

<sup>1</sup> Typical Southern California vehicle mix.

"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: TRAFFIC FLOW BY VEHICLE TYPE (VEHICLE MIX)

Classification		<b>Total % Traffic Flow</b>		Tatal
Classification	Autos	Medium Trucks	Heavy Trucks	Total
All Roadways <sup>1</sup>	97.42%	1.84%	0.74%	100.00%

<sup>1</sup> Typical Southern California vehicle mix.

#### 6.1.2 ON-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 6-5 presents the on-site roadway parameters including the ADT volumes used for this study. The on-site roadway parameters are based on the long-range 2033 with project traffic conditions for adjacent roadway traffic noise levels impacting the on-site multi-family residential land use. The primary source of transportation noise affecting the Project site is anticipated to be from Bear Valley Road, Third Avenue and Second Avenue.

Roadway	<b>Classification</b> <sup>1</sup>	Lanes	Average Daily Traffic Volume <sup>2</sup>	Speed Limit (mph)	
Bear Valley Road	Super Arterial	6	45,470	50	
Third/Second Avenue	Arterial	4	7,920	50	

<sup>1</sup> Road classifications based upon the County of Riverside General Plan Circulation Element.

<sup>2</sup> Bear Valley Marketplace Traffic Impact Analysis, TJW Engineering, Inc.



## 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 *Bear Valley Marketplace Traffic Impact Analysis*. (21) Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway.

### 7.1 NOISE CONTOURS

Noise contours were used to assess the Project's incremental 24-hour dBA CNEL traffic-related noise impacts at receiving 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 CNEL 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 through 7-6 present a summary of the exterior dBA CNEL traffic noise levels, without barrier attenuation, for the 24 study area roadway segments analyzed from the without Project to the with Project conditions in each of the following conditions:

- 1. Existing Without Project
- 2. Existing With Project (EP)
- 3. Project Opening Year (2023) Without Project (OYNP)
- 4. Project Opening Year (2023) With Project (OYWP)
- 5. Future Year (2033) Without Project (2033 NP)
- 6. Future Year (2033) With Project (2033 WP)

Appendix 7.1 includes a summary of the dBA CNEL traffic noise level contours for each of the traffic scenarios.



ID	Road	Comment.	CNEL at Nearest	Distance to Contour from Centerline (Feet)			
U		Segment	Receiving Land Use (dBA) <sup>1</sup>	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	
1	3rd Ave	n/o Silica	63.6	RW	RW	86	
2	3rd Ave	s/o Bear Valley	59.9	RW	RW	RW	
3	2nd Ave	n/o Jasmine	61.9	RW	RW	67	
4	2nd Ave	n/o Bear Valley	63.8	RW	RW	89	
5	2nd Ave	s/o Bear Valley	59.2	RW	RW	RW	
6	Hesperia	n/o Jasmine	69.3	RW	120	259	
7	Hesperia	s/o Jasmine	69.4	RW	122	263	
8	Jasmine	e/o 2nd Ave	62.9	RW	RW	78	
9	Bear Valley	w/o 7th Ave	71.8	82	176	380	
10	Bear Valley	e/o 7th Ave	71.9	83	178	384	
11	Bear Valley	w/o 3rd Ave	71.9	83	179	386	
12	Bear Valley	e/o 3rd Ave	71.9	83	179	386	
13	Bear Valley	e/o 2nd Ave	71.8	82	176	379	

TABLE 7-1: EXISTING WITHOUT PROJECT CONTOURS

<sup>1</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest receiving land use. "RW" = Location of the respective noise contour falls within the right-of-way of the road.

ID	Baad	Segment	CNEL at Nearest	Distance to Contour from Centerline (Feet)			
	Road		Receiving Land Use (dBA) <sup>1</sup>	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	
1	3rd Ave	n/o Silica	63.9	RW	RW	92	
3	3rd Ave	s/o Bear Valley	60.8	RW	RW	56	
5	2nd Ave	n/o Jasmine	62.5	RW	RW	73	
7	2nd Ave	n/o Bear Valley	65.5	RW	54	116	
9	2nd Ave	s/o Bear Valley	60.1	RW	RW	51	
11	Hesperia	n/o Jasmine	69.6	RW	125	270	
13	Hesperia	s/o Jasmine	69.6	RW	125	270	
15	Jasmine	e/o 2nd Ave	63.3	RW	RW	83	
17	Bear Valley	w/o 7th Ave	72.1	86	185	398	
19	Bear Valley	e/o 7th Ave	72.2	87	188	405	
21	Bear Valley	w/o 3rd Ave	72.3	88	189	407	
23	Bear Valley	e/o 3rd Ave	72.1	85	184	396	
25	Bear Valley	e/o 2nd Ave	72.1	85	184	397	

#### TABLE 7-2: EXISTING WITH PROJECT CONTOURS

<sup>1</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest receiving land use. "RW" = Location of the respective noise contour falls within the right-of-way of the road.

5	Beed	Common t	CNEL at Nearest	Distance to Contour from Centerline (Feet)			
ID	Road	Segment	Receiving Land Use (dBA) <sup>1</sup>	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	
1	3rd Ave	n/o Silica	63.3	RW	RW	83	
3	3rd Ave	s/o Bear Valley	59.1	RW	RW	RW	
5	2nd Ave	n/o Jasmine	62.2	RW	RW	71	
7	2nd Ave	n/o Bear Valley	64.1	RW	RW	94	
9	2nd Ave	s/o Bear Valley	59.5	RW	RW	RW	
11	Hesperia	n/o Jasmine	69.7	RW	127	273	
13	Hesperia	s/o Jasmine	69.7	RW	128	277	
15	Jasmine	e/o 2nd Ave	63.2	RW	RW	82	
17	Bear Valley	w/o 7th Ave	72.2	87	187	402	
19	Bear Valley	e/o 7th Ave	72.2	87	188	406	
21	Bear Valley	w/o 3rd Ave	72.3	88	189	407	
23	Bear Valley	e/o 3rd Ave	72.3	88	189	407	
25	Bear Valley	e/o 2nd Ave	72.1	86	186	400	

TABLE 7-3: PROJECT OPENING YEAR (2023) WITHOUT PROJECT CONTOURS

<sup>1</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest receiving land use. "RW" = Location of the respective noise contour falls within the right-of-way of the road.

	Road	Comment	CNEL at Nearest	Distance to Contour from Centerline (Feet)			
ID		Segment	Receiving Land Use (dBA) <sup>1</sup>	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	
1	3rd Ave	n/o Silica	63.7	RW	RW	88	
3	3rd Ave	s/o Bear Valley	60.1	RW	RW	51	
5	2nd Ave	n/o Jasmine	62.8	RW	RW	76	
7	2nd Ave	n/o Bear Valley	65.7	RW	56	121	
9	2nd Ave	s/o Bear Valley	60.4	RW	RW	53	
11	Hesperia	n/o Jasmine	69.9	RW	132	284	
13	Hesperia	s/o Jasmine	69.9	RW	132	284	
15	Jasmine	e/o 2nd Ave	63.6	RW	RW	87	
17	Bear Valley	w/o 7th Ave	72.5	90	195	420	
19	Bear Valley	e/o 7th Ave	72.6	92	198	426	
21	Bear Valley	w/o 3rd Ave	72.6	92	198	427	
23	Bear Valley	e/o 3rd Ave	72.4	90	194	417	
25	Bear Valley	e/o 2nd Ave	72.4	90	194	417	

#### TABLE 7-4: PROJECT OPENING YEAR (2023) WITH PROJECT CONTOURS

<sup>1</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest receiving land use. "RW" = Location of the respective noise contour falls within the right-of-way of the road.

ID	Road	Segment	CNEL at Nearest Receiving Land Use (dBA) <sup>1</sup>	Distance to Contour from Centerline (Feet)		
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	3rd Ave	n/o Silica	63.7	RW	RW	89
3	3rd Ave	s/o Bear Valley	60.8	RW	RW	56
5	2nd Ave	n/o Jasmine	62.8	RW	RW	77
7	2nd Ave	n/o Bear Valley	64.7	RW	RW	103
9	2nd Ave	s/o Bear Valley	60.1	RW	RW	51
11	Hesperia	n/o Jasmine	70.2	64	138	298
13	Hesperia	s/o Jasmine	70.3	65	140	302
15	Jasmine	e/o 2nd Ave	63.8	RW	RW	90
17	Bear Valley	w/o 7th Ave	72.7	94	203	436
19	Bear Valley	e/o 7th Ave	72.8	95	205	442
21	Bear Valley	w/o 3rd Ave	72.8	96	206	444
23	Bear Valley	e/o 3rd Ave	72.8	96	206	443
25	Bear Valley	e/o 2nd Ave	72.7	94	202	436

TABLE 7-5: FUTURE YEAR (2033) WITHOUT PROJECT CONTOURS

<sup>1</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest receiving land use. "RW" = Location of the respective noise contour falls within the right-of-way of the road.

ID	Road	Segment	CNEL at Nearest Receiving Land Use (dBA) <sup>1</sup>	Distance to Contour from Centerline (Feet)			
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	
1	3rd Ave	n/o Silica	64.1	RW	RW	94	
3	3rd Ave	s/o Bear Valley	61.5	RW	RW	63	
5	2nd Ave	n/o Jasmine	63.3	RW	RW	83	
7	2nd Ave	n/o Bear Valley	66.1	RW	59	128	
9	2nd Ave	s/o Bear Valley	60.9	RW	RW	57	
11	Hesperia	n/o Jasmine	70.4	66	143	308	
13	Hesperia	s/o Jasmine	70.5	66	143	308	
15	Jasmine	e/o 2nd Ave	64.2	RW	RW	95	
17	Bear Valley	w/o 7th Ave	73.0	98	210	453	
19	Bear Valley	e/o 7th Ave	73.1	99	214	461	
21	Bear Valley	w/o 3rd Ave	73.1	100	215	463	
23	Bear Valley	e/o 3rd Ave	73.0	98	210	453	
25	Bear Valley	e/o 2nd Ave	72.9	97	210	452	

#### TABLE 7-6: FUTURE YEAR (2033) WITH PROJECT CONTOURS

<sup>1</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest receiving 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 the existing traffic scenarios identified in the Traffic Analysis prepared by TJW Engineering, 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 2023 conditions. Table 7-1 shows the Existing without Project conditions CNEL noise levels. The Existing without Project exterior noise levels range from 59.2 to 71.9 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 60.1 to 72.3 dBA CNEL. Table 7-7 shows that the Project off-site traffic noise level increases range from 0.2 to 1.7 dBA CNEL on the study area roadway segments. Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to the study area roadway segments would experience *less than significant* noise level increases on receiving land uses due to the Project-related traffic.

# 7.3 PROJECT OPENING YEAR (2023) TRAFFIC NOISE LEVEL INCREASES

Table 7-3 presents the Project Opening Year (2023) without Project conditions CNEL noise levels. The Project Opening Year (2023) without Project exterior noise levels range from 59.1 to 72.3 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-4 shows that the Project Opening Year (2023) with Project conditions will also range from 60.1 to 72.6 dBA CNEL. Table 7-8 shows that the Project off-site traffic noise level increases range from 0.1 to 1.6 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to the study area roadway segments would experience *less than significant* noise level increases on receiving land uses due to the Project-related traffic.

## 7.4 FUTURE YEAR (2033) PROJECT TRAFFIC NOISE LEVEL INCREASES

Table 7-5 presents the Future Year (2033) without Project conditions CNEL noise levels. The Future Year (2033) without Project exterior noise levels range from 60.1 to 72.8 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-6 shows that the Future Year (2033) with Project conditions will also range from 60.9 to 73.1 dBA CNEL. Table 7-9 shows that the Project off-site traffic noise level increases range from 0.2 to 1.4 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to the study area roadway segments would experience *less than significant* noise level increases on receiving land uses due to the Project-related traffic.



ID	Road	Segment		EL at Receiv and Use (dBA	Incremental Noise Level Increase Threshold <sup>2</sup>		
		5	No Project	With Project	Project Addition	Limit	Exceeded?
1	3rd Ave	n/o Silica	63.6	63.9	0.3	3.0	No
2	3rd Ave	s/o Bear Valley	59.9	60.8	0.9	5.0	No
3	2nd Ave	n/o Jasmine	61.9	62.5	0.6	3.0	No
4	2nd Ave	n/o Bear Valley	63.8	65.5	1.7	3.0	No
5	2nd Ave	s/o Bear Valley	59.2	60.1	0.9	5.0	No
6	Hesperia	n/o Jasmine	69.3	69.6	0.3	1.5	No
7	Hesperia	s/o Jasmine	69.4	69.6	0.2	1.5	No
8	Jasmine	e/o 2nd Ave	62.9	63.3	0.4	3.0	No
9	Bear Valley	w/o 7th Ave	71.8	72.1	0.3	1.5	No
10	Bear Valley	e/o 7th Ave	71.9	72.2	0.3	1.5	No
11	Bear Valley	w/o 3rd Ave	71.9	72.3	0.4	1.5	No
12	Bear Valley	e/o 3rd Ave	71.9	72.1	0.2	1.5	No
13	Bear Valley	e/o 2nd Ave	71.8	72.1	0.3	1.5	No

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

<sup>1</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.

<sup>2</sup> Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?



ID	Road	Segment		EL at Receivi and Use (dBA	Incremental Noise Level Increase Threshold <sup>2</sup>		
			No Project	With Project	Project Addition	Limit	Exceeded?
1	3rd Ave	n/o Silica	63.3	63.7	0.4	3.0	No
2	3rd Ave	s/o Bear Valley	59.1	60.1	1.0	5.0	No
3	2nd Ave	n/o Jasmine	62.2	62.8	0.6	3.0	No
4	2nd Ave	n/o Bear Valley	64.1	65.7	1.6	3.0	No
5	2nd Ave	s/o Bear Valley	59.5	60.4	0.9	5.0	No
6	Hesperia	n/o Jasmine	69.7	69.9	0.2	1.5	No
7	Hesperia	s/o Jasmine	69.7	69.9	0.2	1.5	No
8	Jasmine	e/o 2nd Ave	63.2	63.6	0.4	3.0	No
9	Bear Valley	w/o 7th Ave	72.2	72.5	0.3	1.5	No
10	Bear Valley	e/o 7th Ave	72.2	72.6	0.4	1.5	No
11	Bear Valley	w/o 3rd Ave	72.3	72.6	0.3	1.5	No
12	Bear Valley	e/o 3rd Ave	72.3	72.4	0.1	1.5	No
13	Bear Valley	e/o 2nd Ave	72.1	72.4	0.3	1.5	No

 TABLE 7-8: PROJECT OPENING YEAR (2023) TRAFFIC NOISE LEVEL INCREASES

<sup>1</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.

<sup>2</sup> Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?



ID	Road	Segment		EL at Receivind Use (dBA	Incremental Noise Level Increase Threshold <sup>2</sup>		
			No Project	With Project	Project Addition	Limit	Exceeded?
1	3rd Ave	n/o Silica	63.7	64.1	0.4	3.0	No
2	3rd Ave	s/o Bear Valley	60.8	61.5	0.7	3.0	No
3	2nd Ave	n/o Jasmine	62.8	63.3	0.5	3.0	No
4	2nd Ave	n/o Bear Valley	64.7	66.1	1.4	3.0	No
5	2nd Ave	s/o Bear Valley	60.1	60.9	0.8	3.0	No
6	Hesperia	n/o Jasmine	70.2	70.4	0.2	1.5	No
7	Hesperia	s/o Jasmine	70.3	70.5	0.2	1.5	No
8	Jasmine	e/o 2nd Ave	63.8	64.2	0.4	3.0	No
9	Bear Valley	w/o 7th Ave	72.7	73.0	0.3	1.5	No
10	Bear Valley	e/o 7th Ave	72.8	73.1	0.3	1.5	No
11	Bear Valley	w/o 3rd Ave	72.8	73.1	0.3	1.5	No
12	Bear Valley	e/o 3rd Ave	72.8	73.0	0.2	1.5	No
13	Bear Valley	e/o 2nd Ave	72.7	72.9	0.2	1.5	No

 TABLE 7-9:
 FUTURE YEAR (2033) PROJECT TRAFFIC NOISE LEVEL INCREASES

<sup>1</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.

<sup>2</sup> Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?



# 8 ON-SITE TRAFFIC NOISE ANALYSIS

An on-site exterior noise impact analysis has been completed to determine the noise exposure levels that would result from adjacent transportation noise sources in the Project study area, and to identify potential noise mitigation measures that would achieve acceptable Project exterior and interior noise levels. The primary source of transportation noise affecting the Project site is anticipated to be from Bear Valley Road, Third Avenue and Second Avenue. The Project would also be exposed to nominal traffic noise from the Project's internal roads. However, due to the distance, topography and low traffic volume/speed, traffic noise from these roads will not make a substantive contribution to ambient noise conditions.

## 8.1 EXTERIOR NOISE ANALYSIS

Using the FHWA traffic noise prediction model and the parameters outlined in Tables 6-3 to 6-5, the expected future exterior noise levels for the on-site Project land uses were estimated at onsite receiver locations. To describe the on-site traffic noise impacts, six on-site receiver locations were identified at the multi-family residential locations facing Bear Valley Road, Third Avenue and Second Avenue as shown on Exhibit 8-A. Table 8-1 presents a summary of future on-site exterior traffic noise levels. The on-site traffic noise analysis calculations are provided in Appendix 8.1.

As shown on Table 8-1, the planned multi-family residential land use will experience *normally acceptable* exterior noise levels of ranging from 56.8 to 64.7 dBA CNEL. For *normally acceptable* exterior noise levels, the *Land Use Compatibility Standards* indicate that the *land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insultation requirements.* 

Receiver Location <sup>1</sup>	Land Use	Unmitigated Exterior Noise Level (dBA CNEL) <sup>2</sup>	Land Use Compatibility <sup>3</sup>		
MF1	Multi-Family Residential	63.4	Normally Acceptable		
MF2	Multi-Family Residential	64.7	Normally Acceptable		
MF3	Multi-Family Residential	56.8	Normally Acceptable		
MF4	Multi-Family Residential	56.9	Normally Acceptable		
MF5	Multi-Family Residential	58.0	Normally Acceptable		
MF6	Multi-Family Residential	59.8	Normally Acceptable		

TABLE 8-1: UNMITIGATED EXTERIOR NOISE LEVELS

<sup>1</sup>On-site multi-family receiver locations shown on Exhibit 8-A.

<sup>2</sup> Exterior on-site traffic noise level calculations are included in Appendix 8.1.

<sup>3</sup> Based on the General Plan land use compatibility standards as shown on Exhibit 3-A.





#### **EXHIBIT 8-A: ON-SITE RECEIVER LOCATIONS**

13078-05 Noise Study



# 9 OFF-SITE RECEIVER LOCATIONS

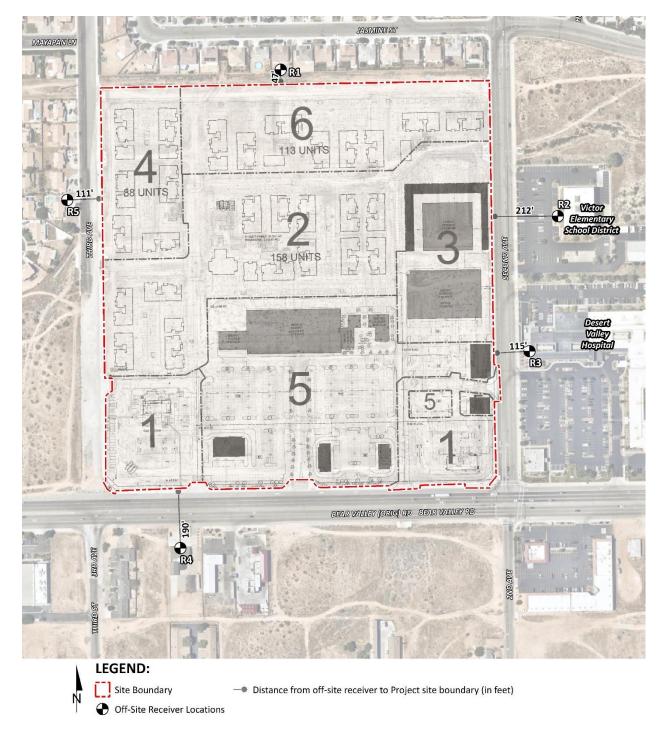
To assess the potential for long-term operational and short-term construction noise impacts, the following off-site receiver locations, as shown on Exhibit 9-A, were identified as representative locations for analysis. Sensitive receivers are generally defined as locations where people reside or where 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 off-site Project noise levels, five receiver locations in the vicinity of the Project site were identified. All distances are measured from the Project site boundary to the outdoor living areas (e.g., private backyards) or at the building façade, whichever is closer to the Project site. The selection of receiver locations is based on FHWA guidelines and is consistent with additional guidance provided by Caltrans and the FTA, as previously described in Section 5.2. 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 residence at 16595 Jasmine Street, approximately 47 feet north of the Project site. R1 is placed at the private outdoor living areas (backyard) facing the Project site. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment.
- R2: Location R2 represents the Victor Elementary School District building at 12219 2<sup>nd</sup> Avenue, approximately 212 feet east 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 Desert Valley Hospital at 16850 Bear Valley Road, approximately 115 feet east 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 near this location, L2, is used to describe the existing ambient noise environment.
- R4: Location R4 represents the 20 High Desert Funeral Chapel & Cremation at 16545 Bear Valley Road, approximately 190 feet south of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R4 is placed at the building façade. A 24-hour noise measurement near this location, L3, is used to describe the existing ambient noise environment.



R5: Location R5 represents the existing noise sensitive residence at 12244 3<sup>rd</sup> Avenue, approximately 111 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 near this location, L4, is used to describe the existing ambient noise environment.



#### EXHIBIT 9-A: OFF-SITE RECEIVER LOCATIONS



# **10 OPERATIONAL NOISE IMPACTS**

This section analyzes the potential stationary-source operational noise impacts at the nearest receiver locations, identified in Section 9, resulting from the operation of the Victorville Connection Project. Exhibit 10-A identifies the representative noise source activities used to assess the operational noise levels.

### **10.1** OPERATIONAL NOISE SOURCES

This operational noise analysis is intended to describe noise level impacts associated with the expected typical daytime and nighttime activities at the Project site. The on-site Project-related noise sources are expected to include: roof-top air conditioning units, drive-thru speakerphones, trash enclosure activity, parking lot activity, loading dock activity, car wash tunnel, car wash vacuum, and gas station activity. The multi-family residential land use within the Victorville Connection is considered a noise-sensitive receiving land use. Therefore, no potential operational noise impacts for the multi-family residential land use are analyzed in the noise study.

### **10.2** 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 10-1 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 roof-top air conditioning units, drive-thru speakerphones, trash enclosure activity, parking lot activity, loading dock activity, car wash tunnel, car wash vacuum, and gas station activity all operating at the same time. These sources of noise activity will likely vary throughout the day.

### **10.2.1 MEASUREMENT PROCEDURES**

The reference noise level measurements presented in this section were collected using a Larson Davis LxT Type 1 precisions 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. (17)

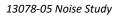






EXHIBIT 10-A: OPERATIONAL NOISE SOURCE LOCATIONS



Noise Source <sup>1</sup>	Noise Source Height	Min./	Hour <sup>2</sup>	Reference Noise Level @50 feet	Sound Power Level
	(Feet)	Day	Night	(dBA L <sub>eq</sub> )	(dBA) <sup>3</sup>
Roof-Top Air Conditioning Units	5'	39	28	57.2	88.9
Drive-Thru Speakerphone	3'	60	60	51.5	83.2
Trash Enclosure Activity	5'	10	10	56.8	89.0
Parking Lot Activity	5'	60	60	56.1	87.8
Loading Dock Activity	5'	60	0	62.8	103.4
Car Wash Tunnel	8'	60	0	74.3	106.0
Car Wash Vacuum	3'	60	0	54.6	86.3
Gas Station Activity	5'	60	60	48.2	79.9

**TABLE 10-1: REFERENCE NOISE LEVEL MEASUREMENTS** 

<sup>1</sup> As measured by Urban Crossroads, Inc.

<sup>2</sup> Anticipated duration (minutes within the hour) of noise activity during typical hourly conditions expected at the Project site. "Daytime" = 7:00 a.m. - 10:00 p.m.; "Nighttime" = 10:00 p.m. - 7:00 a.m.

<sup>3</sup> 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.

### **10.2.2** ROOF-TOP AIR CONDITIONING UNITS

To assess the noise levels created by the roof-top air conditioning units, reference noise level measurements were collected from a Lennox SCA120 series 10-ton model packaged air conditioning unit. At the uniform reference distance of 50 feet, the reference noise levels are 57.2 dBA L<sub>eq</sub>. Based on the typical operating conditions observed over a four-day measurement period, the roof-top air conditioning units are estimated to operate for an average of 39 minutes per hour during the daytime hours, and 28 minutes per hour during the nighttime hours. For this noise analysis, the air conditioning units are expected to be located on the roof of the proposed building. This reference noise level describes the expected roof-top air conditioning units located 5 feet above the roof for the planned air conditioning units at the Project site.

### 10.2.3 DRIVE-THRU SPEAKERPHONE ACTIVITY

To describe the potential noise level impacts associated with potential drive-thru speakerphones and vehicle activities, a reference noise level measurement was collected. The reference noise levels collected are expected to reflect potential drive-thru speakerphone noise level activities at the Project site, since the reference measurement includes both drive-thru speakerphone and vehicle activity noise. The noise sources included in the reference noise level measurement consist of voices of the employees over the speakerphone, customers' voices ordering food, car engines idling, car radios playing music, and cars queuing in the drive-thru lane. At 50 feet from the speakerphone, a reference noise level of 51.5 dBA L<sub>eq</sub> was measured.



### **10.2.4** 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 56.8 dBA L<sub>eq</sub> 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. Typical trash enclosure activities are estimated to occur for 10 minutes per hour.

## 10.2.5 PARKING LOT ACTIVITY

To describe the on-site parking lot activity a reference noise level of 56.1 dBA  $L_{eq}$  at 50 feet is used. Parking lot activity 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 cars pulling in and out of parking spaces.

## 10.2.6 LOADING DOCK ACTIVITY

The reference 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, two-axle 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<sub>eq</sub>.

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.

### 10.2.7 CAR WASH TUNNEL

A reference noise level measurement was taken by Urban Crossroads to describe the air blowers used in a car wash tunnel. A reference noise level of 74.3 dBA  $L_{eq}$  was measured at the uniform distance of 50 feet. The reference noise level measurement includes an exposed five-unit air blower system with background pressure washer noise and is used to represent the proposed Project facilities. It is anticipated that the air dryers within the proposed car wash will operate continuously during the peak operating conditions. Further, this noise analysis does not include any additional attenuation or directional influence provided by locating the car wash air blower and dryer equipment inside the tunnel itself, but rather, models the tunnel exit activities as

occurring at the building façade. As such, the analysis may conservatively overstate actual noise levels produced by the car wash tunnel air blower and dryer equipment.

### 10.2.8 CAR WASH VACUUM

To represent the self-serve vacuums within the Project site, a reference noise level measurement was collected at an express car wash. The reference noise level measurement represents up to four vacuums operating simultaneously. At a uniform reference distance of 50 feet, the vacuum reference noise level is 54.6 dBA  $L_{eq}$ . This reference car wash vacuum activity noise level is anticipated to conservatively overstate those of the Project, since this reference noise level includes more vacuums operating simultaneously (4 vacuums) than what will be possible at the Project site (2 vacuums).

### 10.2.9 GAS STATION ACTIVITY

To describe the potential noise level impacts created by the gas station of the Project, a reference noise level measurement was collected. The reference noise level measurement includes six cars fueling at once, car doors closing, engines starting, fuel pump TV sounds and background car pass-by events within a 3-minute period. At 50 feet from the gas station, a reference noise level of 48.2 dBA L<sub>eq</sub> was measured.

## **10.3** 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 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 protocol, the CadnaA noise prediction model relies on the reference sound power level ( $L_w$ ) to describe individual noise sources. While sound pressure levels (e.g.,  $L_{eq}$ ) quantify in decibels the intensity of given sound sources at a reference distance, sound power levels ( $L_w$ ) are connected to the sound source and are independent of distance. Sound pressure levels vary substantially with distance from the source and diminish because of intervening obstacles and barriers, air absorption, wind, and other factors. Sound power is the acoustical energy emitted by the sound source and is an absolute value that is not affected by the environment.

The operational noise level calculations provided in this noise study account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. A default ground attenuation factor of 0.5 was used in the noise analysis to account for mixed ground representing a combination of hard and soft surfaces. Appendix 10.1 includes the detailed noise model inputs used to estimate the Project operational noise levels presented in this section.

# **10.4** PROJECT OPERATIONAL NOISE LEVELS

Using the reference noise levels to represent the proposed Project operations that include rooftop air conditioning units, drive-thru speakerphones, trash enclosure activity, parking lot activity, loading dock activity, car wash tunnel, car wash vacuum, and gas station activity, Urban Crossroads, Inc. calculated the operational source noise levels that are expected to be generated at the Project site and the Project-related noise level increases that would be experienced at each of the sensitive receiver locations. Table 10-2 shows the Project operational noise levels during the daytime hours of 7:00 a.m. to 10:00 p.m. The daytime hourly noise levels at the off-site receiver locations are expected to range from 46.6 to 53.7 dBA  $L_{eq}$ . The daytime hourly noise levels at the future on-site Project receiver locations are expected to range from 47.5 to 64.9 dBA  $L_{eq}$ .

Table 10-3 shows the 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 38.3 to 48.5 dBA  $L_{eq}$ . The nighttime hourly noise levels at the future on-site Project receiver locations are expected to range from 35.1 to 52.7 dBA  $L_{eq}$ . The differences between the daytime and nighttime noise levels are largely related to the duration of noise activity (Table 10-1). Appendix 10.1 includes the detailed noise model inputs including the existing perimeter walls used to estimate the Project operational noise levels presented in this section.

## 10.5 PROJECT OPERATIONAL NOISE LEVEL COMPLIANCE

To demonstrate compliance with local noise regulations, the Project-only operational noise levels are evaluated against exterior noise level thresholds based on the City of Victorville exterior noise level standards at nearby noise-sensitive receiver locations. Table 10-4 shows the operational noise levels associated with Victorville Connection Project will satisfy the City of Victorville 65 dBA L<sub>eq</sub> daytime and 55 dBA L<sub>eq</sub> nighttime exterior noise level standards at all nearby receiver locations. Therefore, the operational noise impacts are considered *less than significant* at the nearby noise-sensitive receiver locations.



Nation Courses1		Operational Noise Levels by Receiver Location (dBA Leq)									
Noise Source <sup>1</sup>	R1	R2	R3	R4	R5	MF1	MF2	MF3	MF4	MF5	MF6
Roof-Top Air Conditioning Units	18.4	16.8	18.9	27.9	22.0	18.2	13.8	22.5	16.3	30.1	26.2
Drive-Thru Speakerphone	35.2	35.9	45.5	45.3	39.3	35.0	32.0	47.2	40.6	45.7	49.6
Trash Enclosure Activity	18.2	15.9	18.2	30.1	22.9	19.3	14.7	20.7	15.9	31.2	32.2
Parking Lot Activity	35.2	35.9	45.5	45.3	39.3	35.0	32.0	47.2	40.6	45.7	49.6
Loading Dock Activity	43.2	51.9	50.3	38.8	48.6	44.9	46.5	60.0	57.0	61.5	52.1
Car Wash Tunnel	42.5	34.4	38.6	46.1	51.6	44.6	39.0	36.3	42.2	59.6	64.3
Car Wash Vacuum	20.4	9.8	16.8	34.6	25.8	22.6	12.8	12.2	17.1	35.3	43.2
Gas Station Activity	12.8	10.6	13.9	30.7	21.4	14.1	10.5	9.8	11.8	21.3	30.5
Total (All Noise Sources)	46.6	52.2	52.7	50.9	53.7	48.2	47.5	60.5	57.3	63.8	64.9

#### TABLE 10-2: DAYTIME PROJECT OPERATIONAL NOISE LEVELS

<sup>1</sup> See Exhibit 10-A for the noise source locations. CadnaA noise model calculations are included in Appendix 10.1.

#### TABLE 10-3: NIGHTTIME PROJECT OPERATIONAL NOISE LEVELS

Naina Coursel			Opera	ational No	oise Leve	ls by Rece	eiver Loca	ation (dB	A Leq)		
Noise Source <sup>1</sup>	R1	R2	R3	R4	R5	MF1	MF2	MF3	MF4	MF5	MF6
Roof-Top Air Conditioning Units	18.4	16.8	18.9	27.9	22.0	18.2	13.8	22.5	16.3	30.1	26.2
Drive-Thru Speakerphone	35.2	35.9	45.5	45.3	39.3	35.0	32.0	47.2	40.6	45.7	49.6
Trash Enclosure Activity	17.3	14.9	17.2	29.1	22.0	18.3	13.8	19.7	15.0	30.2	31.2
Parking Lot Activity	35.2	35.9	45.5	45.3	39.3	35.0	32.0	47.2	40.6	45.7	49.6
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
Car Wash Tunnel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Car Wash Vacuum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gas Station Activity	12.8	10.6	13.9	30.7	21.4	14.1	10.5	9.8	11.8	21.3	30.5
Total (All Noise Sources)	38.3	39.0	48.5	48.5	42.4	38.1	35.1	50.2	43.6	48.8	52.7

<sup>1</sup> See Exhibit 10-A for the noise source locations. CadnaA noise model calculations are included in Appendix 10.1.



Receiver Location <sup>1</sup>	-	perational s (dBA Leq) <sup>2</sup>		l Standards Leq) <sup>3</sup>	Noise Level Standards Exceeded? <sup>4</sup>		
Location	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime	
R1	46.6	38.3	65	55	No	No	
R2	52.2	39.0	65	55	No	No	
R3	52.7	48.5	65	55	No	No	
R4	50.9	48.5	65	55	No	No	
R5	53.7	42.4	65	55	No	No	
MF1	48.2	38.1	65	55	No	No	
MF2	47.5	35.1	65	55	No	No	
MF3	60.5	50.2	65	55	No	No	
MF4	57.3	43.6	65	55	No	No	
MF5	63.8	48.8	65	55	No	No	
MF6	64.9	52.7	65	55	No	No	

TABLE 10-4: OPERATIONAL NOISE LEVEL COMPLIANCE

<sup>1</sup> See Exhibit 9-A for the off-site and Exhibit 8-A for the on-site receiver locations.

<sup>2</sup> Proposed Project operational noise levels as shown on Tables 10-2 and 10-3.

<sup>3</sup> City of Victorville Municipal Code, Section 13.01.030 (Appendix 3.1).

<sup>4</sup> Do the estimated Project operational noise source activities exceed the noise level standards?

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

### **10.6 PROJECT OPERATIONAL NOISE LEVEL INCREASES**

To describe the Project operational noise level increases, the Project operational noise levels are combined with the existing ambient noise levels measurements for the nearby off-site receiver locations potentially impacted by Project operational noise sources. The operational noise level increases are limited to the off-site receiver locations R1 to R5 that may perceive a noise level increase over time. 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 10-5 and 10-6, respectively. As indicated on Tables 10-5 and 10-6, the Project will generate daytime and nighttime operational noise level increases ranging from 0.0 to 3.8 dBA L<sub>eq</sub> at the receiver locations. Project-related operational noise level increases will satisfy the operational noise level increase significance criteria presented in Table 4-1. Therefore, the incremental Project operational noise level increase is considered *less than significant* at all receiver locations.



Receiver Location <sup>1</sup>	Total Project Operational Noise Level <sup>2</sup>	Measurement Location <sup>3</sup>	Reference Ambient Noise Levels⁴	Combined Project and Ambient⁵	Project Increase <sup>6</sup>	Increase Criteria <sup>7</sup>	Increase Criteria Exceeded?
R1	46.6	L1	46.7	49.7	3.0	5.0	No
R2	52.2	L2	65.4	65.6	0.2	1.5	No
R3	52.7	L2	65.4	65.6	0.2	1.5	No
R4	50.9	L3	72.3	72.3	0.0	1.5	No
R5	53.7	L4	52.3	56.1	3.8	5.0	No

#### TABLE 10-5: DAYTIME PROJECT OPERATIONAL NOISE LEVEL INCREASES

<sup>1</sup> See Exhibit 9-A for the receiver locations.

<sup>2</sup> Total Project daytime operational noise levels as shown on Table 10-2.

<sup>3</sup> Reference noise level measurement locations as shown on Exhibit 5-A.

<sup>4</sup> Observed daytime ambient noise levels as shown on Table 5-1.

<sup>5</sup> Represents the combined ambient conditions plus the Project activities.

<sup>6</sup> The noise level increase expected with the addition of the proposed Project activities.

<sup>7</sup> Significance increase criteria as shown on Table 4-1.



Receiver Location <sup>1</sup>	Total Project Operational Noise Level <sup>2</sup>	Measurement Location <sup>3</sup>	Reference Ambient Noise Levels⁴	Combined Project and Ambient⁵	Project Increase <sup>6</sup>	Increase Criteria <sup>7</sup>	Increase Criteria Exceeded?
R1	38.3	L1	46.9	47.5	0.6	5.0	No
R2	39.0	L2	62.8	62.8	0.0	3.0	No
R3	48.5	L2	62.8	63.0	0.2	3.0	No
R4	48.5	L3	69.6	69.6	0.0	1.5	No
R5	42.4	L4	50.9	51.5	0.6	5.0	No

TABLE 10-6: NIGHTTIME PROJECT OPERATIONAL NOISE LEVEL INCREASES

<sup>1</sup> See Exhibit 9-A for the receiver locations.

<sup>2</sup> Total Project nighttime operational noise levels as shown on Table 10-3.

<sup>3</sup> Reference noise level measurement locations as shown on Exhibit 5-A.

<sup>4</sup> Observed nighttime ambient noise levels as shown on Table 5-1.

<sup>5</sup> Represents the combined ambient conditions plus the Project activities.

<sup>6</sup> The noise level increase expected with the addition of the proposed Project activities.

<sup>7</sup> Significance increase criteria as shown on Table 4-1.



# **11 CONSTRUCTION IMPACTS**

This section analyzes potential impacts resulting from the short-term construction activities associated with the development of the Project. Exhibit 11-A shows the construction noise source locations in relation to the nearby sensitive receiver locations previously described in Section 9.

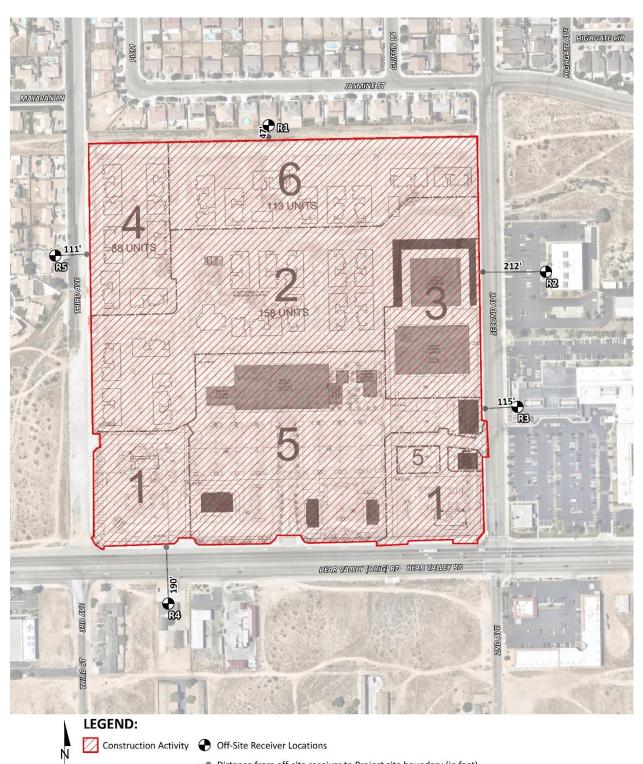
### **11.1 CONSTRUCTION NOISE LEVELS**

Noise generated by the Project construction equipment will include a combination of trucks, power tools, concrete mixers, and portable generators that when combined can reach high levels. Even though the site is vacant and graded, this analysis assumes that some site preparation and grading will be required as part of the Project construction. The number and mix of construction equipment are expected to occur in the following stages:

- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

## **11.2 CONSTRUCTION REFERENCE NOISE LEVELS**

To describe peak construction noise activities, this construction noise analysis was prepared using reference noise level measurements published in the Update of Noise Database for Prediction of Noise on Construction and Open Sites by the Department for Environment, Food and Rural Affairs (DEFRA). (22). The DEFRA database provides the most recent and comprehensive source of reference construction noise levels. Table 11-1 provides a summary of the DEFRA construction reference noise level measurements expressed in hourly average dBA Leq using the estimated FHWA Roadway Construction Noise Model (RCNM) usage factors (23) to describe the typical construction activities for each stage of Project construction.



**EXHIBIT 11-A: TYPICAL CONSTRUCTION NOISE SOURCE LOCATIONS** 

- Distance from off-site receiver to Project site boundary (in feet)

Construction Stage	Reference Construction Activity <sup>1</sup>	Reference Noise Level @ 50 Feet (dBA L <sub>eq</sub> ) <sup>1</sup>	Highest Reference Noise Level (dBA L <sub>eq</sub> )
<b>C</b> 11	Crawler Tractors	77	
Site Preparation	Hauling Trucks	71	77
reparation	Rubber Tired Dozers	71	
	Graders	79	
Grading	Excavators	64	79
	Compactors	67	
	Cranes	67	
Building Construction	Tractors	72	72
construction	Welders	65	
	Pavers	70	
Paving	Paving Equipment	69	70
	Rollers	69	
	Cranes	67	
Architectural Coating	Air Compressors	67	67
Coating	Generator Sets	67	

TABLE 11-1: CONSTRUCTION REFERENCE NOISE LEVELS

 $^1$  Update of Noise Database for Prediction of Noise on Construction and Open Sites by the Department for Environment, Food and Rural Affairs (DEFRA) expressed in hourly average  $L_{eq}$  based on estimated usage factors from the FHWA Roadway Construction Noise Model (RCNM).

### **11.3 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. To assess the worst-case construction noise levels, the Project construction noise analysis relies on the highest noise level impacts when the equipment with the highest reference noise level is operating at the closest point from the edge of primary construction activity (Project site boundary) to each receiver location. As shown on Table 11-2, the construction noise levels are expected to range from 58.6 to 75.4 dBA L<sub>eq</sub>, and the highest construction levels are expected to range from 70.6 to 75.4 dBA L<sub>eq</sub> at the nearby receiver locations. Appendix 11.1 includes the detailed CadnaA construction noise model inputs.

The construction noise analysis presents a conservative approach with the highest noise-levelproducing equipment for each stage of Project construction operating at the closest point from primary construction activity to the nearby sensitive receiver locations. This scenario is unlikely to occur during typical construction activities and likely overstates the construction noise levels which will be experienced at each receiver location.



<b>_</b> .	Construction Noise Levels (dBA Leq)									
Receiver Location <sup>1</sup>	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Levels <sup>2</sup>				
R1	73.4	75.4	68.4	66.4	63.4	75.4				
R2	68.6	70.6	63.6	61.6	58.6	70.6				
R3	71.7	73.7	66.7	64.7	61.7	73.7				
R4	69.7	71.7	64.7	62.7	59.7	71.7				
R5	71.1	73.1	66.1	64.1	61.1	73.1				

#### TABLE 11-2: CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY

<sup>1</sup>Noise receiver locations are shown on Exhibit 11-A.

<sup>2</sup> 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 11.1.

### **11.4 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 11-3. Therefore, the noise impacts due to Project construction noise are considered *less than significant* at all receiver locations.

	Construction Noise Levels (dBA Leq)				
Receiver Location <sup>1</sup>	Highest Construction Noise Levels <sup>2</sup>	I prochola <sup>2</sup>			
R1	75.4	80	No		
R2	70.6	80	No		
R3	73.7	80	No		
R4	71.7	80	No		
R5	73.1	80	No		

<sup>1</sup>Noise receiver locations are shown on Exhibit 11-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 11-2.

<sup>3</sup> Construction noise level thresholds as shown on Table 4-1.

<sup>4</sup> Do the estimated Project construction noise levels exceed the construction noise level threshold?



## **11.5 CONSTRUCTION VIBRATION IMPACTS**

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures and soil type. It is expected that ground-borne vibration from Project construction activities would cause only intermittent, localized intrusion. Ground-borne vibration levels resulting from typical construction activities occurring within the Project site were estimated by data published by the Federal Transit Administration (FTA). (7) However, while vehicular traffic is rarely perceptible, construction has the potential to result in varying degrees of temporary ground vibration, depending on the specific construction activities and equipment used. Ground vibration levels associated with various types of construction equipment are summarized on Table 11-4. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the potential Project construction vibration levels using the following vibration assessment methods defined by the FTA. To describe the human response (annoyance) associated with vibration impacts the FTA provides the following equation: PPV<sub>equip</sub> = PPV<sub>ref</sub> x  $(25/D)^{1.5}$ 

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

TABLE 11-4:	VIBRATION SOURCE LEVELS FO	R CONSTRUCTION EQUIPMENT

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual

Table 11-5 presents the expected Project related vibration levels at the nearby receiver locations. At distances ranging from 47 to 212 feet from Project construction activities, construction vibration velocity levels are estimated to range from 0.004 to 0.035 in/sec PPV. Based on maximum acceptable continuous vibration threshold of 0.3 PPV (in/sec) for older residential buildings, the typical Project construction vibration levels will satisfy the building damage thresholds at all receiver locations. In addition, the typical construction vibration levels at the nearest sensitive receiver locations are unlikely to be sustained during the entire construction period but will occur rather only during the times that heavy construction equipment is operating adjacent to the Project site boundaries.



	Distance to	Typical Construction Vibration Levels PPV (in/sec) <sup>3</sup>				Thresholds	Thresholds	
Receiver <sup>1</sup>	Const. Activity (Feet) <sup>2</sup>	Small bulldozer	Jackhammer	Loaded Trucks	Large bulldozer	Highest Vibration Level	PPV (in/sec) <sup>4</sup>	Exceeded? <sup>5</sup>
R1	47'	0.001	0.014	0.029	0.035	0.035	0.3	No
R2	212'	0.000	0.001	0.003	0.004	0.004	0.3	No
R3	115'	0.000	0.004	0.008	0.009	0.009	0.3	No
R4	190'	0.000	0.002	0.004	0.004	0.004	0.3	No
R5	111'	0.000	0.004	0.008	0.010	0.010	0.3	No

TABLE 11-5: PROJECT CONSTRUCTION VIBRATION LEVELS

<sup>1</sup>Receiver locations are shown on Exhibit 11-A.

 $^{\rm 2}$  Distance from receiver location to Project construction boundary (Project site boundary).

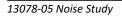
<sup>3</sup> Based on the Vibration Source Levels of Construction Equipment (Table 11-4).

<sup>4</sup> Caltrans Transportation and Construction Vibration Guidance Manual, April 2020, Tables 19, p. 38.

<sup>5</sup> Does the peak vibration exceed the acceptable vibration thresholds?

"PPV" = Peak Particle Velocity

Moreover, the impacts at the site of the nearest sensitive receiver locations are unlikely to be sustained during the entire construction period but will occur rather only during the times that heavy construction equipment is operating adjacent to the Project site perimeter.





# **12 REFERENCES**

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- 3. 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. March 1974. EPA/ONAC 550/9/74-004.
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- 9. **State of California.** California Code of Regulations, Title 24, Part 2, Volume 1, Chapter 12, Section 1206.4, Allowable Interior Noise Level. *ICC Digital Coes.* [Online] 2019. https://codes.iccsafe.org/content/CABCV12019/chapter-12-interior-environment.
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- 20. California Department of Transportation. *Traffic Noise Attenuation as a Function of Ground and Vegetation Final Report.* June 1995. FHWA/CA/TL-95/23.

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- 22. **Department of Environment, Food and Rural Affiars (Defra).** Update of Noise Database for Prediction of Noise on Construction and Open Sites. 2004.
- 23. FHWA. Roadway Construction Noise Model. January 2006.



# **13 CERTIFICATION**

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed Victorville Connection 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.

Bill Lawson, P.E., INCE Principal URBAN CROSSROADS, INC. 1133 Camelback #8329 Newport Beach, CA 92658 (949) 581-3148 blawson@urbanxroads.com



### 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**

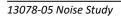
PE – Registered Professional Traffic Engineer – TR 2537 • January, 2009
AICP – American Institute of Certified Planners – 013011 • June, 1997–January 1, 2012
PTP – Professional Transportation Planner • May, 2007 – May, 2013
INCE – Institute of Noise Control Engineering • March, 2004

### **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:

CITY OF VICTORVILLE MUNICIPAL CODE



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### Chapter 13.01 NOISE CONTROL

#### Sections:

#### 13.01.010 Purpose and intent.

- (a) The purpose of this chapter is to establish criteria and standards for the regulation of noise levels within the city of Victorville.
- (b) The city council declares and finds that excessive noise levels are detrimental to the public health, welfare and safety and contrary to the public interest. It is the intent of this chapter to protect persons from excessive levels of noise from sources including, but not limited to; persons, animals, or fowl; automobiles, motorcycles, engines, machines, or other mechanical devices; loudspeakers, musical instruments, radios, televisions, phonographs, or other amplifying devices.
- (c) This chapter includes standards for the measurement of noise levels to ensure that noise levels do not disturb and interfere with the peace, comfort or repose of the residents of the neighborhood from which the noise is emitted.

(Ord. 1962 § 2 (part), 2002)

#### 13.01.020 Definitions.

The following words, phrases, and terms as used in this chapter shall have the following meanings:

- (1) "A-weighted sound level" means the sound pressure level in decibels as measured on a sound level meter using A-weighting network. The level to read is designated db(A) or dB(A).
- (2) "Ambient noise level" means the all-encompassing noise level associated with a given environment, being a composite of sounds from all sources, excluding any intrusive noise.
- (3) "Cumulative period" means an additive period of time composed of individual time segments which may be continuous or interrupted.
- (4) "Decibel" means a unit of measure of sound level noise.
- (5) "Noise level" means the same as "sound level" and the terms may be used interchangeably herein.
- (6) "Sound level" (noise level) in decibels is the quantity measured using the frequency weighting of A of a sound level meter as defined herein.
- (7) "Sound level meter" means an instrument meeting American National Standard Institute's Standard S1.4-1971 for type 1 or type 2 sound level meters or an instrument and the associated recording and analyzing equipment which will provide equivalent data.

(Ord. 1962 § 2 (part), 2002)

#### 13.01.030 Noise measurement criteria.

Any noise level measurements made pursuant to the provisions of this chapter shall be performed using a sound level meter as defined in this chapter. The location selected for measuring exterior noise levels shall be at any point on the property line of the offender or anywhere on the affected property.

(Ord. 1962 § 2 (part), 2002)

#### 13.01.040 Base ambient noise levels.

All ambient noise measurements shall commence in decibels within the respective zones and times as follows:

Zone	Time	Sound Level Decibels
All residential zones	10:00pm to 7:00am	55 dB(A)
	7:00am to 10:00pm	65 dB(A)
All commercial zones	Anytime	70 dB(A)
All industrial zones	Anytime	75 dB(A)

If the ambient noise level exceeds the applicable limit as noted in the above table, the ambient noise level shall be the standard.

(Ord. 1962 § 2 (part), 2002)

#### 13.01.050 Noise levels prohibited.

Noise levels shall not exceed the ambient noise levels in Section 13.01.040 by the following dB(A) levels for the cumulative period of time specified:

- (1) Less than 5dB(A) for a cumulative period of more than thirty minutes in any hour;
- (2) Less than 10 dB(A) for a cumulative period of more than fifteen minutes in any hour;
- (3) Less than 15 dB(A) for a cumulative period of more than five minutes in any hour;
- (4) Less than 20 dB(A) for a cumulative period of more than one minute in any hour;
- (5) 20 dB(A) or more for any period of time.

(Ord. 1962 § 2 (part), 2002)

#### 13.01.060 Noise source exemptions.

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

- (1) All mechanical devices, apparatus or equipment used, related to or connected with emergency machinery, vehicle or work.
- (2) The provisions of this regulation shall not preclude the construction, operation, maintenance and repairs of equipment, apparatus or facilities of park and recreation projects, public works projects or essential public works services and facilities, including those utilities subject to the regulatory jurisdiction of the California Public Utilities Commission.
- (3) Activities conducted on the grounds of any elementary, intermediate or secondary school or college.
- (4) Outdoor gatherings, public dances and shows, provided said events are conducted pursuant to a permit as required by this code.
- (5) Activities conducted in public parks and public playgrounds, provided said events are conducted pursuant to a permit as required by this code.

- (6) Any activity to the extent regulation thereof has been preempted by state or federal law.
- (7) Traffic on any roadway or railroad right-of-way.
- (8) The operation of the Southern California Logistics Airport.
- (9) Construction activity on private properties that are determined by the director of building and safety to be essential to the completion of a project.

(Ord. 1962 § 2 (part), 2002)

#### 13.01.070 Notice and penalties.

Any person violating any of the provisions, or failing to comply with the requirements of this chapter, is guilty of a civil penalty, punishable in accordance with Chapter 1.05. In addition, in the discretion of the city attorney and based upon the specific facts and circumstances presented to him or her, any such violation may be charged as an infraction subject to the penalties contained in Section 1.04.010.

(Ord. 1962 § 2 (part), 2002)

#### 13.01.080 Severability.

If any provision of the ordinance codified in this chapter or the application thereof to any person or circumstance is held invalid, the remainder of the ordinance, and the application of such provision to other persons or circumstances, shall not be affected thereby.

(Ord. 1962 § 2 (part), 2002)

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APPENDIX 5.1:

**STUDY AREA PHOTOS** 



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## JN: 13078 Study Area Photos



L1\_E 34, 28' 27.360000"117, 18' 10.340000"



L1\_N 34, 28' 28.650000"117, 18' 11.710000"



L1\_S 34, 28' 28.650000"117, 18' 11.710000"



L1\_W 34, 28' 27.360000"117, 18' 10.340000"



L2\_E 34, 28' 21.370000"117, 17' 56.690000"



L2\_N 34, 28' 21.400000"117, 17' 55.890000"

## JN: 13078 Study Area Photos



L2\_S 34, 28' 21.370000"117, 17' 56.690000"



L2\_W 34, 28' 21.370000"117, 17' 56.690000"



L3\_E 34, 28' 14.270000"117, 18' 8.750000"



L3\_N 34, 28' 14.270000"117, 18' 8.750000"



L3\_S 34, 28' 14.270000"117, 18' 8.750000"



L3\_W 34, 28' 14.270000"117, 18' 8.750000"

# JN: 13078 Study Area Photos



L4\_E



L4\_N 34, 28' 27.000000"117, 18' 6.250000"



L4\_S 34, 28' 24.570000"117, 18' 6.520000"



L4\_W 34, 28' 18.880000"117, 18' 12.950000"

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APPENDIX 5.2:

**NOISE LEVEL MEASUREMENT WORKSHEETS** 



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						24-Ho	our Noise L	evel Meas	urement	Summary						
	Wednesda Victorville (	y, June 30, 2 Connection	2021			n: L1 - Located e: single-family		-	-	Site near a	Meter	r: Piccolo II				13078 A. Khan
							Hourly L <sub>eq</sub>	dBA Readings	(unadjusted	)						
85.0	0															
<b>(80.0</b> 75.0 70.0																
( <b>Vap</b> ) 65.0 65.0																
60.0 <b>ٽر</b> 55.0 <b>ح</b>																
<b>/J.noH</b>	0		46.3	48.5	48.7	<u>د.</u> 8.		4. <u>0</u>	<u>∞</u>	<mark>47.1</mark> 46.6	9.		9 <mark> </mark>	<u>4.</u>	<del></del>	<u>د</u>
<b>±</b> 40.0 35.0	0 - 4 -	41	46.	- 4 4	- 4 -	4 <mark>4</mark> .	43.	40 41		47,47	4	48.	48. 48.		44.	45.
	0	1	2 3	4 5	6	7 8	9 2	10 11		13 14	15	16 17	18 19	20	21 22	23
									eginning							
Timeframe	Hour	L <sub>eq</sub>		L <sub>min</sub>	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L <sub>eq</sub>	Adj.	Adj. L <sub>eq</sub>
	0	46.3 41.9	51.2 45.1	43.1 39.4	50.8 44.9	50.3 44.7	49.6 44.2	48.7 43.8	47.0 42.7	45.5 41.5	43.8 40.0	43.5 39.8	43.2 39.5	46.3 41.9	10.0 10.0	56.3 51.9
	2	46.3	50.1	43.3	49.9	49.6	48.8	48.4	47.2	45.7	44.0	43.8	43.5	46.3	10.0	56.3
Night	3	48.4	52.0	45.2	51.8	51.5	50.9	50.4	49.2	48.0	46.1	45.7	45.4	48.4	10.0	58.4
	4 5	48.5 48.0	53.0 52.8	44.8 44.4	52.7 52.3	52.3 52.0	51.6 51.1	51.0 50.5	49.3 48.9	47.9 47.2	45.7 45.2	45.4 44.8	44.9 44.5	48.5 48.0	10.0 10.0	58.5 58.0
	6	48.7	56.5	45.2	55.2	53.9	51.8	50.7	49.1	47.2	46.1	44.8	45.3	48.7	10.0	58.7
	7	44.5	53.0	40.9	52.3	51.6	49.2	46.9	44.1	43.0	41.5	41.3	41.0	44.5	0.0	44.5
	8	40.8	46.7	36.9	46.3	45.9	44.6	43.8	41.4	39.9	37.9	37.5	37.1	40.8	0.0	40.8
	9 10	43.3 40.4	51.4 45.0	37.1 37.5	51.0 44.5	50.6 44.2	49.3 43.3	48.0 42.9	43.8 41.2	40.2 39.6	37.9 38.1	37.6 37.9	37.3 37.7	43.3 40.4	0.0 0.0	43.3 40.4
	10	41.5	47.1	37.5	46.8	46.4	45.4	44.6	42.5	40.2	38.2	37.9	37.7	41.5	0.0	41.5
	12	43.8	50.7	39.6	50.1	49.6	48.0	47.0	44.3	42.3	40.3	40.0	39.7	43.8	0.0	43.8
Davi	13	47.1	52.4	42.7	51.9	51.3	50.3	49.7	47.9	46.4	43.8	43.4	42.9	47.1	0.0	47.1
Day	14 15	46.6 47.6	52.0 52.5	42.7 43.7	51.5 52.0	51.1 51.6	49.8 50.6	49.0 50.2	47.3 48.6	46.0 47.0	43.7 44.6	43.3 44.2	42.9 43.8	46.6 47.6	0.0 0.0	46.6 47.6
	16	48.3	52.6	44.4	52.1	51.7	50.9	50.5	49.2	47.8	45.5	45.0	44.5	48.3	0.0	48.3
	17	48.6	53.6	44.5	53.0	52.5	51.7	51.1	49.4	48.1	45.6	45.1	44.7	48.6	0.0	48.6
	18 19	48.6 48.2	56.1 53.1	44.0	55.1 52.5	54.0 52.1	51.7 51.3	50.9 50.7	49.2 49.0	47.7 47.6	45.3 45.3	44.7 44.9	44.2 44.6	48.6 48.2	0.0 5.0	48.6 53.2
	20	48.2	55.5	44.4 44.9	55.0	54.5	53.5	52.7	49.0 50.0	47.0	45.9	44.9	44.0	48.2	5.0	54.4
	21	48.3	56.3	43.3	55.5	54.7	53.5	52.9	47.6	46.0	44.1	43.8	43.4	48.3	5.0	53.3
Night	22 23	44.8	49.5	41.9	49.0 51.8	48.5	47.7 49.3	47.1	45.5	44.1	42.6 42.7	42.4 42.4	42.0	44.8	10.0 10.0	54.8
Timeframe	23 Hour	45.5 <b>L</b> <sub>eq</sub>	52.5 L <sub>max</sub>	41.7 L <sub>min</sub>	L1%	50.9 <b>L2%</b>	49.3 <b>L5%</b>	48.6 <b>L8%</b>	45.7 <b>L25%</b>	44.4 <b>L50%</b>	42.7 <b>L90%</b>	42.4 <b>L95%</b>	41.8 <b>L99%</b>	45.5	<i>L<sub>eg</sub> (dBA)</i>	55.5
Day	Min	40.4	45.0	36.9	44.5	44.2	43.3	42.9	41.2	39.6	37.9	37.5	37.1	24-Hour	Daytime	Nighttime
	Max	49.4	56.3	44.9	55.5	54.7	53.5	52.9	50.0	48.1	45.9	45.5	45.0		(7am-10pm)	(10pm-7an
Energy /	Average Min	46.7	45.1	erage: 39.4	51.3 44.9	50.8 44.7	49.5 44.2	48.7 43.8	46.4 42.7	44.7	42.5	42.1 39.8	41.8 39.5	46.8	46.7	46.9
Night	Max	48.7	56.5	45.2	55.2	53.9	51.8	51.0	49.3	48.0	46.1	45.7	45.4		-0.7	-0.5
Energy	Average	46.9	Av	erage:	50.9	50.4	49.5	48.8	47.2	45.8	44.0	43.7	43.3			



						24-Ho	our Noise Le	evel Measu	urement Si	ummary						
		, June 30, 20	)21			: L2 - Located		•		nue near	Meter:	Piccolo II				13078
Project:	Victorville C	onnection			Source	: Desert Valley			•						Analyst:	A. Khan
							Hourly L <sub>eq</sub> d	IBA Readings	(unadjusted)							
85.0	0															
( <b>8</b> 0.0 75.0 70.0	0															
( <b>Vgp</b> ) 65.0 - 65.0 - 60.0	0															
<b>–</b> 60.0	<b>65.1</b>		4	0 0	64.5			60.3		0.0 	66.4		- <mark></mark>		63.6 52.5	<u> </u>
<b>1</b> 55.0 <b>1</b> 55.0 <b>1</b> 55.0 <b>1</b> 55.0 <b>1</b> 55.0 <b>1</b> 55.0 <b>1</b> 55.0	0	61.0 61.5	61.4	62.0 62.6	9	65.	<mark></mark>		<mark>ب 64</mark>				- <mark></mark>	<u> </u>	63.6 62.5	62.7
							$\mp$ $\mp$	-				+ +				
35.0		1 2							12 1	2 44			10 10		24 22	
	0	1 2	3	4 5	6	7 8	9 1	.0 11 Hour Br	12 1 eginning	.3 14	15 1	6 17	18 19	20	21 22	23
Timeframe	Hour	L <sub>eq</sub>	L <sub>max</sub>	L <sub>min</sub>	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L <sub>eq</sub>	Adj.	Adj. L <sub>eq</sub>
Timejrume	0	65.1	- max 76.6	59.3	76.4	75.9	73.0	68.7	61.1	60.4	59.7	59.6	59.4	65.1	10.0	75.1
	1	61.0	68.9	59.1	68.4	67.7	64.7	62.7	60.4	60.0	59.4	59.4	59.2	61.0	10.0	71.0
	2	61.5	68.4	59.2	68.0	67.5	65.3	64.1	61.2	60.3	59.5	59.4	59.3	61.5	10.0	71.5
Night	3	61.4	65.7	59.5	65.5	65.1	64.0	63.2	61.7	61.0	59.9	59.8	59.6	61.4	10.0	71.4
	4 5	62.0 62.6	68.2 70.3	59.7 59.2	67.7 69.9	67.0 69.4	65.1 67.2	63.8 65.6	62.1 62.4	61.3 61.1	60.1 59.7	60.0 59.5	59.8 59.3	62.0 62.6	10.0 10.0	72.0 72.6
	6	64.5	73.7	59.6	73.2	72.5	70.0	68.4	63.9	61.8	60.2	60.0	59.8	64.5	10.0	74.5
	7	65.0	74.3	59.5	73.9	73.2	70.8	69.4	64.5	61.7	59.9	59.8	59.5	65.0	0.0	65.0
	8	65.4	75.1	59.3	74.6	73.8	71.4	69.6	65.2	62.0	59.7	59.5	59.4	65.4	0.0	65.4
	9 10	65.2 66.3	74.5 76.1	59.5	74.1	73.3 75.2	71.0 73.0	69.6 71.0	64.9 65.4	61.7	60.0	59.7	59.6 59.9	65.2 66.3	0.0	65.2
	10	65.5	75.0	59.9 59.6	75.8 74.6	73.8	73.0	71.0	65.0	62.3 61.7	60.2 59.9	60.1 59.8	59.9	65.5	0.0 0.0	66.3 65.5
	12	64.7	73.8	59.4	73.3	72.4	70.5	69.1	64.7	61.5	59.8	59.6	59.4	64.7	0.0	64.7
	13	65.0	73.9	59.9	73.4	72.6	70.4	69.0	64.9	62.3	60.4	60.2	60.0	65.0	0.0	65.0
Day	14	65.4	75.2	60.0	74.6	73.7	71.0	69.5	65.0	62.4	60.6	60.3	60.1	65.4	0.0	65.4
	15 16	66.4 65.6	76.2 75.1	60.4 60.5	75.6 74.4	74.7 73.4	72.0 70.7	70.5 69.2	66.0 65.5	63.3 63.3	61.0 61.2	60.7 60.9	60.4 60.6	66.4 65.6	0.0 0.0	66.4 65.6
	10	66.1	74.7	60.5	74.4	73.4	70.7	70.2	66.4	63.7	61.3	61.0	60.6	66.1	0.0	66.1
	18	65.3	74.1	60.0	73.5	72.9	71.1	69.7	64.9	62.7	60.6	60.4	60.1	65.3	0.0	65.3
	19	65.2	74.3	59.9	73.8	72.9	70.5	69.1	64.9	62.6	60.6	60.3	60.0	65.2	5.0	70.2
	20	65.1 63.6	73.8 73.0	60.1 59.2	73.3	72.5 71.8	70.4 69.2	69.0 67.5	65.1 62.7	62.6 60.9	60.6 59.5	60.4 59.4	60.2 59.3	65.1	5.0 5.0	70.1
	21 22	62.5	73.0	59.2	72.5 70.6	69.9	69.2	65.8	61.8	60.9	59.5	59.4	59.3	63.6 62.5	10.0	68.6 72.5
Night	23	62.7	71.3	59.2	70.8	70.0	67.5	65.8	62.1	60.7	59.6	59.4	59.2	62.7	10.0	72.7
Timeframe	Hour	L <sub>eq</sub>	L <sub>max</sub>	L <sub>min</sub>	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%		L <sub>eq</sub> (dBA)	
Day	Min Max	63.6 66.4	73.0 76.2	59.2 60.5	72.5 75.8	71.8 75.2	69.2 73.0	67.5 71.0	62.7 66.4	60.9 63.7	59.5 61.3	59.4 61.0	59.3 60.6	24-Hour	Daytime (7am-10pm)	Nighttime (10pm-7am)
Energy	Average	65.4		rage:	75.8	73.3	73.0	69.5	65.0	62.3	60.4	60.1	59.9			
Night	Min	61.0	65.7	58.9	65.5	65.1	64.0	62.7	60.4	60.0	59.4	59.2	59.0	64.6	65.4	62.8
	Max	65.1	76.6	59.7	76.4	75.9	73.0	68.7	63.9	61.8	60.2	60.0	59.8			
Energy	Average	62.8	Ave	rage:	70.1	69.4	67.2	65.3	61.9	60.8	59.7	59.6	59.4			



						24-Ho	our Noise Le	evel Meas	urement S	ummary						
	-	, June 30, 20	21			: L3 - Located		-	-		Meter:	Piccolo II				13078
Project:	Victorville C	onnection			Source	: Funeral Char			(unadjusted)						Analyst:	A. Khan
							Houriy L <sub>eq</sub> C	iba Redaings	(undajustea)							
85.0 - 80.0	0															
<b>4</b> 75.	0 ++					- <u>m</u>										
<b>Bp</b> 70. 65. <b>6</b> 5.	0 0 0	4	o	69.3	72.1	75.3		<mark>72.4</mark>	71.7	71.4	71.2	<mark>/1/</mark>	71.9	<mark>72.1</mark>	70.0	72.2
<b>1</b> 55.0 <b>1</b> 55.0	0 — ii —	65.0	67.0				+ <b>`</b> +'	` <u></u> -''-				` <u></u> '`		+ <sup>•</sup> +		
<u>o</u> 45.	ŏ — —															
40.0 35.0																
	0	1 2	3	4 5	6	7 8	91	.0 11		13 14	15 1	.6 17	18 19	20	21 22	23
Timeframe	11	,	,	,	140/	1.20/		L8%	eginning	150%	100%	105%	L99%	,	A	Adi I
Timejrame	Hour 0	<b>L</b> <sub>eq</sub> 67.5	L <sub>max</sub> 78.7	<b>L</b> <sub>min</sub> 47.9	<b>L1%</b> 78.2	<b>L2%</b>	<b>L5%</b> 74.7	73.5	<b>L25%</b> 66.5	<b>L50%</b> 60.6	<b>L90%</b> 50.1	<b>L95%</b> 49.0	48.1	<b>L</b> <sub>eq</sub> 67.5	<b>Adj.</b> 10.0	<b>Adj. L</b> <sub>eq</sub> 77.5
	1	65.4	75.7	44.5	75.3	74.6	72.6	71.3	65.3	57.9	46.8	45.6	44.7	65.4	10.0	75.4
	2	65.0	75.6	48.4	75.2	74.4	72.1	70.7	64.6	57.7	49.5	49.0	48.6	65.0	10.0	75.0
Night	3	67.0	76.9	50.6	76.5	75.8	73.5	72.2	67.8	61.5	52.8	51.6	50.8	67.0	10.0	77.0
	4	69.3	78.8	51.9	78.3	77.5	75.2	73.9	70.2	65.6	54.4	53.2	52.1	69.3	10.0	79.3
	5	71.3 72.1	80.0 80.5	55.9 57.5	79.6 80.1	79.0 79.4	77.1 77.4	75.8 76.3	72.5 73.3	68.6	59.4 61.9	57.7 60.1	56.2 58.0	71.3	10.0	81.3
	7	75.3	80.5	63.7	80.1	81.8	80.0	78.9	73.3	69.9 73.9	67.4	65.8	64.2	72.1 75.3	10.0 0.0	82.1 75.3
	8	72.4	80.6	57.3	80.2	79.5	77.3	76.2	73.7	70.7	62.1	59.8	57.6	72.4	0.0	72.4
	9	71.6	78.8	55.1	78.5	77.9	76.3	75.5	73.2	70.2	60.4	58.0	55.5	71.6	0.0	71.6
	10	71.9	80.2	57.4	79.7	79.0	77.3	75.8	73.1	70.1	61.5	59.4	57.7	71.9	0.0	71.9
	11	72.4	81.9	56.4	81.3	80.6	77.9	76.4	73.3	70.1	60.7	58.9	57.1	72.4	0.0	72.4
	12	71.7	81.0	55.1	80.7	79.8	77.0	75.5	72.5	69.5	60.5	58.5	55.7	71.7	0.0	71.7
Day	13 14	71.4 72.0	80.6 83.3	54.6 55.6	80.2 82.7	79.4 81.5	76.5 77.6	75.2 75.2	72.3 72.0	69.2 69.1	60.1 60.5	57.3 58.2	55.0 56.1	71.4 72.0	0.0 0.0	71.4 72.0
Day	14	72.0	79.0	55.8	78.5	77.7	75.9	75.0	72.6	69.6	60.5	58.1	56.1	72.0	0.0	72.0
	16	71.7	80.3	55.6	79.9	79.1	76.8	75.4	72.7	70.1	61.6	59.3	56.0	71.7	0.0	71.7
	17	71.9	81.1	55.0	80.6	79.7	77.2	75.7	73.0	69.9	60.4	57.8	55.5	71.9	0.0	71.9
	18	71.9	80.0	55.4	79.5	78.9	76.9	76.0	73.3	69.9	61.5	58.4	55.7	71.9	0.0	71.9
	19	71.9	81.1	54.4	80.6	79.8	77.4	75.9	73.0	69.7	60.6	58.2	55.1	71.9	5.0	76.9
	20 21	72.1 72.5	82.4 83.8	55.2 54.2	81.8 83.1	81.1 82.1	78.6 78.0	76.3 76.7	72.2 72.6	68.8 68.1	59.2 58.3	57.2 56.2	55.5 54.5	72.1 72.5	5.0 5.0	77.1 77.5
	22	72.5	78.7	52.4	78.3	77.7	75.9	76.7	72.0	66.8	56.3	54.3	52.6	72.5	10.0	80.0
Night	23	72.2	85.0	51.2	84.7	83.6	79.3	76.4	69.7	64.4	54.1	52.7	51.5	72.2	10.0	82.2
Timeframe	Hour	L <sub>eq</sub>	L <sub>max</sub>	L <sub>min</sub>	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%		L <sub>eq</sub> (dBA)	
Day	Min	71.2	78.8	54.2	78.5	77.7	75.9	75.0	72.0	68.1	58.3	56.2	54.5	24-Hour	Daytime	Nighttime
Energy	Max Average	75.3 72.3	83.8 Ave	63.7 rage:	83.1 80.6	82.1 79.9	80.0 77.4	78.9 76.0	76.5 73.1	73.9 69.9	67.4 61.0	65.8 58.7	64.2 56.5		(7am-10pm)	(10pm-7am)
	Min	65.0	75.6	44.5	75.2	79.9	77.4	70.7	64.6	57.7	46.8	45.6	44.7	71.4	72.3	69.6
Night	Max	72.2	85.0	57.5	84.7	83.6	79.3	76.4	73.3	69.9	61.9	60.1	58.0	/ 1.4	, 2.3	03.0
Energy	Average	69.6		rage:	78.5	77.7	75.3	73.9	69.0	63.7	53.9	52.6	51.4			



						24-Ho	our Noise Le	evel Measu	urement S	ummary						
	Wednesday Victorville (	-	021			<ul> <li>: L4 - Located</li> <li>: single-family</li> </ul>		•		ue near a	Meter:	Piccolo II			JN: Analyst:	13078 A. Khan
,						, j	Hourly L <sub>eq</sub> d	IBA Readings	(unadjusted)						,	
85.0	0															
80 (																
( <b>Vgp</b> ) 75.0 70.0 65.0 65.0																
، دہ ہے 60.0 <b>ت</b> ے	0															
<b>1</b> 55.0 50.0 45.0 45.0	0										<b>,</b>	N	<u>N</u> 0.	<mark>ທ</mark>	<u>ы</u>	
945.0 40.0	20.7	46.6	51.9	52.7 52.7	51.2	47.3 45.2	46.7	<mark>44</mark> .9		<mark>52.1</mark>	52.4	54.7	5 <mark>5.</mark>	<u> </u>	<b>54.5</b> 49.9	48.9
35.0	0															+
	0	1 2	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
Timeframe	Hour	L <sub>eq</sub>	L <sub>max</sub>	L <sub>min</sub>	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L <sub>eq</sub>	Adj.	Adj. L <sub>eq</sub>
	0	50.7	57.2	45.5	56.8	56.3	55.0	54.3	51.6	49.0	46.5	46.1	45.6	50.7	10.0	60.7
	1	46.6	51.3	41.3	51.1	50.8	50.1	49.7	47.9	45.6	42.4	41.9	41.4	46.6	10.0	56.6
Night	2	51.2 51.9	55.1 56.5	47.5 48.0	54.9 56.2	54.6 55.8	54.1 55.1	53.7 54.6	52.1 52.7	50.7 51.3	48.5 48.9	48.1 48.6	47.6 48.1	51.2 51.9	10.0 10.0	61.2 61.9
	4	52.0	57.2	46.8	56.9	56.6	55.7	55.2	53.2	51.2	47.7	47.3	46.9	52.0	10.0	62.0
	5	52.7	57.5	48.4	57.3	56.9	56.1	55.6	54.0	51.7	49.2	48.9	48.5	52.7	10.0	62.7
	6	51.2	56.2	46.1	55.9	55.6	54.9	54.3	52.4	50.3	47.0	46.6	46.2	51.2	10.0	61.2
	7 8	47.3 45.2	52.6 51.4	42.2 39.3	52.2 50.9	51.9 50.5	51.1 49.4	50.5 48.7	48.4 46.3	46.3 44.0	43.3 40.4	42.9 39.9	42.4 39.5	47.3 45.2	0.0 0.0	47.3 45.2
	° 9	45.2	53.5	40.3	53.1	50.5	49.4 51.5	48.7 50.8	40.3	44.0	40.4	40.9	40.4	45.2	0.0	45.2
	10	44.8	50.3	40.4	49.9	49.2	48.3	47.7	45.8	43.8	41.4	41.0	40.5	44.8	0.0	44.8
	11	44.9	50.9	40.3	50.4	50.1	49.3	47.9	45.8	43.5	41.0	40.7	40.4	44.9	0.0	44.9
	12	47.7	54.0	42.6	53.7	53.2	51.8	51.0	48.6	46.4	43.5	43.2	42.7	47.7	0.0	47.7
Day	13 14	52.3 52.1	58.8 57.5	46.0 46.6	58.3 57.2	57.7 56.8	56.6 55.9	55.7 55.3	53.2 53.1	51.0 51.3	47.4 47.9	46.9 47.4	46.2 46.8	52.3 52.1	0.0 0.0	52.3 52.1
Day	14	52.1	58.3	46.5	58.0	57.5	56.5	55.7	53.5	51.5	47.5	47.4	40.8	52.1	0.0	52.1
	16	54.2	60.5	48.2	60.1	59.7	58.3	57.6	55.1	52.9	49.5	48.9	48.4	54.2	0.0	54.2
	17	54.7	61.1	48.1	60.6	60.0	59.0	58.2	55.7	53.5	49.5	48.9	48.3	54.7	0.0	54.7
	18	54.2	60.4	47.3	60.1	59.6	58.3	57.5	55.3	53.1	49.3	48.3	47.5	54.2	0.0	54.2
	19 20	55.0 55.5	61.5 63.7	47.9 46.9	61.0 63.2	60.7 62.7	59.7 61.6	58.9 60.6	56.1 55.9	53.6 52.5	49.4 48.4	48.8 47.7	48.1 47.1	55.0 55.5	5.0 5.0	60.0 60.5
	20	54.5	63.0	40.9	62.6	61.9	60.5	59.9	54.7	51.6	46.6	47.7	47.1	54.5	5.0	59.5
Night	22	49.9	56.8	43.5	56.4	56.0	54.7	54.0	51.0	47.9	44.6	44.2	43.7	49.9	10.0	59.9
U	23	48.9	57.5	41.1	56.9	56.4	54.4	53.2	49.1	46.1	42.5	41.8	41.3	48.9	10.0	58.9
Timeframe	Hour	L <sub>eq</sub>	L <sub>max</sub>	L <sub>min</sub>	<b>L1%</b> 49.9	L2%	L5%	L8%	L25%	L50%	L90%	<b>L95%</b> 39.9	<i>L99%</i>		L <sub>eq</sub> (dBA)	Nichtting
Day	Min Max	44.8 55.5	50.3 63.7	39.3 48.2	49.9 63.2	49.2 62.7	48.3 61.6	47.7 60.6	45.8 56.1	43.5 53.6	40.4 49.5	39.9 48.9	39.5 48.4	24-Hour	Daytime (7am-10pm)	Nighttim (10pm-7an
Energy	Average	52.3		erage:	56.7	56.3	55.2	54.4	51.7	49.3	45.8	45.2	44.7			
Night	Min	46.6	51.3	41.1	51.1	50.8	50.1	49.7	47.9	45.6	42.4	41.8	41.3	51.8	52.3	50.9
	Max	52.7	57.5	48.4	57.3	56.9	56.1	55.6	54.0	51.7	49.2	48.9	48.5			
Energy	Average	50.9	Ave	erage:	55.8	55.4	54.4	53.8	51.5	49.3	46.4	45.9	45.5			



APPENDIX 7.1:

**OFF-SITE TRAFFIC NOISE LEVEL CALCULATIONS** 



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F	HWA-RD-77-10	8 HIGH	WAY NC	DISE PI	REDICTIO	ON MOE	DEL			
<i>Scenario:</i> Existing <i>Road Name:</i> 3rd Ave <i>Road Segment:</i> n/o Silica						Vame: B mber: 1		alley Mark	etplace	
SITE SPECIFIC	INPUT DATA							L INPUT:	S	
Highway Data			Si	te Con	ditions (I	Hard = 1	10, So	ft = 15)		
Average Daily Traffic (Adt)	4,380 vehicl	es				A	utos:	15		
Peak Hour Percentage	10.00%			Me	dium True	cks (2 A	xles):	15		
Peak Hour Volume	438 vehicl	es		He	avy Truck	(3+ A	xles):	15		
Vehicle Speed	45 mph		Ve	ehicle	Mix					
Near/Far Lane Distance	44 feet		-		icleType	1	Dav	Evening	Night	Dailv
Site Data							77.5%	•	9.6%	
Barrier Height	0.0 feet			М	edium Tru	icks: 8	34.8%	4.9%	10.3%	6 1.849
Barrier Type (0-Wall, 1-Berm)	0.0			1	Heavy Tru	icks: {	36.5%	2.7%	10.8%	6 0.74%
Centerline Dist. to Barrier			No	oise So	ource Ele	vations	(in fe	et)		
Centerline Dist. to Observer					Autos	0.0	00			
Barrier Distance to Observer				Mediu	m Trucks:	2.2	97			
Observer Height (Above Pad)				Heav	y Trucks	8.0	06	Grade Ad	iustmen	t: 0.0
Pad Elevation			1.		uivalent l	Distanc	o (in f	in a fl		
Road Elevation			La	ine Eq	Autos:			eet)		
Road Grade Left View				Madiu	Autos: m Trucks					
Right View					/y Trucks.					
FHWA Noise Model Calculation	ons									
VehicleType REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresne	el i	Barrier Att	en Be	rm Atten
Autos: 68.4	6 -5.5	4	0.56		-1.20	-	4.65	0.0	000	0.00
Medium Trucks: 79.4	-22.7	7	0.59		-1.20	-	4.87	0.0	000	0.00
Heavy Trucks: 84.2		-	0.58		-1.20	-	5.43	0.0	000	0.00
Unmitigated Noise Levels (wi									-	
VehicleType Leq Peak H			Leq Eve		Leq N	•		Ldn	-	NEL
	62.3	60.4		58.6 48.2		52.6		61.2 55.1		61. 55.
	56.1 56.9	54.6 55.5		48.2		46.6 47.7		55.1 56.1		
				46.4		47.7 54.6		56. 63.1		56. 63.
	Vehicle Noise: 64.1 62.4					54.6		03.	1	63.
Centerline Distance to Noise	rline Distance to Noise Contour (in feet)			BA	65 d	BA	6	0 dBA	55	5 dBA
		Ldn:								170
		Lan:	17		37			80		173

	FHW	A-RD-77-108 H	IIGHWA	Y NOISE F	REDICI		DEL			
Scenario. Road Name:	2nd Ave					t Name: E Number: '		/alley Mark	etplace	
Road Segment	n/o Jasmine									
	PECIFIC INI	PUT DATA						L INPUT	s	
Highway Data				Site Co.	nditions	(Hard =		,		
Average Daily Tr	, ,	3,000 vehicles					Autos:			
Peak Hour P	•	10.00%				rucks (2 A				
	ur Volume:	300 vehicles		H	eavy Tru	ıcks (3+ A	(xles):	15		
	cle Speed:	45 mph		Vehicle	Mix					
Near/Far Lane	e Distance:	44 feet		Ve	nicleTyp	е	Day	Evening	Night	Daily
Site Data						Autos:	77.5%	12.9%	9.6%	97.429
Barri	er Height:	0.0 feet		٨	ledium 1	Frucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-Wal		0.0			Heavy 1	Frucks:	86.5%	2.7%	10.8%	0.749
Centerline Dist.	to Barrier:	50.0 feet		Noise S	ource F	levations	: (in fi	eef)		
Centerline Dist. to	Observer:	50.0 feet			Auto		000			
Barrier Distance to	Observer:	0.0 feet		Medii	im Truci		297			
Observer Height (A	bove Pad):	5.0 feet			vy Truci		006	Grade Ad	iustment	: 0.0
	Elevation:	0.0 feet			·					
	Elevation:	0.0 feet		Lane E		t Distanc		feet)		
Ro	oad Grade:	0.0%			Auto					
	Left View:	-90.0 degrees			Im Truck					
ŀ	Right View:	90.0 degrees		неа	vy Truci	ks: 45.0	000			
FHWA Noise Model	Calculations									
VehicleType		Traffic Flow	Distand		e Road	Fresn	-	Barrier Att		m Atten
Autos:	68.46	-7.18		0.56	-1.20		-4.65		000	0.00
Medium Trucks:	79.45	-24.42		0.59	-1.20		-4.87		000	0.00
Heavy Trucks:	84.25	-28.37		0.58	-1.20		-5.43	0.0	000	0.00
Unmitigated Noise I				,						
	eq Peak Hour			q Evening		Night		Ldn		NEL
Autos:	60.6		8.7	57.		50.9		59.		60.
Medium Trucks:	54.4		2.9	46.		45.0		53.		53.
Heavy Trucks: Vehicle Noise:	55.3		3.8	44.		46.1		54.4		54.
	62.5		0.7	57.	)	52.9		61.	5	61.
Centerline Distance	to Noise Cor	ntour (in feet)	-	70 dBA		dBA		0 -0 4		dBA
			dn:	13		29		60 dBA		35
			JII.			∠J				

FHWA-	RD-77-108 H	IGHV	VAY N	DISE PF	EDICTI	ON MC	DDEL			
Scenario: Existing								/alley Mark	etplace	
Road Name: 3rd Ave					Job Ni	umber:	13078			
Road Segment: s/o Bear Valley										
SITE SPECIFIC INPU	T DATA			ite 0					S	
Highway Data			3	ne con	aitions (	Hara -		oft = 15)		
	90 vehicles						Autos:			
	00%				dium Tru					
	89 vehicles			He	avy Truc	ks (3+	Axles).	15		
	45 mph		v	ehicle I	lix					
Near/Far Lane Distance:	44 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data					A	utos:	77.5%	6 12.9%	9.6%	97.42%
Barrier Height:	0.0 feet			Me	dium Tr	ucks:	84.8%	6 4.9%	10.3%	1.84%
	0.0			ŀ	leavy Tr	ucks:	86.5%	6 2.7%	10.8%	0.74%
Centerline Dist. to Barrier: 5	50.0 feet		A	oise So	urce Ele	vatio	ne (in f	oof)		
Centerline Dist. to Observer: 5	50.0 feet		~	0130 00	Autos		.000	,		
Barrier Distance to Observer:	0.0 feet			1 4 m - 1	n Trucks		.000			
Observer Height (Above Pad):	5.0 feet					. –	.006	Grade Ad	liustmon	+ 0.0
Pad Elevation:	0.0 feet			neav	y Trucks	. o	.000	Orade Ad	yusunon	. 0.0
Road Elevation:	0.0 feet		L	ane Equ	ıivalent	Distar	ice (in	feet)		
Road Grade:	0.0%				Autos	: 45	.177			
Left View: -9	0.0 degrees			Mediur	n Trucks	: 44	.981			
Right View: 9	0.0 degrees			Heav	y Trucks	: 45	.000			
FHWA Noise Model Calculations										
VehicleType REMEL Tra	affic Flow	Dista	ance	Finite	Road	Fres	nel	Barrier At	ten Be	rm Atten
Autos: 68.46	-9.19		0.56		-1.20		-4.65	0.	000	0.00
Medium Trucks: 79.45	-26.42		0.59		-1.20		-4.87	0.	000	0.00
Heavy Trucks: 84.25	-30.38		0.58		-1.20		-5.43	0.	000	0.00
Unmitigated Noise Levels (without	Topo and ba	arrier	attenu	ation)						
VehicleType Leq Peak Hour	Leq Day		Leq Ev		Leq I			Ldn	-	NEL
Autos: 58.6		5.7		55.0		48.	-	57.	-	58.
Medium Trucks: 52.4		0.9		44.5		43.	-	51.	-	51.
Heavy Trucks: 53.3	51	1.8		42.8		44.	0	52.	4	52.
Vehicle Noise: 60.5	58	3.7		55.6		50.	9	59.	4	59.9
Centerline Distance to Noise Conto	ur (in feet)									
			70 di		65 c		1	60 dBA	55	i dBA
	L	dn:	10		2	1		46		99
	CNE		11		2			49		106

	FHW	A-RD-77-108 H	IIGHW	AY NO	DISE P	REDICTI		DEL			
Road Nar	<i>rio:</i> Existing me: 2nd Ave ent: n/o Bear Vall	ey					Name: E umber: 1		/alley Mark	etplace	
SITE	SPECIFIC INF	PUT DATA				N	OISE N	IODE	L INPUT	s	
Highway Data				S	ite Cor	ditions (	'Hard =	10, S	oft = 15)		
Peak	r Percentage: 1 Hour Volume:	4,600 vehicles 10.00% 460 vehicles				edium Tru eavy Truc	cks (2 A	/	15		
	ehicle Speed:	45 mph		V	ehicle	Mix					-
Near/Far La	ane Distance:	44 feet		-		icleType		Dav	Evening	Night	Daily
Site Data								77.5%		9.6%	
Ba	arrier Height:	0.0 feet			М	ledium Tr	ucks:	84.8%	6 4.9%	10.3%	6 1.84%
Barrier Type (0-V		0.0				Heavy Tr	ucks:	86.5%	6 2.7%	10.8%	6 0.74%
Centerline D	list. to Barrier:	50.0 feet		N	oise S	ource Ele	vations	s (in f	eet)		
Centerline Dist	to Observer:	50.0 feet				Autos		000			-
Barrier Distance	e to Observer:	0.0 feet			Mediu	m Trucks	. 0	297			
Observer Height	(Above Pad):	5.0 feet				vy Trucks		006	Grade Ad	iustmer	nt: 0.0
F	Pad Elevation:	0.0 feet			neu	vy mache	. 0.0	000			
Ro	oad Elevation:	0.0 feet		Li	ane Eq	uivalent	Distand	e (in:	feet)		
	Road Grade:	0.0%				Autos	: 45.	177			
	Left View:	-90.0 degrees				m Trucks		981			
	Right View:	90.0 degrees	5		Hea	vy Trucks	45.0	000			
FHWA Noise Mod	lel Calculations										
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresn	el	Barrier Att	en Be	erm Atten
Autos	68.46	-5.32		0.56		-1.20		-4.65	0.0	000	0.000
Medium Trucks	79.45	-22.56		0.59		-1.20		-4.87	0.0	000	0.000
Heavy Trucks	84.25	-26.52		0.58		-1.20		-5.43	0.0	000	0.000
Unmitigated Nois	e Levels (withou	ut Topo and b	arrier a	ttenu	ation)						
VehicleType	Leq Peak Hour	Leq Day	Le	eq Eve	ening	Leq I	Vight		Ldn		ONEL
Autos	: 62.5	5 6	0.6		58.8		52.8		61.4	1	62.0
Medium Trucks	Medium Trucks: 56		4.8		48.4		46.9	)	55.3	3	55.6
Heavy Trucks			5.7		46.7		47.9		56.3		56.4
Vehicle Noise	01.0		2.6		59.4		54.8	1	63.3	5	63.8
Centerline Distan	ice to Noise Con	ntour (in feet)		70 dł	D A	65 (	ID A		60 dBA	5	5 dBA
		,	dn:	18		000		I '	83	5	179
		CN		18		3	-		83 89		1/9
		CN		19		4			99		192

Sunday, July 18, 2021

Sunday, July 18, 2021

	FHV	VA-RD-77-108	HIGH	WAY NO	DISE PRI	EDICTIO	N MODEL			
Scenario: Exis					I			Valley Mark	etplace	
Road Name: 2nd						Job Nun	nber: 1307	78		
Road Segment: s/o I	Bear Va	alley								
SITE SPECI	FIC IN	IPUT DATA						DEL INPUT	S	
Highway Data				S	te Cond	itions (H	ard = 10,	Soft = 15)		
Average Daily Traffic	'Adt):	1,590 vehicle	s				Auto	s: 15		
Peak Hour Percen	tage:	10.00%			Med	ium Truck	ks (2 Axles	s): 15		
Peak Hour Vol	ume:	159 vehicle	s		Hea	vy Trucks	(3+ Axle	s): 15		
Vehicle Sp	beed:	45 mph		V	ehicle M	ix				
Near/Far Lane Dist	ance:	44 feet		-		leType	Dav	Evenina	Niaht	Dailv
Site Data						Aut	os: 77.5	5% 12.9%	9.6%	6 97.429
Barrier He	iaht:	0.0 feet			Med	dium Truc	ks: 84.8	3% 4.9%	10.3%	5 1.849
Barrier Type (0-Wall, 1-B	erm):	0.0			He	eavy Truc	sks: 86.5	5% 2.7%	10.8%	6 0.74%
Centerline Dist. to Ba		50.0 feet		N	oise Sou	ırce Elev	ations (in	feet)		
Centerline Dist. to Obse		50.0 feet				Autos:	0.000	,		
Barrier Distance to Obse		0.0 feet			Medium	Trucks:	2.297			
Observer Height (Above	/	5.0 feet			Heavy	Trucks:	8.006	Grade Ad	justmen	t: 0.0
Pad Elev		0.0 feet		_						
Road Elev		0.0 feet		Li	ane Equ		istance (i	n feet)		
Road G		0.0%				Autos:	45.177			
	View:	-90.0 degre				Trucks:	44.981			
Right	View:	90.0 degre	es		Heavy	Trucks:	45.000			
FHWA Noise Model Calc		-								
VehicleType REN		Traffic Flow		tance	Finite F		Fresnel	Barrier Att		rm Atten
Autos:	68.46	-9.94		0.56		-1.20	-4.6		000	0.00
Medium Trucks:	79.45	-27.18		0.59		-1.20	-4.8		000	0.00
Heavy Trucks:	84.25	-31.13		0.58		-1.20	-5.4	3 0.0	000	0.00
Unmitigated Noise Level										
VehicleType Leq Pe				Leq Eve		Leq Nig	-	Ldn	-	NEL
Autos:	57 51		56.0 50.2		54.2 43.8		48.2 42.2	56.0 50.0	-	57. 50
Medium Trucks:										
Heavy Trucks:	52		51.1		42.0		43.3	51.		51.
Vehicle Noise: 59.7 58.0					54.8		50.2	58.	(	59.
Centerline Distance to Noise Contour (in feet)			70 dE	BA	65 dB	A	60 dBA	55	5 dBA	
			Ldn:	9		19		41		88

	FHV	/A-RD-77-108 I	HIGHWA	Y NOISE F	REDICT	ION MO	DEL			
Road Nan	<i>rio:</i> Existing ne: Hesperia nt: s/o Jasmine					t Name: I lumber:		alley Mark	etplace	
SITE	SPECIFIC IN	PUT DATA			I	NOISE	IODE		s	
Highway Data				Site Co.	nditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 2	0,040 vehicles					Autos:	15		
Peak Hour	Percentage:	10.00%		М	edium Ti	ucks (2 A	Axles):	15		
Peak H	our Volume:	2,004 vehicles		н	eavy Tru	cks (3+ A	Axles):	15		
Ve	hicle Speed:	45 mph		Vehicle	Mix					
Near/Far La	ne Distance:	72 feet			nicleType	<u> </u>	Dav	Evening	Night	Daily
Site Data							77.5%			97.429
	rrier Height:	0.0 feet		٨	1edium 7		84.8%		10.3%	
Barrier Type (0-V		0.0			Heavy 7		86.5%		10.8%	
	ist to Barrier:	62.0 feet								
Centerline Dist.		62.0 feet		Noise S		levation		eet)		
Barrier Distance		0.0 feet			Auto		000			
Observer Height		5.0 feet			Im Truck		297			
•	ad Elevation:	0.0 feet		Hea	vy Truck	(S. 8.)	006	Grade Ad	ustment	2 0.0
Ro	ad Elevation:	0.0 feet		Lane Ec	uivalen	t Distand	ce (in i	feet)		
	Road Grade:	0.0%			Auto	s: 50.	725			
	Left View:	-90.0 degrees	5	Media	ım Truck	s: 50.	550			
	Right View:	90.0 degrees	3	Hea	vy Trucł	s: 50.	567			
FHWA Noise Mod	el Calculations	;								
VehicleType	REMEL	Traffic Flow	Distand	ce Finite	e Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:		1.07		0.20	-1.20		-4.70		000	0.00
Medium Trucks:		-16.17		0.17	-1.20		-4.88		000	0.00
Heavy Trucks:		-20.13		0.18	-1.20		-5.32	0.0	000	0.00
Unmitigated Nois				,			1			
VehicleType	Leq Peak Hou			q Evening		Night		Ldn		NEL
Autos: Medium Trucks:	68. 61.		6.2 0.4	64.5 54.0		58.4 52.5		67.0 61.0		67. 61.
Heavy Trucks:	62.		0.4 1.3	54.0		52.5		61.0		62.
Vehicle Noise:			8.2	65.1		60.4		68.9		69.
Centerline Distan	ce to Noise Co	ntour (in feet)								
		,,		70 dBA	65	dBA	6	0 dBA	55	dBA
		1	dn:	53	. 1	14		245	5	527

Sunday, July 18, 2021

Scenario: Existing						Project	Name: F	Bear V	alley Mark	etplace	
Road Name: Hesperi							imber: 1		ancy mark	otpiaco	
Road Segment: n/o Jas						000/10		0070			
SITE SPECIFIC	: INP	UT DATA		1		N	OISE N	ODE		5	
Highway Data					Site Con	ditions (	Hard =	10, So	ft = 15)		
Average Daily Traffic (Ad	): 19	,650 vehicles					A	Autos:	15		
Peak Hour Percentag	e: 10	0.00%			Med	dium Tru	cks (2 A	xles):	15		
Peak Hour Volum	e: 1	,965 vehicles			Hea	avy Truc	ks (3+ A	xles):	15		
Vehicle Spee	d:	45 mph		ŀ	Vehicle N	Aix					
Near/Far Lane Distanc	e:	72 feet		F		cleType		Day	Evening	Night	Daily
Site Data					VCIII			77.5%	•	9.6%	
	4.	0.0.6			Me	dium Tr		B4.8%		10.3%	
Barrier Heigh Barrier Type (0-Wall, 1-Bern		0.0 feet				leavy Tr		B6.5%		10.8%	
Centerline Dist. to Barrie	·	62.0 feet		L							
Centerline Dist. to Observe		62.0 feet		-	Noise So				et)		
Barrier Distance to Observe		0.0 feet				Autos	. 0.0				
Observer Height (Above Pad		5.0 feet			Mediur	n Trucks	: 2.2	97			
Pad Elevatio	·	0.0 feet			Heav	y Trucks	: 8.0	106	Grade Adj	ustment	: 0.0
Road Elevatio		0.0 feet		ŀ	Lane Equ	ivalent	Distanc	e (in f	eet)		
Road Grad		0.0%		F		Autos					
Left Vier		-90.0 degrees			Mediur	n Trucks	50.5	50			
Right Vie		90.0 degrees			Heav	y Trucks					
FHWA Noise Model Calculat	ions										
VehicleType REMEL	7	raffic Flow	Dista	nce	Finite	Road	Fresne	e/	Barrier Atte	en Ber	m Atter
Autos: 68	.46	0.98		-0.2	20	-1.20		4.70	0.0	000	0.00
Medium Trucks: 79	.45	-16.26		-0.1	7	-1.20		4.88	0.0	000	0.00
Heavy Trucks: 84	.25	-20.21		-0.1	8	-1.20		-5.32	0.0	000	0.00
Unmitigated Noise Levels (w											
VehicleType Leq Peak		Leq Day		leq E	vening	Leq I	<u> </u>		Ldn		NEL
Autos:	68.0	-	5.1		64.4		58.3		66.9		67
Medium Trucks:	61.8		0.3		53.9		52.4		60.9		61
Heavy Trucks:	62.7		1.2		52.2		53.5		61.8	-	61
Vehicle Noise:	69.9	-	8.1		65.0		60.3		68.9	)	69
	Com	tour (in feet)									
Centerline Distance to Noise							ID A	6	0 dBA	55	dBA
Centerline Distance to Noise					dBA	65 a					
Centerline Distance to Noise		L	dn:	5	6 6 6 6	11	2		242 259	5	520 558

Barrier Height:         0.0 feet         Medium Trucks:         84.8%         4.9%         10.3%         1.84'           Barrier Type (0-Wall, 1-Berrn):         0.0         10.3%         1.84'           Centerline Dist. to Dserver:         50.0 feet         10.3%         1.84'           Barrier Type (0-Wall, 1-Berrn):         0.0 feet         Noise Source Elevations (in feet)         10.3%         1.84'           Centerline Dist. to Dserver:         50.0 feet         Noise Source Elevations (in feet)         10.8%         0.74'           Diserver Height (Above Pad):         5.0 feet         Autos:         2.297         10.8%         0.00           Road Elevation:         0.0 feet         Autos:         8.006         Grade Adjustment: 0.0         0.0           Road Grade:         0.0%         Autos:         45.177         Medium Trucks:         44.98           Heavy Trucks:         45.00         Medium Trucks:         45.00         45.00           FHWA Noise Model Calculations         VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fersnel         Barrier Atten         Bern Atten		FHV	VA-RD-77-108	HIGHW	AY N	IOISE PR	EDICT	ION MO	DEL			
Highway Data         Site Conditions (Hard = 10, Soft = 15)           Average Daily Traffic (Adt):         3,760 vehicles         Autos:         15           Peak Hour Percentage:         10.00%         Medium Trucks (2 Akles):         15           Peak Hour Volume:         376 vehicles         Medium Trucks (2 Akles):         15           Vehicle Speed:         45 mph         Near/Far Lane Distance:         44 feet         Vehicle Type         Day         Evening         Night         Daily           Site Data         Barrier Height:         0.0 feet         Autos:         77.5%         12.9%         9.6%         97.42'           Barrier Jype (0-Wail, 1-Berm):         0.0         feet         Medium Trucks:         84.8%         4.9%         10.3%         1.84'           Barrier Dist. to Barrier:         50.0 feet         Autos:         0.000         Medium Trucks:         2.297           Observer Height (Above Pad):         5.0 feet         Road Grade:         0.0%         Laft View:         9.0.0 degrees           Right View:         90.0 degrees         Right View:         90.0 degrees         Heavy Trucks:         45.000         0.000           Heavy Trucks:         84.25         -27.39         0.56         -1.20         -4.65         0.000	Road Nam	e: Jasmine	•							alley Mark	etplace	
Average Daily Traffic (Adt):         3,760 vehicles         Autos:         15           Peak Hour Percentage:         10,00%         Medium Trucks (2 Axles):         15           Peak Hour Volume:         376 vehicles         Medium Trucks (2 Axles):         15           Vehicle Speed:         45 mph         Heavy Trucks (3+ Axles):         15           Site Data         Autos:         75%         12.9%         9.6%         97.42'           Barrier Height:         0.0 feet         Medium Trucks:         44.8%         4.9%         10.3%         1.84'           Barrier Type (0: Wall, 1-Berm):         0.0         Centerline Dist. to Barrier:         50.0 feet         Molise Source Elevations (in feet)         Noise Source Elevations (in feet)         Noise Source Elevations (in feet)         0.0%         Left Ivew:         -0.0 degrees         Road Grade:         0.0%         Left Ivew:         -0.0 degrees         Medium Trucks:         4.981         Heavy Trucks:         4.981         -0.0           Road Grade:         0.0%         Distance         Finite Road         Fresnel         Barrier Atten         Bern Atten           Road Grade:         0.0%         Distance         Finite Road         Fresnel         Barrier Atten         Bern Atten           Wehilos Type         ReREMEL <th>SITE</th> <th>SPECIFIC IN</th> <th>IPUT DATA</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>S</th> <th></th>	SITE	SPECIFIC IN	IPUT DATA								S	
Noise         Deak Hour Percentage:         10.00%         Medium Trucks (2 Ades):         15           Peak Hour Volume:         376 vehicles         Heavy Trucks (3+ Axles):         15           Vehicle Speed:         45 mph         Vehicle Mix         Vehicle Mix         Vehicle Mix           Site Data         Autos:         77.5%         12.9%         9.6%         97.42'           Barrier Height:         0.0 feet         Autos:         77.5%         12.9%         9.6%         97.42'           Barrier Height:         0.0 feet         Medium Trucks:         84.8%         4.9%         10.3%         1.84'           Centerline Dist. to Barrier:         50.0 feet         Noise Source Elevations (in feet)         0.000           Deserver Height (Above Pad):         5.0 feet         Autos:         0.000         Medium Trucks:         2.297           Observer: Height Weiw:         90.0 degrees         Rad Grade:         0.0%         Autos:         4.981           Road Grade:         0.0 feet         Lane Equivalent Distance (in feet)         Autos:         4.981           Road Grade:         0.0 feet         Lane Equivalent Distance (in feet)         Autos:         4.65         0.000         0.00           Heavy Trucks:         84.25         -23	Highway Data				5	Site Cond	ditions	(Hard =	10, So	ft = 15)		
Peak Hour Volume:         376 vehicles           Vehicle Speed:         45 mph           Near/Far Lane Distance:         44 feet           Barrier Height:         0.0 feet           Barrier Height:         0.0 feet           Barrier Height:         0.0 feet           Barrier Jype (0-Wall, 1-Berm):         0.0           Centerline Dist. to Dserver:         50.0 feet           Barrier Distance to Observer:         0.0 feet           Barrier Distance to Observer:         0.0 feet           Road Grade:         0.0 feet           Road Grade:         0.0 feet           Road Grade:         0.0 feet           Road Grade:         0.0%           Left View:         -90.0 degrees           Right View:         90.0 degrees           FHWA Noise Model Calculations         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         79.45         -23.44         0.59         -1.20         -4.65         0.000         0.000           Medium Trucks:         84.92         -27.39         0.58         -1.20         -4.65         0.000         0.000           Heavy Trucks:         84.95         -27.39         0.58         -1.20         -4.65	Average Daily	Traffic (Adt):	3,760 vehicles						Autos:	15		
Vehicle Speed: Near/Far Lane Distance:         45 mph 44 feet         Vehicle Type         Day         Evening         Night         Daily           Site Data         Autos:         77.5%         12.9%         9.6%         97.42'           Barrier Height:         0.0 feet         Medium Trucks:         44.8%         4.9%         10.3%         1.84'           Barrier Type (0-Wall, 1-Berm):         0.0         Centerline Dist. to Diserver:         50.0 feet         Medium Trucks:         4.8%         4.9%         10.8%         0.74's           Centerline Dist. to Diserver:         50.0 feet         Autos:         0.00         Medium Trucks:         2.97'         10.8%         0.74's           Observer Height (Above Pad):         5.0 feet         Autos:         0.00         Medium Trucks:         4.98's         1.84's           Road Grade:         0.0%         Autos:         45.177         Medium Trucks:         4.98's           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         68.46         -6.20         0.56         -1.20         -4.65         0.000         0.000           Medium Trucks:         84.425         -27.39	Peak Hour	Percentage:	10.00%			Med	dium Tr	ucks (2 A	xles):	15		
Near/Far Lane Distance:         44 feet         Vehicle Type         Day         Evening         Night         Daily           Site Data         Autos:         77.5%         12.9%         9.6%         97.42'           Barrier Height:         0.0 feet         Medium Trucks:         84.8%         4.9%         10.3%         18.4%           Barrier Height:         0.0 feet         Medium Trucks:         84.8%         4.9%         10.3%         18.4%           Centerline Dist. to Barrier:         50.0 feet         Noise Source Elevations (in feet)         Noise Source Elevations (in feet)         0.0           Observer Height (Above Pad):         5.0 feet         Medium Trucks:         2.297         Medium Trucks:         8.006         Grade Adjustment:         0.0           Road Grade:         0.0 feet         Medium Trucks:         4.981         Heavy Trucks:         4.981         Heavy Trucks:         4.981           Right View:         90.0 degrees         Finite Road         Fresnel         Barrier Atten         Bermer Atten           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Bermer Atten           Medium Trucks:         79.45         -23.44         0.59         -1.20 </td <td>Peak H</td> <td>our Volume:</td> <td>376 vehicles</td> <td></td> <td></td> <td>Hea</td> <td>avy Tru</td> <td>cks (3+ A</td> <td>(xles)</td> <td>15</td> <td></td> <td></td>	Peak H	our Volume:	376 vehicles			Hea	avy Tru	cks (3+ A	(xles)	15		
Near/Far Lane Distance:         44 feet           VehicleType         Day         Evening         Night         Daily           Site Data         Autos:         7.5%         12.9%         9.6%         97.42'           Barrier Type (0-Wall, 1-Berm):         0.0         Medium Trucks:         84.8%         4.9%         10.3%         1.84'           Barrier Type (0-Wall, 1-Berm):         0.0         Medium Trucks:         84.8%         4.9%         10.3%         1.84'           Barrier Type (0-Wall, 1-Berm):         0.0         Noise Source Elevations (in feet)         Noise Source Elevations (in feet)         Noise Source Elevations (in feet)           Centerline Dist. to Observer:         0.0 feet         Autos:         8.006         Grade Adjustment:         0.0           Road Elevation:         0.0 feet         Left View:         90.0 degrees         Heavy Trucks:         8.006         Grade Adjustment:         0.0           FHWA Noise Model Calculations         Distance         Finite Road         Fresnel         Barrier Atten         Bern Atten           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Bern Atten           Autos:         68.46         -6.20         0.56	Ve	hicle Speed:	45 mph		1	/ehicle N	lix					
Site Data         Autos:         77.5%         12.9%         9.6%         97.42           Barrier Height:         0.0 feet         Medium Trucks:         84.8%         4.9%         10.3%         1.84'           Barrier Height:         0.0         Centerine Dist. to Barrier:         50.0 feet         Meaium Trucks:         84.8%         4.9%         10.3%         1.84'           Centerine Dist. to Barrier:         50.0 feet         Noise Source Elevations (in feet)         Autos:         0.000         Meaium Trucks:         2.297         Meaium Trucks:         2.297         Heavy Trucks:         8.006         Grade Adjustment:         0.0           Deserver Height (Above Pad):         0.0 feet         Autos:         4.98         1.84'         Heavy Trucks:         8.006         Grade Adjustment:         0.0           Road Elevation:         0.0 feet         Autos:         4.05'         0.000         Medium Trucks:         4.98         Heavy Trucks:         4.98         Heavy Trucks:         4.98         Heavy Trucks:         4.98         0.00         0.00           Mutos:         68.46         -6.20         0.56         -1.20         -4.65         0.000         0.00           Mutos:         68.46         -6.20         0.56         -1.20	Near/Far La	ne Distance:	44 feet		F			2	Dav	Evenina	Niaht	Daily
Barrier Type (IV-Wall, 1-Berm):         0.0 feet         Heavy Trucks:         86.5%         2.7%         10.8%         0.74'           Centerline Dist. to Diserver:         50.0 feet         Autos:         0.000         Noise Source Elevations (in feet)         Noise Source Elevations (in feet)         Noise Source Elevations (in feet)           Diserver Height (Above Pad):         5.0 feet         Autos:         0.000         Medium Trucks:         2.297           Moise Source Elevation:         0.0 feet         Autos:         6.17         Medium Trucks:         2.297           Moise Model Calculations         0.0%         Autos:         45.177         Medium Trucks:         45.177           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         68.46         -6.20         0.56         -1.20         -4.65         0.000         0.00           Medium Trucks:         79.45         -23.44         0.59         -1.20         -4.67         0.000         0.00           Unnitigated Noise Levels (without Topo and barrier attenuation)         Userbeing         Leq Deving         Leq Night         Ldn         CNEL           Autos:         65.4         53.9         4	Site Data									•		
Barrier Type (0-Wall, 1-Bern):         0.0         Heavy Trucks:         86.5%         2.7%         10.8%         0.74's           Centerline Dist. to Darrier:         50.0 feet         Noise Source Elevations (in feet)         Autos:         0.000           Deserver Height (Above Pad):         5.0 feet         Autos:         0.000         Grade Adjustment:         0.0           Road Grade:         0.0%         Autos:         6.5.17         Heavy Trucks:         4.981           Road Grade:         0.0%         Autos:         45.177         Heavy Trucks:         4.981           Weinicit Type         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Bern Atten           Autos:         68.46         -6.20         0.56         -1.20         -4.65         0.000         0.000           Medium Trucks:         79.45         -23.44         0.59         -1.20         -4.65         0.000         0.000           Umitigated Noise Levels (without Topo and barrier attenuation)         Use Reveals (without Topo and barrier attenuation)         Use Reveals (without Topo and barrier 3.93         61.9         0.54.4         54.4           Autos:         55.4         53.9         47.5         66.0         54.4 <t< td=""><td>Bar</td><td>rier Height:</td><td>0.0 feet</td><td></td><td></td><td>Me</td><td>dium T</td><td>rucks:</td><td>84.8%</td><td>4.9%</td><td>10.3%</td><td>1.84%</td></t<>	Bar	rier Height:	0.0 feet			Me	dium T	rucks:	84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Barrier:         50.0 feet           Centerline Dist. to Observer:         50.0 feet           Barrier Distance to Observer:         0.0 feet           Dbserver Height (Above Pad):         5.0 feet           Pad Elevation:         0.0 feet           Road Grade:         0.0%           Autos:         49.06           Grade Elevation:         0.0 feet           Road Grade:         0.0%           Autos:         45.177           Left View:         -90.0 degrees           FHWA Noise Model Calculations         Vehicle Type           VehicleType         REMEL         Traffic Flow           Distance         Finite Road         Fresnel           Medium Trucks:         84.6         -6.20         0.56           Heavy Trucks:         84.25         -23.44         0.59         -1.20           Medium Trucks:         84.25         -27.39         0.58         -1.20         -4.67         0.000         0.00           Medium Trucks:         85.4         55.4         55.4         55.4         55.4         55.4         55.4         55.4         55.4         55.4         55.4         55.4         55.4         55.4         55.4         55.4         <						H	leavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Observer:         5.0.0 feet         Autos:         0.000           Barrier Distance to Observer:         0.0 feet         Medium Trucks:         2.297           Observer Height (Above Pad):         5.0 feet         Heavy Trucks:         8.006         Grade Adjustment:         0.0           Pad Elevation:         0.0 feet         Lane Equivalent Distance (in feet)         Autos:         49.81           Road Grade:         0.0%         Autos:         45.00         Feet         Barrier Atten         Berrier Atten           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berrier Atten         Berrier Atten         Metium Trucks:         4.981           Heavy Trucks:         84.25         -23.44         0.59         -1.20         -4.65         0.000         0.00           Medium Trucks:         84.25         -27.39         0.58         -1.20         -5.43         0.000         0.00           Unntitigated Noise Levels (without Topo and barrier attenuation)         VehicleType         Leg Peak Hour         Leg Apy         Leg Vening         Leg Night         Ldn         CNEL           Autos:         61.6         59.7         58.0         51.9         60.5	Centerline Dis	st. to Barrier:	50.0 feet		,	Voise So	urco E	lovation	: (in fo	of)		
Barrier Distance to Observer:         0.0 feet         Medium Trucks:         2.297           Observer Height (Above Pad):         5.0 feet         Heavy Trucks:         8.006         Grade Adjustment:         0.0           Pad Elevation:         0.0 feet         Lane Equivalent Distance (in feet)         Lane Equivalent Distance (in feet)           Road Grade:         0.0%         Lane Equivalent Distance (in feet)         Medium Trucks:         4.981           Webicitype         Left View:         -90.0 degrees         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         6.846         -6.20         0.56         -1.20         -4.65         0.000         0.00           Medium Trucks:         79.45         -23.44         0.59         -1.20         -5.43         0.000         0.00           Medium Trucks:         84.25         -27.39         0.58         -1.20         -5.43         0.000         0.00           Uehicitype         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         61.6         59.7         58.0         51.9         60.5         61.           Medium Trucks:         55.4         53.9         47.5         66.0         54.4	Centerline Dist.	to Observer:	50.0 feet		÷	10.00 00						
Observer Height (Above Pad):         5.0 feet         Heavy Trucks:         8.006         Grade Adjustment:         0.0           Pad Elevation:         0.0 feet         Lane Equivalent Distance (in feet)           Left View:         -90.0 degrees         Autos:         45.177         Medium Trucks:         45.177           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Bern Atten           Autos:         68.46         -6.20         0.56         -1.20         -4.65         0.000         0.00           Medium Trucks:         79.45         -23.44         0.59         -1.20         -4.67         0.000         0.00           Medium Trucks:         79.45         -23.44         0.59         -1.20         -5.43         0.000         0.00           Unnitigated Noise Levels (without Topo and barrier attenuation)         VehicleType         Leg Daving         Leg Revinig         Led Night         Ldn         CNEL           Autos:         61.6         59.7         58.0         51.9         60.5         61.1           Medium Trucks:         55.4         53.9 </td <td>Barrier Distance</td> <td>to Observer:</td> <td>0.0 feet</td> <td></td> <td></td> <td>Mediun</td> <td></td> <td> ··</td> <td></td> <td></td> <td></td> <td></td>	Barrier Distance	to Observer:	0.0 feet			Mediun		··				
Pad Elevation:         0.0 feet         Lane Equivalent Distance (in feet)           Road Grade:         0.0%         Autos:         45.177           Left View:         -90.0 degrees         Medium Trucks:         44.981           Right View:         -90.0 degrees         Medium Trucks:         44.981           PHWA Noise Model Calculations         Medium Trucks:         45.000         Medium Trucks:           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         68.46         -6.20         0.56         -1.20         -4.65         0.000         0.00           Medium Trucks:         79.45         -23.44         0.59         -1.20         -4.67         0.000         0.00           Medium Trucks:         84.25         -27.39         0.58         -1.20         -5.43         0.000         0.00           Unmitigated Noise Levels (without Topo and barrier attenuation)         VehicleType         Leg Peak Hour         Leg Apy         Leg Night         Ldn         CNEL           Autos:         61.6         59.7         58.0         51.9         60.5         61.1           Medium Trucks:         55.4         53.9<	Observer Height (	Above Pad):	5.0 feet					•••		Grade Ad	iustment	0.0
Road Grade:         0.0%         Autos:         45.177           Left View:         -90.0 degrees         Medium Trucks:         44.981           Right View:         -90.0 degrees         Medium Trucks:         44.981           Heavy Trucks:         45.000         Heavy Trucks:         45.000           FHWA Noise Model Calculations         VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         68.46         -6.20         0.56         -1.20         -4.65         0.000         0.00           Medium Trucks:         79.45         -23.44         0.59         -1.20         -4.67         0.000         0.00           Heavy Trucks:         84.25         -27.39         0.58         -1.20         -4.67         0.000         0.00           Unmitigated Noise Levels (without Topo and barrier attenuation)         VehicleType         Leg Peak Hour         Leg Day         Leg Evening         Leg Night         Ldn         CNEL           Autos:         61.6         59.7         58.0         51.9         60.5         61.1           Medium Trucks:         55.4         53.9         47.5         45.0         55.4	Pa	ad Elevation:	0.0 feet									
Left View:         -90.0 degrees         Medium Trucks:         44.981           Right View:         90.0 degrees         Heavy Trucks:         45.000           FHWA Noise Model Calculations         Family Trucks:         45.000         Output           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         68.46         -6.20         0.56         -1.20         -4.65         0.000         0.00           Medium Trucks:         79.45         -23.44         0.59         -1.20         -4.67         0.000         0.00           Unmitigated Noise Levels (without Topo and barrier attenuation)         -5.43         0.000         0.00           VehicleType         Leq Revening         Leq Night         Ldn         CNEL           Autos:         61.6         59.7         58.0         51.9         60.5         61.           Medium Trucks:         55.4         53.9         47.5         46.0         54.4         55           VehicleType         Eq.2         54.8         45.8         47.0         55.4         55           Vehicle Noise:         63.5         61.7         58.6         53.9					L	ane Equ				feet)		
Right View:         90.0 degrees         Heavy Trucks:         45.000           FHWA Noise Model Calculations         Heavy Trucks:         45.000         4.65         0.000         0.000           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         68.46         -6.20         0.56         -1.20         -4.65         0.000         0.00           Medium Trucks:         79.45         -23.44         0.59         -1.20         -4.67         0.000         0.00           Heavy Trucks:         64.25         -27.39         0.58         -1.20         -5.43         0.000         0.00           Unmitigated Noise Levels (without Topo and barrier attenuation)         VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         61.6         59.7         58.0         51.9         60.5         61.1           Medium Trucks:         55.4         53.9         47.5         46.0         54.4         55.4           Heavy Trucks:         56.2         54.8         45.8         47.0         55.4         55.4           Vehicle Noise:	F											
FHWA Noise Model Calculations         Free Number of State State         Finite Road         Freshel         Barrier Atten         Bern Atten           Autos:         68.46         -6.20         0.56         -1.20         -4.65         0.000         0.00           Medium Trucks:         79.45         -23.44         0.59         -1.20         -4.67         0.000         0.00           Heavy Trucks:         84.25         -27.39         0.58         -1.20         -5.43         0.000         0.00           Unnitigated Noise Levels (without Topo and barrier attenuation)         VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         61.6         59.7         58.0         51.9         60.5         61.           Autos:         55.4         53.9         47.5         46.0         54.4         54.           Heavy Trucks:         56.2         54.8         45.8         47.0         55.4         55.           Vehicle Noise:         63.5         61.7         58.6         53.9         62.4         62           Centerline Distance to Noise Contour (in feet)         Tod BA         65 dBA         60 dBA         55 dBA         Ldn:         1												
VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Bern Atten           Autos:         68.46         -6.20         0.56         -1.20         -4.65         0.000         0.00           Medium Trucks:         79.45         -23.44         0.59         -1.20         -4.67         0.000         0.00           Heavy Trucks:         64.25         -27.39         0.58         -1.20         -5.43         0.000         0.00           Unmitigated Noise Levels (without Topo and barrier attenuation)         -5.43         0.000         0.00           VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Medium Trucks:         55.4         53.9         47.5         46.0         54.4         54.           Heavy Trucks:         56.2         54.8         45.8         47.0         55.4         55.           Vehicle Noise:         63.5         61.7         58.6         53.9         62.4         62           Centerline Distance to Noise Contour (in feet)		Right View:	90.0 degree	s		Heav	y Truck	's: 45.	000			
Autos:         68.46         -6.20         0.56         -1.20         -4.65         0.000         0.00           Medium Trucks:         79.45         -23.44         0.59         -1.20         -4.67         0.000         0.00           Heavy Trucks:         84.25         -27.39         0.58         -1.20         -4.67         0.000         0.00           Umritigated Noise Levels (without Top on and barrier attenuation)         VehicleType         Leg Peak Hour         Leg Day         Leg Evening         Leg Night         Ldn         CNEL           Autos:         61.6         59.7         58.0         51.9         60.5         61.           Medium Trucks:         55.4         53.9         47.5         46.0         54.4         54.           Heavy Trucks:         56.2         54.8         45.8         47.0         55.4         55.           Vehicle Noise:         63.5         61.7         58.6         53.9         62.4         62           Centerline Distance to Noise Contour (in feet)	FHWA Noise Mode	el Calculation	s									
Medium Trucks:         79.45         -23.44         0.59         -1.20         -4.87         0.000         0.000           Heavy Trucks:         84.25         -27.39         0.58         -1.20         -5.43         0.000         0.000           Unnitigated Noise Levels (without Topo and barrier attenuation)           -6.43         0.000         0.000           VehicloType         Leg Peak Hour         Leg Day         Leg Reining         Leg Night         Ldn         CNEL           Autos:         61.6         59.7         58.0         51.9         60.5         61.           Medium Trucks:         55.4         53.9         47.5         46.0         54.4         54.           Heavy Trucks:         56.2         54.8         45.8         47.0         55.4         55.9           Vehice Noise:         63.5         61.7         58.6         53.9         62.4         62.           Centerline Distance to Noise Contour (in feet)          70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         16         34         73         157				Distar					-			
Heavy Trucks:         84.25         -27.39         0.58         -1.20         -5.43         0.000         0.000           Unnitigated Noise Levels (without Topo and barrier attenuation)         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Vehicle Type         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Mutos:         61.6         59.7         58.0         51.9         60.5         61.1           Medium Trucks:         55.4         53.9         47.5         46.0         54.4         54.           Heavy Trucks:         56.2         54.8         45.8         47.0         55.4         55.           Vehicle Noise:         63.5         61.7         58.6         53.9         62.4         62           Centerline Distance to Noise Contour (in feet)						-						0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)           VehicleType         Leq Peak Hour         Leq Day         Leq Vehicle         Leq Night         Ldn         CNEL           Autos:         61.6         59.7         58.0         51.9         60.5         61.1           Medium Trucks:         55.4         53.9         47.5         46.0         54.4         54.           Heavy Trucks:         56.2         54.8         45.8         47.0         55.4         55.           Vehicle Noise:         63.5         61.7         58.6         53.9         62.4         62.2           Centerline Distance to Noise Contour (in feet)						-						
VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         61.6         59.7         56.0         51.9         60.5         61.           Medium Trucks:         55.4         53.9         47.5         46.0         54.4         54.           Heavy Trucks:         56.2         54.8         45.8         47.0         55.4         55.           Vehicle Noise:         63.5         61.7         58.6         53.9         62.4         62.           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         16         34         73         157	Heavy Trucks:	84.25	-27.39		0.58	3	-1.20		-5.43	0.0	000	0.00
Autos:         61.6         59.7         58.0         51.9         60.5         61.           Medium Trucks:         55.4         53.9         47.5         46.0         54.4         54.           Heavy Trucks:         56.2         54.8         45.8         47.0         55.4         55.           Vehicle Noise:         63.5         61.7         58.6         53.9         62.4         62           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         16         34         73         157												
Medium Trucks:         55.4         53.9         47.5         46.0         54.4         54.4           Heavy Trucks:         56.2         54.8         45.8         47.0         55.4         55.           Vehicle Noise:         63.5         61.7         58.6         53.9         62.4         62.           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         16         34         73         157					eq Ev	•	Leq					
Heavy Trucks:         56.2         54.8         45.8         47.0         55.4         55.           Vehicle Noise:         63.5         61.7         58.6         53.9         62.4         62.           Centerline Distance to Noise Contour (in feet)         To dBA         65 dBA         60 dBA         55 dBA           Ldn:         16         34         73         157												
Vehicle Noise:         63.5         61.7         58.6         53.9         62.4         62           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         16         34         73         157												
Contertine Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         16         34         73         157												
70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         16         34         73         157		0.0 01.1				58.6		53.9	)	62.4	1	62.9
Ldn: 16 34 73 157	Centerline Distanc	enterline Distance to Noise Contour (in feet)			70				-			
									6			
CNEL: 17 36 78 168						-						÷.
			CN	IEL:	1	/	3	00		18	1	00

Sunday, July 18, 2021

	FHW/	A-RD-77-108 HI	GHWAY	NOISE PI	REDICTIO	N MODEL			ĺ
	o: Existing e: Bear Valley t: w/o 7th Ave					ame: Bear aber: 1307	Valley Mark 8	etplace	
SITE	SPECIFIC INP	UT DATA			NO	ISE MOD	EL INPUT	s	
Highway Data				Site Con	ditions (H	ard = 10,	Soft = 15)		
Average Daily Peak Hour Peak H	Percentage: 1	,880 vehicles 0.00% ,488 vehicles			dium Truck avy Trucks		s): 15		
Vel	nicle Speed:	45 mph		Vehicle I	Mix				
Near/Far Lar	e Distance:	72 feet			icleType	Dav	Evening	Night	Daily
Site Data				1011	Aut		•	9.6%	
Bar	rier Height:	0.0 feet		M	edium Truc	ks: 84.8	% 4.9%	10.3%	1.849
Barrier Type (0-W	all, 1-Berm):	0.0		1	Heavy Truc	ks: 86.5		10.8%	0.749
Centerline Dis		62.0 feet		Noise So	ource Elev	ations (in	feet)		
Centerline Dist. I		62.0 feet			Autos:	0.000	,		
Barrier Distance t		0.0 feet		Mediu	m Trucks:	2.297			
Observer Height (J	,	5.0 feet		Heav	vy Trucks:	8.006	Grade Ad	justment:	0.0
	d Elevation:	0.0 feet							
	d Elevation:	0.0 feet		Lane Eq	uivalent D		n feet)		
F	Road Grade:	0.0%			Autos:	50.725			
	Left View: Right View:	-90.0 degrees 90.0 degrees			m Trucks: ry Trucks:	50.550 50.567			
FHWA Noise Mode	I Calculations								
VehicleType	REMEL 1	raffic Flow	Distance	Finite	Road	Fresnel	Barrier Att	en Beri	m Atten
Autos:	68.46	3.47	-0.2	20	-1.20	-4.7	0.0	000	0.00
Medium Trucks:	79.45	-13.76	-0.1	17	-1.20	-4.8	8 0.0	000	0.00
Heavy Trucks:	84.25	-17.72	-0.1	-	-1.20	-5.3	2 0.0	000	0.00
Unmitigated Noise								1	
	Leq Peak Hour	Leq Day	_	vening	Leq Nig		Ldn		VEL
Autos:	70.5		-	66.9		60.8	69.4		70.
Medium Trucks:	64.3		-	56.4		54.9	63.4		63.
Heavy Trucks:	65.2			54.7		55.9	64.3		64.
Vehicle Noise:	72.4		6	67.5		62.8	71.4	4	71.
Centerline Distanc	e to Noise Con	tour (in feet)	70	dBA	65 dB	A	60 dBA	55	dBA
		Ldr		76	164	·	354		63
		CNEL		82	176		380		18
		SHEL			.70		500	0	

		-RD-77-108 I									_
Scenario: E	5								alley Mark	etplace	
Road Name: E Road Segment: y						Job I	lumber:	13078			
Road Segment. V	v/o 3rd Ave										
	CIFIC INP	UT DATA							LINPUT	S	
Highway Data				5	site Cond	litions	(Hard =				
Average Daily Traf								Autos:			
Peak Hour Per	•	0.00%					rucks (2 A				
Peak Hour		574 vehicles			Hea	ivy Iru	icks (3+ A	(xies):	15		
	e Speed:	45 mph		ν	/ehicle N	lix					
Near/Far Lane D	vistance:	72 feet			Vehi	cleType	e	Day	Evening	Night	Daily
Site Data								77.5%	12.9%	9.6%	97.42
Barrier	Height:	0.0 feet						84.8%		10.3%	
Barrier Type (0-Wall,	1-Berm):	0.0			н	leavy 1	rucks:	86.5%	2.7%	10.8%	0.74
Centerline Dist. to	Barrier:	62.0 feet			loise So	urce E	levation	s (in fe	eet)		
Centerline Dist. to C		62.0 feet				Auto	os: 0.0	000			
Barrier Distance to C		0.0 feet			Mediun	n Truck	(s: 2.1	297			
Observer Height (Abo	,	5.0 feet			Heav	/ Truck	(s: 8.)	006	Grade Ad	iustment	0.0
	levation:	0.0 feet		-							
	levation:	0.0 feet		L	ane Equ		t Distand		teet)		
	d Grade:	0.0%			1.4 m all	Auto					
-		-90.0 degree			Mediun	r Truck V Truck					
Rig	ht View:	90.0 degrees			neav	y muci	(8. 50.	100			
FHWA Noise Model Ca	alculations										
VehicleType F	REMEL T	raffic Flow	Distar	nce	Finite I	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	68.46	3.58		-0.20	)	-1.20		-4.70	0.0	000	0.00
Medium Trucks:	79.45	-13.66		-0.17		-1.20		-4.88		000	0.00
Heavy Trucks:	84.25	-17.61		-0.18	3	-1.20		-5.32	0.0	000	0.00
Unmitigated Noise Le	vels (withou	t Topo and b	arrier a	attenu	uation)						
VehicleType Leq	Peak Hour	Leq Day	L	eq Ev	rening	Leq	Night		Ldn	CI	NEL
Autos:	70.6	6	8.7		67.0		60.9	)	69.	5	70
Medium Trucks:	64.4	-	2.9		56.5		55.0		63.	-	63
Heavy Trucks:	65.3		3.8		54.8		56.1		64.4		64
Vehicle Noise:	72.5	7	0.7		67.6		62.9	)	71.	5	71
Centerline Distance to	Noise Cont	our (in feet)									
				70 d	IBA	65	dBA	e	60 dBA	55	dBA
		L	dn:	78	3	1	67		360		75
			EL:				79		386		32

	FH	WA-RD-77-108	HIGHW	iay N	OISE PI	REDICT	TON MO	DEL			
Scenari	o: Existing					Projec	t Name:	Bear V	alley Mark	etplace	
Road Nam	e: Bear Valle	y				Job N	lumber:	13078			
Road Segmer	nt: e/o 7th Ave	e									
	SPECIFIC IN	NPUT DATA							L INPUT	s	
Highway Data				S	ite Con	ditions	(Hard =		,		
Average Daily	Traffic (Adt):	35,490 vehicles	5					Autos:	15		
Peak Hour	Percentage:	10.00%					rucks (2				
Peak H	our Volume:	3,549 vehicles	5		He	avy Tru	icks (3+	Axles):	15		
Ve	hicle Speed:	45 mph		v	ehicle	Mix					
Near/Far La	ne Distance:	72 feet		-	Veh	icleType	e	Dav	Evening	Night	Dailv
Site Data							Autos:	77.5%	•	•	97.429
		0.0 feet			м	edium T	rucks:	84.8%	4.9%	10.3%	
вал Barrier Type (0-W	rier Height:	0.0 reet				Heavy 7	rucks:	86.5%		10.8%	
Centerline Di		62.0 feet									
Centerline Dist.		62.0 feet		N	loise So	ource E	levatior	ns (in fe	eet)		
Barrier Distance		0.0 feet				Auto	os: 0	.000			
		5.0 feet			Mediu	m Truck	(s: 2	.297			
Observer Height (	ad Elevation:	0.0 feet			Heav	ry Truck	(s: 8	.006	Grade Adj	iustment.	0.0
	ad Elevation:	0.0 feet		1	ano Fa	uivalon	t Distar	co (in i	foot)		
	Road Grade:	0.0 feet		-		Auto		.725	000		
,	Left View:				Modiu	m Truck		.550			
	Right View:	-90.0 degree				y Truck		.567			
	Night view.	90.0 degree	:5		near	y macr	.3. 30	.307			
FHWA Noise Mode					r						
VehicleType	REMEL	Traffic Flow	Dista			Road	Fres		Barrier Atte		m Atter
Autos:	68.46			-0.20		-1.20		-4.70		000	0.00
Medium Trucks:	79.45			-0.17		-1.20		-4.88		000	0.00
Heavy Trucks:	84.25			-0.18		-1.20		-5.32	0.0	000	0.00
Unmitigated Noise VehicleType	Leg Peak Ho			eq Ev		Lea	Night		Ldn	CI	VEL
Autos:			68.7		66.9		60.	9	69.5	5	70
Medium Trucks:	64	4.4	62.9		56.5		55.	0	63.4	1	63
Heavy Trucks:	65	5.2	63.8		54.8		56.	0	64.4	1	64
Vehicle Noise:	72	2.5	70.7		67.6		62.	9	71.4	1	71
Centerline Distanc	e to Noise C	ontour (in feet,	)								
			1	70 d	RA	65	dBA	6	i0 dBA	55	dBA
								,			
			Ldn: NEL:	77	,	1	66 78	-	358 384	7	72 28

	FHV	VA-RD-77-108	HIGHW	AY N	OISE PI	REDICTIC	N MOD	EL			
	o: Existing e: Bear Valley nt: e/o 3rd Ave						lame: B mber: 13		alley Mark	etplace	
SITE S	SPECIFIC IN	PUT DATA				NC	DISE M	ODEI		s	
Highway Data				S	ite Con	ditions (H	lard = 1	0, So	ft = 15)		
Average Daily	Traffic (Adt):	35.710 vehicle	s				Α	utos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Truc	ks (2 A)	des):	15		
Peak He	our Volume:	3,571 vehicles	s		He	avy Truck	s (3+ A)	(les):	15		
Vel	hicle Speed:	45 mph		14	ehicle l	Mise					
Near/Far Lar	ne Distance:	72 feet		v		icleType		Day	Evening	Night	Daily
Site Data				_	ven			7.5%	12.9%	9.6%	
				-	14	edium Tru		4.8%	4.9%	10.39	
	rier Height:	0.0 feet				Heavy Tru		6.5%		10.89	
Barrier Type (0-Wa	. ,	0.0 62.0 feet								10.07	0 0.147
Centerline Dis Centerline Dist. 1		62.0 feet		Ν	loise So	ource Elev	vations	(in fe	et)		
Barrier Distance t		0.0 feet				Autos:	0.0	00			
					Mediu	m Trucks:	2.2	97			
Observer Height (/	Above Pad): Id Elevation:	5.0 feet			Heav	y Trucks:	8.0	06	Grade Ad	iustmer	nt: 0.0
	d Elevation:	0.0 feet		1	ano Fa	uivalent L	Distance	in fi	oof)		
	la Elevation: Road Grade:	0.0 feet		-	ane Ly	Autos:			eeŋ		
r	Left View:	0.0%			Madiu	m Trucks:					
	Right View:	-90.0 degree				vy Trucks:					
	Right view.	90.0 degree	es		near	y mucks.	50.5	07			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow	Distar			Road	Fresne		Barrier Att		erm Atten
Autos:	68.46	3.58		-0.20		-1.20		4.70		000	0.00
Medium Trucks:	79.45	-13.66		-0.17		-1.20		4.88		000	0.00
Heavy Trucks:	84.25	-17.62		-0.18		-1.20	-	5.32	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrier a	attenu	uation)						
VehicleType	Leq Peak Hou	r Leq Day	' L	eq Ev	ening	Leq N	ight		Ldn	(	ONEL
Autos:	70	.6	68.7		67.0		60.9		69.5	5	70.
Medium Trucks:	64	.4	62.9		56.5		55.0		63.5	5	63.
Heavy Trucks:	65	.3	63.8		54.8		56.1		64.4	1	64.
Vehicle Noise:	72	.5	70.7		67.6		62.9		71.5	5	71.
Centerline Distanc	e to Noise Co	ontour (in feet,	)								
				70 d		65 dE			0 dBA	5	5 dBA
			Ldn:	78		167			360		775
		CI	NEL:	83	3	179	9		386		831

Sunday, July 18, 2021

Sunday, July 18, 2021

	FHWA	-RD-77-108 HIG	HWAY N	IOISE PR	EDICTION	MODEL		
	Existing Bear Valley e/o 2nd Ave					ame: Bear aber: 13078	Valley Marke	etplace
SITE S	PECIFIC INP	UT DATA			NO	SE MOD	EL INPUTS	3
Highway Data				Site Con	ditions (Ha	ard = 10, S	oft = 15)	
Average Daily Ti Peak Hour P Peak Hou	ercentage: 1	,780 vehicles 0.00% ,478 vehicles			dium Truck avy Trucks		: 15	
Vehi	icle Speed:	45 mph		Vehicle N	liv			
Near/Far Lane	e Distance:	72 feet	H		cleType	Dav	Evening	Night Daily
Site Data				10/11	Aut		•	9.6% 97.42
		0.0 feet		Me	dium Truc	ks: 84.8	6 4.9%	10.3% 1.849
	ier Height:	0.0 teet		F	leavv Truc			10.8% 0.749
Barrier Type (0-Wa Centerline Dist		0.0 62.0 feet						10.070 0.71
Centerline Dist.		62.0 feet	1	Noise So	urce Eleva	ations (in a	feet)	
Barrier Distance to		0.0 feet			Autos:	0.000		
Observer Height (A		5.0 feet		Mediur	n Trucks:	2.297		
• (	bove Pad): I Elevation:	0.0 feet		Heav	y Trucks:	8.006	Grade Adj	ustment: 0.0
	l Elevation:	0.0 feet	6	ano Fau	ivalent Di	stanco (in	foot)	
	ad Grade:	0.0%	Ľ.	Lune Lqu	Autos:	50.725	leey	
7.0		-90.0 degrees		Mediur	n Trucks:	50.550		
ŀ	Right View:	90.0 degrees			y Trucks:	50.567		
FHWA Noise Model	Calculations							
VehicleType	REMEL T	raffic Flow D	listance	Finite	Road	Fresnel	Barrier Atte	en Berm Atten
Autos:	68.46	3.46	-0.2	0	-1.20	-4.70	0.0	00 0.00
Medium Trucks:	79.45	-13.78	-0.1	7	-1.20	-4.88	0.0	00 0.00
Heavy Trucks:	84.25	-17.73	-0.1	8	-1.20	-5.32	0.0	00 0.00
Unmitigated Noise	Levels (withou	t Topo and bar	rier atten	uation)				
VehicleType L	eq Peak Hour	Leq Day	Leg E	vening	Leq Nig	ıht	Ldn	CNEL
Autos:	70.5	68.6	;	66.9		60.8	69.4	70
Medium Trucks:	64.3	62.8	3	56.4		54.9	63.3	63
Heavy Trucks:	65.1	63.7	,	54.7		55.9	64.3	64
Vehicle Noise:	72.4	70.6	6	67.5		62.8	71.3	71
Centerline Distance	to Noise Com	tour (in feet)					-	
			70 0		65 dB/	4	60 dBA	55 dBA
		Ldn	. 7	6	164		353	762

Scenario: EP						Project	t Name:	Boor \	alley Mark	otolocc	
Road Name: 3rd	Av.o						l Name. Number:			etpiace	
Road Segment: s/o						300 1	iumber.	13070			
SITE SPEC	FIC INPU					r	NOISE	MODE		s	
Highway Data				Si	te Cond		(Hard =				
Average Daily Traffic	(Adt): 2.3	00 vehicles					-	Autos:	15		
Peak Hour Percer	, , ,,	.00%			Med	dium Tr	rucks (2	Axles):	15		
Peak Hour Vo	lume: 2	30 vehicles			Hea	avy Tru	icks (3+ .	Axles):	15		
Vehicle S	peed:	45 mph		14	ehicle N	Aiv					
Near/Far Lane Dist	tance:	44 feet				cleType		Dav	Evening	Niaht	Dailv
Site Data					VCIII		Autos:	77.5%		<b>J</b>	97.42
	aiahti	0.0 feet			Ме		rucks:	84.8%		10.3%	
Barrier H Barrier Type (0-Wall, 1-E	•	0.0 reet			H	leavy T	rucks:	86.5%		10.8%	
Centerline Dist. to B		0.0 50.0 feet									
Centerline Dist. to Obs		50.0 feet		N	oise So		levation		eet)		
Barrier Distance to Obs		0.0 feet				Auto		.000			
Observer Height (Above		5.0 feet			Mediun			.297	Grade Ad		
Pad Elev	ation:	0.0 feet			Heav	y Truck	S. 8.	.006	Glade Ad	usunen	. 0.0
Road Elev	ation:	0.0 feet		Lä	ane Equ	ıivalen	t Distan	ce (in	feet)		
Road 0	Grade:	0.0%				Auto	s: 45	.177			
Left	View: -9	90.0 degrees			Mediun	n Truck	(s: 44	.981			
Right	View: 9	0.0 degrees			Heav	y Truck	:s: 45	.000			
FHWA Noise Model Calc	ulations										
VehicleType REI	MEL Tr	affic Flow	Distan	ice	Finite I	Road	Fresi	nel	Barrier Att	en Ber	m Atter
Autos:	68.46	-8.33		0.56		-1.20		-4.65		000	0.00
Medium Trucks:	79.45	-25.57		0.59		-1.20		-4.87		000	0.00
Heavy Trucks:	84.25	-29.53		0.58		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise Leve			-								
	eak Hour	Leq Day		eq Eve		Leq	Night		Ldn		NEL
Autos:	59.5	•.	7.6		55.8		49.	-	58.4		59
Medium Trucks:	53.3		1.8		45.4		43.		52.3		52
Heavy Trucks:	54.1	-	2.7		43.7		44.	-	53.3		53
Vehicle Noise:	61.3		9.6		56.4		51.	5	60.3	5	60
Centerline Distance to N	oise Conto	our (in feet)	_	70 d	24	65	dBA	T (	C dBA	55	dB A
			dn:	70 dE	s <b>A</b>		dBA 24		50 dBA 52		dBA 13
		LC	<i>III.</i>	11			<u> </u>		52	1	13

FHWA-RD-77-10	<del>o ni</del> Gh	WATN	OISE PI			-				
Scenario: EP							/alley Mar	ketplac	е	
Road Name: 3rd Ave				Job N	umber.	13078				
Road Segment: n/o Silica										
SITE SPECIFIC INPUT DATA							EL INPU	TS		
Highway Data		S	ite Con	ditions	(Hard	= 10, S	oft = 15)			
Average Daily Traffic (Adt): 4,790 vehicl	es					Autos	15			
Peak Hour Percentage: 10.00%			Me	dium Tr	ucks (2	Axles)	: 15			
Peak Hour Volume: 479 vehicl	es		He	avy Tru	cks (3+	Axles)	: 15			
Vehicle Speed: 45 mph		V	ehicle l	Mix						
Near/Far Lane Distance: 44 feet		-		icleType		Day	Evening	Nigh	t L	Daily
Site Data					Autos:	77.5%	6 12.9%			7.429
Barrier Height: 0.0 feet			М	edium T	rucks:	84.89	6 4.9%	10.3	%	1.84%
Barrier Type (0-Wall, 1-Berm): 0.0			,	Heavy T	rucks:	86.5%	6 2.7%	10.8	%	0.74%
Centerline Dist to Barrier: 50.0 feet										
Centerline Dist. to Observer: 50.0 feet		N	loise So	ource El		ns (in f	eet)			
Barrier Distance to Observer: 0.0 feet				Auto		0.000				
Observer Height (Above Pad): 5.0 feet			Mediu	m Truck	s: 2	2.297				
Pad Elevation: 0.0 feet			Heav	/y Truck	s: 8	3.006	Grade A	djustme	nt: 0	.0
Road Elevation: 0.0 feet		1	ane Fo	uivalen	Dista	nce (in	feet)			
Road Grade: 0.0%		-	une 24	Auto		5.177	1000			
Left View: -90.0 dear			Mediu	m Truck		1.981				
Right View: 90.0 degr				/y Truck		5.000				
rught view. 90.0 degr	ees		near	ly mach	3. 4.	5.000				
FHWA Noise Model Calculations										
VehicleType REMEL Traffic Flow	Dist	tance	Finite	Road	Fres		Barrier A	tten E	lerm /	Atten
Autos: 68.46 -5.1	-	0.56		-1.20		-4.65		.000		0.00
Medium Trucks: 79.45 -22.3	9	0.59		-1.20		-4.87	0	.000		0.00
Heavy Trucks: 84.25 -26.3	4	0.58		-1.20		-5.43	0	.000		0.00
Unmitigated Noise Levels (without Topo and	d barrie	r attenu	uation)							
VehicleType Leq Peak Hour Leq Da	iy 🛛	Leq Ev	ening	Leq	Night		Ldn		CNE	L
Autos: 62.7	60.8		59.0		53	.0	61	.6		62.
Medium Trucks: 56.4	54.9		48.6		47	.0	55	.5		55.
Heavy Trucks: 57.3	55.9		46.8		48	.1	56	.4		56.
Vehicle Noise: 64.5	62.8		59.6		54	.9	63	.5		63.
Centerline Distance to Noise Contour (in fee	et)									
	T	70 di	BA	65	dBA		60 dBA		55 dB	A
	Ldn:	18		4	0	-	85		184	-
	Lun.				-					

	FH	WA-RD-77-108	8 HIG	HWAY I	NOISE	PREDICT		DEL			
	io: EP ne: 2nd Ave nt: n/o Jasmir	ie					t Name: Number:		alley Mark	etplace	
	SPECIFIC II	NPUT DATA							L INPUT	s	
Highway Data					Site Co	onditions	: (Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	3,410 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10.00%					rucks (2 /	,			
	lour Volume:	341 vehicle	es		ŀ	leavy Tru	ıcks (3+ )	Axles):	15		
	hicle Speed:	45 mph			Vehicle	e Mix					-
Near/Far La	ne Distance:	44 feet		ŀ	Ve	hicleTyp	е	Day	Evening	Night	Daily
Site Data				-			Autos:	77.5%	12.9%	9.6%	97.42%
Ba	rrier Heiaht:	0.0 feet				Medium 1	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0				Heavy T	Frucks:	86.5%	2.7%	10.8%	0.74%
Centerline Di		50.0 feet		Ī	Noise	Source E	levation	s (in fe	eet)		
Centerline Dist.		50.0 feet		ľ		Auto	os: 0.	000			
Barrier Distance		0.0 feet			Med	ium Trucl	ks: 2.	297			
Observer Height (		5.0 feet			He	avy Truck	ks: 8.	006	Grade Ad	justmen	t: 0.0
	ad Elevation:	0.0 feet		-			4 Diatau	( )	( 4)		
	ad Elevation:	0.0 feet		-	Lane E		t Distan		reet)		
	Road Grade:	0.0%				Auto ium Trucl		177			
	Left View: Right View:	-90.0 degre 90.0 degre				avy Truci		981 000			
FHWA Noise Mode	el Calculatior	IS									
VehicleType	REMEL	Traffic Flow	Di	stance	Fini	te Road	Fresr	nel	Barrier Att	en Be	rm Atten
Autos:	68.46	-6.62	2	0.5	56	-1.20		-4.65	0.0	000	0.000
Medium Trucks:	79.45	-23.86	6	0.5	59	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-27.82	2	0.5	58	-1.20		-5.43	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	l barr	ier atter	nuation	)					
VehicleType	Leq Peak Ho	ur Leq Da	у	Leq E	vening	Leg	Night		Ldn	С	NEL
Autos:	6	1.2	59.3		57	.5	51.5	5	60.	1	60.7
Medium Trucks:		5.0	53.5		47		45.6		54.0	-	54.3
Heavy Trucks:	5	5.8	54.4		45	.4	46.6	6	55.0	D	55.1
Vehicle Noise:	6	3.0	61.3		58	.1	53.5	5	62.	D	62.5
Centerline Distant	ce to Noise C	ontour (in fee	t)	70	dBA	65	dBA	6	0 dBA	55	dBA
			Ldn:		ава 15		32	0	68		147
		~	NFL:		15		32 34		73		147 157
		L L	IVEL:		10		34		15		157

Sunday, July 18, 2021

Sunday, July 18, 2021

	FH\	VA-RD-77-108	HIGHV	NAY NO	ISE PR	EDICTIO	N MOI	DEL			
Scenario Road Name						Project N Job Nur			alley Marke	etplace	
Road Segmen		alley				000 110	1001. 1	0070			
SITE S	PECIFIC IN	IPUT DATA				NO	ISE N	IODE		3	
Highway Data				Si	te Conc	litions (H	lard =	10, So	ft = 15)		
Average Daily	Traffic (Adt):	6,850 vehicles					A	Autos:	15		
Peak Hour I	Percentage:	10.00%			Med	lium Truc	ks (2 A	xles):	15		
Peak He	our Volume:	685 vehicles			Hea	vy Truck	s (3+ A	xles):	15		
Vel	nicle Speed:	45 mph		14	ehicle M	liv.					
Near/Far Lar	e Distance:	44 feet		V		cleType		Dav	Evening	Niaht	Daily
Site Data								77.5%	12.9%	9.6%	
Bar	rier Height:	0.0 feet			Me	dium Tru	cks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-Wa	•	0.0			н	eavy Tru	cks:	86.5%	2.7%	10.8%	0.749
Centerline Dis		50.0 feet		N	oise So	urce Elev	ations	(in fe	et)		
Centerline Dist. t	o Observer:	50.0 feet		-		Autos:	0.0				
Barrier Distance t	o Observer:	0.0 feet			Mediun	Trucks:	2.2	97			
Observer Height (/	Above Pad):	5.0 feet			Heav	/ Trucks:	8.0	06	Grade Adj	ustment	0.0
	d Elevation:	0.0 feet									
	d Elevation:	0.0 feet		Lá	ne Equ	ivalent D			eet)		
F	Road Grade:	0.0%				Autos:	45.1				
	Left View:	-90.0 degree				n Trucks:	44.9				
	Right View:	90.0 degree	s		Heavy	/ Trucks:	45.0	000			
FHWA Noise Mode	I Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista		Finite I		Fresne		Barrier Atte		m Atten
Autos:	68.46	-3.59		0.56		-1.20		4.65	0.0		0.00
Medium Trucks:	79.45	-20.83		0.59		-1.20		4.87	0.0		0.00
Heavy Trucks:	84.25			0.58		-1.20		-5.43	0.0	00	0.00
Unmitigated Noise											
	Leq Peak Hou			Leq Eve		Leq Ni	•		Ldn		VEL
Autos:	64		62.3		60.6		54.5		63.1		63.
Medium Trucks:	58		56.5		50.1		48.6		57.0		57.
Heavy Trucks:	58		57.4		48.4		49.6		58.0		58.
Vehicle Noise:	66		64.3		61.2		56.5		65.0		65.
Centerline Distanc	e to Noise Co	ontour (in feet)		70 dF	24	65 dF	24	6	0 dBA	55	dBA
			Ldn:	70 dE 23	~	50 aE		0	108 108		33
			Lan: JEL	23 25		50 54			108	_	33 50
		CI	*	25		34			110	2	

	FHW	A-RD-77-108	HIGHWA	Y NOISE P	REDICT	ION MO	DEL			
Scenario: Road Name: Road Segment:	Hesperia					t Name: I Number:		/alley Mark	etplace	
SITE SP	ECIFIC INI	PUT DATA							s	
Highway Data				Site Cor	nditions	(Hard =	10, So	oft = 15)		
Average Daily Tra	ffic (Adt): 2	0,880 vehicles					Autos:	15		
Peak Hour Pe	rcentage:	10.00%		M	edium Ti	rucks (2 A	Axles):	15		
Peak Hou	Volume:	2,088 vehicles		H	eavy Tru	icks (3+ A	Axles):	15		
	le Speed:	45 mph		Vehicle	Mix					
Near/Far Lane	Distance:	72 feet		Vel	nicleType	е	Day	Evening	Night	Daily
Site Data						Autos:	77.5%	12.9%	9.6%	97.429
Barrie	r Height:	0.0 feet		N	ledium 7	rucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-Wall,		0.0			Heavy 1	rucks:	86.5%	2.7%	10.8%	0.749
Centerline Dist.	o Barrier:	62.0 feet		Noise S	ource F	levation	e (in fi	oof)		
Centerline Dist. to	Observer:	62.0 feet		10130 0	Auto		000			
Barrier Distance to	Observer:	0.0 feet		Medii	m Truck		297			
Observer Height (Ab		5.0 feet			vy Truck		006	Grade Ad	iustment	: 0.0
	Elevation:	0.0 feet			·					
	Elevation:	0.0 feet		Lane Eq		t Distand		feet)		
	ad Grade:	0.0%		11-16	Auto m Truck		725 550			
	Left View: ight View:	-90.0 degree 90.0 degree			vy Truck		550 567			
	gni view.	90.0 degree	5	1100	vy maor		007			
FHWA Noise Model C	alculations									
VehicleType	REMEL	Traffic Flow	Distan	ce Finite	Road	Fresn	nel	Barrier Att	en Ber	m Atten
Autos:	68.46	1.25		-0.20	-1.20		-4.70		000	0.00
Medium Trucks:	79.45	-15.99		0.17	-1.20		-4.88		000	0.00
Heavy Trucks:	84.25	-19.95		-0.18	-1.20		-5.32	0.0	000	0.00
Unmitigated Noise L			arrier a	ttenuation)						
	q Peak Hour			q Evening		Night		Ldn		NEL
Autos:	68.		6.4	64.6		58.6		67.2	-	67.
Medium Trucks: Heavy Trucks:	62. 62.		0.6 1.5	54.2 52.5		52.7 53.7		61.1 62.1		61. 62.
Vehicle Noise:	70.3		8.4	52.t		53.7		69.1		62.
			0.4	05.0	)	00.0	)	09.	1	09.
Centerline Distance t	o Noise Coi	ntour (in feet)		70 dBA	65	dBA	1	60 dBA	FF	dBA
		,	.dn:	70 dBA 54		ава 17		252		ава 542
			un.	34		117		202		/ <b>T</b>

		NA-RD-77-108 H								
Scenar								alley Mark	etplace	
	ne: 2nd Ave				Job	Number:	13078			
Road Segme	nt: s/o Bear Va	alley								
	SPECIFIC IN	IPUT DATA						L INPUT	S	
Highway Data				Sit	e Condition:	s (Hard =	: 10, So	oft = 15)		
Average Daily	Traffic (Adt):	2,000 vehicles					Autos:	15		
Peak Hour	Percentage:	10.00%			Medium T	rucks (2	Axles):	15		
Peak H	lour Volume:	200 vehicles			Heavy Tr	ucks (3+ .	Axles):	15		
Ve	ehicle Speed:	45 mph		Ve	hicle Mix					
Near/Far La	ne Distance:	44 feet			VehicleTyp	e	Day	Evening	Night	Daily
Site Data						Autos:	77.5%	12.9%	9.6%	97.42
Ra	rrier Height:	0.0 feet			Medium	Trucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-V		0.0			Heavy	Trucks:	86.5%	2.7%	10.8%	0.749
Centerline D	ist. to Barrier:	50.0 feet		No	ise Source E	levation	s (in f	eet)		
Centerline Dist.	to Observer:	50.0 feet			Aut		000	,		
Barrier Distance	to Observer:	0.0 feet			Medium Truc		297			
Observer Height	(Above Pad):	5.0 feet			Heavy Truc		006	Grade Ad	iustment	0.0
P	ad Elevation:	0.0 feet								
Ro	ad Elevation:	0.0 feet		La	ne Equivaleı			feet)		
	Road Grade:	0.0%			Aut		.177			
	Left View:	-90.0 degrees			Medium Truc		.981			
	Right View:	90.0 degrees			Heavy Truc	ks: 45	.000			
FHWA Noise Mod	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite Road	Fresi	nel	Barrier Att	en Ber	m Atten
Autos:	68.46	-8.94		0.56	-1.20	)	-4.65	0.0	000	0.00
Medium Trucks:	79.45	-26.18		0.59	-1.20	)	-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-30.13		0.58	-1.20	)	-5.43	0.0	000	0.00
Unmitigated Nois	e Levels (with	out Topo and b	arrier a	ttenua	tion)					
VehicleType	Leq Peak Hou	ır Leq Day	Le	eq Eve	ning Lea	q Night		Ldn	C	NEL
Autos:			7.0		55.2	49.	-	57.	-	58
Medium Trucks:		-	1.1		44.8	43.	-	51.		51.
Heavy Trucks:		.5 5	2.1		43.0	44.	3	52.	3	52.
Vehicle Noise:	60	.7 5	9.0		55.8	51.	2	59.	7	60.
	ce to Noise Co	ontour (in feet)								
Centerline Distan				70 dB	A 6!	5 dBA	(	60 dBA	55	dBA
Centerline Distan										
Centerline Distan		L	dn:	10		22 24		48	1	03

	FHW	A-RD-77-108 H	IGHWAY	NOISE P	REDICTIO	ON MODE	L		
	rio: EP ne: Hesperia nt: s/o Jasmine					Vame: Be imber: 13	ar Valley Mark 078	etplace	
SITE	SPECIFIC INF	PUT DATA			N	DISE MO	DEL INPUT	S	
Highway Data				Site Cor	ditions (	Hard = 10	, Soft = 15)		
Average Daily	Traffic (Adt): 20	0,860 vehicles				Au	tos: 15		
Peak Hour	Percentage:	10.00%		Me	edium Tru	cks (2 Axl	es): 15		
Peak H	lour Volume: 2	2,086 vehicles		He	avy Truci	ks (3+ Axl	es): 15		
Ve	hicle Speed:	45 mph		Vehicle	Mix				
Near/Far La	ne Distance:	72 feet			icleType	Da	y Evening	Night	Daily
Site Data				Ven			.5% 12.9%	9.6%	
					edium Tri		.3% 12.3%	10.3%	1.84%
	rrier Height:	0.0 feet			Heavy Tru		.5% 2.7%	10.8%	0.74%
Barrier Type (0-V	. ,	0.0 62.0 feet						10.070	0.1470
Centerline Di Centerline Dist.	st. to Barrier:	62.0 feet		Noise S	ource Ele	vations (	in feet)		
Barrier Distance		0.0 feet			Autos	0.00	D		
Observer Height		5.0 feet		Mediu	m Trucks	2.29			
•	(ADOVE Fau). ad Elevation:	0.0 feet		Hea	vy Trucks	8.00	6 Grade Adj	iustment:	0.0
	ad Elevation: ad Elevation:	0.0 feet		Lane Fo	uivalent	Distance	(in feet)		
	Road Grade:	0.0%		Lano Lq	Autos		, ,		
	Left View:	-90.0 degrees		Mediu	m Trucks				
	Right View:	90.0 degrees			vy Trucks	00.00	-		
	rught tion.	50.0 degrees			,	00.00			
FHWA Noise Mod									
VehicleType	REMEL		Distance		Road	Fresnel	Barrier Att		m Atten
Autos:	68.46	1.24	-0.		-1.20			000	0.000
Medium Trucks:		-16.00	-0.		-1.20			000	0.000
Heavy Trucks:	84.25	-19.95	-0.	18	-1.20	-5.	.32 0.0	000	0.000
Unmitigated Nois			nrrier atte	nuation)					
VehicleType	Leq Peak Hour			Evening	Leq N	•	Ldn		VEL
Autos:				64.6		58.6	67.2	-	67.8
Medium Trucks:				54.2		52.7	61.1		61.4
Heavy Trucks:	62.9	9 61	.5	52.5		53.7	62.1	1	62.2
Vehicle Noise:	70.1	1 68	.4	65.3		60.6	69.1	1	69.6
Centerline Distan	ce to Noise Cor	ntour (in feet)							
			70	) dBA	65 d	BA	60 dBA	55	dBA
		Ld		54	11	7	251	5	42
		CNE	EL:	58	12	5	270	5	81

Sunday, July 18, 2021

Sunday, July 18, 2021

Sunday, July 18, 2021

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	FHV	VA-RD-77-108	HIGHWA	Y NC	DISE PF	REDICTIO		DEL			
Scenario Road Name Road Segmen	e: Jasmine	9					Vame: E Imber: 1		alley Marke	etplace	
SITE S	SPECIFIC IN	IPUT DATA				N	OISE N	IODE	L INPUTS	6	
Highway Data				Si	te Con	ditions (	Hard =	10, So	ft = 15)		
	Percentage: our Volume:	4,170 vehicles 10.00% 417 vehicles				dium Tru avy Truc	cks (2 A		15 15 15		
	nicle Speed:	45 mph		Ve	hicle I	<i>lix</i>					
Near/Far Lar	ie Distance:	44 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	97.42
Bar	rier Height:	0.0 feet			Me	edium Tru	ucks:	84.8%	4.9%	10.3%	1.84
Barrier Type (0-Wa		0.0			ŀ	leavy Tru	ucks:	86.5%	2.7%	10.8%	0.74
Centerline Dis		50.0 feet		N	oise So	urce Ele	vations	s (in fe	et)		
Centerline Dist. t		50.0 feet				Autos	: 0.0	000			
Barrier Distance t		0.0 feet			Mediur	n Trucks	: 2.2	297			
Observer Height (/	,	5.0 feet			Heav	y Trucks	: 8.0	006	Grade Adj	ustment	0.0
	d Elevation:	0.0 feet				-					
	d Elevation:	0.0 feet		Lá	ne Equ	ivalent			eet)		
F	Road Grade:	0.0%				Autos					
	Left View: Right View:	-90.0 degree 90.0 degree				n Trucks y Trucks					
FHWA Noise Mode	I Calculation	s									
VehicleType	REMEL	Traffic Flow	Distanc	e	Finite	Road	Fresn	el i	Barrier Atte	en Ber	m Atter
Autos:	68.46	-5.75		0.56		-1.20		-4.65	0.0	00	0.00
Medium Trucks:	79.45	-22.99		0.59		-1.20		-4.87	0.0	00	0.00
Heavy Trucks:	84.25	-26.94		0.58		-1.20		-5.43	0.0	00	0.00
Unmitigated Noise	Levels (with	out Topo and I	oarrier at	tenu	ation)						
VehicleType	Leq Peak Hou	r Leq Day	Lee	q Eve	ening	Leq N	light		Ldn	CI	VEL
Autos:	62	.1 6	60.2		58.4		52.3	_	61.0		61
Medium Trucks:	55	.8 5	54.3		48.0		46.4		54.9		55
Heavy Trucks:	56	.7 5	55.3		46.2		47.5		55.8		56
Vehicle Noise:	63	.9 6	32.2		59.0		54.3		62.9		63
Centerline Distanc	e to Noise Co	ontour (in feet)						1			
				70 dE	3A	65 d		6	0 dBA		dBA
			dn:	17		36	-		78		68
		CN	IEL:	18		39	)		83	1	80

	FHW	/A-RD-77-108	HIGHWA	Y NOISE P	REDICT	ION MO	DEL			
	o: EP e: Bear Valley nt: e/o 7th Ave					t Name: I Number:		/alley Mark	etplace	
SITE	SPECIFIC IN	PUT DATA							S	
Highway Data				Site Cor	nditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 3	8,360 vehicles					Autos:	15		
Peak Hour	Percentage:	10.00%		Me	edium Ti	rucks (2 A	Axles):	15		
Peak H	our Volume:	3,836 vehicles		He	eavy Tru	icks (3+ A	Axles):	15		
	hicle Speed:	45 mph		Vehicle	Mix					
Near/Far La	ne Distance:	72 feet		Veł	nicleType	е	Day	Evening	Night	Daily
Site Data						Autos:	77.5%	12.9%	9.6%	97.429
Bar	rier Height:	0.0 feet		M	ledium 7	rucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-W		0.0			Heavy 1	rucks:	86.5%	2.7%	10.8%	0.749
Centerline Dis	. ,	62.0 feet		Noise S	ource F	levation	s (in f	eet)		
Centerline Dist.	to Observer:	62.0 feet		110/38 3	Auto		000			
Barrier Distance	to Observer:	0.0 feet		Mediu	m Truck		297			
Observer Height (		5.0 feet			vy Truck		006	Grade Ad	justment	: 0.0
	ad Elevation:	0.0 feet			·					
	d Elevation:	0.0 feet		Lane Eq		t Distand		feet)		
,	Road Grade: Left View:	0.0%		Madii	Auto m Truck		725 550			
	Right View:	-90.0 degree 90.0 degree			vy Truck		550 567			
	Right view.	90.0 degree	, ,	neu	vy maor		507			
FHWA Noise Mode										
VehicleType	REMEL	Traffic Flow	Distan		Road	Fresn	-	Barrier Att		m Atten
Autos:	68.46	3.89		0.20	-1.20		-4.70		000	0.00
Medium Trucks:	79.45	-13.35		0.17	-1.20 -1.20		-4.88		000	0.00
Heavy Trucks:	84.25	-17.31		-0.18	-1.20		-5.32	0.0	000	0.00
Unmitigated Noise				,			1			
VehicleType Autos:	Leq Peak Hour		9.1	q Evening 67.3		Night 61.2		Ldn 69.9		NEL 70
Autos: Medium Trucks:	71. 64.		9.1 3.2	67.3 56.9		61.2 55.3	-	69.9	-	70. 64.
Heavy Trucks:	65.		3.2 4.1	55.1		56.4		64.7		64.
Vehicle Noise:	72.	-	1.1	67.9		63.2		71.8		72.
Centerline Distanc	o to Noiso Co	ntour (in foot)							-	
Centernite Distanc	0 10 110/30 00	mour (mileel)		70 dBA	65	dBA	6	50 dBA	55	dBA
		L	dn:	81		75	1	377		313

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

	FHV	VA-RD-77-108 H	IGHWA	NOISE PE	REDICTIO	N MODEL			
	io: EP le: Bear Valley nt: w/o 7th Ave					ame: Bear \ nber: 13078		etplace	
SITE	SPECIFIC IN	PUT DATA			NO	ISE MODI	EL INPUT	s	
Highway Data				Site Con	ditions (H	lard = 10, S	oft = 15)		
Average Daily	Traffic (Adt): 3	37,410 vehicles				Autos	: 15		
Peak Hour	Percentage:	10.00%		Me	dium Truc	ks (2 Axles)	: 15		
Peak H	lour Volume:	3,741 vehicles		He	avy Truck	s (3+ Axles)	: 15		
Ve	hicle Speed:	45 mph		Vehicle I	Mix				
Near/Far La	ne Distance:	72 feet			icleType	Day	Evening	Night	Daily
Site Data						tos: 77.5%	•	9.6%	
Ba	rrier Heiaht:	0.0 feet		Me	edium Trud	cks: 84.89	6 4.9%	10.3%	1.84%
Barrier Type (0-W		0.0		F	Heavy True	cks: 86.5%	6 2.7%	10.8%	0.74%
Centerline Dis	. ,	62.0 feet							
Centerline Dist.		62.0 feet		Noise Sc	Autos:	ations (in f	eet)	-	-
Barrier Distance	to Observer:	0.0 feet				0.000 2.297			
Observer Height (	Above Pad):	5.0 feet			m Trucks:	2.297 8.006	Grade Ad	liuctmont	H 0.0
Pa	ad Elevation:	0.0 feet		Heav	y Trucks:	8.006	Grade Au	jusunen	. 0.0
Roa	ad Elevation:	0.0 feet		Lane Equ		istance (in	feet)		
I	Road Grade:	0.0%			Autos:	50.725			
	Left View:	-90.0 degrees			m Trucks:	50.550			
	Right View:	90.0 degrees		Heav	ry Trucks:	50.567			
FHWA Noise Mode	el Calculations	5							-
VehicleType	REMEL	Traffic Flow	Distance	e Finite	Road	Fresnel	Barrier Att	ten Ber	rm Atten
Autos:	68.46	3.78	-0	.20	-1.20	-4.70	0.0	000	0.000
Medium Trucks:	79.45	-13.46		.17	-1.20	-4.88		000	0.000
Heavy Trucks:	84.25	-17.42	-	.18	-1.20	-5.32	0.0	000	0.000
Unmitigated Noise				,					
	Leq Peak Hou			Evening	Leq Ni		Ldn		NEL
Autos:	70			67.2		61.1	69.		70.4
Medium Trucks:	64			56.7		55.2	63.		63.9
Heavy Trucks:	65			55.0		56.3	64.		64.7
Vehicle Noise:	72		).9	67.8		63.1	71.	7	72.1
Centerline Distance	e to Noise Co	ntour (in feet)	-	0.404	05.15		0.404		
				0 dBA	65 dE		60 dBA		dBA
		CNE	in:	80 86	172 185		371 398		799 358
		CIVE	:L.	00	185		290	6	000

Average Daily Traffic (Adi): 38,630 vehicles         Autos:         15           Peak Hour Percentage:         10.00%         Medium Trucks (2 Axles):         15           Peak Hour Volume:         3,863 vehicles         Heavy Trucks (3+ Axles):         15           Vehicle Speed:         45 mph         Vehicle Type         Day         Evening         Night         Daily           Site Data         Autos:         72 feet         Vehicle Type         Day         Evening         Night         Daily           Barrier Type (0-Wall, 1-Berm):         0.0         externine Dist. to Barrier:         62.0 feet         Autos::         0.00         Medium Trucks:         84.5%         2.7%         10.3%         0.749           Observer Height (Above Pad):         5.0 feet         Autos::         0.00         Medium Trucks:         80.06         Grade Adjustment:         0.0           Road Elevation:         0.0 feet         Autos::         50.725         Medium Trucks:         50.567           FHWA Noise Model Calculations         Vehicle Type         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         63.46         3.92         -0.20         -1.20         -6.32         0.00		FHV	VA-RD-77-108 I	IIGHW.	AY N	OISE PF	REDICTIO	ом мо	DEL			
Highway Data         Site Conditions (Hard = 10, Soft = 15)           Average Daily Traffic (Adt): 38,630 vehicles         Autos: 15           Peak Hour Porcentage: 10.00%         Medium Trucks (2 Avles): 15           Peak Hour Volume: 3,863 vehicles         Medium Trucks (2 Avles): 15           Vehicle Speed: 45 mph         Medium Trucks (2 Avles): 15           Barrier Height: 0.0 feet         Day         Evening         Night         Daily           Barrier Type (0-Wall, 1-Berm): 0.0         Centerline Dist. to Barrier: 62.0 feet         Autos: 0.000         Noise Source Elevations (in feet)           Centerline Dist. to Observer: 0.0 feet         Road Grade: 0.0%         Autos: 0.000         Medium Trucks: 8.06         Grade Adjustment: 0.0           Pad Elevation: 0.0 feet         Road Grade: 0.0%         Lark Urots: 0.725         Medium Trucks: 50.560           FHWA Noise Model Calculations         Vehice Type         Control         Fresnel         Barrier Atten           Autos: 71.02         -17.28         -0.120         -4.70         0.000         0.00           Medium Trucks: 84.49         0.90         o.000         0.000         0.000         0.000           Moise Source Elevation: 0.0 feet         Road Grade: 0.0%         Lark Equivalent Distance (in feet)         Autos: 0.560         0.550         Heavy Trucks: 50.560	Road Nan	ne: Bear Valley								alley Mark	etplace	
Average Daily Traffic (Adi): 38,630 vehicles Peak Hour Percentage: 10.00%         Autos: 15           Peak Hour Percentage: 10.00%         Medium Trucks (2 Axles): 15           Peak Hour Volume: 3,863 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 72 feet         Medium Trucks (3+ Axles): 15           Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0         Noise Source Elevations (in feet)           Centerline Dist. to Desriver: 62.0 feet Centerline Dist. to Desriver: 62.0 feet Barrier Distance to Observer: 0.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0%         Noise Source Elevations (in feet)           Left View: -90.0 degrees Right View: 90.0 degrees Right View: 90.0 degrees         Fresnel         Barrier Atten         Berrier Atten           VehicleType         REMEL         Traffic Flow         Distance         Fresnel         Barrier Atten           VehicleType         ReModel Calculations         0.0 degrees         Fresnel         Barrier Atten         Berrier Atten           VehicleType         ReModel Calculations         0.01 degrees         Fresnel         Barrier Atten         Berrier Atten           VehicleType         ReMedium Trucks:         63.0         -0.12         -4.70         0.000         0.00           Medium Trucks:         64.6         3.92         -0.20         -1.20         -4.88         0.000         0.00 <t< th=""><th>SITE</th><th>SPECIFIC IN</th><th>PUT DATA</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>5</th><th></th></t<>	SITE	SPECIFIC IN	PUT DATA								5	
Beak Hour Percentage:         10.00%         Medium Trucks (2 Axles):         15           Peak Hour Volume:         3.863 vehicles         Heavy Trucks (3* Axles):         15           Vehicle Speed:         45 mph         Vehicle Type         Day         Evening         Night         Daily           Site Data         0.0 feet         Wehicle Mix         Autos:         77.5%         12.9%         9.6%         97.42'           Barrier Height:         0.0 feet         Medium Trucks:         8.48'         4.9%         10.3%         1.84'           Barrier Dist. to Diserver:         62.0 feet         Moles Source Elevations (in feet)         0.00         7.42'           Observer Height:         0.0 feet         Autos:         0.000         Medium Trucks:         2.297           Observer Height:         0.0 feet         Autos:         50.50         Heavy Trucks:         50.550           Road Elevation:         0.0 feet         Lane Equivalent Distance (in feet)         0.000         0.00           Road Grade:         0.0'%         Late Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Bermat Atten           Autos:         68.46         3.92         -0.20         -1.20         -4.70         0.000 <th>Highway Data</th> <th></th> <th></th> <th></th> <th>S</th> <th>ite Con</th> <th>ditions (</th> <th>Hard =</th> <th>10, Sc</th> <th>oft = 15)</th> <th></th> <th></th>	Highway Data				S	ite Con	ditions (	Hard =	10, Sc	oft = 15)		
Peak Hour Volume:         3,863 vehicles           Vehicle Speed:         45 mph           Near/Far Lane Distance:         72 feet           Vehicle Mix         Vehicle Mix           Site Data         Vehicle Mix           Barrier Height:         0.0 feet           Barrier Height:         0.0 feet           Barrier Jype (0-Wall, 1-Berm):         0.0           Centerline Dist. to Barrier:         62.0 feet           Barrier Jistance to Observer:         0.0 feet           Barrier Jistance to Observer:         62.0 feet           Road Grade:         0.0%           Left View:         -90.0 degrees           Right View:         90.0 degrees           Right View:         90.0 degrees           Right View:         90.0 degrees           Heavy Trucks:         50.560           FHWA Noise Model Calculations         Finite Road         Fresnel           VehicleType         Refile Flow         Distance           VehicleType         Leq Vehicle Mix         0.000           Medium Trucks:         71.20         -4.70         0.000           Medium Trucks:         71.20         -4.88         0.000         0.000           Medium Trucks:         71.20         -5.	Average Daily	Traffic (Adt):	38,630 vehicles						Autos:	15		
Vehicle Speed:         45 mph           Near/Far Lane Distance:         72 feet           Site Data         Autos:         75%         12.9%         9.6%         97.42           Barrier Height:         0.0 feet         Autos:         77.5%         12.9%         9.6%         97.42           Barrier Type (0-Wall, 1-Berrn):         0.0         Centerline Dist. to Diserver:         62.0 feet         Medium Trucks:         84.8%         4.9%         10.8%         0.74%           Centerline Dist. to Diserver:         62.0 feet         Autos:         0.00         Medium Trucks:         84.8%         4.9%         10.8%         0.74%           Deserver Height (Above Pad):         5.0 feet         Autos:         0.00         Medium Trucks:         84.8%         4.9%         10.8%         0.74%           Road Grade:         0.0%         Left View:         90.0 degrees         Medium Trucks:         8.066         Grade Adjustment:         0.0           FHWA Noise Model Calculations         VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Bern Atten           Autos:         68.46         3.92         -0.17         -1.20         -4.88         0.000         0.00 </td <td>Peak Hour</td> <td>Percentage:</td> <td>10.00%</td> <td></td> <td></td> <td>Me</td> <td>dium Tru</td> <td>cks (2 A</td> <td>Axles):</td> <td>15</td> <td></td> <td></td>	Peak Hour	Percentage:	10.00%			Me	dium Tru	cks (2 A	Axles):	15		
Near/Far Lane Distance:         T2 feet         Vehicle Mix         Levening         Night         Daily           Site Data         Autos:         77.5%         12.9%         9.6%         97.42%           Barrier Height:         0.0 feet         Medium Trucks:         84.8%         4.9%         10.3%         18.49           Barrier Height:         0.0         feet         Medium Trucks:         86.5%         2.7%         10.8%         0.749           Centerline Dist. to Barrier:         62.0 feet         Medium Trucks:         86.5%         2.7%         10.8%         0.749           Observer Height (Above Pad):         5.0 feet         Matos:         0.00         Medium Trucks:         2.297           Road Elevation:         0.0 feet         Lane Equivalent Distance (in feet)         Matos:         50.550           Road Grade:         0.0 feet         Heavy Trucks:         50.550         Heavy Trucks:         50.550           FHWA Noise Model Calculations         VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Bern Atten           Autos:         79.45         -13.32         -0.17         -1.20         -4.70         0.000         0.000	Peak I	Hour Volume:	3,863 vehicles			He	avy Truci	ks (3+ A	Axles):	15		
Near/Far Lane Distance:         72 feet         VehicleType         Day         Evening         Night         Daily           Site Data         Autos:         77.5%         12.9%         9.6%         97.429           Barrier Height:         0.0         feet         Medium Trucks:         84.8%         4.9%         10.3%         1.849           Barrier Type (0-Wall, 1-Berm):         0.0         feet         Medium Trucks:         84.8%         4.9%         10.8%         0.749           Centerline Dist. to Doserver:         62.0 feet         Autos:         0.00         feet         Autos:         0.00           Barrier Distance to Observer:         0.0 feet         Autos:         0.000         feed         Medium Trucks:         84.8%         4.9%         10.8%         0.749           Road Elevation:         0.0 feet         Autos:         0.000         feed         Autos:         50.725         feed         Autos:         50.725         feed/ustment:         0.0         feed         Autos:         50.50         feed/ustment:         0.0         feed         Autos:         50.550         feed/ustment:         0.0         feed/ustment:         0.0         0.0         0.00         feed/ustment:         0.0         feed/ustment:	Ve	ehicle Speed:	45 mph		V	ohiclo I	liv					
Site Data         Autos:         77.5%         12.9%         9.6%         97.42           Barrier Height:         0.0 feet         Medium Trucks:         84.8%         4.9%         10.3%         18.49           Barrier Height:         0.0         Centerine Dist. to Barrier:         62.0 feet         Medium Trucks:         86.5%         2.7%         10.8%         0.749           Centerine Dist. to Diserver:         62.0 feet         Noise Source Elevations (in feet)         Autos:         0.000           Diserver Height (Above Pad):         5.0 feet         Autos:         0.000         Medium Trucks:         2.297           Road Grade:         0.0 feet         Autos:         50.550         Heavy Trucks:         80.06         Grade Adjustment:         0.0           Road Grade:         0.0 feet         Autos:         50.550         Heavy Trucks:         50.550           FHWA Noise Model Calculations         VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         71.9         69.1         67.3         61.3         69.9         70.           Moise Model Calculations         Leq Evening         Leq Evening         Leg Vening         Evening	Near/Far La	ane Distance:	72 feet					1	Dav	Evenina	Night	Daily
Barrier Height:         0.0 feet           Barrier Type (0-Wall, 1-Berm):         0.0           Centerline Dist. to Barrier:         62.0 feet           Barrier Distance to Observer:         62.0 feet           Barrier Distance to Observer:         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           Right View:         90.0 degrees           Heavy Trucks:         50.560           Heavy Trucks:         50.567           FHWA Noise Model Calculations         Medium Trucks:           VehicleType         Traffic Flow         Distance           VehicleType         Traffic Flow         Distance           VehicleType         Leq Day         Leq Evening           Leq View:         -0.18         -1.20           VehicleType         Leq Day         Leq Evening           Unitigated Noise Levels (without Topo and barrier attenuation)         Conte	Site Data											
Barrier Type (0-Wall, 1-Berm):         0.0         Heavy Trucks:         86.5%         2.7%         10.8%         0.74%           Centerline Dist. to Desriver:         62.0 feet         Autos:         0.000         Noise Source Elevations (in feet)         Autos:         0.000         Melium Trucks:         2.297         Heavy Trucks:         80.66         Grade Adjustment:         0.0           Pad Elevation:         0.0 feet         Autos:         0.000         Melium Trucks:         2.297           Pad Elevation:         0.0 feet         Autos:         50.755         Heavy Trucks:         50.755           Eleft View:         90.0 degrees         Melium Trucks:         50.560         Heavy Trucks:         50.560           FHWA Noise Model Calculations         VenicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         68.46         3.92         -0.20         -1.20         -4.70         0.000         0.00           Medium Trucks:         79.45         -13.32         -0.17         -1.20         -4.88         0.000         0.00           Unnitigated Noise Levels (without Topo and barrier attenuation)         Use So:3.3         61.3         69.9         70.	Be	wier Height	0.0 feet			Me						
Centerline Dist. to Barrier:         62.0 feet         Noise Source Elevations (in feet)           Centerline Dist. to Darrier:         62.0 feet         Autos:         0.000           Barrier Distance to Observer:         0.0 feet         Autos:         0.000           Barrier Distance to Observer:         0.0 feet         Autos:         0.000           Pad Elevation:         0.0 feet         Heavy Trucks:         8.006         Grade Adjustment:         0.0           Road Glevation:         0.0 feet         Lane Equivalent Distance (in feet)         Autos:         50.550           Left View:         -90.0 degrees         Medium Trucks:         50.550         Heavy Trucks:         50.567           FHWA Noise Model Calculations         Vehicle Type         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Bermi Atten           Autos:         68.46         3.92         -0.20         -1.20         -4.70         0.000         0.00           Medium Trucks:         79.45         -13.32         -0.17         -1.20         -4.88         0.000         0.00           Umitigated Moise Levels (without Topo and barrier attenuation)         Ueg Evening         Leq Evening         Leq Neing         Keing         Keing						F	leavv Tru	icks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Observer:         62.0 feet         Noise Source Elevations (in feet)           Barrier Distance to Observer:         0.0 feet         Autos:         0.000           Pad Elevation:         0.0 feet         Medium Trucks:         2.297           Pad Elevation:         0.0 feet         Heavy Trucks:         8.006         Grade Adjustment:         0.0           Road Elevation:         0.0 feet         Lane Equivalent Distance (in feet)         Autos:         50.755           Right View:         -90.0 degrees         Heavy Trucks:         50.567         Medium Trucks:         50.567           FHWA Noise Model Calculations         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berriw Atten           Autos:         68.46         3.92         -0.20         -1.20         -4.70         0.000         0.00           Medium Trucks:         79.45         -13.32         -017         -1.20         -5.32         0.000         0.000           Unnitigated Noise Levels (without Topo and barrier attenuation)         Uvenice/Pype         Laq Evening         Leq Evening         Leq Noise         CNEL           Autos:         71.0         69.1         67.3         61.3         69.9         70.		. ,										
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:         8.006         Grade Adjustment:         0.0           Road Elevation:         0.0 feet         Lane Equivalent Distance (in feet)         Autos:         50.725           Road Grade:         0.0%         Autos:         50.725         Heavy Trucks:         50.560           FHWA Noise Model Calculations         90.0 degrees         Medium Trucks:         50.560         Heavy Trucks:         50.560           FHWA Noise Model Calculations         0.016         Lieft View:         90.0 degrees         Heavy Trucks:         50.560           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         68.46         3.92         -0.20         -1.20         -4.70         0.000         0.00           Medium Trucks:         79.45         -13.32         -0.17         -1.20         -4.88         0.000         0.00           Unmitigated Noise Levels (without Topo and barrier attenuation)         Vehicle/type         Leg Devining					N	loise So				eet)		
Medium Trucks: 2.297 Heavy Trucks: 8.006         Grade Adjustment: 0.0           Medium Trucks: 8.006         Grade Adjustment: 0.0           Pad Elevation:         0.0 feet         Later Virucks: 8.006         Grade Adjustment: 0.0           Read Grade:         0.0%         Left View: -90.0 degrees           FHWA Noise Model Calculations         Venicle Type         Read Grade:         0.0%         Finite Road         Free Model Calculations           Vehicle Type         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         68.46         3.92         -0.20         -1.20         -4.70         0.000         0.00           Medium Trucks:         79.45         -13.32         -0.17         -1.20         -4.88         0.000         0.00           Medium Trucks:         84.25         -17.28         -0.18         -1.20         -5.32         0.000         0.000           Umitigated Noise Levels (without Top and barrier attenuation)         Leq Real Hour         Leq Road         55.3         63.8         64.7         64.           Heavy Trucks:         65.6         64.2         55.1         56.4												
Pad Elevation:         0.0 feet         Heavy Trucks:         8.006         Grade Adjustment.         0.0           Road Elevation:         0.0 feet         Lane Equivalent Distance (in feet)         Lane Equivalent Distance (in feet)         Lane Equivalent Distance (in feet)           Road Frade         0.0%         Lane Equivalent Distance (in feet)         Autos: 50.755           Heavy Trucks:         50.560         Heavy Trucks:         50.567           FHWA Noise Model Calculations         Fresnel         Barrier Atten         Berrier Atten           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berrier Atten           Autos:         68.46         3.92         -0.20         -1.20         -4.70         0.000         0.00           Medium Trucks:         79.45         -13.32         -0.17         -1.20         -5.32         0.000         0.00           Unnitigated Noise Levels (without Topo and barrier attenuation)         VehicleType         Leq Evening         Leq Evening         Leq Not         CNEL           Autos:         71.0         69.1         67.3         61.3         69.9         70.           Medium Trucks:         65.6         64.2         55.1         56.4<												
Road Grade:         0.0%         Autos:         50.725           Left View:         -90.0 degrees         Medium Trucks:         50.550           Heavy Trucks:         50.567           FHWA Noise Model Calculations         VehicleType         ReBMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         68.46         3.92         -0.20         -1.20         -4.70         0.000         0.00           Medium Trucks:         79.45         -13.32         -0.17         -1.20         -4.88         0.000         0.00           Medium Trucks:         84.25         -17.28         -0.18         -1.20         -5.32         0.000         0.000           Unnitigated Noise Levels (without Topo and barrier attenuation)         VehicleType         Leg Peak Hour         Leg Qay         Leg Vening         Leg Night         Ldn         CNEL           Autos:         71.0         69.1         67.3         61.3         69.9         70.           Medium Trucks:         65.6         64.2         55.1         56.4         64.7         64.           Heavy Trucks:         65.6         64.2         55.1         56.4         64.7         64	•	, ,				Heav	y Trucks	: 8.0	006	Grade Adj	ustment	: 0.0
Left View:         -90.0 degrees         Medium Trucks:         50.550           Right View:         90.0 degrees         Heavy Trucks:         50.550           FHWA Noise Model Calculations         Entite Road         Fresnel         Barrier Atten         Bernier Atten           Autos:         68.46         3.92         -0.20         -1.20         -4.70         0.000         0.00           Medium Trucks:         79.45         -13.32         -0.17         -1.20         -4.78         0.000         0.00           Medium Trucks:         84.25         -17.28         -0.18         -1.20         -5.32         0.000         0.00           Unnitigated Noise Levels (without Topo and barrier attenuation)         VehicleType         Leq Evening         Leq Night         Ldn         CNEL           Autos:         71.0         69.1         67.3         61.3         69.9         70.           Medium Trucks:         65.6         64.2         55.1         56.4         64.7         64.           Heavy Trucks:         65.6         64.2         55.1         56.4         64.7         64.           Vehicle Noise:         72.8         71.1         67.9         63.3         71.8         72.           C	Ro	ad Elevation:	0.0 feet		L	ane Equ	uivalent	Distand	ce (in i	feet)		
Right View:         90.0 degrees         Heavy Trucks:         50.567           FHWA Noise Model Calculations         Image: Constraint of the second secon		Road Grade:	0.0%				Autos	50.	725			
Right View:         90.0 degrees         Heavy Trucks:         50.567           FHWA Noise Model Calculations         Finite Road         Fresnel         Barrier Atten         Bern Atten           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Bern Atten           Autos:         68.46         3.92         -0.20         -1.20         -4.70         0.000         0.00           Medium Trucks:         79.45         -13.32         -0.17         -1.20         -4.88         0.000         0.00           Unnitigated Noise Levels (without Topo and barrier attenuation)         -         -         -5.32         0.000         0.00           VehicleType         Leg Peak Hour         Leg Devining         Leg Night         Ldn         CNEL           Autos:         71.0         69.1         67.3         61.3         69.9         70.           Medium Trucks:         64.8         63.2         55.9         55.3         63.8         64.4           Heavy Truck:         72.8         71.1         67.9         63.3         71.8         72.           Centerline Distance to Noise Contour (in feet)         -         70 dBA         65 dBA         60 d		Left View:	-90.0 degrees	;		Mediur	n Trucks	50.	550			
VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Freshel         Barrier Atten         Bern Atten           Autos:         68.46         3.92         -0.20         -1.20         -4.70         0.000         0.000           Medium Trucks:         79.45         -13.32         -0.17         -1.20         -4.88         0.000         0.00           Heavy Trucks:         84.25         -17.28         -0.18         -1.20         -5.32         0.000         0.00           Unnitigated Noise Levels (without Topo and barrier attenuation)         Leq Evening         Leq Night         Ldn         CNEL           Autos:         71.0         69.1         67.3         61.3         69.9         70.           Medium Trucks:         64.8         63.2         55.1         56.4         64.7         64.           Heavy Trucks:         65.6         64.2         55.1         56.4         64.7         64.           Vehicle Noise:         72.8         71.1         67.9         63.3         71.8         72.           Centerline Distance to Noise Contour (in feet)		Right View:	0			Heav	y Trucks	50.	567			
Autos:         68.46         3.92         -0.20         -1.20         -4.70         0.000         0.00           Medium Trucks:         79.45         -13.32         -0.17         -1.20         -4.88         0.000         0.000           Heavy Trucks:         84.25         -17.28         -0.18         -1.20         -5.32         0.000         0.000           Umitigated Moise Levels (without Topo and barrier attenuation)         Leq Night         Ldn         CNEL           Autos:         71.0         69.1         67.3         61.3         69.9         70.           Medium Trucks:         64.8         63.2         56.9         55.3         63.8         64.           Heavy Trucks:         65.6         64.2         55.1         56.4         64.7         64.           Vehicle Noise:         72.8         71.1         67.9         63.3         71.8         72.           Centerline Distance to Noise Contour (in feet)         To         To         63.4         60 dBA         55 dBA           Ldn:         82         176         379         817	FHWA Noise Mod	lel Calculation:	S									
Medium Trucks:         79.45         -13.32         -0.17         -1.20         -4.88         0.000         0.000           Heavy Trucks:         64.25         -17.28         -0.18         -1.20         -5.32         0.000         0.000           Unnitigated Noise Levels (without Topo and barrier attenuation)         -         -         -5.32         0.000         0.000           VehiceType         Leg Peak Hour         Leg Devining         Leg Right         Ldn         CNEL           Autos:         71.0         69.1         67.3         61.3         69.9         70.           Medium Trucks:         64.8         63.2         56.9         55.3         63.8         64.4           Heavy Trucks:         65.6         64.2         55.1         56.4         64.7         64.7           Vehice Noise:         72.8         71.1         67.9         63.3         71.8         72.           Centerline Distance to Noise Contour (in feet)         -         -         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         82         176         379         817         817	VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Heavy Trucks:         84.25         -17.28         -0.18         -1.20         -5.32         0.000         0.000           Unnitigated Noise Levels (without Topo and barrier attenuation)         Leq Name         Leq Night         Ldn         CNEL           VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Medium Trucks:         64.8         63.2         55.1         56.4         64.7         64.           Heavy Trucks:         65.6         64.2         55.1         56.4         64.7         64.           Vehicle Noise:         72.8         71.1         67.9         63.3         71.8         72.           Centerline Distance to Noise Contour (in feet)	Autos:	68.46	3.92		-0.20		-1.20		-4.70	0.0	000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)           VehicleType         Leq Peak Hour         Leq Day         Leq Vening         Leq Night         Ldn         CNEL           Autos:         71.0         69.1         67.3         61.3         69.9         70.0           Medium Trucks:         64.8         63.2         55.9         55.3         63.8         64.           Heavy Trucks:         65.6         64.2         55.1         56.4         64.7         64.           Vehicle Noise:         72.8         71.1         67.9         63.3         71.8         72.           Centerline Distance to Noise Contour (in feet)												0.000
VehicleType         Leq Peak Hour         Leq Day         Leq Vehicle         Leq Night         Ldn         CNEL           Autos:         71.0         69.1         67.3         61.3         69.9         70.0           Medium Trucks:         64.8         63.2         55.9         55.3         63.8         64.           Heavy Trucks:         65.6         64.2         55.1         56.4         64.7         64.           Vehicle Noise:         72.8         71.1         67.9         63.3         71.8         72.           Centerline Distance to Noise Contour (in feet)	Heavy Trucks:	84.25	-17.28		-0.18		-1.20		-5.32	0.0	000	0.000
Autos:         71.0         69.1         67.3         61.3         69.9         70.           Medium Trucks:         64.8         63.2         56.9         55.3         63.8         64.           Heavy Trucks:         65.6         64.2         55.1         56.4         64.7         64.           Vehicle Noise:         72.8         71.1         67.9         63.3         71.8         72.           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         82         176         379         817												
Medium Trucks:         64.8         63.2         56.9         55.3         63.8         64.           Heavy Trucks:         65.6         64.2         55.1         56.4         64.7         64.           Vehicle Noise:         72.8         71.1         67.9         63.3         71.8         72.           Centerline Distance to Noise Contour (in feet)					eq Ev	•	Leq N			-	-	
Heavy Trucks:         65.6         64.2         55.1         56.4         64.7         64.           Vehicle Noise:         72.8         71.1         67.9         63.3         71.8         72.           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         82         176         379         817												
Vehicle Noise:         72.8         71.1         67.9         63.3         71.8         72.           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         82         176         379         817		• •										
Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         82         176         379         817										• • • •		64.9
TO dBA         65 dBA         60 dBA         55 dBA           Ldn:         82         176         379         817		12		1.1		07.9		03.0	)	71.0	<b>)</b>	12.3
Ldn: 82 176 379 817	Centerine Distan	Ce to NOISE CO	intour (in feet)		70 dl	BA	65 d	BA	6	60 dBA	55	dBA
CNEL: 88 189 407 876			L	dn:	82	!	17	6		379	8	817
			CN	EL:	88		18	9		407	ε	376

Sunday, July 18, 2021

Sunday, July 18, 2021

	FHW	VA-RD-77-108	HIGHW	AY NC	DISE PI	REDICTI	ом мо	DEL			
Scenario: Road Name: Road Segment:	Bear Valley						Vame: E Imber: 1		alley Mark	etplace	
SITE SP	ECIFIC IN	PUT DATA							L INPUT	s	
Highway Data				Si	te Con	ditions (	Hard =	10, Sc	ft = 15)		
Average Daily Tra	ffic (Adt): 3	7,190 vehicle	5					Autos:	15		
Peak Hour Per	rcentage:	10.00%			Me	dium Tru	cks (2 A	xles):	15		
Peak Hour	Volume:	3,719 vehicle	5		He	avy Truc	ks (3+ A	xles):	15		
Vehicl	e Speed:	45 mph		V	hicle	Mix					
Near/Far Lane	Distance:	72 feet				icleType		Dav	Evening	Night	Dailv
Site Data					ven			77.5%	•	9.6%	
	r Height:	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-Wall,		0.0 1001			1	Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist. t	o Barrier:	62.0 feet		N	oise So	ource Ele	vations	in fe	et)		
Centerline Dist. to C		62.0 feet				Autos		000			
Barrier Distance to C		0.0 feet			Mediu	m Trucks	: 2.2	297			
Observer Height (Abo	,	5.0 feet			Heav	/y Trucks	: 8.0	006	Grade Ad	iustmen	t: 0.0
	Elevation:	0.0 feet									
	Elevation:	0.0 feet		Lá	ine Eq	uivalent			'eet)		
	d Grade:	0.0%				Autos					
	eft View:	-90.0 degree				m Trucks					
Ri	ght View:	90.0 degree	es		Heav	/y Trucks	: 50.8	067			
FHWA Noise Model C		-								-	
	REMEL	Traffic Flow	Distar		Finite	Road	Fresn	-	Barrier Att		rm Atten
Autos:	68.46	3.75		-0.20		-1.20		-4.70		000	0.00
Medium Trucks:	79.45	-13.49		-0.17		-1.20		-4.88		000	0.00
Heavy Trucks:	84.25	-17.44		-0.18		-1.20		-5.32	0.0	000	0.00
Unmitigated Noise Le						1.000	Endat		Ldn		NEL
VehicleType Lee Autos:	q Peak Hou 70		68.9	eq Eve	ening 67.2	Leq I	11gnt 61.1		Lan 69.7	-	INEL 70.
Autos: Medium Trucks:	70. 64	-	63.1		56.7		55.2		63.6		70. 63.
Heavy Trucks:	65	-	64.0		55.0		56.2		64.6		64.
Vehicle Noise:	72.		70.9		67.8		63.1		71.6	-	72.
Centerline Distance to	o Noise Co	ntour (in feet	)								
				70 dE	2.4	65 0	DA	6	0 dBA	54	i dBA
				70 UL	~	050	DA		0 uDA	00	
			Ldn:	80	~	17			370		796

	FHW	A-RD-77-108 HI	GHWAY	NOISE PF	REDICT		DEL			
Scenario Road Name Road Segmen						t Name: 1 lumber: 1		/alley Mark	etplace	
SITE S	SPECIFIC IN	PUT DATA			1	NOISE	IODE	L INPUT	s	
Highway Data				Site Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	4,130 vehicles					Autos:	15		
Peak Hour I	Percentage:	10.00%		Me	dium Tr	rucks (2 A	xles):	15		
Peak He	our Volume:	413 vehicles		He	avy Tru	cks (3+ A	xles):	15		
Vel	hicle Speed:	45 mph		Vehicle I	Nix					
Near/Far Lar	ne Distance:	44 feet			cleType	9	Day	Evening	Night	Daily
Site Data						Autos:	77.5%	12.9%	9.6%	97.429
Bar	rier Height:	0.0 feet		Me	edium T	rucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-Wa		0.0		ŀ	leavy T	rucks:	86.5%	5 2.7%	10.8%	0.749
Centerline Dis	. ,	50.0 feet		Noise So	urco E	lovation	(in f	nof)		
Centerline Dist. t	to Observer:	50.0 feet		NUISE SU	Auto		000	eel)		
Barrier Distance t	o Observer:	0.0 feet		Mediu	n Truck		297			
Observer Height ()	Above Pad):	5.0 feet			y Truck		006	Grade Ad	iustment	· 0.0
Pa	d Elevation:	0.0 feet							Juotimoni	. 0.0
Roa	d Elevation:	0.0 feet		Lane Equ				feet)		
F	Road Grade:	0.0%			Auto					
	Left View:	-90.0 degrees			n Truck					
	Right View:	90.0 degrees		Heav	y Truck	s: 45.0	000			
FHWA Noise Mode	l Calculations									
VehicleType			Distance			Fresn	-	Barrier Att		m Atten
Autos:	68.46	-5.79		.56	-1.20		-4.65		000	0.00
Medium Trucks:	79.45	-23.03		.59	-1.20		-4.87		000	0.00
Heavy Trucks:	84.25	-26.99		.58	-1.20		-5.43	0.0	000	0.00
Unmitigated Noise							r			
	Leq Peak Hour			Evening	Leq	Night		Ldn		VEL
Autos:	62.			58.4		52.3		60.9		61.
Medium Trucks:	55.			47.9		46.4		54.9		55.
Heavy Trucks: Vehicle Noise:	56.			46.2		47.4		55.		55.
	63.		.1	59.0		54.3		62.	5	63
Centerline Distanc	e to Noise Col	ntour (in feet)	7/	) dBA	65	dBA		50 dBA	55	dBA
		Ld		17		ава 36		77		ава 67
										07

	FHV	NA-RD-77-10	BHIG	HWAT	NUISE PI	REDICI		UDEL			
Scenar									/alley Mark	etplace	
	e: Bear Valley					Job N	lumber	13078			
Road Segme	nt: e/o 2nd Ave	e									
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Con	ditions	(Hard		,		
Average Daily	, ,		es					Autos:			
	Percentage:	10.00%						Axles):			
	lour Volume:	3,724 vehicle	s		He	avy Tru	cks (3+	Axles):	15		
	hicle Speed:	45 mph			Vehicle I	Mix					
Near/Far La	ne Distance:	72 feet		-	Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%
Bai	rrier Height:	0.0 feet			M	edium 1	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			1	Heavy 1	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	st. to Barrier:	62.0 feet		H	Noise So	urco F	lovatio	ne (in fi	oof)		
Centerline Dist.	to Observer:	62.0 feet		ť	10130 00	Auto		0.000			
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck		2.297			
Observer Height (	Above Pad):	5.0 feet				y Truck		3.006	Grade Ad	iustment	0.0
Pa	ad Elevation:	0.0 feet								aounom	0.0
Roa	ad Elevation:	0.0 feet		4	Lane Eq				feet)		
1	Road Grade:	0.0%				Auto		0.725			
	Left View:	-90.0 degre	es			m Truck		0.550			
	Right View:	90.0 degre	es		Heav	ry Truck	:s: 51	0.567			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Free	snel	Barrier Att	en Ber	m Atten
Autos:	68.46	3.76	5	-0.2	0	-1.20		-4.70	0.0	000	0.00
Medium Trucks:	79.45			-0.1		-1.20		-4.88		000	0.00
Heavy Trucks:	84.25	-17.44	ŀ	-0.1	8	-1.20		-5.32	0.0	000	0.00
Unmitigated Noise				er atten	nuation)						
VehicleType	Leq Peak Hou		/	Leq E	vening	Leq	Night		Ldn		VEL
Autos:	70		68.9		67.2		61		69.1		70.
Medium Trucks:	64		63.1		56.7		55		63.6	-	63.
Heavy Trucks:	65		64.0		55.0		56		64.6	-	64.
Vehicle Noise:	72	2.7	70.9		67.8		63	.1	71.0	3	72.
Centerline Distand	ce to Noise Co	ontour (in fee	t)				_				
			L		dBA		dBA	(	60 dBA		dBA
			Ldn:	-	10		72		370		97
			NEL:		15		84		397		55

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL
Scenario: OYNP Project Name: Bear Valley Marketplace

Sunday, July 18, 2021

Road Nan	rio: OYNP ne: 3rd Ave nt: s/o Bear Va	illey					Name: lumber:		alley Mark	etplace	
-	SPECIFIC IN	PUT DATA								5	
Highway Data				S	ite Con	ditions	(Hard :	= 10, So	oft = 15)		
Average Daily	Traffic (Adt):	1,560 vehicles	6					Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Tr	ucks (2	Axles):	15		
Peak H	lour Volume:	156 vehicles	6		He	avy Tru	cks (3+	Axles):	15		
Ve	hicle Speed:	45 mph		V	ehicle l	Mix					
Near/Far La	ne Distance:	44 feet				icleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42%
Ba	rrier Height:	0.0 feet			M	edium T	rucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-V		0.0			ŀ	leavy T	rucks:	86.5%	2.7%	10.8%	0.74%
Centerline Di	ist. to Barrier:	50.0 feet		N	oise Sc	ource El	levatio	ns (in f	eet)		
Centerline Dist.	to Observer:	50.0 feet			0.00 00	Auto		.000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		297			
Observer Height	(Above Pad):	5.0 feet				v Truck		006	Grade Ad	iustment	0.0
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		Li	ane Eq	uivalen	t Distar	nce (in	feet)		
	Road Grade:	0.0%				Auto		5.177			
	Left View:	-90.0 degree	s		Mediu	m Truck	s: 44	.981			
	Right View:	90.0 degree	es		Heav	y Truck	s: 45	5.000			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fres	nel	Barrier Atte	en Ber	m Atten
Autos:	68.46	-10.02		0.56		-1.20		-4.65	0.0	000	0.000
Medium Trucks:	79.45	-27.26		0.59		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-31.21		0.58		-1.20		-5.43	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrieı	r attenu	ation)						
VehicleType	Leq Peak Hou			Leq Eve	•	Leq	Night		Ldn		NEL
Autos:	57		55.9		54.1		48		56.7		57.3
Medium Trucks:	φ.		50.1		43.7		42		50.6		50.9
Heavy Trucks:	52		51.0		42.0		43		51.6	-	51.7
Vehicle Noise:	59	.6	57.9		54.7		50	.1	58.6	6	59.1
Centerline Distan	ce to Noise Co	ontour (in feet)	1								
				70 dE	BA		dBA		60 dBA		dBA
			Ldn:	9			9		40		37
		CI	VEL:	9		2	20		43	9	93

Sunday, July 18, 2021

	FHW	A-RD-77-108 H	IIGHWAY	' NOI	SE PR	EDICTIO	on Mo	DEL			
Scenario Road Name Road Segment	2nd Ave						Vame: mber:		alley Mark	etplace	
SITE S	PECIFIC INI	PUT DATA							L INPUT	S	
Highway Data				Site	e Cond	litions (	Hard =	10, So	ft = 15)		
Average Daily T Peak Hour P Peak Ho	, ,	3,240 vehicles 10.00% 324 vehicles				lium Tru ivy Truci	cks (2 /		15 15 15		
	icle Speed:	45 mph		Vel	hicle N	lix					
Near/Far Lane	e Distance:	44 feet				cleType		Dav	Evening	Night	Daily
Site Data							utos:	77.5%	•	9.6%	
	ier Height:	0.0 feet		1	Me	dium Tru	icks:	84.8%	4.9%	10.3%	
Barrier Type (0-Wa	II, 1-Berm):	0.0			н	leavy Tru	icks:	86.5%	2.7%	10.8%	
Centerline Dist		50.0 feet		No	ise So	urce Ele	vation	s (in fe	et)		
Centerline Dist. to		50.0 feet				Autos	: 0.	000	,		
Barrier Distance to	Observer:	0.0 feet			Mediun	1 Trucks		297			
Observer Height (A	bove Pad):	5.0 feet			Heav	/ Trucks	8	006	Grade Ad	iustmen	t: 0.0
Pac	l Elevation:	0.0 feet									
Road	Elevation:	0.0 feet		Laı	ne Equ	ivalent	Distan	e (in f	eet)		
R	oad Grade:	0.0%				Autos					
	Left View:	-90.0 degrees				n Trucks					
1	Right View:	90.0 degrees			Heavy	/ Trucks	: 45.	000			
FHWA Noise Model	Calculations										
VehicleType	REMEL	Traffic Flow	Distance		Finite I	Road	Fresn	el	Barrier Att	en Bei	rm Atter
Autos:	68.46	-6.85	0	.56		-1.20		-4.65	0.0	000	0.00
Medium Trucks:	79.45	-24.08	-	.59		-1.20		-4.87		000	0.00
Heavy Trucks:	84.25	-28.04		.58		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise					- í .						
	eq Peak Hour			Ever		Leq N	•		Ldn		NEL
Autos:	61.0		9.1		57.3		51.3		59.9	-	60
Medium Trucks:	54.8		3.2		46.9		45.3		53.8	-	54
Heavy Trucks:	55.0		4.2		45.1		46.4		54.		54
Vehicle Noise:	62.6	в 6	1.1		57.9		53.2	2	61.6	3	62
Centerline Distance	to Noise Cor	ntour (in feet)	7	0 dB/	1	65 d	DA.	6	0 dBA	55	dBA
		,	dn:	14	-	65 d 31		0	66		142
		L CN		14		33			71		142
		CIVI	- <b>- - - - - - - - - -</b>	13		33	,		/ 1		152

	FHW	/A-RD-77-108	HIGHWA	Y NOISE P	REDICT	ION MO	DEL			
Scenario Road Name Road Segmen		lley				t Name: I Number:		/alley Mark	etplace	
SITE S	PECIFIC IN	PUT DATA			I	NOISE	IODE		s	
Highway Data				Site Cor	nditions	(Hard =	10, So	oft = 15)		
Average Daily 1	raffic (Adt):	1,720 vehicles					Autos:	15		
Peak Hour I	Percentage:	10.00%		Me	edium Ti	rucks (2 A	Axles):	15		
Peak Ho	our Volume:	172 vehicles		He	eavy Tru	icks (3+ A	Axles):	15		
	icle Speed:	45 mph		Vehicle	Mix					
Near/Far Lar	e Distance:	44 feet			nicleType	e	Day	Evening	Night	Daily
Site Data							77.5%	•		97.429
Ban	rier Height:	0.0 feet		M	ledium 1	rucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-Wa	•	0.0			Heavy 1	rucks:	86.5%	2.7%	10.8%	0.749
Centerline Dis	t. to Barrier:	50.0 feet		Noico S		levation	r (in fi	nof)		
Centerline Dist. t	o Observer:	50.0 feet		10136 3	Auto		200	eel)		
Barrier Distance t	o Observer:	0.0 feet		Mediu	m Truck		297			
Observer Height (A	Above Pad):	5.0 feet			vy Truck		006	Grade Ad	iustment	0.0
Pa	d Elevation:	0.0 feet			·				,	
	d Elevation:	0.0 feet		Lane Eq		t Distand		feet)		
F	oad Grade:	0.0%			Auto					
	Left View:	-90.0 degree			m Truck					
	Right View:	90.0 degree	5	неа	vy Trucł	(s: 45.	000			
FHWA Noise Mode	l Calculations									
VehicleType	REMEL	Traffic Flow	Distand		Road	Fresn	-	Barrier Att		m Atten
Autos:	68.46	-9.60		0.56	-1.20		-4.65		000	0.00
Medium Trucks:	79.45	-26.83		0.59	-1.20		-4.87		000	0.00
Heavy Trucks:	84.25	-30.79		0.58	-1.20		-5.43	0.0	000	0.00
Unmitigated Noise				,			1			
VehicleType Autos:	Leq Peak Hour 58		6.3	q Evening 54.6		Night 48.5	-	Ldn 57.1		NEL 57.
Autos: Medium Trucks:	58.		0.3 0.5	54.0 44.1		48.0		57.	-	57. 51.
Heavy Trucks:	52.		1.4	44.1		42.0		51.0		52.
Vehicle Noise:	60.		8.3	42.4		50.5		59.0		59
Centerline Distanc			0.0	00.2		00.0		00.		00.
Centernine Distance	0 10 110/30 00	mour (mileel)		70 dBA	65	dBA		50 dBA	55	dBA
		L	.dn:	9		20	·	43		93

Scenar	io: OYNP				Project	Name: Be	ar Va	llev Marke	tolace	
	ne: 2nd Ave					umber: 13		iloy Marite	, piaco	
	nt: n/o Bear Va	alley			00071					
SITE	SPECIFIC IN					IOISE MO	ODEI	INDUT	2	
Highway Data	SPECIFIC IN	FUIDAIA		Site Cor		(Hard = 1)			,	
Average Daily	Traffic (Adt):	4.980 vehicles				Al	utos:	15		
• •	Percentage:	10.00%		Me	edium Tr	ucks (2 Ax	les):	15		
	lour Volume:	498 vehicles		He	eavy Tru	cks (3+ Ax	les):	15		
Ve	hicle Speed:	45 mph		Vehicle	Misc	-	-			
Near/Far La	ne Distance:	44 feet			nicleTvpe		av I	Evening	Niaht	Dailv
Site Data				101			7.5%	12.9%	9.6%	
		0.0 feet		- N	, Iedium T		4.8%	4.9%	10.3%	
Barrier Type (0-V	rrier Height:	0.0 teet 0.0			Heavy T		6.5%	2.7%	10.8%	
Centerline Di	. ,	50.0 feet								
Centerline Dist.		50.0 feet		Noise S		evations		et)		
Barrier Distance		0.0 feet			Auto	0.00	-			
Observer Height		5.0 feet			Im Truck			Dura dia Andi		
P	ad Elevation:	0.0 feet		Hea	vy Truck	s: 8.00	)6 C	Grade Adj	usiment	0.0
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalen	Distance	(in fe	et)		
	Road Grade:	0.0%			Auto	s: 45.17	77			
	Left View:	-90.0 degrees	3	Mediu	ım Truck	s: 44.98	31			
	Right View:	90.0 degrees	6	Hea	vy Truck	s: 45.00	00			
FHWA Noise Mod	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Distanc	ce Finite	Road	Fresnel	I B	arrier Atte	en Ber	m Atter
Autos:	68.46	-4.98		0.56	-1.20	-4	4.65	0.0	00	0.00
Medium Trucks:				0.59	-1.20		1.87	0.0	00	0.00
Heavy Trucks:	84.25	-26.17		0.58	-1.20	-5	5.43	0.0	00	0.00
Unmitigated Nois	e Levels (with	out Topo and b	arrier at	tenuation)						
VehicleType	Leq Peak Hou	ır Leq Day	Lee	q Evening	Leq	Night	l	dn		VEL
Autos:	62		0.9	59.2	-	53.1		61.7		62
Medium Trucks:			5.1	48.7		47.2		55.7		55
	-		6.0	47.0	·	48.3		56.6		56
Heavy Trucks:		.7 6	2.9	59.8	3	55.1		63.7		64
Heavy Trucks: Vehicle Noise:	64									
Vehicle Noise:	0.	ontour (in feet)								
	0.	ontour (in feet)		70 dBA	65	dBA	60	dBA	55	dBA
Vehicle Noise:	0.		dn:	70 dBA 19		dBA 1		<i>dBA</i> 88		<i>dBA</i> 89

FHWA-RD-77-108 HIGHWAY	NOISE PREDICTION MODEL
Scenario: OYNP Road Name: Hesperia Road Segment: n/o Jasmine	Project Name: Bear Valley Marketplace Job Number: 13078
SITE SPECIFIC INPUT DATA	NOISE MODEL INPUTS
Highway Data	Site Conditions (Hard = 10, Soft = 15)
Average Daily Traffic (Adt): 21,270 vehicles	Autos: 15
Peak Hour Percentage: 10.00%	Medium Trucks (2 Axles): 15
Peak Hour Volume: 2,127 vehicles	Heavy Trucks (3+ Axles): 15
Vehicle Speed: 45 mph	Vehicle Mix
Near/Far Lane Distance: 72 feet	VehicleType Day Evening Night Daily
Site Data	Autos: 77.5% 12.9% 9.6% 97.42%
	Medium Trucks: 84.8% 4.9% 10.3% 1.84%
Barrier Height: 0.0 feet	Heavy Trucks: 86.5% 2.7% 10.8% 0.74%
Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 62.0 feet	
Centerline Dist. to Observer: 62.0 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: 8.006 Grade Adjustment: 0.0
Road Elevation: 0.0 feet	Lane Equivalent Distance (in feet)
Road Grade: 0.0%	Autos: 50.725
Left View: -90.0 degrees	Medium Trucks: 50.550
Right View: 90.0 degrees	Heavy Trucks: 50.567
FHWA Noise Model Calculations	
VehicleType REMEL Traffic Flow Distance	Finite Road Fresnel Barrier Atten Berm Atten
Autos: 68.46 1.33 -0	.20 -1.20 -4.70 0.000 0.000
	.17 -1.20 -4.88 0.000 0.000
Heavy Trucks: 84.25 -19.87 -0	.18 -1.20 -5.32 0.000 0.000
Unmitigated Noise Levels (without Topo and barrier att	,
	Evening Leq Night Ldn CNEL
Autos: 68.4 66.5	64.7 58.7 67.3 67.9
Medium Trucks: 62.2 60.7	54.3 52.7 61.2 61.4
Heavy Trucks: 63.0 61.6	52.6 53.8 62.2 62.3
Vehicle Noise: 70.2 68.5	65.3 60.7 69.2 69.7
Centerline Distance to Noise Contour (in feet)	
7	0 dBA 65 dBA 60 dBA 55 dBA
Ldn:	55 118 255 549
CNEL:	59 127 273 589

Sunday, July 18, 2021

Sunday, July 18, 2021

	FHW	/A-RD-77-108	HIGHWA	Y NC	DISE PR	EDICTIC	N MOI	DEL			
Scenario Road Name Road Segment	: Hesperia					Project N Job Nur			alley Marke	etplace	
SITE S	PECIFIC IN	PUT DATA				NC	ISE N	ODEL	. INPUTS	3	
Highway Data				Si	te Cond	ditions (H	lard =	10, Soi	ft = 15)		
Average Daily T Peak Hour F	Percentage:	10.00%				dium Truc	ks (2 A	,	15 15		
		2,168 vehicles			Hea	avy Truck	S (3+ A	xies):	15		
	icle Speed:	45 mph		Ve	ehicle M	lix					
Near/Far Lan	e Distance:	72 feet			Vehic	cleType	I	Day	Evening	Night	Daily
Site Data						Au	tos:	77.5%	12.9%	9.6%	97.42%
Barr	ier Height:	0.0 feet			Me	dium Tru	cks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wa		0.0			н	leavy Tru	cks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist	to Barrier:	62.0 feet		N	oise So	urce Elev	ations	(in fe	et)		
Centerline Dist. to	o Observer:	62.0 feet				Autos:	0.0				
Barrier Distance to	o Observer:	0.0 feet			Mediun	n Trucks:	2.2				
Observer Height (A	bove Pad):	5.0 feet				v Trucks:	8.0		Grade Adj	ustment	.00
Pad	d Elevation:	0.0 feet									
Road	d Elevation:	0.0 feet		Lá	ane Equ	ivalent E			eet)		
R	oad Grade:	0.0%				Autos:	50.7				
	Left View:	-90.0 degree	s			n Trucks:	50.5				
	Right View:	90.0 degree	s		Heavy	y Trucks:	50.5	67			
FHWA Noise Model	Calculations	1									
VehicleType	REMEL	Traffic Flow	Distand	e	Finite I	Road	Fresne	el E	Barrier Atte	en Ber	m Atten
Autos:	68.46	1.41	-	0.20		-1.20		4.70	0.0	00	0.00
Medium Trucks:	79.45	-15.83	-	0.17		-1.20		4.88	0.0	00	0.00
Heavy Trucks:	84.25	-19.78	-	0.18		-1.20		-5.32	0.0	00	0.00
Unmitigated Noise	Levels (witho	ut Topo and I	parrier at	tenu	ation)						
VehicleType L	.eq Peak Hou	r Leq Day	Le	q Eve	ening	Leq N	ight		Ldn	CI	NEL
Autos:	68.	5 6	6.6		64.8		58.8		67.4		68.0
Medium Trucks:	62.	26	60.7		54.4		52.8		61.3		61.
Heavy Trucks:	63.	1 6	61.7		52.6		53.9		62.2		62.4
Vehicle Noise:	70.	3 6	68.6		65.4		60.7		69.3		69.7
Centerline Distance	to Noise Co	ntour (in feet)									
				70 dE	3A	65 dE	ЗA	60	) dBA	55	dBA
		1	dn:	56		120	1		258	5	56
		-		00		120			200		

		A-RD-77-108 H	nghw.	AT NU							
Scenario: (					F				alley Mark	etplace	
Road Name: E						Job N	lumber: '	13078			
Road Segment: v	v/o /th Ave										
	CIFIC INP	UT DATA								S	
lighway Data				Si	ite Condi	itions	(Hard =	10, So	,		
Average Daily Trat								Autos:			
Peak Hour Per	•	0.00%					rucks (2 A				
Peak Hour		,801 vehicles			Heav	vy Tru	cks (3+ A	(xles):	15		
	e Speed:	45 mph		Ve	ehicle Mi	ix					
Near/Far Lane I	Distance:	72 feet			Vehic	leType	9	Day	Evening	Night	Daily
Site Data				-		,	Autos:	77.5%	12.9%	9.6%	97.42
Barrier	Height:	0.0 feet			Med	lium T	rucks:	84.8%	4.9%	10.3%	1.84
Barrier Type (0-Wall,		0.0			He	avy T	rucks:	86.5%	2.7%	10.8%	0.74
Centerline Dist. to	Barrier:	62.0 feet		M	oise Sou	irce F	levation	s (in f	eet)		
Centerline Dist. to C	bserver:	62.0 feet		/10		Auto		000	,		
Barrier Distance to C	bserver:	0.0 feet			Medium			297			
Observer Height (Abo	,	5.0 feet			Heavy			006	Grade Ad	iustment	: 0.0
	levation:	0.0 feet		-							
	levation:	0.0 feet		Lá	ane Equi				feet)		
	d Grade:	0.0%				Auto					
-		-90.0 degrees			Medium						
Rig	ght View:	90.0 degrees			Heavy	I FUCK	s: 50.	100			
HWA Noise Model C	alculations										
VehicleType F	REMEL T	Traffic Flow	Distar	ice	Finite R	load	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	68.46	3.85		-0.20		-1.20		-4.70	0.0	000	0.00
Medium Trucks:	79.45	-13.39		-0.17		-1.20		-4.88		000	0.00
Heavy Trucks:	84.25	-17.35		-0.18		-1.20		-5.32	0.0	000	0.00
Inmitigated Noise Le	vels (withou	it Topo and b	arrier a	ittenu	ation)						
VehicleType Leq	Peak Hour	Leq Day	Le	eq Eve	ening	Leq	Night		Ldn		NEL
Autos:	70.9	-	9.0		67.2		61.2		69.8		70
Medium Trucks:	64.7	-	3.2		56.8		55.3		63.7		64
Heavy Trucks:	65.5		4.1		55.1		56.3		64.7		64
Vehicle Noise:	72.8	7	1.0		67.9		63.2	2	71.7	7	72
Centerline Distance to	Noise Con	tour (in feet)				-					
				70 dE			dBA	6	60 dBA		dBA
			dn:	81			74		375		80
			EL:	87			87		402		67

Scenario: OY Road Name: Jas Road Segment: e/c	smine							: Bear V : 13078	alley Mark	etplace	
SITE SPEC	IFIC INP	UT DATA								s	
Highway Data				S	ite Con	ditions	(Hard :	= 10, So	oft = 15)		
Average Daily Traffic	(Adt): 4	,060 vehicles	6					Autos:	15		
Peak Hour Perce	ntage: 1	0.00%			Me	dium Tr	ucks (2	Axles):	15		
Peak Hour Ve	olume:	406 vehicles	6		He	avy Tru	cks (3+	Axles):	15		
Vehicle S	Speed:	45 mph		v	ehicle l	Mix					
Near/Far Lane Dis	tance:	44 feet		-		icleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%	•	•	97.42%
Barrier H	loiabti	0.0 feet			М	edium T		84.8%		10.3%	
Barrier Type (0-Wall, 1-	•	0.0 reet 0.0			1	Heavy T	rucks:	86.5%		10.8%	
Centerline Dist. to E	Barrier:	50.0 feet			laisa Se	urco E	lovatio	ns (in fe	of		
Centerline Dist. to Ob:	server:	50.0 feet		~	0136 30	Auto		0.000	el)		
Barrier Distance to Ob	server:	0.0 feet				m Truck		2.297			
Observer Height (Above	e Pad):	5.0 feet						3.006	Grade Ad	iuctmont	
Pad Ele	vation:	0.0 feet			neav	ry Truck	.s. c	5.000	Orade Au	asunone	0.0
Road Ele	vation:	0.0 feet		L	ane Eq	uivalen	t Distar	nce (in i	feet)		
Road	Grade:	0.0%				Auto	s: 45	5.177			
Lef	t View:	-90.0 degree	s		Mediu	m Truck	s: 44	4.981			
Righ	t View:	90.0 degree	s		Heav	ry Truck	is: 45	5.000			
FHWA Noise Model Cal	culations										
VehicleType RE	MEL	Traffic Flow	Dist	tance	Finite	Road	Fres	snel	Barrier Att	en Ber	m Atten
Autos:	68.46	-5.87		0.56		-1.20		-4.65		000	0.00
Medium Trucks:	79.45	-23.10		0.59		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-27.06		0.58		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise Leve					,			1			
	Peak Hour	Leq Day		Leq Ev		Leq	Night		Ldn 60.9		VEL
Autos: Medium Trucks:	62.0 55.7		60.1 54.2		58.3 47.9		52 46		60.9 54.1	-	61. 55
										-	
Heavy Trucks:	56.6		55.2		46.1		47		55.		55.
Vehicle Noise:	63.8		62.1		58.9		54	.2	62.	3	63.
Centerline Distance to I	voise Con	tour (in feet)		70 d	RA	65	dBA	6	0 dBA	55	dBA
				70 ui	БА	05	UDA		U UDA	55	UDA
			Ldn:	16			35		76	1	65

	FHV	VA-RD-77-108	HIGH	WAY N	IOISE PF	REDICTIO		EL			
	o: OYNP e: Bear Valley t: e/o 7th Ave						Vame: Be imber: 13		ey Marke	tplace	
SITES	SPECIFIC IN	PUT DATA				N	DISE MO	ODEL	INPUTS	;	
Highway Data				;	Site Con	ditions (l	Hard = 1	0, Soft	= 15)		
Average Daily	Traffic (Adt): 3	38,530 vehicles					AL	utos:	15		
Peak Hour I	Percentage:	10.00%			Mee	dium Tru	cks (2 Ax	les):	15		
Peak He	our Volume:	3,853 vehicles			Hei	avy Truck	ks (3+ Ax	les):	15		
Vel	nicle Speed:	45 mph		1	Vehicle N	Nix					
Near/Far Lar	ne Distance:	72 feet		-	Vehi	cleType	D	av E	vening	Niaht	Dailv
Site Data							utos: 7	7.5%	12.9%	9.6%	97.42%
Bar	rier Heiaht:	0.0 feet			Me	edium Tru	icks: 8	4.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wa		0.0			F	leavy Tru	icks: 8	6.5%	2.7%	10.8%	0.74%
Centerline Dis	t. to Barrier:	62.0 feet		-	Noise So	urce Fle	vations	(in feet	)		
Centerline Dist. t	o Observer:	62.0 feet		Ē	10.00 00	Autos			,		
Barrier Distance t	o Observer:	0.0 feet			Mediur	n Trucks	0.00				
Observer Height (/	,	5.0 feet				y Trucks.			rade Adju	ustment:	0.0
	d Elevation:	0.0 feet		-							
	d Elevation:	0.0 feet		4	Lane Equ				<i>t</i> )		
F	Road Grade:	0.0%				Autos.					
	Left View: Right View:	-90.0 degree 90.0 degree				n Trucks. y Trucks.					
FHWA Noise Mode	I Calculations	5									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresnel	l Ba	rrier Atte	n Ben	m Atten
Autos:	68.46	3.91		-0.2	0	-1.20	-4	4.70	0.0	00	0.000
Medium Trucks:	79.45	-13.33		-0.1	7	-1.20	-4	1.88	0.0	00	0.000
Heavy Trucks:	84.25	-17.29		-0.1	8	-1.20	-5	5.32	0.0	00	0.000
Unmitigated Noise											
	Leq Peak Hou			Leq E	vening	Leq N	•	Lo	dn	CI	VEL
Autos:	71		59.1		67.3		61.3		69.9		70.5
Medium Trucks:	64		33.2		56.9		55.3		63.8		64.0
Heavy Trucks:	65		64.2		55.1		56.4		64.7		64.9
Vehicle Noise:	72	.8 7	71.1		67.9		63.2		71.8		72.2
Centerline Distanc	e to Noise Co	ontour (in feet)						_			
					dBA	65 d		60 0			dBA
			dn:	8	-	17	-		78	-	15
		CN	IEL:	8	1	18	8	40	JG	8	75

Sunday, July 18, 2021

Sunday, July 18, 2021

	FHW	A-RD-77-108	HIGHWAY	( NOISE	E PREDICTI	ON MO	DEL			
	b: OYNP e: Bear Valley t: w/o 3rd Ave					Name: E umber: 1		alley Marke	etplace	
SITE S	SPECIFIC INF	PUT DATA						L INPUTS	3	
Highway Data				Site C	Conditions	(Hard =	10, So	ft = 15)		
Average Daily T Peak Hour I Book H	Percentage:	8,690 vehicles 10.00% 3.869 vehicles			Medium Tru Heavy Truc	icks (2 A	/	15 15 15		
	nicle Speed:				neavy nuc	, + C) 6A	мез).	15		
Near/Far Lar		45 mph 72 feet		Vehic	le Mix					
Nedi/Fai Lai	le Distance.	72 leet		1	/ehicleType		Day	Evening	Night	Daily
Site Data							77.5%	12.9%	9.6%	97.42
Bar	rier Height:	0.0 feet			Medium Tr	ucks:	84.8%	4.9%	10.3%	1.84
Barrier Type (0-Wa	all, 1-Berm):	0.0			Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74
Centerline Dis	t. to Barrier:	62.0 feet		Noise	Source El	ovations	in fo	of)		
Centerline Dist. t	o Observer:	62.0 feet		NUISE	Auto		000	eŋ		
Barrier Distance t	o Observer:	0.0 feet		Mo	dium Truck:		297			
Observer Height (/	Above Pad):	5.0 feet			eavv Truck			Grade Adj	ustment	. 0.0
Pa	d Elevation:	0.0 feet			cavy macks	J. 0.0	000	erade ridj	uoumoni	0.0
Roa	d Elevation:	0.0 feet		Lane	Equivalent	Distanc	e (in f	eet)		
F	Road Grade:	0.0%			Autos	s: 50.1	725			
	Left View:	-90.0 degree	s		dium Truck					
	Right View:	90.0 degree	s	н	eavy Trucks	s: 50.8	567			
FHWA Noise Mode										
VehicleType	REMEL	Traffic Flow	Distance	e Fir	nite Road	Fresn	el I	Barrier Atte	en Ber	m Atter
Autos:	68.46	3.92		.20	-1.20		-4.70	0.0		0.00
Medium Trucks:	79.45	-13.31	-	.17	-1.20		-4.88	0.0		0.00
Heavy Trucks:	84.25	-17.27	-0	.18	-1.20		-5.32	0.0	00	0.00
Unmitigated Noise	Levels (witho	ut Topo and L	parrier att	enuatio	n)					
	Leq Peak Hour			Evening		Night		Ldn		VEL
Autos:	71.0		39.1	-	7.3	61.3		69.9		70
Medium Trucks:	64.8		33.3	-	6.9	55.3		63.8		64
Heavy Trucks:	65.6		64.2	-	5.1	56.4		64.8		64
Vehicle Noise:	72.8	B 7	71.1	6	7.9	63.3		71.8	1	72
Centerline Distanc	e to Noise Cor	ntour (in feet)	-	0 484	65			0 484	57	dB A
		,		0 dBA		dBA 76		0 dBA		dBA
			.dn: IEL:	82 88		76 39		379 407		18
		CN	IEL:	99	18	59		407	8	11

	FHW	/A-RD-77-108	HIGHWA	Y NOISE P	REDICT	ION MO	DEL			
Road Nam	io: OYNP ne: Bear Valley nt: e/o 2nd Ave					t Name: I Number:		/alley Mark	etplace	
SITE	SPECIFIC IN	PUT DATA							S	
Highway Data				Site Cor	nditions	(Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt): 3	7,640 vehicles					Autos:	15		
Peak Hour	Percentage:	10.00%		M	edium Ti	rucks (2 A	Axles):	15		
Peak H	lour Volume:	3,764 vehicles		H	eavy Tru	icks (3+ A	Axles):	15		
	hicle Speed:	45 mph		Vehicle	Mix					
Near/Far La	ne Distance:	72 feet		Vel	nicleType	е	Day	Evening	Night	Daily
Site Data						Autos:	77.5%	12.9%	9.6%	97.429
Ba	rrier Height:	0.0 feet		N	ledium 7	rucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-W		0.0			Heavy 1	rucks:	86.5%	2.7%	10.8%	0.749
Centerline Di	st. to Barrier:	62.0 feet		Noise S	ource F	levation	e (in fi	oof)		
Centerline Dist.	to Observer:	62.0 feet		10130 0	Auto		000			
Barrier Distance	to Observer:	0.0 feet		Medii	m Truck		297			
Observer Height (		5.0 feet			vy Truck		006	Grade Ad	iustment	: 0.0
	ad Elevation:	0.0 feet			·					
	ad Elevation:	0.0 feet		Lane Eq		t Distand		feet)		
	Road Grade:	0.0%		11-16	Auto m Truck		725 550			
	Left View: Right View:	-90.0 degree 90.0 degree			vy Truck		550 567			
	Right view.	90.0 degree	5	1100	vy maor		007			
FHWA Noise Mod	el Calculations									
VehicleType	REMEL	Traffic Flow	Distan		Road	Fresn	-	Barrier Att		m Atten
Autos:	68.46	3.81		-0.20	-1.20		-4.70		000	0.00
Medium Trucks:	79.45	-13.43		0.17	-1.20		-4.88		000	0.00
Heavy Trucks:	84.25	-17.39		-0.18	-1.20		-5.32	0.0	000	0.00
Unmitigated Noise			-	,			1			
VehicleType	Leq Peak Hou			q Evening		Night		Ldn		NEL
Autos: Medium Trucks:	70. 64.		9.0 3.1	67.2 56.8		61.1 55.2		69.8 63.7	-	70. 63.
Heavy Trucks:	65.		4.1	55.0		56.3		64.6		64.
Vehicle Noise:	72	-	1.0	67.8		63.1		71.7		72
Centerline Distand	e te Neise Ce	ntour (in foot)							-	
Centernine Distant	e to MUISE CO	mour (milleet)		70 dBA	65	dBA		50 dBA	55	dBA
		L	.dn:	80		73		373		303

Sunday, July 18, 2021

Scenario: OYNP						Project N	lame:	Bear \	alley Mark	etplace	
Road Name: Bear Va	alley					Job Nu	mber:	13078	,		
Road Segment: e/o 3rd	Ave										
SITE SPECIFIC	; INP	UT DATA								S	
Highway Data					Site Con	ditions (F	lard =		,		
Average Daily Traffic (Adt	· · ·		5					Autos:			
Peak Hour Percentage		0.00%	_			dium Truc		/			
Peak Hour Volume		,866 vehicle	5		не	avy Truck	S (3+	Axies):	15		
Vehicle Speed Near/Far Lane Distance		45 mph		[	Vehicle I	Nix					
Nedi/Fai Lane Distance	<i>7.</i>	72 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data							itos:	77.5%		9.6%	
Barrier Heigh	t:	0.0 feet				edium Tru		84.8%		10.3%	
Barrier Type (0-Wall, 1-Berm	ı):	0.0			ŀ	leavy Tru	cks:	86.5%	5 2.7%	10.8%	0.749
Centerline Dist. to Barrie	r:	62.0 feet		ŀ	Noise Sc	urce Ele	vatior	s (in f	eet)		
Centerline Dist. to Observe	er:	62.0 feet		ŀ		Autos:		.000			
Barrier Distance to Observe		0.0 feet			Mediu	n Trucks:		.297			
Observer Height (Above Pad	/	5.0 feet			Heav	v Trucks:	8	.006	Grade Ad	ljustmen	t: 0.0
Pad Elevation		0.0 feet									
Road Elevation		0.0 feet			Lane Equ	uivalent L			feet)		
Road Grade	•.	0.0%				Autos:		.725			
Left View		-90.0 degree				n Trucks:	00	.550			
Right View	V:	90.0 degree	es		Heav	y Trucks:	50	.567			
FHWA Noise Model Calculat											
VehicleType REMEL		raffic Flow	Dis	stance	Finite		Fres	-	Barrier At		rm Atten
	.46	3.92		-0.2	20	-1.20		-4.70		000	0.00
Autos: 68								-4.88	0.	000	0.00
Medium Trucks: 79	.45	-13.32		-0.1		-1.20					
Medium Trucks: 79 Heavy Trucks: 84	.25	-13.32 -17.27		-0.1	8	-1.20 -1.20		-5.32	0.	000	0.00
Medium Trucks: 79 Heavy Trucks: 84 Unmitigated Noise Levels (w	.25 vithou	-13.32 -17.27 It Topo and	barrie	-0.1 er atter	8 nuation)	-1.20			-		
Medium Trucks: 79 Heavy Trucks: 84 Unmitigated Noise Levels (w VehicleType Leq Peak I	.25 vithou Hour	-13.32 -17.27 I <b>t Topo and</b> Leq Day	barrie	-0.1 er atter	8 nuation) Evening		-	-5.32	Ldn	C	0.00
Medium Trucks: 79 Heavy Trucks: 84 Unmitigated Noise Levels (w VehicleType Leq Peak Autos:	.25 vithou Hour 71.0	-13.32 -17.27 It Topo and Leq Day	<i>barrie</i> , 69.1	-0.1 er atter	8 nuation) Evening 67.3	-1.20	61.	-5.32	Ldn 69.	9 0	NEL 70.
Medium Trucks: 79 Heavy Trucks: 84 Unmitigated Noise Levels (w VehicleType Leq Peak Autos: Medium Trucks:	.25 vithou Hour 71.0 64.8	-13.32 -17.27 It Topo and Leq Day	<i>barrie</i> 69.1 63.3	-0.1 er atter	18 nuation) ivening 67.3 56.9	-1.20	61. 55.	-5.32 3	Ldn 69. 63.	9 8	NEL 70. 64.
Medium Trucks: 79 Heavy Trucks: 84 Unmitigated Noise Levels (w VehicleType Leq Peak Autos: Medium Trucks: Heavy Trucks:	.25 vithou Hour 71.0 64.8 65.6	-13.32 -17.27 It Topo and Leq Day	barrie 69.1 63.3 64.2	-0.1 er atter	8 nuation) ivening 67.3 56.9 55.1	-1.20	61. 55. 56.	-5.32 3 3 4	Ldn 69. 63. 64.	C 9 8 8	NEL 70. 64. 64.
Medium Trucks: 79 Heavy Trucks: 84 Unmitigated Noise Levels (w VehicleType Leq Peak Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	.25 vithou Hour 71.0 64.8 65.6 72.8	-13.32 -17.27 It Topo and Leq Day	barrie 69.1 63.3 64.2 71.1	-0.1 er atter	18 nuation) ivening 67.3 56.9	-1.20	61. 55.	-5.32 3 3 4	Ldn 69. 63.	C 9 8 8	NEL 70. 64. 64.
Medium Trucks: 79 Heavy Trucks: 84 Unmitigated Noise Levels (w VehicleType Leq Peak I Autos: Medium Trucks: Heavy Trucks:	.25 vithou Hour 71.0 64.8 65.6 72.8	-13.32 -17.27 It Topo and Leq Day	barrie 69.1 63.3 64.2 71.1	-0.1 er atter Leq E	8 nuation) ivening 67.3 56.9 55.1	-1.20	61. 55. 56. 63.	-5.32 3 3 4 3	Ldn 69. 63. 64.	C 9 8 8 8	
Medium Trucks: 79 Heavy Trucks: 84 Unmitigated Noise Levels (w VehicleType Leq Peak Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	.25 vithou Hour 71.0 64.8 65.6 72.8	-13.32 -17.27 It Topo and Leq Day	barrie 69.1 63.3 64.2 71.1	-0.1 er atter Leq E	8 vening 67.3 56.9 55.1 67.9	-1.20	61. 55. 56. 63.	-5.32 3 3 4 3	Ldn 69. 63. 64. 71.	C 9 8 8 8 8 55	NEL 70. 64. 64. 72.

	FHV	VA-RD-77-108	HIGHWA	AY NOISI	E PREDICT	ION MO	DEL			
Scenan Road Nam Road Segmei						t Name: I Number: 1		alley Mark	etplace	
SITE	SPECIFIC IN	PUT DATA						L INPUT	S	
Highway Data				Site (	Conditions	(Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	4,540 vehicles				,	Autos:	15		
• •	Percentage:	10.00%			Medium Ti	rucks (2 A	Axles):	15		
Peak H	our Volume:	454 vehicles			Heavy Tru	icks (3+ A	Axles):	15		
Ve	hicle Speed:	45 mph		Mahi		-	-			
Near/Far La	ne Distance:	44 feet			le Mix	-	0	E. maine	Market	Deile
Site Data					/ehicleTyp		Day	Evening	Night	Daily
Site Data				_			77.5%		9.6%	
	rier Height:	0.0 feet			Medium 1		84.8%		10.3%	1.84%
Barrier Type (0-W	. ,	0.0			Heavy 1	rucks:	86.5%	5 2.7%	10.8%	0.74%
Centerline Dis		50.0 feet		Noise	e Source E	levations	s (in f	eet)		
Centerline Dist.		50.0 feet			Auto	os: 0.0	000	1		
Barrier Distance		0.0 feet		Me	dium Truck		297			
Observer Height (	Above Pad):	5.0 feet		F	leavy Truck	(s' 8(	006	Grade Ad	iustment.	0.0
Pá	d Elevation:	0.0 feet		_						
Roa	d Elevation:	0.0 feet		Lane	Equivalen			feet)		
1	Road Grade:	0.0%			Auto					
	Left View:	-90.0 degree	s	Me	dium Truck	(s: 44.9	981			
	Right View:	90.0 degree	s	E	leavy Truck	(s: 45.0	000			
FHWA Noise Mode	Calculation:	s								
VehicleType	REMEL	Traffic Flow	Distan	ce Fi	nite Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	68.46	-5.38		0.56	-1.20		-4.65	0.0	000	0.00
Medium Trucks:	79.45	-22.62		0.59	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-26.57		0.58	-1.20		-5.43	0.0	000	0.00
Unmitigated Noise										
VehicleType	Leq Peak Hou			eq Evenin		Night		Ldn		VEL
Autos:		4 6	60.5	5	8.8	52.7	r	61.3		61.
										55
Medium Trucks:	56	.2 :	54.7		8.3	46.8		55.3	-	
Heavy Trucks:	56 57	.2 ! .1 !	55.6	4	6.6	47.9	)	56.2	2	56.
Heavy Trucks: Vehicle Noise:	56 57 64	.2 8 .1 8		4			)		2	56.
Heavy Trucks: Vehicle Noise:	56 57 64	.2 8 .1 8	55.6	4	6.6 9.4	47.9 54.7	) 7	56.2 63.3	3	56. 63.
Heavy Trucks:	56 57 64	.2 8 .1 8 .3 6 ontour (in feet)	55.6 32.5	4 5 70 dBA	6.6 9.4 65	47.9 54.7 dBA	) 7	56.2 63.3 60 dBA	55	56.3 63.7 dBA
Heavy Trucks: Vehicle Noise:	56 57 64	.2 .4 .1 .4 .3 .6 <i>ontour (in feet)</i>	55.6	4	6.6 9.4 65	47.9 54.7	) 7	56.2 63.3	2 3 55 1	56.3 63.3

Sunday, July 18, 2021

	FHW	VA-RD-77-108	HIGHW	AY NO	DISE PI	REDICTI		DEL			
	: OYWP								alley Mark	etplace	
Road Name						Job N	umber: 1	13078			
Road Segmen	t: s/o Bear Va	lley									
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				Si	te Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	1,970 vehicle	s					Autos:	15		
Peak Hour I	Percentage:	10.00%			Me	edium Tru	icks (2 A	(xles):	15		
Peak He	our Volume:	197 vehicle	s		He	avy Truc	:ks (3+ A	(xles):	15		
Vel	nicle Speed:	45 mph		V	ehicle	Mix					
Near/Far Lar	e Distance:	44 feet		-		icleType		Dav	Evening	Night	Dailv
Site Data							utos:	77.5%	•	9.6%	97.42
Bar	rier Heiaht:	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84
Barrier Type (0-Wa	all, 1-Berm):	0.0			1	Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74
Centerline Dis		50.0 feet		N	oise So	ource El	evations	s (in fe	et)		
Centerline Dist. t		50.0 feet				Autos	s: 0.0	000	1		
Barrier Distance t		0.0 feet			Mediu	m Trucks	: 2.2	297			
Observer Height (/	,	5.0 feet			Heav	vy Trucks	s: 8.0	006	Grade Ad	iustment	: 0.0
	d Elevation:	0.0 feet				·					
	d Elevation:	0.0 feet		Lá	ane Eq	uivalent			feet)		
F	Road Grade:	0.0%				Autos					
	Left View:	-90.0 degre				m Trucks					
	Right View:	90.0 degre	es		Heav	vy Trucks	s: 45.0	000			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow	Distai		Finite	Road	Fresn		Barrier Att		m Atter
Autos:	68.46	-9.01		0.56		-1.20		-4.65		000	0.00
Medium Trucks:	79.45	-26.24		0.59		-1.20		-4.87		000	0.00
Heavy Trucks:	84.25	-30.20		0.58		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise VehicleType	Levels (witho Lea Peak Hou					1.000	li-lat		Ldn		NEL
Autos	Leq Peak Hou 58	1.1	56.9	eq Eve	55.1	Leq I	vignt 49.1		Lan 57.7		<u>NEL</u> 58
Autos: Medium Trucks:	52	-	51.1		55.1 44.7		49.1		57.6		58 51
Heavy Trucks:	52. 53.	-	52.0		44.7		43.2		51.6		51
Vehicle Noise:	60.		58.9		55.8		51.1		52.0		60
Centerline Distanc	e to Noise Co	ntour (in feet	)								
Biotano			,	70 dE	3A	65 (	1BA	6	i0 dBA	55	dBA
			Ldn:	10		2	2		47	1	102

	FHW	/A-RD-77-108	HIGH	WAY I	NOISE PF	REDICT	TION MO	DEL			
	io: OYWP ne: 2nd Ave						t Name: I Number:		/alley Mark	etplace	
	nt: n/o Bear Va	lley				3001	vumber.	13070			
	SPECIFIC IN	PUT DATA							LINPUT	s	
Highway Data					Site Con	ditions	; (Hard =	10, So	oft = 15)		
Average Daily	( )	7,230 vehicles	S					Autos:			
		10.00%					rucks (2 A				
	lour Volume:	723 vehicles	5		Hei	avy Tru	icks (3+ A	(xles)	15		
	hicle Speed:	45 mph		Ī	Vehicle N	Nix					
Near/Far La	ne Distance:	44 feet		Γ	Vehi	cleTyp	е	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	97.42
Ba	rrier Height:	0.0 feet						84.8%	4.9%	10.3%	
Barrier Type (0-W	/all, 1-Berm):	0.0			F	leavy 1	rucks:	86.5%	2.7%	10.8%	0.749
Centerline Di	st. to Barrier:	50.0 feet			Noise So	urce E	levation	s (in f	eet)		
Centerline Dist.		50.0 feet				Auto		000			
Barrier Distance	to Observer:	0.0 feet			Mediur			297			
Observer Height	,	5.0 feet				y Truck		006	Grade Ad	justment	: 0.0
	ad Elevation:	0.0 feet		L							
	ad Elevation:	0.0 feet		-	Lane Equ				feet)		
	Road Grade:	0.0%				Auto		177			
	Left View:	-90.0 degree			Mediur						
	Right View:	90.0 degree	es		Heav	y Trucl	(S. 45.	000			
FHWA Noise Mod					-						
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite		Fresn	-	Barrier Att		m Atten
Autos:	68.46	-3.36		0.5		-1.20		-4.65		000	0.00
Medium Trucks:	79.45 84.25	-20.60 -24.55		0.5		-1.20 -1.20		-4.87 -5.43		000 000	0.00
Heavy Trucks:						-1.20		-5.43	0.0	000	0.00
Unmitigated Nois VehicleType	Leg Peak Hou				vening	1.00	Night	1	Ldn	0	NEL
Autos:	64.		62.6	LeyL	60.8	Ley	54.7	,	63.4		<u>VLL</u> 64.
Medium Trucks:	58.		56.7		50.4		48.8		57.3		57
Heavy Trucks:	59.		57.7		48.6		49.9		58.2		58
Vehicle Noise:	66.		64.6		61.4		56.7		65.3		65
Centerline Distan	ce to Noise Co	ntour (in feet,	)								
					dBA		dBA		60 dBA		dBA
			Ldn:	_	24		52		112	-	42
			NEL:		26		56		121		60

	FHV	VA-RD-77-108	HIGH	IWAY N	IOISE P	REDICT	ION MO	DDEL			
Road Nam	io: OYWP e: 2nd Ave nt: n/o Jasmine	)					Name: lumber:		'alley Mark	etplace	
	SPECIFIC IN	PUT DATA							L INPUT	S	
	Percentage:	3,650 vehicle 10.00%				dium Tr	ucks (2	Autos: Axles):	15 15		
Ve	lour Volume: hicle Speed: ne Distance:	365 vehicle 45 mph 44 feet	s	1	Vehicle						
Site Data					Veh	icleType	e Autos:	Day 77.5%	Evening 12.9%	Night 9.6%	Daily
	r <b>rier Height:</b> /all, 1-Berm):	0.0 feet 0.0				edium T Heavy T	rucks:	84.8% 86.5%	4.9%	9.6% 10.3% 10.8%	1.84%
Centerline Di		50.0 feet		1	Noise Se	ource E	levatior	ns (in f	eet)		
Centerline Dist. Barrier Distance Observer Height ( Pa	to Observer:	50.0 feet 0.0 feet 5.0 feet 0.0 feet				Auto m Truck /y Truck	s: 2	.000 .297 .006	Grade Ad	justment	: 0.0
Roa	ad Elevation:	0.0 feet		1	Lane Eq	uivalen	t Distan	ice (in	feet)		
1	Road Grade:	0.0%				Auto		.177			
	Left View: Right View:	-90.0 degree 90.0 degree				m Truck /y Truck		.981 .000			
FHWA Noise Mode	el Calculations	5									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	68.46	-6.33		0.5	6	-1.20		-4.65	0.0	000	0.000
Medium Trucks:	79.45	-23.57		0.5	9	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-27.52		0.5	8	-1.20		-5.43	0.0	000	0.000
Unmitigated Noise			barrie	er atten	uation)						
VehicleType	Leq Peak Hou			Leq E		,	Night		Ldn	-	NEL
Autos:	61		59.6		57.8		51.	-	60.4	-	61.0
Medium Trucks:	55	-	53.8		47.4		45.	-	54.3	-	54.5
Heavy Trucks: Vehicle Noise:	56		54.7 61.6		45.7 58.4		46. 53.		55.3 62.3	-	55.4 62.8
Centerline Distand					30.4		55.	U	02.	J	02.0
Centerine Distant	e to NUISE CO	mour (in reet)	,	70 0	dBA	65	dBA	6	60 dBA	55	dBA
			Ldn:	1	5	3	33		71	· 1	153
		Ci	NEL:	1	6	3	35		76	1	165

	FH\	VA-RD-77-108 HIG	SHWAY I	NOISE PE	REDICTI	ом моі	DEL			
Road Nam	io: OYWP ne: 2nd Ave nt: s/o Bear Va	illey				Name: E Imber: 1		alley Mark	etplace	
SITE	SPECIFIC IN	IPUT DATA			N	OISE N	IODE		s	
Highway Data				Site Con	ditions (	'Hard =	10, So	ft = 15)		
Average Daily	Traffic (Adt):	2,130 vehicles					Autos:	15		
Peak Hour	Percentage:	10.00%		Me	dium Tru	cks (2 A	xles):	15		
Peak H	lour Volume:	213 vehicles		He	avy Truc	ks (3+ A	xles):	15		
Ve	hicle Speed:	45 mph	-	Vehicle I	Mix					
Near/Far La	ne Distance:	44 feet	-		icleType		Dav	Evening	Night	Daily
Site Data			-	VCIII			77.5%	•	9.6%	
				1.4	edium Tn		84.8%		10.3%	
	rrier Height:	0.0 feet			leavy Tri		86.5%		10.8%	
Barrier Type (0-W	. ,	0.0 50.0 feet		,	icavy in	ucho.	00.070	2.170	10.070	0.147
Centerline Dis Centerline Dist		50.0 feet		Noise Sc	ource Ele	evations	s (in fe	et)		
Barrier Distance		0.0 feet			Autos	: 0.0	000			
Observer Height (		5.0 feet		Mediui	m Trucks	: 2.2	297			
	ad Elevation:	0.0 feet		Heav	y Trucks	: 8.0	006	Grade Ad	justment	: 0.0
	ad Elevation:	0.0 feet	ŀ	Lane Eq	uivalent	Distanc	e (in f	feet)		
	Road Grade:	0.0%			Autos			,		
	Left View:	-90.0 degrees		Mediu	m Trucks					
	Right View:	90.0 degrees		Heav	y Trucks					
FHWA Noise Mode	el Calculation	s								
VehicleType	REMEL	Traffic Flow D	Distance	Finite	Road	Fresn	el	Barrier Att	en Ber	rm Atten
Autos:	68.46	-8.67	0.5	56	-1.20		-4.65	0.0	000	0.00
Medium Trucks:	79.45	-25.91	0.5		-1.20		-4.87		000	0.00
Heavy Trucks:	84.25	-29.86	0.5		-1.20		-5.43	0.0	000	0.000
Unmitigated Noise										
VehicleType	Leq Peak Hou			vening	Leq N			Ldn		NEL
Autos:	59			55.5		49.4		58.1		58.
Medium Trucks:	52			45.1		43.5		52.0		52.2
Heavy Trucks: Vehicle Noise:	53			43.3		44.6		52.9		53.0
	61		5	56.1		51.4		60.0	J	60.4
Centerline Distand	ce to Noise Co	ontour (in feet)	70	dBA	65 0	IRΔ	6	0 dBA	55	dBA
		Ldn		11	23			50		107
		CNEL		11	25	-		53		107
		ONLL		• •	20	-		00		.5

Sunday, July 18, 2021

Sunday, July 18, 2021

	FHW	A-RD-77-108	HIGHWA	Y NC	DISE PR	EDICTIC	ON MO	DEL				
Scenario Road Name Road Segment	: Hesperia			Project Name: Bear Valley Marketplace Job Number: 13078								
SITE S	PECIFIC IN	PUT DATA				NC	DISE N	IODEI	. INPUT	5		
Highway Data				Si	te Cond	ditions (H	lard =	10, So	ft = 15)			
Average Daily T Peak Hour F	Percentage:	10.00%				dium Truc	:ks (2 A		15 15 15			
		2,250 vehicles			Hea	avy Truck	S (3+ A	xies):	15			
	icle Speed:	45 mph		Ve	ehicle N	lix						
Near/Far Lan	e Distance:	72 feet			Vehi	cleType	I	Day	Evening	Night	Daily	
Site Data						Au	itos:	77.5%	12.9%	9.6%	97.42%	
Barr	ier Height:	0.0 feet			Me	dium Tru	cks:	84.8%	4.9%	10.3%	1.84%	
Barrier Type (0-Wa	•	0.0			h	leavy Tru	cks:	86.5%	2.7%	10.8%	0.74%	
Centerline Dist	to Barrier:	62.0 feet		N	oise So	urce Elev	vations	(in fe	et)			
Centerline Dist. to	o Observer:	62.0 feet				Autos:						
Barrier Distance to	Observer:	0.0 feet			Medium	n Trucks:						
Observer Height (A	bove Pad):	5.0 feet				v Trucks:			Grade Adj	ustment	+ 0.0	
Pad	d Elevation:	0.0 feet										
Road	d Elevation:	0.0 feet		Lá	ane Equ	ivalent E	Distanc	e (in fe	eet)			
R	oad Grade:	0.0%				Autos:						
	Left View:	-90.0 degree	s			n Trucks:						
	Right View:	90.0 degree	S		Heav	y Trucks:	50.5	67				
FHWA Noise Model	Calculations	5										
VehicleType	REMEL	Traffic Flow	Distand	e	Finite I	Road	Fresne	e/ L	Barrier Atte	en Ber	rm Atten	
Autos:	68.46	1.57	-	0.20		-1.20		4.70	0.0	000	0.00	
Medium Trucks:	79.45	-15.67	-	0.17		-1.20		4.88	0.0	000	0.00	
Heavy Trucks:	84.25	-19.62	-	0.18		-1.20		5.32	0.0	000	0.00	
Unmitigated Noise	Levels (witho	out Topo and I	arrier at	tenu	ation)							
VehicleType L	eq Peak Hou	r Leq Day	Le	q Eve	ening	Leq N	ight		Ldn	C	NEL	
Autos:	68.	.6 6	6.7		65.0		58.9		67.5	5	68.1	
Medium Trucks:	62.	.4 6	9.0		54.5		53.0		61.5	5	61.7	
Heavy Trucks:	63.	.3 6	61.8		52.8		54.0		62.4		62.5	
Vehicle Noise:	70.	.5 6	8.7		65.6		60.9		69.4	ļ	69.9	
Centerline Distance	e to Noise Co	ntour (in feet)									-	
				70 dE	3A	65 dE	BA	6	0 dBA	55	dBA	
			dn:	57	-				264		570	
		1	un.	57		123	5		204	5	570	

	FHV	VA-RD-77-108	HIGH	IWAY N	OISE PF	REDICTI	ON MO	DEL			
Scenari Road Nam Road Segmer		•					Name: umber:		'alley Mark	etplace	
SITE	SPECIFIC IN	PUT DATA				N	OISE	NODE		s	
Highway Data				S	ite Con	ditions (	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	4,470 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10.00%			Mee	dium Tru	icks (2 /	Axles):	15		
Peak H	our Volume:	447 vehicle	s		Hei	avy Truc	ks (3+7	Axles):	15		
	hicle Speed:	45 mph		ν	ehicle N	lix					
Near/Far Lar	ne Distance:	44 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	97.42%
Bar	rier Height:	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			ŀ	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	t. to Barrier:	50.0 feet			loise So	urce Fl	evation	s (in fe	pet)		
Centerline Dist.	to Observer:	50.0 feet		Ē	0.00 00	Autos		000			
Barrier Distance t	to Observer:	0.0 feet			Mediur	n Trucks		297			
Observer Height (	,	5.0 feet				y Trucks		006	Grade Ad	justment.	0.0
	d Elevation:	0.0 feet		-	_						
	d Elevation:	0.0 feet		4	ane Equ	Autos		ce (In 1 177	reet)		
F	Road Grade: Left View:	0.0%			Madium	Autos n Trucks		177 981			
	Right View:	-90.0 degree 90.0 degree				y Trucks		000			
FHWA Noise Mode	Calculation:	s									
VehicleType	REMEL	Traffic Flow		stance	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atten
Autos:	68.46	-5.45		0.56		-1.20		-4.65		000	0.00
Medium Trucks:	79.45	-22.69		0.59		-1.20		-4.87		000	0.00
Heavy Trucks:	84.25	-26.64		0.58		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er atteni	uation)						
	Leq Peak Hou			Leq Ev		Leq I	•		Ldn		VEL
Autos:	62		60.5		58.7		52.7		61.3		61.
Medium Trucks:	56		54.6		48.3		46.7		55.2		55.
Heavy Trucks: Vehicle Noise:	57	-	55.6 62.5		46.5 59.3		47.8 54.6		56.1 63.2		56. 63
					59.3		54.t	5	63.2	2	63.
Centerline Distanc	e to NOISE CO	intour (in reet	/	70 d	BA	65 0	1BA	6	0 dBA	55	dBA
			Ldn:	18	3	3	8	1	82	1	76
			NEL :	19			1		87		88

Sunday, July 18, 2021

Scenar	ia: OYWP					Project	Name <sup>.</sup> F	Bear V	alley Mark	etplace	
	e: Hesperia						umber: 1		ancy mark	cipiace	
	nt: s/o Jasmin	e				00071		0010			
SITE	SPECIFIC IN			T						6	
Highway Data	SPECIFIC II	FUIDAIA		5	Site Cond					3	
	Traffic (Adt)	22,500 vehicles						Autos:	,		
• •	Percentage:	10.00%			Med	lium Tr	ucks (2 A	xles):			
	lour Volume:	2.250 vehicles			Hea	vv Tru	cks (3+ A	xles):	15		
Ve	hicle Speed:	45 mph		-			(.	,	-		
	ne Distance:	72 feet		'	Vehicle M						
					Venio	cleType		Day	Evening	Night	Daily
Site Data								77.5%		9.6%	
	rrier Height:	0.0 feet				dium T		84.8%		10.3%	
Barrier Type (0-W		0.0			н	eavy T	UCKS:	86.5%	2.7%	10.8%	0.74
Centerline Di		62.0 feet		٨	Voise So	urce El	evations	; (in fe	eet)		
Centerline Dist.		62.0 feet				Auto	s: 0.0	000			
Barrier Distance		0.0 feet			Mediun	1 Truck	s: 2.2	297			
Observer Height	,	5.0 feet			Heav	/ Truck	s: 8.0	006	Grade Ad	iustment	: 0.0
	ad Elevation:	0.0 feet					Distance	- 6	64		
	ad Elevation:	0.0 feet		4	ane Equ				reet)		
	Road Grade:	0.0%			Marthum	Auto					
	Left View:	-90.0 degree			Mediun						
	Right View:	90.0 degree	s		neav	/ Truck	s: 50.8	100			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distand	се	Finite I	Road	Fresn	e/	Barrier Att	en Ber	m Atter
Autos:	68.46	1.57	-	-0.20	D	-1.20		-4.70	0.0	000	0.0
Medium Trucks:	79.45	-15.67	-	-0.17	7	-1.20		-4.88	0.0	000	0.0
mound mucho.	84.25	-19.62	-	-0.18	В	-1.20		-5.32	0.0	000	0.00
Heavy Trucks:	04.20										
Heavy Trucks:		out Topo and I	barrier at	tten	uation)					C	NEL
Heavy Trucks:					uation) /ening	Leq	Night		Ldn		
Heavy Trucks: Unmitigated Noise	e <b>Levels (with</b> Leq Peak Hol	ur Leq Day				Leq	Night 58.9		Ldn 67.5	5	68
Heavy Trucks: Unmitigated Noise VehicleType	e Levels (with Leq Peak Hou 68	ur Leq Day 3.6 ( 2.4 (	Le 66.7 60.9		/ening	Leq	58.9 53.0		67.5 61.5	5	
Heavy Trucks: Unmitigated Noise VehicleType Autos:	e Levels (with Leq Peak Hou 68	ur Leq Day 3.6 ( 2.4 (	Le 66.7		ening 65.0	Leq	58.9		67.5	5	61
Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks:	e Levels (with Leq Peak Hou 62 63	<i>Ir Leq Day</i> 3.6 (2.4 (6 3.3 (6	Le 66.7 60.9		<i>ening</i> 65.0 54.5	Leq	58.9 53.0		67.5 61.5	5	61 62
Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	e Levels (with Leq Peak Hou 62 63 70	Leq Day           8.6         6           2.4         6           8.3         6           0.5         6	Le 66.7 60.9 61.8		vening 65.0 54.5 52.8	Leq	58.9 53.0 54.0		67.5 61.5 62.4	5	61 62
Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	e Levels (with Leq Peak Hou 62 63 70	Leq Day           8.6         6           2.4         6           8.3         6           0.5         6	Lei 66.7 60.9 61.8 68.7		vening 65.0 54.5 52.8 65.6		58.9 53.0 54.0		67.5 61.5 62.4	5	61 62
Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks:	e Levels (with Leq Peak Hou 62 63 70	Image: Leq Day         Leq Day           8.6         (           2.4         (           8.3         (           0.5         (           pontour (in feet)         (	Lei 66.7 60.9 61.8 68.7	q Ev	vening 65.0 54.5 52.8 65.6	65	58.9 53.0 54.0 60.9		67.5 61.5 62.4 69.4	5	68 61 69 dBA 670

Site Data         Autos:         77.5%         12.9%         9.6%         9           Barrier Height:         0.0 feet         Medium Trucks:         84.8%         4.9%         0.3%           Barrier Jype (0-Wall, 1-Berm):         0.0         Medium Trucks:         84.8%         4.9%         10.3%           Centerline Dist. to Barrier:         62.0 feet         Noise Source Elevations (in feet)         10.8%           Barrier Distance to Observer:         0.0 feet         Autos:         0.000           Observer Height (Above Pad):         5.0 feet         Heavy Trucks:         8.006         Grade Adjustment: 0	Daily 97.42% 1.84% 0.74%
Highway Data     Site Conditions (Hard = 10, Soft = 15)       Average Daily Traffic (Adt): 40,540 vehicles     Autos: 15       Peak Hour Volume: 4,054 vehicles     Medium Trucks (2 Axles): 15       Vehicle Speed: 45 mph     Heavy Trucks (3 + Axles): 15       Near/Far Lane Distance: 72 feet     Vehicle Mix       Site Data     Autos: 77.5% 12.0% 9.6% 5       Barrier Height: 0.0 feet     Medium Trucks: 84.8% 4.9% 10.3%       Barrier Type (0-Wall, 1-Berm): 0.0     Medium Trucks: 86.5% 2.7% 10.8%       Centerline Dist. to Barrier: 62.0 feet     Autos: 0.000       Barrier Leight (Above Pad): 5.0 feet     Mole Grade Adjustment. 0	97.42% 1.84%
Average Daily Traffic (Adt): 40,540 vehicles     Autos: 15       Peak Hour Percentage: 10,00%     Medium Trucks (2 Axles): 15       Peak Hour Volume: 4,054 vehicles     Heavy Trucks (3 4 Axles): 15       Vehicle Speed: 45 mph     Vehicle Type       Near/Far Lane Distance: 72 feet     Vehicle Type       Site Data     Autos: 77.5% 12.9% 9.6% 9       Barrier Height: 0.0 feet     Medium Trucks: 84.8% 4.9% 10.3%       Barrier Type (O-Wall, 1-Berm): 0.0     Medium Trucks: 84.8% 4.9% 10.3%       Centerline Dist. to Barrier: 62.0 feet     Noise Source Elevations (in feet)       Barrier Type (Jobserver: 0.0 feet     Autos: 0.000       Barrier Type (Autos)     5.0 feet       Medium Trucks: 8.006     Grade Adjustment: 0.000	97.42% 1.84%
Barrier Type (O-Wall, 1-Berm):     0.0       Barrier Type (O-Wall, 1-Berm):     0.0       Centerline Dist. to Barrier:     62.0 feet       Barrier Type (D-Wall, 1-Berm):     0.0       Centerline Dist. to Barrier:     62.0 feet       Disterver Height (Above Pad):     5.0 feet	97.42% 1.84%
Peak Hour Volume:     4,054 vehicles       Vehicle Speed:     45 mph       Near/Far Lane Distance:     72 feet       Vehicle Type     Day       Earrier Height:     0.0 feet       Barrier Height:     0.0 feet       Barrier Type (0-Wall, 1-Berm):     0.0       Centerline Dist. to Diserver:     62.0 feet       Destrier Time to bist. to Observer:     62.0 feet       Modium Trucks:     84.8%       Autos:     0.00       Centerline Dist. to Diserver:     62.0 feet       Motise Source Elevations (in feet)       Observer Height (Above Pad):     5.0 feet	97.42% 1.84%
Vehicle Speed:         45 mph           Near/Far Lane Distance:         72 feet           Site Data         Vehicle Type         Day         Evening         Night           Barrier Height:         0.0 feet         Medium Trucks:         84.8%         4.9%         10.3%           Barrier Type (0-Wall, 1-Berm):         0.0         feet         Medium Trucks:         86.5%         2.7%         10.8%           Centerline Dist. to Barrier:         62.0 feet         Noise Source Elevations (in feet)         Noise Source Elevations (in feet)           Deserver Height (Above Pad):         5.0 feet         Heavy Trucks:         8.006         Grade Adjustment:	97.42% 1.84%
Near/Far Lane Distance:         T2 feet         Venicle Mix         Day         Evening         Night         I           Site Data         Autos:         77.5%         12.9%         9.6%         9           Barrier Height:         0.0 feet         Medium Trucks:         84.8%         4.9%         10.3%           Barrier Type (OWall, 1-Berm):         0.0         Heavy Trucks:         86.5%         2.7%         10.8%           Centerline Dist. to Barrier:         62.0 feet         Noise Source Elevations (in feet)         10.8%           Barrier Distance to Observer:         0.0 feet         Autos:         0.000           Deserver Height (Above Pad):         5.0 feet         Meavy Trucks:         8.006         Grade Adjustment. 0.001	97.42% 1.84%
Near/Far Lane Distance:         72 feet         VehicleType         Day         Evening         Night         I           Site Data         Autos:         77.5%         12.9%         9.6%         9           Barrier Height:         0.0 feet         Medium Trucks:         84.8%         4.9%         10.3%           Barrier Type (0-Wall, 1-Berm):         0.0         Medium Trucks:         86.5%         2.7%         10.8%           Centerline Dist. to Dasrier:         62.0 feet         Noise Source Elevations (in feet)         10.8%           Barrier Distance to Observer:         0.0 feet         Autos:         0.000           Observer Height (Above Pad):         5.0 feet         Heavy Trucks:         8.006         Grade Adjustment:	97.42% 1.84%
Site Data         Autos:         77.5%         12.9%         9.6%         9           Barrier Height:         0.0 feet         Medium Trucks:         84.8%         4.9%         10.3%           Barrier Type (0-Wall, 1-Berm):         0.0         Medium Trucks:         84.8%         4.9%         10.3%           Centerline Dist. to Barrier:         62.0 feet         Noise Source Elevations (in feet)         10.8%           Barrier Distance to Observer:         0.0 feet         Medium Trucks:         2.297           Observer Height (Above Pad):         5.0 feet         Heavy Trucks:         8.006         Grade Adjustment. 0.000	97.42% 1.84%
Barrier Type (J-Wall, 1-Barrn):         0.0         Heavy Trucks:         86.5%         2.7%         10.8%           Centerline Dist. to Barrier:         62.0 feet         Noise Source Elevations (in feet)         Noise Source Elevations (in feet)           Barrier Type (J-Wall, 1-Barri):         62.0 feet         Autos:         0.000           Barrier Type (J-Wall, 1-Barri):         62.0 feet         Autos:         0.000           Barrier Type (J-Wall, 1-Barri):         5.0 feet         Heavy Trucks:         8.000           Observer Height (Above Pad):         5.0 feet         Heavy Trucks:         8.000	
Barrier Type (0-Wall, 1-Berrn):         0.0         Heavy Trucks:         86.5%         2.7%         10.8%           Centerline Dist. to Barrier:         62.0 feet         Noise Source Elevations (in feet)            Barrier Distance to Observer:         62.0 feet         Autos:         0.000           Barrier Distance to Observer:         0.0 feet         Medium Trucks:         2.297           Observer Height (Above Pad):         5.0 feet         Heavy Trucks:         8.006         Grade Adjustment:	0.74%
Centerline Dist. to Barrier:         62.0 feet         Noise Source Elevations (in feet)           Centerline Dist. to Observer:         62.0 feet         Autos:         0.000           Barrier Distance to Observer:         0.0 feet         Medium Trucks:         2.297           Observer Height (Above Pad):         5.0 feet         Heavy Trucks:         8.006         Grade Adjustment:	
Centerline Dist. to Observer:         62.0 feet         Noise Source Elevations (in reet)           Barrier Distance to Observer:         0.0 feet         Autos:         0.000           Observer Height (Above Pad):         5.0 feet         Medium Trucks:         2.297           Heavy Trucks:         8.006         Grade Adjustment:         0.000	
Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297 Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.006 Grade Adjustment: 0	
Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.006 Grade Adjustment: 0	
Heavy Trucks: 8,006 Grade Adjustment. 0	
Pad Elevation: 0.0 feet	1.0
Road Elevation: 0.0 feet Lane Equivalent Distance (in feet)	
Road Grade: 0.0% Autos: 50.725	
Left View: -90.0 degrees Medium Trucks: 50.550	
Right View: 90.0 degrees Heavy Trucks: 50.567	
FHWA Noise Model Calculations	
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm	
Autos: 68.46 4.13 -0.20 -1.20 -4.70 0.000	0.000
Medium Trucks: 79.45 -13.11 -0.17 -1.20 -4.88 0.000	0.000
Heavy Trucks: 84.25 -17.07 -0.18 -1.20 -5.32 0.000	0.00
Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leg Peak Hour Leg Day Leg Evening Leg Night Ldn CNE	-
Autos: 71.2 69.3 67.5 61.5 70.1	70.3
Medium Trucks: 65.0 63.5 57.1 55.6 64.0	64.2
Heavy Trucks: 65.8 64.4 55.4 56.6 65.0	65.1
Vehicle Noise: 73.0 71.3 68.1 63.5 72.0	72.
Centerline Distance to Noise Contour (in feet)	
70 dBA 65 dBA 60 dBA 55 dE	ЗA
Ldn: 84 182 391 843	2
CNEL: 90 195 420 905	,

Sunday, July 18, 2021

FI	IWA-RD-77-108	B HIGHWA	Y NOISE F	REDICTION	N MODEL						
Scenario: OYWP Road Name: Bear Vall Road Segment: e/o 7th A	/		Project Name: Bear Valley Marketplace Job Number: 13078								
SITE SPECIFIC	INPUT DATA		NOISE MODEL INPUTS								
Highway Data			Site Col	nditions (Ha	ard = 10, S	oft = 15)					
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume:	10.00%			edium Truck eavy Trucks		15					
Vehicle Speed:	45 mph		Vehicle	Mix							
Near/Far Lane Distance:	72 feet			hicleType	Dav	Evening	Night Daily				
Site Data				Aut		•	9.6% 97.42%				
Barrier Height:	0.0 feet		N	ledium Truc	ks: 84.8%		10.3% 1.84%				
Barrier Type (0-Wall, 1-Berm):	0.0			Heavy Truc	ks: 86.5%	6 2.7%	10.8% 0.74%				
Centerline Dist. to Barrier:			Noise S	ource Eleva	ations (in f	eet)					
Centerline Dist. to Observer:				Autos:	0.000						
Barrier Distance to Observer:			Mediu	im Trucks:	2.297						
Observer Height (Above Pad):			Hea	vy Trucks:	8.006	Grade Adju	stment: 0.0				
Pad Elevation:											
Road Elevation:			Lane Ec	uivalent Di		feet)					
Road Grade:				Autos:	50.725						
Left View:				Im Trucks:	50.550 50.567						
Right View:	90.0 degre	es	неа	vy Trucks:	00.007						
FHWA Noise Model Calculatio	-										
VehicleType REMEL	Traffic Flow	Distanc			Fresnel	Barrier Atte					
Autos: 68.4	• ••==		0.20	-1.20	-4.70	0.00					
Medium Trucks: 79.4 Heavy Trucks: 84.2			).17 ).18	-1.20 -1.20	-4.88 -5.32						
Unmitigated Noise Levels (with				=1.20	-0.32	0.00	0.000				
VehicleType Lea Peak H			Evening	Leg Nig	tht	Ldn	CNEL				
	71.3	69.4	67.6		61.6	70.2	70.8				
	5.1	63.5	57.2		55.6	64.1	64.3				
Heavy Trucks:	35.9	64.5	55.4	1	56.7	65.0	65.2				
	73.1	71.4	68.2	2	63.6	72.1	72.6				
Centerline Distance to Noise	Contour (in feet	)									
		1	'0 dBA	65 dB/	A	60 dBA	55 dBA				
		Ldn:	86	184		397	855				
	С	NEL:	92	198		426	917				

Average Daily Traffic (Adt): 40,140 vehicles         Autos:         15           Peak Hour Percentage:         10,00%         Medium Trucks (2 Axles):         15           Peak Hour Volume:         4,014 vehicles         Medium Trucks (2 Axles):         15           Vehicle Speed:         45 mph         Near/Far Lane Distance:         72 feet         Vehicle Type         Day         Evening         Night         Daily           Site Data         Barrier Height:         0.0 feet         Medium Trucks:         84.8%         4.9%         0.3%         1.8           Barrier Type (0-Wall, 1-Berm):         0.0         Centerline Dist. to Diserver:         62.0 feet         Autos:         77.5%         12.9%         9.6%         97.4           Barrier Type (0-Wall, 1-Berm):         0.0         Centerline Dist. to Doserver:         62.0 feet         Autos:         70.0 feet         Medium Trucks:         84.8%         4.9%         10.8%         0.7%           Barrier Distance to Observer:         0.0 feet         Autos:         0.50         Fet         Autos:         0.00         Centerline Oist.         0.0 feet         Autos:         0.00         Autos:         0.00         Autos:         50.75           Heavy Trucks:         79.45         -13.15         -0.17         -1		FHWA-	RD-77-108 HIC	GHWAY	NOISE PR	REDICT		DEL			
Highway Data         Site Conditions (Hard = 10, Soft = 15)           Average Daily Traffic (Adl): 40,140 vehicles Peak Hour Volume: 4,014 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 72 feet         Autos: 15           Barrier Height: Dist. to Diserver:         0.0 feet         Vehicle Type         Day         Evening         Night         Dails           Barrier Height: Observer Height (Abov Pad):         0.0 feet         Vehicle Type         Day         Evening         Night         Dails         0.8%         9.6%         <	Road Name: B	ear Valley							alley Mark	etplace	
Average Daily Traffic (Adi): 40,140 vehicles         Autos:         15           Peak Hour Percentage:         10,00%         Medium Trucks (2 Axles):         15           Peak Hour Volume:         4,014 vehicles         Medium Trucks (2 Axles):         15           Vehicle Speed:         45 mph         Yehicle Type         Day         Evening         Night         Daily           Site Data         Autos:         72 feet         Vehicle Type         Day         Evening         Night         Daily           Barrier Type (0-Wall, 1-Berm):         0.0         Centerline Dist. to Doserver:         62.0 feet         Medium Trucks:         84.8%         4.9%         0.3%         1.84           Barrier Type (0-Wall, 1-Berm):         0.0         Centerline Dist. to Doserver:         62.0 feet         Autos:         0.0%         Medium Trucks:         84.8%         4.9%         0.0%         7.4           Barrier Distance to Observer:         0.0 feet         Autos:         8.006         Grade Adjustment:         0.0           Road Grade:         0.0%         Left Ivew:         -90.0 degrees         Heavy Trucks:         50.755           FHWA Noise Model Calculations         VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel	SITE SPE	CIFIC INPU	T DATA			N	IOISE N	IODE	L INPUT	s	
Peak Hour Percentage:         10.00%         Medium Trucks (2 Axles):         15           Peak Hour Volume:         4.014 vehicles         Heavy Trucks (3 + Axles):         15           Vehicle Speed:         45 mph         Vehicle Speed:         45 mph           Near/Far Lane Distance:         72 feet         Vehicle Speed:         45 mph           Site Data         Autos:         77.5%         12.9%         9.6%         97.42           Barrier Type (O-Walt).         Parmer Type (O-Walt).         0.0 feet         Medium Trucks:         84.8%         4.9%         10.3%         1.84           Barrier Type (O-Walt).         Daserver:         62.0 feet         Medium Trucks:         86.5%         2.7%         10.8%         0.74           Deserver Height (Above Pad):         5.0 feet         Autos:         2.297         Neise Source Elevations (in feet)         0.0           Road Elevation:         0.0 feet         Autos:         50.755         Heavy Trucks:         80.06         Grade Adjustment:         0.0           Road Elevation:         0.0 feet         Autos:         50.550         Heavy Trucks:         50.556           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten	Highway Data				Site Con	ditions	(Hard =	10, So	oft = 15)		
Peak Hour Volume:         4,014 vehicles           Vehicle Speed:         4,5 mph           Near/Far Lane Distance:         72 feet           Site Data         Vehicle Type         Day         Evening         Night         Dails           Site Data         Autos:         77.5%         12.9%         9.6%         9.74           Barrier Height:         0.0 feet         Medium Trucks:         84.8%         4.9%         10.3%         1.84           Barrier Jist to Barrier:         62.0 feet         Medium Trucks:         86.5%         2.7%         10.8%         0.74           Observer Height (Above Pad):         5.0 feet         Medium Trucks:         8.006         Grade Adjustment:         0.0           Road Grade:         0.0%         Autos:         70.000         Medium Trucks:         50.550           Right View:         90.0 degrees         Finite Road         Fresnel         Barrier Atten         Bern Atten           VehicleType         Leq Day         Leq Day         Leq Day         Leq Evening         Uehicle Nize           VehicleType         Remain         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Bern Atten           Autos:         68.46         4	Average Daily Traff	ic (Adt): 40,1	40 vehicles					Autos:	15		
Vehicle Speed: Near/Far Lane Distance:         45 mph 72 feet         Vehicle Mix           Site Data         Autos:         77.5%         12.9%         9.6%         97.4%           Barrier Height:         0.0 feet         Autos:         77.5%         12.9%         9.6%         97.4%           Barrier Type (0-Wall, 1-Berm):         0.0         Centerline Dist. to Barrier:         62.0 feet         Medium Trucks:         84.8%         4.9%         10.3%         1.84           Barrier Type (0-Wall, 1-Berm):         0.0         Centerline Dist. to Desrver:         62.0 feet         Autos:         86.5%         2.7%         10.8%         0.74           Barrier Distance to Observer:         0.0 feet         Autos:         0.00         Medium Trucks:         82.297           Pad Elevation:         0.0 feet         Autos:         50.75         Heavy Trucks:         50.755           FHWA Noise Model Calculations         VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berrier Atten         Berrier Atten         Berrier Atten           Autos:         79.45         -13.15         -0.17         -1.20         -4.70         0.000         0.00           Medium Trucks:         84.25	Peak Hour Perc	entage: 10.	00%		Me	dium Tri	ucks (2 A	(xles)	15		
Near/Far Lane Distance:         72 feet         Vehicle N/X         Day         Evening         Night         Dail           Site Data         Autos:         77.5%         12.9%         9.6%         97.42           Barrier Height:         0.0 feet         Medium Trucks:         84.8%         4.9%         10.3%         1.84           Barrier Type (0-Wall, 1-Berm):         0.0         Centerline Dist. to Barrier:         62.0 feet         Medium Trucks:         86.5%         2.7%         10.8%         0.7           Centerline Dist. to Dserver:         62.0 feet         Medium Trucks:         86.5%         2.7%         10.8%         0.7           Observer Height (Above Pad):         5.0 feet         Mattis:         0.000         Medium Trucks:         2.297           Road Grade:         0.0 feet         Mattis:         50.550         Heavy Trucks:         50.550           Left View:         -90.0 degrees         Medium Trucks:         50.550         Heavy Trucks:         50.550           FHWA Noise Model Calculations         Vehicle Type         REMEL         Traffic Flow         Distance         Finite Road         Fresnet         Barrier Atten         Berm Atten           Autos:         79.45         -13.15         -0.17         -1.20	Peak Hour	/olume: 4,0	14 vehicles		He	avy Tru	cks (3+ A	(xles)	15		
Near/Far Lane Distance:         72 feet         Vehicle Type         Day         Evening         Night         Dail           Site Data         Autos:         77.5%         12.9%         9.6%         97.4%           Barrier Height:         0.0 feet         Medium Trucks:         84.8%         4.9%         10.3%         1.84           Barrier Type (0-Wall, 1-Berm):         0.0         Centerline Dist. to Barrier:         62.0 feet         Medium Trucks:         84.8%         4.9%         0.0%         7.4%           Centerline Dist. to Observer:         0.0 feet         Autos:         0.00         Medium Trucks:         2.297         10.8%         0.74           Deserver Height (Above Pad):         5.0 feet         Autos:         0.00         Medium Trucks:         8.006         Grade Adjustment:         0.0           Road Elevation:         0.0 feet         Autos:         50.75         Heavy Trucks:         50.75           Edit View:         90.0 degrees         Right View:         90.0 degrees         Heavy Trucks:         50.55         Heavy Trucks:         50.55           FHWA Noise Model Calculations         VehicleType         REIMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Attee <td></td> <td></td> <td>45 mph</td> <td></td> <td>Vehicle I</td> <td>Nix</td> <td></td> <td></td> <td></td> <td></td> <td></td>			45 mph		Vehicle I	Nix					
Site Data         Autos:         77.5%         12.9%         9.6%         97.42           Barrier Height:         0.0 feet         Medium Trucks:         84.8%         4.9%         10.3%         1.84           Barrier Type (0-Wall, 1-Berm):         0.0         Centerine Dist. to Barrier:         62.0 feet         Medium Trucks:         86.5%         2.7%         10.3%         1.84           Barrier Dist. to Diserver:         62.0 feet         Noise Source Elevations (in feet)         Autos:         0.000           Observer Height (Above Pad):         5.0 feet         Heavy Trucks:         8.006         Grade Adjustment:         0.0           Road Elevation:         0.0 feet         Autos:         0.000         Medium Trucks:         2.297           Road Grade:         0.0%         Lane Equivalent Distance (in feet)         Autos:         50.560           FHWA Noise Model Calculations         Vehicle Type         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berrer Atten           Autos:         79.45         -13.15         -0.17         -1.20         -4.88         0.000         0.0           Medium Trucks:         79.45         -13.15         -0.17         -1.20         -5.32         0.000	Near/Far Lane D	istance:	72 feet					Dav	Evenina	Niaht	Daily
Barrier Type (I)         0.0 feet         Heavy Trucks:         66.5%         2.7%         10.8%         0.74           Centerline Dist. to Diserver:         62.0 feet         Autos:         0.00	Site Data						Autos:	77.5%	12.9%	9.6%	97.429
Barrier Type (0-Wall, 1-Berm):         0.0         Heavy Trucks:         86.5%         2.7%         10.8%         0.74           Centerline Dist. to Desriver:         62.0 feet         Autos:         0.000         Noise Source Elevations (in feet)         Autos:         0.000         Medium Trucks:         2.297         Noise Source Elevations (in feet)         Autos:         0.000         Medium Trucks:         2.297         Heavy Trucks:         8.006         Grade Adjustment:         0.0           Pad Elevation:         0.0 feet         Autos:         0.074         Autos:         50.755         Heavy Trucks:         50.500         FMMA Noise Model Calculations         Medium Trucks:         50.500         Medium Trucks:         50.500         0.000         0.00           Heavy Trucks:         79.45         -13.15         -0.17         -1.20         -4.70         0.000         0.00           Medium Trucks:         79.45         -13.15         -0.17         -1.20         -4.88         0.000         0.00           Unnitigated Noise Levels (without Topa and barrier attenuation)         Leq Day         Leq Evening         Leq Night         Ldn         CRLL           VehiceType         Leq Peak How         Leq Day         Leq Evening         Leq Night         Ldn         CNEL	Barrier	Heiaht:	0.0 feet		Me	edium T	rucks:	84.8%	4.9%	10.3%	1.849
Centerline Dist. to Barrier:         62.0 feet           Centerline Dist. to Observer:         62.0 feet           Barrier Distance to Observer:         0.0 feet           Observer Height (Above Pad):         5.0 feet           Pad Elevation:         0.0 feet           Road Grade:         0.0%           Left View:         -90.0 degrees           FHWA Noise Model Calculations         Verkice Finite Road           VerkiceType         REMEL           Autos:         50.725           FHWA Noise Model Calculations         Verkice Finite Road           VerkiceType         REMEL           Autos:         68.46           Autos:         79.45           -17.11         -0.17           -12.0         -4.70           Medium Trucks:         84.25           VerkiceType         Remet Without Topo and barrier attenuation)           VerkiceType         Leq Peak Hour         Leq Evening           Leq Evening         Leq Night         Ldn           Autos:         65.8         64.3           55.3         56.6         64.9           Medium Trucks:         64.9         66.           Autos:         71.1         69.2         67.5					F	leavy T	rucks:	86.5%	2.7%	10.8%	0.749
Centerline Dist. to Observer:         62.0 feet         Autos:         0.000           Barrier Distance to Observer:         0.0 feet         Medium Trucks:         2.297           Observer Height (Above Pad):         5.0 feet         Heavy Trucks:         8.006         Grade Adjustment:         0.0           Pad Elevation:         0.0 feet         Lane Equivalent Distance (in feet)         Lane Equivalent Distance (in feet)           Road Grade:         0.0%         Autos:         50.567           Eft View:         -90.0 degrees         Medium Trucks:         50.550           FHWA Noise Model Calculations         Vehicle Type         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berma Atte           Autos:         79.45         -13.15         -0.17         -1.20         -4.70         0.000         0.00           Medium Trucks:         79.45         -13.15         -0.17         -1.20         -4.70         0.000         0.00           Unnitigated Noise Levels (without Topo and barrier attenuation)         Vehicle Type         Leq Day         Leq Evening         Leq Noil         CNEL           Autos:         71.1         69.2         67.5         61.4         70.1         77		,	2.0 feet		Noiso Se	urco El	ovation	in f	nof)		
Barrier Distance to Observer:         0.0 feet         Medium Trucks:         2.297           Observer Height (Above Pad):         5.0 feet         Heavy Trucks:         8.006         Grade Adjustment:         0.0           Pad Elevation:         0.0 feet         Lare Equivalent Distance (in feet)         Lare Equivalent Distance (in feet)           Road Grade:         0.0%         Autos:         50.755           Left View:         -90.0 degrees         Medium Trucks:         50.567           FHWA Noise Model Calculations         Finite Road         Fresnel         Barrier Atten         Bern Atten           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Bern Atten           Autos:         68.46         4.08         -0.20         -1.20         -4.70         0.000         0.0           Medium Trucks:         79.45         -13.15         -0.17         -1.20         -4.88         0.000         0.0           Unnitigated Noise Levels (without Topo and barrier attenuation)         VehicleType         Leq Day         Leq Evening         Leq Noght         Ldn         CNEL           Autos:         71.1         69.2         67.5         61.4         70.1         77 <t< td=""><td>Centerline Dist. to O</td><td>bserver: 6</td><td>2.0 feet</td><td></td><td>NUISE SU</td><td></td><td></td><td></td><td>eel)</td><td></td><td></td></t<>	Centerline Dist. to O	bserver: 6	2.0 feet		NUISE SU				eel)		
Observer Height (Above Pad):         5.0 feet         Heavy Trucks:         8.006         Grade Adjustment:         0.0           Road Elevation:         0.0 feet         Lane Equivalent Distance (in feet)         Lane Equivalent Distance         Lane Equivalent Distance (in feet)         Lane Equivalent Distance (in feet)         Lane Equivalent Distance         Final Katos:         50.75           FHWA Noise Model Calculations         Medium Trucks:         50.550         Heavy Trucks:         50.550           FHWA Noise Model Calculations         Finite Road         Fresnel         Barrier Atten         Berner Atten           Autos:         68.4         4.08         -0.17         -1.20         -4.70         0.000         0.0           Medium Trucks:         79.45         -13.15         -0.17         -1.20         -4.88         0.000         0.0           Unmitigated Noise Levels (without Topo and barrier attenuation)         Vehicle Nove         Leq Day         Leq Right         Ldn         CNEL           Vehicle Noise:         71.1         69.2         67.5         61.4         70.1         70           Medium Trucks:         65.8         64.3         55.3         56.6	Barrier Distance to O	bserver:	0.0 feet		Mediu						
Pad Elevation:         0.0 feet           Road Grade:         0.0%           Autos:         50.725           Left View:         -90.0 degrees         Medium Trucks:         50.550           FHWA Noise Model Calculations         Distance         Finite Road         Fresnel         Barrier Atten         Berner Atten           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berner Atten           Autos:         68.46         4.08         -0.20         -1.20         -4.70         0.000         0.0           Medium Trucks:         79.45         -13.15         -0.17         -1.20         -4.70         0.000         0.00           Medium Trucks:         84.25         -17.11         -0.18         -12.0         -4.88         0.000         0.00           Umitigated Noise Levels (without Topo and barrier attenuation)         Uepsile Advise:         71.1         69.2         67.5         61.4         70.1         77.           Medium Trucks:         65.8         64.3         55.3         56.6         64.9         66.8           VehicleType         Leg Peak Hour         Leg Day         Leg Evening         Leg Night         Ldn	Observer Height (Abov	/e Pad):	5.0 feet						Grade Ad	iustment	0.0
Road Grade:         0.0%         Autos:         50.725           Left View:         -90.0 degrees         Medium Trucks:         50.550           FHWA Noise Model Calculations         Medium Trucks:         50.567           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berrier Atten           Autos:         68.46         4.08         -0.20         -1.20         -4.70         0.000         0.0           Medium Trucks:         79.45         -13.15         -0.17         -1.20         -4.70         0.000         0.0           Medium Trucks:         84.25         -17.11         -0.18         -1.20         -5.32         0.000         0.0           Unnitigated Noise Levels (without Topo and barrier attenuation)         VehicleType         Leg Peak Hour         Leg Day         Leg Evening         Leg Night         Ldn         CNEL           Autos:         71.1         69.2         67.5         61.4         70.1         77.           Medium Trucks:         64.9         63.4         55.3         56.6         64.9         66           Vehicle Noise:         73.0         71.2         68.1         63.4         72.0         72	Pad El	evation:	0.0 feet							,	
Left View:         -90.0 degrees         Medium Trucks:         50.550           FHWA Noise Model Calculations         Heavy Trucks:         50.567           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Bermark           Autos:         68.46         4.08         -0.20         -1.20         -4.70         0.000         0.0           Medium Trucks:         79.45         -13.15         -0.17         -1.20         -4.88         0.000         0.00           Heavy Trucks:         84.25         -17.11         -0.18         -1.20         -5.32         0.000         0.00           Unnitigated Noise Levels (without Topo and barrier attenuation)         VehicleType         Leg Day         Leg Evening         Leg Night         Ldn         CNEL           Autos:         71.1         69.2         67.5         61.4         70.1         77           Medium Trucks:         65.8         64.3         55.3         56.6         64.9         64           Heavy Trucks:         65.8         64.3         55.3         56.6         64.9         64           Vehicle Noise:         73.0         71.2         68.1         63.4					Lane Eq				feet)		
Right View:         90.0 degrees         Heavy Trucks:         50.567           FHWA Noise Model Calculations         Heavy Trucks:         50.567           VehicleType         REIMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berrn Atten           Autos:         68.46         4.08         -0.20         -4.70         0.000         0.00           Medium Trucks:         79.45         -13.15         -0.17         -1.20         -4.88         0.000         0.00           Medium Trucks:         79.45         -13.15         -0.17         -1.20         -4.88         0.000         0.00           Unmitigated Noise Levels (without Topo and barrier attenuation)         Leq Day         Leq Day         Leq Day         Leq Night         Ldn         CNEL           VehicleType         Lag Peak Hour         Leq Day         Eq Evening         Leq Night         Ldn         CNEL           Medium Trucks:         64.9         63.4         57.1         55.5         64.0         66           Heavy Trucks:         65.8         64.3         55.3         56.6         64.9         67.7           Medium Trucks:         64.9         68.4         55.3         56.6											
FHWA Noise Model Calculations         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         68.46         4.08         -0.20         -1.20         -4.70         0.000         0.0           Medium Trucks:         79.45         -13.15         -0.17         -1.20         -4.88         0.000         0.0           Heavy Trucks:         84.25         -17.11         -0.18         -1.20         -5.32         0.000         0.0           Unntitigated Noise Levels (without Topo and barrier attenuation)         -0.75         61.4         70.1         77           VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         71.1         69.2         67.5         61.4         70.1         77           Medium Trucks:         64.9         63.4         57.1         55.5         64.0         66           Heavy Trucks:         65.8         64.3         55.3         56.6         64.9         68           Vehicle Noise:         73.0         71.2         68.1         63.4         72.0         72           Centerline Distance to Noise Contour (in feet)			0								
VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atte           Autos:         68.46         4.08         -0.20         -1.20         -4.70         0.000         0.0           Medium Trucks:         79.45         -13.15         -0.17         -1.20         -4.88         0.000         0.0           Heavy Trucks:         84.25         -17.11         -0.18         -1.20         -5.32         0.000         0.0           Unmitigated Noise Levels (without Topo and barrier attenuation)          Leq Evening         Leq Night         Ldn         CNEL           Autos:         71.1         69.2         67.5         61.4         70.1         70           Medium Trucks:         64.9         63.4         57.1         55.5         64.0         66           Heavy Trucks:         65.8         64.3         55.3         56.6         64.9         66           Vehicle Noise:         73.0         71.2         68.1         63.4         72.0         72           Centerline Distance to Noise Contour (in feet)	Rig	ht View: 9	0.0 degrees		Heav	y Truck	s: 50.8	567			
Autos:         68.46         4.08         -0.20         -1.20         -4.70         0.000         0.0           Medium Trucks:         79.45         -13.15         -0.17         -1.20         -4.78         0.000         0.0           Heavy Trucks:         84.25         -17.11         -0.18         -1.20         -4.88         0.000         0.0           Umitigated Moise Levels (without Top can dharrier attenuation)         -5.32         0.000         0.0           VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         71.1         69.2         67.5         61.4         70.1         71           Medium Trucks:         64.9         63.4         57.1         55.5         64.0         66           Heavy Trucks:         65.8         64.3         55.3         56.6         64.9         68           Vehicle Noise:         73.0         71.2         68.1         63.4         72.0         72           Centerline Distance to Noise Contour (in feet)	FHWA Noise Model Ca	lculations									
Medium Trucks:         79.45         -13.15         -0.17         -1.20         -4.88         0.000         0.0           Heavy Trucks:         84.25         -17.11         -0.18         -1.20         -5.32         0.000         0.0           Unmitigated Noise Levels (without Topo and barrier attenuation)	VehicleType R	EMEL Tra	affic Flow D					-	Barrier Att	en Ber	m Atten
Heavy Trucks:         84.25         -17.11         -0.18         -1.20         -5.32         0.000         0.00           Unnitigated Noise Levels (without Topo and barrier attenuation)         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Medium Trucks:         64.9         63.4         57.1         55.5         64.0         66           Heavy Trucks:         65.8         64.3         55.3         56.6         64.9         66           Vehicle Noise:         73.0         71.2         68.1         63.4         72.0         72           Centerline Distance to Noise Contour (in feet)											0.00
Unmitigated Noise Levels (without Topo and barrier attenuation)         Leq Night         Ldn         CNEL           VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         71.1         69.2         67.5         61.4         70.1         77           Medium Trucks:         64.9         63.4         57.1         55.5         64.0         66           Heavy Trucks:         65.8         64.3         55.3         56.6         64.9         66           Vehicle Noise:         73.0         71.2         68.1         63.4         72.0         77           Centerline Distance to Noise Contour (In feet)											0.00
VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         71.1         69.2         67.5         61.4         70.1         70.           Medium Trucks:         64.9         63.4         57.1         55.5         64.0         66.           Heavy Trucks:         65.8         64.3         55.3         56.6         64.9         66.           Vehicle Noise:         73.0         71.2         68.1         63.4         72.0         77.           Centerline Distance to Noise Contour (in feet)	Heavy Trucks:	84.25	-17.11	-0.	18	-1.20		-5.32	0.0	000	0.00
Autos:         71.1         69.2         67.5         61.4         70.1         70           Medium Trucks:         64.9         63.4         57.1         55.5         64.0         64           Heavy Trucks:         65.8         64.3         55.3         56.6         64.9         66           Vehicle Noise:         73.0         71.2         68.1         63.4         72.0         72           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         84         181         389         838											
Medium Trucks:         64.9         63.4         57.1         55.5         64.0         64           Heavy Trucks:         65.8         64.3         55.3         56.6         64.9         66           Vehicle Noise:         73.0         71.2         68.1         63.4         72.0         72           Centerline Distance to Noise Contour (in feet)           Zond Edition         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         84         181         389         838					•	Leq			-		
Heavy Trucks:         65.8         64.3         55.3         56.6         64.9         66           Vehicle Noise:         73.0         71.2         68.1         63.4         72.0         72           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         84         181         389         838				-							70.
Vehicle Noise:         73.0         71.2         68.1         63.4         72.0         77.           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         84         181         389         838											64.
Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         84         181         389         838				-							
T0 dBA         65 dBA         60 dBA         55 dBA           Ldn:         84         181         389         838				2	68.1		63.4		72.	U U	72
Ldn: 84 181 389 838	Centerline Distance to	Noise Conto	ur (in feet)	70	-/0.4	05	-0.4		0 10 1		-/0.4
			1 -1					6			
									389 417		

Scenario: OYWP							alley Mark	etplace	
Road Name: Bear Valley				Job Nu	mper:	13078			
Road Segment: w/o 3rd Ave									
SITE SPECIFIC INPUT DATA							L INPUT	S	
Highway Data		Site	e Con	ditions (l	Hard =	: 10, So	oft = 15)		
Average Daily Traffic (Adt): 41,640 vehicles						Autos:	15		
Peak Hour Percentage: 10.00%			Me	dium True	cks (2	Axles):	15		
Peak Hour Volume: 4,164 vehicles			He	avy Truck	(S (3+	Axles):	15		
Vehicle Speed: 45 mph		Vel	hicle l	Mix					
Near/Far Lane Distance: 72 feet				icleType		Day	Evening	Night	Daily
Site Data			-		utos:	77.5%	•	9.6%	
Barrier Height: 0.0 feet			М	edium Tru	icks:	84.8%	4.9%	10.3%	
Barrier Type (0-Wall, 1-Berm): 0.0			1	Heavy Tru	icks:	86.5%	2.7%	10.8%	0.749
Centerline Dist. to Barrier: 62.0 feet		Noi	ise So	urce Ele	vation	s (in fe	eet)		
Centerline Dist. to Observer: 62.0 feet				Autos:	0	.000			
Barrier Distance to Observer: 0.0 feet		/	Mediu	n Trucks:	2	297			
Observer Height (Above Pad): 5.0 feet			Heav	v Trucks	8	.006	Grade Ad	justment	0.0
Pad Elevation: 0.0 feet		_							
Road Elevation: 0.0 feet		Lar	ie Eq	uivalent l			feet)		
Road Grade: 0.0%				Autos:		.725			
Left View: -90.0 degrees		/		n Trucks:		.550			
Right View: 90.0 degrees			Heav	y Trucks:	50	.567			
FHWA Noise Model Calculations									
VehicleType REMEL Traffic Flow	Distan		Finite	Road	Fres		Barrier Att		m Atten
Autos: 68.46 4.24		-0.20		-1.20		-4.70	•	000	0.00
Medium Trucks: 79.45 -12.99		-0.17		-1.20		-4.88	•	000	0.00
Heavy Trucks: 84.25 -16.95		-0.18		-1.20		-5.32	0.0	000	0.00
Unmitigated Noise Levels (without Topo and ba									
VehicleType Leq Peak Hour Leq Day		q Even		Leq N			Ldn		VEL
	9.4		67.6		61.		70.	-	70.
	3.6		57.2		55.		64.		64.
	1.5		55.5		56.		65.	-	65.
	1.4		68.3		63.	6	72.	1	72.
Centerline Distance to Noise Contour (in feet)		70 15				1			
		70 dBA	4	65 d		6	60 dBA		dBA
	in:	86		18	5		399	8	59
L. CNF		92		19			427	-	21

Scenario:     OYWP     Project Name: Bear Valley Marketplace       Road Name:     Bear Valley     Job Number:     13078       Site Specific INPUT DATA     NOISE MODEL INPUTS       Highway Data     Site Conditions (Hard = 10, Soft = 15)       Average Daily Traffic (Adt):     40,100 vehicles     Autos:     15       Peak Hour Volume:     4,010 vehicles     Medium Trucks (2 Axles):     15       Vehicle Speed:     45 mph     Heavy Trucks (3 Axles):     15       Vehicle Speed:     45 mph     Vehicle Type     Day     Evening     Night       Site Data     Autos:     7.5%     12.9%     9.6%       Barrier Height:     0.0 feet     Medium Trucks:     84.8%     4.9%     10.3%       Heavy Trucks:     86.5%     2.7%     10.8%	
Highway Data         Site Conditions (Hard = 10, Soft = 15)           Average Daily Traffic (Adt): 40,100 vehicles         Autos: 15           Peak Hour Percentage: 10.00%         Medium Trucks (2A,4kes): 15           Peak Hour Volume: 4,010 vehicles         Heavy Trucks (3+ Axles): 15           Vehicle Speed: 45 mph         Vehicle Mix           Near/Far Lane Distance: 72 feet         Vehicle Type         Day           Site Data         Autos: 77.5% 12.9% 9.6%           Barrier Height: 0.0 feet         0.0 feet	
Average Daily Traffic (Adt):         40,100         vehicles         Autos:         15           Peak Hour Percentage:         10.00%         Medium Trucks (2 Axles):         15           Peak Hour Volume:         4,010 vehicles         Heavy Trucks (2 Axles):         15           Vehicle Speed:         45 mph         Vehicle Mix         15           Vehicle Speed:         45 mph         Vehicle Mix         Vehicle Type         Day         Evening         Night           Site Data         Autos:         77.5%         12.9%         9.6%         Medium Trucks:         84.8%         4.9%         10.3% <th></th>	
Notice of the section of the secti	Daily
Beak Hour Volume:         4,010 vehicles         Heavy Trucks (3+ Axles):         15           Vehicle Speed:         45 mph         Vehicle Mix         Vehicle Mix         Vehicle Mix           Site Data         Autos:         77.5%         12.9%         9.6%           Barrier Height:         0.0 feet         Medium Trucks:         84.8%         4.9%         10.3%	Daily
Vehicle Speed:         45 mph         Vehicle Mix           Near/Far Lane Distance:         72 feet         Vehicle Mix           Site Data         Autos:         77.5%         12.9%         9.65           Barrier Height:         0.0 feet         Medium Trucks:         84.8%         4.9%         10.3%	Daily
Near/Far Lane Distance:         T2 fet         Venicle mix         Day         Evening         Night           Site Data         Autos:         77.5%         12.9%         9.6%           Barrier Height:         0.0 feet         Medium Trucks:         84.8%         4.9%         10.3%	Daily
Site Data         Venicie type         Day         Evening         Night           Barrier Height:         0.0 feet         Medium Trucks:         84.8%         4.9%         10.3%	Daily
Barrier Height: 0.0 feet Medium Trucks: 84.8% 4.9% 10.3%	Dally
	% 97.42%
Barrier Type (0-Wall, 1-Berm): 0.0 Heavy Trucks: 86.5% 2.7% 10.8%	% 1.84%
	% 0.74%
Centerline Dist. to Barrier: 62.0 feet Noise Source Elevations (in feet)	-
Centerline Dist. to Observer: 62.0 feet Autos: 0.000	
Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297	
Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.006 Grade Adjustmen	nt: 0.0
Pad Elevation: 0.0 feet	
Road Elevation: 0.0 feet Lane Equivalent Distance (in feet)	
Road Grade: 0.0% Autos: 50.725	
Left View: -90.0 degrees Medium Trucks: 50.550	
Right View: 90.0 degrees Heavy Trucks: 50.567	
FHWA Noise Model Calculations	
	erm Atten
Autos: 68.46 4.08 -0.20 -1.20 -4.70 0.000	0.00
Medium Trucks: 79.45 -13.16 -0.17 -1.20 -4.88 0.000	0.00
Heavy Trucks: 84.25 -17.11 -0.18 -1.20 -5.32 0.000	0.00
Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leg Peak Hour Leg Day Leg Evening Leg Night Ldn (	CNEL
Autos: 71.1 69.2 67.5 61.4 70.0	70.7
Medium Trucks: 64.9 63.4 57.0 55.5 64.0	64.3
Heavy Trucks: 65.8 64.3 55.3 56.6 64.9	65.
Vehicle Noise: 73.0 71.2 68.1 63.4 72.0	72.4
Centerline Distance to Noise Contour (in feet)	
70 dBA 65 dBA 60 dBA 5	i5 dBA
Ldn: 84 180 389	837
Lan: 84 180 389	

Sunday, July 18, 2021

	FHV	VA-RD-77-108	HIGHW	AY NO	DISE PF	REDICTIO	ON MO	DEL					
Scenario Road Name Road Segmen					Project Name: Bear Valley Marketplace Job Number: 13078								
	SPECIFIC IN	PUT DATA							L INPUT	S			
Highway Data				S	ite Con	ditions (l	Hard =	10, So	ft = 15)				
Average Daily	Traffic (Adt):	4,560 vehicles	3				,	Autos:	15				
Peak Hour I	Percentage:	10.00%			Me	dium True	cks (2 A	xles):	15				
Peak Ho	our Volume:	456 vehicles	3		He	avy Truck	(3+ A	(xles):	15				
Vel	nicle Speed:	45 mph		V	ehicle I	Mix							
Near/Far Lar	e Distance:	44 feet		-		icleType		Dav	Evening	Night	Daily		
Site Data								77.5%	12.9%	9.69			
Bar	rier Height:	0.0 feet			Me	edium Tru	icks:	84.8%	4.9%	10.39	6 1.849		
Barrier Type (0-Wa	•	0.0			ŀ	leavy Tru	icks:	86.5%	2.7%	10.89	6 0.749		
Centerline Dis		50.0 feet		N	oise So	ource Ele	vations	s (in fe	et)				
Centerline Dist. t	o Observer:	50.0 feet				Autos		000	.,				
Barrier Distance t		0.0 feet			Mediur	n Trucks		297					
Observer Height (/	,	5.0 feet			Heav	v Trucks	8.0	006	Grade Ad	justmer	nt: 0.0		
	d Elevation:	0.0 feet		_									
	d Elevation:	0.0 feet		L	ane Equ	uivalent l			eet)				
F	Road Grade:	0.0%				Autos:							
	Left View: Right View:	-90.0 degree 90.0 degree				m Trucks: vy Trucks:							
FHWA Noise Mode						-							
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Att	en Be	erm Atten		
Autos:	68.46	-5.36	Biotai	0.56	1 11110	-1.20		-4.65		000	0.00		
Medium Trucks:	79.45	-22.60		0.59		-1.20		-4.87	0.0	000	0.00		
Heavy Trucks:	84.25	-26.56		0.58		-1.20		-5.43	0.0	000	0.00		
Unmitigated Noise	Levels (with	out Topo and	barrier a	attenu	ation)								
VehicleType	Leq Peak Hou	r Leq Day	L	eq Eve	ening	Leq N	light		Ldn	(	CNEL		
Autos:	62	.5	60.6		58.8		52.7		61.4	4	62.		
Medium Trucks:	56		54.7		48.4		46.8		55.3	-	55.		
Heavy Trucks:	57		55.7		46.6		47.9		56.2	-	56.		
Vehicle Noise:	64	.0	62.6		59.4		54.7		63.3	3	63.		
Centerline Distanc	e to Noise Co	ontour (in feet)		70 dl	84	65 d	RA	6	0 dBA	5	5 dBA		
			Ldn:	18		38		0	83	1 5	178		
			VEL:	19		41			89		191		
		0	•	15					00				

F	HWA-RD-77-10	8 HIGHW	AY NOISE F	REDICT	ION MO	DEL			
Scenario: 2033 NP Road Name: 2nd Ave Road Segment: n/o Jasm	ine				t Name: I Number:		/alley Mark	etplace	
SITE SPECIFIC	INPUT DATA				NOISE	IODE		s	
Highway Data			Site Co	nditions	(Hard =	10, So	oft = 15)		
Average Daily Traffic (Adt).	3,700 vehicle	es				Autos:	15		
Peak Hour Percentage	10.00%		М	edium Ti	rucks (2 A	Axles):	15		
Peak Hour Volume.	370 vehicle	es	н	eavy Tru	icks (3+ A	Axles):	15		
Vehicle Speed.	45 mph		Vehicle	Mix					
Near/Far Lane Distance.	44 feet			nicleType	e	Day	Evening	Night	Daily
Site Data						77.5%	•		97.429
Barrier Height	0.0 feet		٨	1edium 7	rucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-Wall, 1-Berm)				Heavy 1	rucks:	86.5%	2.7%	10.8%	0.749
Centerline Dist. to Barrier			Noiso S		levation	r (in f	oot)		
Centerline Dist. to Observer	50.0 feet		Noise 3	Auto		5 ( <i>III I</i>	eel)		
Barrier Distance to Observer	0.0 feet		Mediu	im Truck		297			
Observer Height (Above Pad)	5.0 feet			vy Truck		200	Grade Ad	iustment	· 0.0
Pad Elevation	0.0 feet			•				aounone	. 0.0
Road Elevation	0.0 feet		Lane Ec		t Distand		feet)		
Road Grade				Auto					
Left View				Im Truck					
Right View	90.0 degre	es	Hea	vy Trucł	(s: 45.	000			
FHWA Noise Model Calculation	ons								
VehicleType REMEL	Traffic Flow	Distan		e Road	Fresn		Barrier Att		m Atten
Autos: 68.4			0.56	-1.20		-4.65		000	0.00
Medium Trucks: 79.4			0.59	-1.20		-4.87		000	0.00
Heavy Trucks: 84.2			0.58	-1.20		-5.43	0.0	000	0.00
Unmitigated Noise Levels (wi			,			1			
VehicleType Leq Peak H Autos:	our Leq Da 61.5	59.7	q Evening		Night 51.8		Ldn 60.5		NEL 61.
	55.3	53.8	47.5		45.9		54.4	-	54.
	56.2	53.8 54.8	47.3		45.8		55.3		55.
	50.2 63.4	61.7	58.5		53.8		62.4		62.
Centerline Distance to Noise	Contour (in fee	<i>t</i> )							-
		~	70 dBA	65	dBA	e	60 dBA	55	dBA
		Ldn:	15		33		72	1	55
		NEL:	17		36		77		66

Sunday, July 18, 20	)21
Gunday, Guly 10, 20	

						EDICTIO					
Scenario: 2033									alley Mark	etplace	
Road Name: 3rd A						Job Nun	nber: 1	3078			
Road Segment: s/o B	ear va	lley									
SITE SPECIF	IC IN	PUT DATA							L INPUT	s	
Highway Data					Site Con	ditions (H	ard =	10, Sc	ft = 15)		
Average Daily Traffic (A	Adt):	2,320 vehicles						Autos:	15		
Peak Hour Percent	age:	10.00%			Med	dium Truci	ks (2 A	xles):	15		
Peak Hour Volu	me:	232 vehicles			Hea	avy Trucks	s (3+ A	xles):	15		
Vehicle Sp	eed:	45 mph		-	Vehicle N	lix					
Near/Far Lane Dista	nce:	44 feet		F		cleType		Day	Evening	Night	Daily
Site Data						Au	tos:	, 77.5%	12.9%	9.6%	97.42
Barrier Hei	aht:	0.0 feet			Me	dium Truc	cks:	84.8%	4.9%	10.3%	1.84
Barrier Type (0-Wall, 1-Be		0.0			F	leavy Truc	cks:	86.5%	2.7%	10.8%	0.74
Centerline Dist. to Bar		50.0 feet			Noise So	urce Elev	ations	in fe	et)		
Centerline Dist. to Obser	ver:	50.0 feet		-		Autos:		000	.,		
Barrier Distance to Obser	ver:	0.0 feet			Mediur	n Trucks:		97			
Observer Height (Above F	,	5.0 feet				v Trucks:	8.0	006	Grade Ad	justment	: 0.0
Pad Eleva		0.0 feet		-							
Road Eleva		0.0 feet		4	Lane Equ	ivalent D			'eet)		
Road Gr		0.0%				Autos:	45.				
Left V		-90.0 degree				n Trucks:	44.9				
Right V	iew:	90.0 degree	S		Heav	y Trucks:	45.0	000			
FHWA Noise Model Calcu											
VehicleType REM		Traffic Flow	Dis	stance	Finite		Fresn	-	Barrier Att		m Atter
	68.46	-8.30		0.5	-	-1.20		-4.65		000	0.00
	79.45	-25.53		0.5		-1.20		-4.87		000	0.00
Heavy Trucks:	84.25	-29.49		0.5	8	-1.20		-5.43	0.0	000	0.00
Unmitigated Noise Levels			barri		· · ·					1	
VehicleType Leq Pea				Leq E	vening	Leq Ni			Ldn		NEL
Autos:	59.		7.6		55.9		49.8		58.4		59
Medium Trucks:	53.		51.8		45.4		43.9		52.3		52
Heavy Trucks:	54.		2.7		43.7		44.9		53.3		53
Vehicle Noise:	61.		9.6		56.5		51.8		60.3	3	60
Centerline Distance to No	ise Co	ntour (in feet)		70	-10.4	05.15		-	0 - 10 4		-004
			-		dBA	65 dB	А	6	0 dBA		dBA
		1	.dn:	1	1	24			53	1	13
		~	EL :		2	26			56		22

FHWA-RD-77-108 HIGHW	Y NOISE PREDICTION MODEL
Scenario: 2033 NP Road Name: 2nd Ave Road Segment: n/o Bear Valley	Project Name: Bear Valley Marketplace Job Number: 13078
SITE SPECIFIC INPUT DATA	NOISE MODEL INPUTS
Highway Data	Site Conditions (Hard = 10, Soft = 15)
Average Daily Traffic (Adt): 5,710 vehicles	Autos: 15
Peak Hour Percentage: 10.00%	Medium Trucks (2 Axles): 15
Peak Hour Volume: 571 vehicles	Heavy Trucks (3+ Axles): 15
Vehicle Speed: 45 mph	Vehicle Mix
Near/Far Lane Distance: 44 feet	VehicleType Day Evening Night Daily
Site Data	Autos: 77.5% 12.9% 9.6% 97.42
Barrier Height: 0.0 feet	Medium Trucks: 84.8% 4.9% 10.3% 1.84
Barrier Type (0-Wall, 1-Berm): 0.0	Heavy Trucks: 86.5% 2.7% 10.8% 0.74
Centerline Dist. to Barrier: 50.0 feet	Noise Source Elevations (in feet)
Centerline Dist. to Observer: 50.0 feet	Autos: 0.000
Barrier Distance to Observer: 0.0 feet	Medium Trucks: 2.297
Observer Height (Above Pad): 5.0 feet	Heavy Trucks: 8.006 Grade Adjustment: 0.0
Pad Elevation: 0.0 feet	
Road Elevation: 0.0 feet	Lane Equivalent Distance (in feet)
Road Grade: 0.0%	Autos: 45.177
Left View: -90.0 degrees	Medium Trucks: 44.981
Right View: 90.0 degrees	Heavy Trucks: 45.000
FHWA Noise Model Calculations	
VehicleType REMEL Traffic Flow Distan	
Autos: 68.46 -4.38	0.56 -1.20 -4.65 0.000 0.00
Medium Trucks: 79.45 -21.62	0.59 -1.20 -4.87 0.000 0.00
Heavy Trucks: 84.25 -25.58	0.58 -1.20 -5.43 0.000 0.00
Unmitigated Noise Levels (without Topo and barrier a	
	q Evening Leq Night Ldn CNEL
Autos: 63.4 61.5	59.8 53.7 62.3 62
Medium Trucks: 57.2 55.7	49.3 47.8 56.3 56
Heavy Trucks: 58.1 56.6	47.6 48.8 57.2 57
Vehicle Noise: 65.3 63.5	60.4 55.7 64.2 64
Centerline Distance to Noise Contour (in feet)	
	70 dBA 65 dBA 60 dBA 55 dBA
Ldn: CNEL:	21 45 96 207 22 48 103 222

Sunday, July 18, 2021

	Project N	ame: Bear	Valley Marke	etplace					
	Job Nur	nber: 13078	3						
	NOISE MODEL INPUTS								
Site	Conditions (H	ard = 10, S	,						
		- ( )							
	Heavy Truck	s (3+ Axles)	: 15						
Vehi	icle Mix								
-	VehicleType	Day	Evening	Night	Daily				
	Au	tos: 77.5	% 12.9%	9.6%	97.429				
	Medium True	cks: 84.89	6 4.9%	10.3%	1.84%				
	Heavy True	cks: 86.5%	% 2.7%	10.8%	0.74%				
Nois	se Source Elev	ations (in i	feet)		-				
	Autos:	0.000			-				
М	edium Trucks:	2.297							
	Heavy Trucks:	8.006	Grade Adj	ustment	: 0.0				
Lane			feet)						
-	Heavy Trucks:	45.000							
			-						
					m Atten				
					0.00				
					0.00				
		-5.43	0.0	00	0.00				
	,		l da	0					
					VEL 58				
					58. 51				
			• · · ·		51. 52				
					52. 60.				
	<b>35.</b> ð	51.2	59.7		60.				
70 dBA	65 dE	A	60 dBA	55	dBA				
	22	I	48		03				
10									
	Veh Nois Lan M So So So So So So So So So So So So So	NOO           Site Conditions (H           Medium Truck           Heavy Truck           Vehicle Mix           Vehicle Type           Au           Medium Truck           Heavy Trucks:           Heavy Trucks:           Heavy Trucks:           Heavy Trucks:           Heavy Trucks:           Medium Trucks:           Heavy Trucks:           Medium Trucks:           Medium Trucks:           Heavy Trucks:           Medium Trucks:	NOISE MODI           Site Conditions (Hard = 10, S           Autos           Medium Trucks (2 Axles)           Heavy Trucks (3+ Axles)           Vehicle Mix           Vehicle Mix           Vehicle Mix           Vehicle Mix           Medium Trucks: (3+ Axles)           Medium Trucks: 84.85           Medium Trucks: 84.85           Noise Source Elevations (in 1           Autos: 0.000           Medium Trucks: 2.297           Heavy Trucks: 80.06           Lane Equivalent Distance (in Autos: 45.177           Medium Trucks: 44.981           Heavy Trucks: 45.000           ance         Finite Road           0.56         -1.20         -4.65           0.59         -1.20         -4.87           0.58         -1.20         -5.43           rattenuation         Leg Evening         Leg Night           55.8         51.2         49.2           44.8         43.2         43.0           43.0         44.3         55.8           70 dBA         65 dBA	Site Conditions (Hard = 10, Soft = 15)           Autos:         15           Medium Trucks (2 Axles):         15           Heavy Trucks (3+ Axles):         15           Vehicle Type         Day         Evening           Autos:         77.5%         12.9%           Medium Trucks:         84.8%         4.9%           Heavy Trucks:         84.8%         4.9%           Heavy Trucks:         86.5%         2.7%           Noise Source Elevations (in feet)         Autos:         0.000           Medium Trucks:         2.297         Heavy Trucks:         8.066           Lane Equivalent Distance (in feet)         Autos:         0.000           Medium Trucks:         45.177         Medium Trucks:         45.000           ance         Finite Road         Fresnel         Barrier Attt           0.56         -1.20         -4.65         0.0           0.58         -1.20         -5.43         0.0           ance         Finite Road         Fresnel         Barrier Attt           0.58         -1.20         -5.43         0.0           ots         -1.20         -5.43         0.0           attenuation)         Equivaling         Ldn	NOISE MODEL INPUTS           Site Conditions (Hard = 10, Soft = 15)           Autos:         15           Autos:         15           Medium Trucks (2 Axles):         15           Vehicle Mix         Day         Evening         Night           Autos:         77.5%         12.9%         9.6%           Medium Trucks:         84.8%         4.9%         10.3%           Heavy Trucks:         84.8%         2.7%         10.8%           Noise Source Elevations (in feet)         Autos:         2.297           Heavy Trucks:         8.006         Grade Adjustment           Lane Equivalent Distance (in feet)         Autos:         44.981           Heavy Trucks:         45.000         0.000           0.56         -1.20         -4.65         0.000           0.58         -1.20         -4.65         0.000           0.59         -1.20         -4.65         0.000           0.59         -1.20         -5.43         0.000           0.59         -1.20         -5.45         0.000           0.58         -1.20         -5.7.8         44.8           44.8         43.2         51.7           43.0				

	FHV	VA-RD-77-108	HIGH	WAY I	NOISE PR	REDICT	ION MO	DEL					
Scenario: 2033 Road Name: Hesp Road Segment: s/o Ja	eria	•					t Name: I Number:		/alley Mark	etplace			
SITE SPECIF	IC IN	PUT DATA				1	NOISE	IODE		s			
Highway Data					Site Conditions (Hard = 10, Soft = 15)								
Average Daily Traffic (A	dt): 2	4,700 vehicles	5					Autos:	15				
Peak Hour Percenta	ige:	10.00%			Me	dium Tr	rucks (2 A	(xles)	15				
Peak Hour Volu	me:	2,470 vehicles	S		He	avy Tru	icks (3+ A	(xles)	15				
Vehicle Spe	ed:	45 mph		-	Vehicle I	Mix							
Near/Far Lane Distar	nce:	72 feet		-		icleType	e	Day	Evening	Night	Daily		
Site Data								77.5%	•		97.42		
Barrier Heig	aht.	0.0 feet			M	edium T	rucks:	84.8%	4.9%	10.3%	1.849		
Barrier Type (0-Wall, 1-Be	-	0.0			ŀ	leavy T	rucks:	86.5%	2.7%	10.8%	0.749		
Centerline Dist. to Bar		62.0 feet		-	Noise Sc	uree E	lovation	in t	a a fi				
Centerline Dist. to Obser	ver:	62.0 feet		-	NOISe SC	Auto		000	eel)				
Barrier Distance to Obser	ver:	0.0 feet			Modiu	Auto m Truck		297					
Observer Height (Above P	ad):	5.0 feet				y Truck		297	Grade Ad	iustment	. 0.0		
Pad Elevat	ion:	0.0 feet			neav	y much		000	Orade Auj	usunem	. 0.0		
Road Elevat	ion:	0.0 feet		_	Lane Eq	uivalen	t Distand	e (in:	feet)				
Road Gra	ade:	0.0%				Auto							
Left Vi		-90.0 degree				m Truck							
Right Vi	iew:	90.0 degree	es		Heav	y Truck	(s: 50.	567					
FHWA Noise Model Calcul	ations	5											
VehicleType REME	EL	Traffic Flow	Dist	ance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten		
	58.46	1.98		-0.2		-1.20		-4.70		000	0.00		
	79.45	-15.26		-0.1	-	-1.20		-4.88		000	0.00		
	34.25	-19.22		-0.1	-	-1.20		-5.32	0.0	000	0.00		
Unmitigated Noise Levels					<u> </u>								
VehicleType Leq Pea				Leq E	vening	Leq	Night		Ldn		NEL		
Autos:	69.		67.1 61.3		65.4		59.3 53.4		67.9	-	68.		
Medium Trucks: Heavy Trucks:	62. 63.		62.2		54.9 53.2		53.4 54.4		61.9 62.8		62. 62.		
Vehicle Noise	70		69.1		66.0		61.3		69.9		70		
					00.0		01.0		03.3	,	70.		
Centerline Distance to Noi	38 60	mour (milleet,	, 	70	dBA	65	dBA	6	60 dBA	55	dBA		
			Ldn:		61		31	· `	281		606		

	FHV	VA-RD-77-108	HIGHV	NAY N	IOISE PF	REDICTI	ON MOE	DEL			
	: 2033 NP								alley Marke	tplace	
Road Name						Job Ni	umber: 1	3078			
Road Segment	: n/o Jasmine	3									
	PECIFIC IN	PUT DATA							L INPUTS	•	
Highway Data				1	Site Con	ditions (			,		
Average Daily T	, ,							utos:			
Peak Hour P		10.00%					icks (2 A				
	ur Volume:	2,422 vehicles			He	avy Truc	ks (3+ A	xles):	15		
	icle Speed:	45 mph		1	Vehicle I	Nix					
Near/Far Lane	e Distance:	72 feet			Veh	icleType	l	Day	Evening	Night	Daily
Site Data				-		A	utos:	77.5%	12.9%	9.6%	97.42%
Barr	ier Heiaht:	0.0 feet			Me	edium Tr	ucks: 8	34.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wa		0.0			F	leavy Tr	ucks: 8	36.5%	2.7%	10.8%	0.74%
Centerline Dist	to Barrier:	62.0 feet		-	Noise So	urce Ek	vations	(in fe	oof)		
Centerline Dist. to	Observer:	62.0 feet		ŕ	10/30 00	Autos					
Barrier Distance to	Observer:	0.0 feet			Madiu	n Trucks	. 0.0				
Observer Height (A	bove Pad):	5.0 feet				v Trucks			Grade Adju	istment <sup>.</sup>	0.0
Pac	d Elevation:	0.0 feet		L						iotanionit.	0.0
Road	d Elevation:	0.0 feet		1	Lane Equ				feet)		
R	oad Grade:	0.0%				Autos					
	Left View:	-90.0 degree	s			n Trucks		50			
1	Right View:	90.0 degree	s		Heav	y Trucks	50.5	67			
FHWA Noise Model	Calculations	5									
VehicleType	REMEL	Traffic Flow	Dista		Finite		Fresne		Barrier Atte		m Atten
Autos:	68.46	1.89		-0.2	-	-1.20		4.70	0.0		0.00
Medium Trucks:	79.45	-15.35		-0.1		-1.20		4.88	0.0		0.00
Heavy Trucks:	84.25	-19.30		-0.1	8	-1.20	-	5.32	0.0	00	0.00
Unmitigated Noise											
	.eq Peak Hou			Leq E	vening	Leq I	•		Ldn	CI	VEL
Autos:	69		67.1		65.3		59.2		67.9		68.
Medium Trucks:	62		61.2		54.9		53.3		61.8		62.
Heavy Trucks:	63		32.2		53.1		54.4		62.7		62.
Vehicle Noise:	70	.8 6	59.1		65.9		61.2		69.8		70.:
Centerline Distance	to Noise Co	ontour (in feet)									
					dBA	65 c		6	60 dBA		dBA
		1	.dn:	6	0	12	9		278	5	98
			IEL :	6		13			298		42

	FHV	VA-RD-77-108	HIGHW	AY N	OISE PI	REDICTIC	ON MOI	DEL			
Road Nam	o: 2033 NP e: Jasmine nt: e/o 2nd Ave	)				Project N Job Nui			alley Mark	etplace	
SITE S	SPECIFIC IN	PUT DATA							L INPUT	s	
Highway Data				S	Site Con	ditions (H	lard =	10, So	ft = 15)		
Average Daily	Traffic (Adt):	4,630 vehicles					A	Autos:	15		
Peak Hour	Percentage:	10.00%			Me	dium Truc	:ks (2 A	xles):	15		
Peak H	our Volume:	463 vehicles			He	avy Truck	is (3+ A	xles):	15		
Vel	hicle Speed:	45 mph		v	ehicle l	Mix					
Near/Far Lar	ne Distance:	44 feet		-		icleType		Day	Evening	Night	Daily
Site Data								77.5%	12.9%	9.6%	
Bar	rier Height:	0.0 feet			М	edium Tru	cks:	84.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0			1	Heavy Tru	cks:	86.5%	2.7%	10.8%	0.74%
Centerline Dis	st. to Barrier:	50.0 feet			loise Sr	ource Elev	vations	in fe	et)		
Centerline Dist.	to Observer:	50.0 feet		Ē		Autos:					
Barrier Distance t	to Observer:	0.0 feet			Mediu	m Trucks:	0.0				
Observer Height (J	Above Pad):	5.0 feet				v Trucks:		06	Grade Ad	iustment	0.0
Pa	ad Elevation:	0.0 feet									
	ad Elevation:	0.0 feet		L	ane Eq	uivalent E			eet)		
F	Road Grade:	0.0%				Autos:					
	Left View:	-90.0 degree				m Trucks:					
	Right View:	90.0 degree	s		Heav	y Trucks:	45.0	000			
FHWA Noise Mode	l Calculations	s									
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresn	e/	Barrier Att	en Ber	rm Atten
Autos:	68.46	-5.30		0.56		-1.20		-4.65		000	0.000
Medium Trucks:	79.45	-22.53		0.59		-1.20		-4.87		000	0.000
Heavy Trucks:	84.25	-26.49		0.58	3	-1.20		-5.43	0.0	000	0.000
Unmitigated Noise			barrier a	ttenı	uation)						
	Leq Peak Hou			q Ev	rening	Leq N			Ldn		NEL
Autos:	62		60.6		58.9		52.8		61.4		62.0
Medium Trucks:	56		54.8		48.4		46.9		55.3		55.6
Heavy Trucks:	57		55.7		46.7		47.9		56.3		56.4
Vehicle Noise:	64		62.6		59.5		54.8		63.3	3	63.8
Centerline Distance	e to Noise Co	ontour (in feet)		70.1							
				70 d		65 dE		6	0 dBA		dBA
		-	_dn: IEL :	18 19		39 42			83 90		180 193
		Ch	IEL:	15	9	42			ອບ	1	193

Sunday, July 18, 2021

Sunday, July 18, 2021

	FHW	A-RD-77-108 HI	GHWAY	NOISE PI	REDICTIO	N MODEL						
Road Nam	o: 2033 NP e: Bear Valley t: w/o 7th Ave			Project Name: Bear Valley Marketplace Job Number: 13078								
SITE S	SPECIFIC INP	UT DATA		NOISE MODEL INPUTS								
Highway Data				Site Con	ditions (H	ard = 10, 3	Soft = 15)					
	Percentage: 1	,960 vehicles 0.00% ,296 vehicles			dium Truck avy Trucks		): 15					
Vel	nicle Speed:	45 mph		Vehicle	Mix							
Near/Far Lar	e Distance:	72 feet			icleType	Dav	Evening	Night	Daily			
Site Data					Aut		•		7.429			
Bar	rier Height:	0.0 feet		М	edium Truc	ks: 84.8	% 4.9%	10.3%	1.84%			
Barrier Type (0-W	all, 1-Berm):	0.0		1	Heavy Truc	ks: 86.5	% 2.7%	10.8%	0.749			
Centerline Dis		62.0 feet		Noise So	ource Elev	ations (in	feet)					
Centerline Dist. I		62.0 feet			Autos:	0.000						
Barrier Distance t		0.0 feet		Mediu	m Trucks:	2.297						
Observer Height (J	,	5.0 feet		Heav	/y Trucks:	8.006	Grade Ad	iustment: 0	0.0			
	d Elevation:	0.0 feet										
	d Elevation:	0.0 feet		Lane Eq	uivalent Di		n feet)					
F	Road Grade:	0.0%			Autos:	50.725						
	Left View: Right View:	-90.0 degrees 90.0 degrees			m Trucks: /y Trucks:	50.550 50.567						
FHWA Noise Mode	I Calculations											
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Att	en Berm	Atten			
Autos:	68.46	4.38	-0.3	20	-1.20	-4.7	0.0	000	0.00			
Medium Trucks:	79.45	-12.86	-0.	17	-1.20	-4.8	9 0.0	000	0.00			
Heavy Trucks:	84.25	-16.81	-0.	18	-1.20	-5.3	2 0.0	000	0.00			
Unmitigated Noise		it Topo and ba	1									
	Leq Peak Hour	Leq Day	_	Evening	Leq Nig		Ldn	CNE				
Autos:	71.4			67.8		61.7	70.3		71.			
Medium Trucks:	65.2			57.3		55.8	64.3		64.			
Heavy Trucks:	66.1			55.6		56.9	65.2	-	65.			
Vehicle Noise:	73.3		.5	68.4		63.7	72.3	3	72.			
Centerline Distanc	e to Noise Con	tour (in feet)	70	dBA	65 dB	Δ	60 dBA	55 dE	84			
		Ldi		88	189		407	877				
		CNE		94	203		436	940				
		SNE			200			040				

	FHW	A-RD-77-108 HIG	HWAY I	NOISE PF	REDICTION		EL						
Road Nan	rio: 2033 NP ne: Bear Valley ent: w/o 3rd Ave			Project Name: Bear Valley Marketplace Job Number: 13078									
	SPECIFIC IN	PUT DATA		NOISE MODEL INPUTS									
Highway Data				Site Conditions (Hard = 10, Soft = 15)									
Average Daily	Traffic (Adt): 4	4.020 vehicles				Au	itos:	15					
		10.00%		Me	dium Truck	s (2 Ax	les):	15					
Peak H	our Volume:	4,402 vehicles		Hea	avy Trucks	(3+ Ax	les):	15					
Ve	ehicle Speed:	45 mph	ŀ	Vehicle N	Nix								
Near/Far La	ane Distance:	72 feet	-		cleType	Di	av E	vening	Night	Daily			
Site Data					Aut		7.5%	12.9%	9.6%				
	rrier Height:	0.0 feet		Me	dium Truc		4.8%	4.9%	10.3%	1.849			
Barrier Type (0-V		0.0		F	leavy Truc	ks: 86	5.5%	2.7%	10.8%	0.749			
	ist. to Barrier:	62.0 feet	-	N- : 0-									
Centerline Dist.	to Observer:	62.0 feet	ŀ	Noise So	urce Eleva Autos:	0.00		)					
Barrier Distance	to Observer:	0.0 feet		Madiur	n Trucks:	2.29							
Observer Height	(Above Pad):	5.0 feet			y Trucks:	8.00		rade Ad	iustment:	0.0			
P	ad Elevation:	0.0 feet							dournorn.	0.0			
	Road Elevation: 0.0 feet					stance		(t)					
	Road Grade:	0.0%			Autos:	50.72							
	Left View:	-90.0 degrees			n Trucks:	50.55							
	Right View:	90.0 degrees		Heav	y Trucks:	50.56	1						
FHWA Noise Mod	el Calculations												
VehicleType			stance	Finite		Fresnel		rrier Atte		m Atten			
Autos:		4.49	-0.2		-1.20		.70		000	0.00			
Medium Trucks:		-12.75	-0.1		-1.20		.88		000	0.00			
Heavy Trucks:	84.25	-16.71	-0.1	18	-1.20	-5	.32	0.0	000	0.00			
Unmitigated Nois				<i>,</i>					T				
VehicleType	Leq Peak Hour		Leq E	vening	Leq Nig		Lo	dn		VEL			
Autos:				67.9		61.8		70.5		71.			
Medium Trucks:				57.5 55.7		55.9 57.0		64.4 65.3		64.			
Heavy Trucks: Vehicle Noise:				55.7 68.5		63.8		72.4	·	65. 72			
				68.5		63.8		12.4	•	12.			
Centerline Distan	ce to Noise Cor	ntour (in feet)	70	dDA	65 d'D		60		57	dD A			
		Ldn:		dBA 39	65 dB/ 192	٩	60 d			<i>dBA</i> 91			
					192		4	14	8	91			

Scenario: 2033 NP				Project	Name:	Bear V	alley Mark	etplace	
Road Name: Bear Valley Road Segment: e/o 7th Ave				Job N	umber:	13078			
SITE SPECIFIC INPUT DATA				N	OISE	MODE	L INPUT	s	
Highway Data		Si	ite Con	ditions	Hard	= 10, Sc	ft = 15)		
Average Daily Traffic (Adt): 43,720 vehicl	es					Autos:	15		
Peak Hour Percentage: 10.00%			Ме	dium Tru	icks (2	Axles):	15		
Peak Hour Volume: 4,372 vehicl	es		He	avy Truc	:ks (3+	Axles):	15		
Vehicle Speed: 45 mph		14	ehicle I	liv					
Near/Far Lane Distance: 72 feet		V		icleType		Dav	Evening	Niaht	Dailv
Site Data					utos:	77.5%	•	9.6%	97.42
Barrier Height: 0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	1.84
Barrier Type (0-Wall, 1-Berm): 0.0			ŀ	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.749
Centerline Dist. to Barrier: 62.0 feet		N	oise Sc	urce El	evatio	ns (in fe	et)		
Centerline Dist. to Observer: 62.0 feet				Autos		0.000			
Barrier Distance to Observer: 0.0 feet			Mediu	n Trucks		.297			
Observer Height (Above Pad): 5.0 feet			Heav	y Trucks	 : 8	3.006	Grade Ad	justment	0.0
Pad Elevation: 0.0 feet		_							
Road Elevation: 0.0 feet		Lá	ane Equ	uivalent			'eet)		
Road Grade: 0.0%				Autos		).725			
Left View: -90.0 degr				m Trucks		0.550			
Right View: 90.0 degr	ees		Heav	y Trucks	5: 50	).567			
FHWA Noise Model Calculations VehicleType REMEL Traffic Flow	Dista		Finite	0	Fres		Barrier Att		m Atter
VehicleType REMEL Traffic Flow Autos: 68.46 4.4		-0.20	Filline	-1.20	ries	-4.70		000	0.00
Medium Trucks: 79.45 -12.7	-	-0.17		-1.20		-4.88		000	0.00
Heavy Trucks: 84.25 -16.7	-	-0.18		-1.20		-5.32		000	0.00
Unmitigated Noise Levels (without Topo an	d barrier	attenu	ation)						
VehicleType Leq Peak Hour Leq Da	ay L	Leq Eve	ening	Leq I	Night		Ldn	CI	VEL
Autos: 71.5	69.6		67.9		61		70.4		71
Medium Trucks: 65.3	63.8		57.4		55		64.3	-	64
Heavy Trucks: 66.1	64.7		55.7		56	.9	65.3	3	65
Vehicle Noise: 73.4	71.6		68.5		63	.8	72.3	3	72
Centerline Distance to Noise Contour (in fe	et)	70 "		65 (	-04		0 -10 4		-/0.4
		70 dE	5A	65 0	ıва	6	0 dBA	55	dBA
	Ldn:	89		19	M.		412		87

FH	WA-RD-77-108 H	IIGHWAY	NOISE P	REDICTIO	ON MODEL						
Scenario: 2033 NP Road Name: Bear Valley Road Segment: e/o 3rd Ave			Project Name: Bear Valley Marketplace Job Number: 13078								
SITE SPECIFIC IN	IPUT DATA		NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15)								
Highway Data			Site Con	ditions (		,					
Average Daily Traffic (Adt):					Auto						
Peak Hour Percentage:	10.00%				cks (2 Axles						
Peak Hour Volume:	4,400 vehicles		He	avy Truci	ks (3+ Axles	): 15					
Vehicle Speed:	45 mph		Vehicle	Mix				-			
Near/Far Lane Distance:	72 feet		Veh	icleType	Day	Evening	Night Daii	ily			
Site Data				A	utos: 77.5	% 12.9%	9.6% 97.4	2%			
Barrier Height:	0.0 feet		М	edium Tru	icks: 84.8	% 4.9%	10.3% 1.8	34%			
Barrier Type (0-Wall, 1-Berm):	0.0		1	Heavy Tru	icks: 86.5	% 2.7%	10.8% 0.7	74%			
Centerline Dist. to Barrier:	62.0 feet		Noise Se	ource Ele	vations (in	feet)					
Centerline Dist. to Observer:	62.0 feet			Autos							
Barrier Distance to Observer:	0.0 feet		Mediu	m Trucks							
Observer Height (Above Pad):	5.0 feet		Hear	/y Trucks	8.006	Grade Adj	ustment: 0.0				
Pad Elevation:	0.0 feet										
Road Elevation:	0.0 feet		Lane Eq		Distance (ii	i feet)					
Road Grade:	0.0%			Autos							
Left View:	-90.0 degrees			m Trucks							
Right View:	90.0 degrees		Hear	/y Trucks	50.567						
FHWA Noise Model Calculation											
VehicleType REMEL	Traffic Flow	Distance		Road	Fresnel	Barrier Atte		-			
Autos: 68.46		-	.20	-1.20	-4.70			.000			
Medium Trucks: 79.45		-	.17	-1.20	-4.8			.000			
Heavy Trucks: 84.25	-		.18	-1.20	-5.3	2 0.0	0.0 0.0	.000			
Unmitigated Noise Levels (with			,								
VehicleType Leq Peak Ho			Evening	Leq N	•	Ldn	CNEL				
		9.6	67.9		61.8	70.4		71.1			
		3.8	57.5		55.9	64.4	-	64.6			
		1.7 1.6	55.7 68.5		57.0 63.8	65.3 72.4		65.4 72.8			
Centerline Distance to Noise C		1.0	00.5		03.0	12.4		2.0			
Centenine Distance to Noise C	ontour (in feet)	70	) dBA	65 d	BA	60 dBA	55 dBA				
	Le	dn:	89	19	2	413	891				
	CNE	EL:	96	20	6	443	955				

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	FHWA	A-RD-77-108 HIG	HWAY N	OISE PF	REDICTION	N MODEL						
	o: 2033 NP e: Bear Valley t: e/o 2nd Ave			Project Name: Bear Valley Marketplace Job Number: 13078								
SITE S	PECIFIC INP	UT DATA		NOISE MODEL INPUTS								
Highway Data			<i>.</i> ,	Site Con	ditions (Ha	ard = 10, S	oft = 15)					
Average Daily T Peak Hour I Peak Ho	Percentage: 1	,830 vehicles 0.00% ,283 vehicles			dium Truck avy Trucks		: 15					
Vel	icle Speed:	45 mph	1	/ehicle I	Aix							
Near/Far Lar	e Distance:	72 feet	F		cleType	Dav	Evening	Night	Daily			
Site Data					Aut		•		7.429			
Bar	rier Height:	0.0 feet		Me	edium Truc	ks: 84.8	% 4.9%	10.3%	1.84%			
Barrier Type (0-Wa	all, 1-Berm):	0.0		ŀ	leavy Truc	ks: 86.5	% 2.7%		0.749			
Centerline Dis		62.0 feet	1	loise So	urce Eleva	ations (in	feet)					
Centerline Dist. t		62.0 feet			Autos:	0.000						
Barrier Distance t		0.0 feet		Mediur	n Trucks:	2.297						
Observer Height (/	,	5.0 feet		Heav	y Trucks:	8.006	Grade Adj	ustment: 0	0.0			
	d Elevation:	0.0 feet	L									
	d Elevation:	0.0 feet	1	ane Equ	ivalent Di		feet)					
F	load Grade:	0.0%			Autos:	50.725						
	Left View: Right View:	-90.0 degrees 90.0 degrees			n Trucks: y Trucks:	50.550 50.567						
FHWA Noise Mode	I Calculations											
VehicleType	REMEL 1	raffic Flow D	istance	Finite	Road	Fresnel	Barrier Atte	en Berm	Atten			
Autos:	68.46	4.37	-0.20	)	-1.20	-4.70	0.0	000	0.00			
Medium Trucks:	79.45	-12.87	-0.17	7	-1.20	-4.88	0.0	000	0.00			
Heavy Trucks:	84.25	-16.83	-0.18	3	-1.20	-5.32	.0.0	000	0.00			
Unmitigated Noise		t Topo and barr										
	Leq Peak Hour	Leq Day	Leq Ev		Leq Nig		Ldn	CNE				
Autos:	71.4	69.5		67.8		61.7	70.3		70.			
Medium Trucks:	65.2			57.3		55.8	64.2		64.			
Heavy Trucks:	66.0	64.6		55.6		56.8	65.2		65.			
Vehicle Noise:	73.3	-		68.4		63.7	72.2	2	72.			
Centerline Distanc	e to Noise Con	tour (in feet)	70 c	IRΔ	65 dB/	۵	60 dBA	55 dE	24			
		Ldn:			188	- I	406	875				
		CNEL:	-		202		400	938				
		GIVEL.	. 9	•	202			930				

FI	HWA-RD-77-10	8 HIGHW	AY NOISE F	PREDICT	ION MO	DEL					
Scenario: 2033 WF Road Name: 3rd Ave Road Segment: s/o Bear					t Name: I Number:		/alley Mark	etplace			
SITE SPECIFIC	INPUT DATA			I	NOISE	IODE		s			
Highway Data			Site Conditions (Hard = 10, Soft = 15)								
Average Daily Traffic (Adt):	2,730 vehicle	es				Autos:	15				
Peak Hour Percentage:	10.00%		M	ledium Ti	rucks (2 A	Axles):	15				
Peak Hour Volume:	273 vehicle	es	H	leavy Tru	icks (3+ A	Axles):	15				
Vehicle Speed:	45 mph		Vehicle	Mix							
Near/Far Lane Distance:	44 feet			hicleType	e	Day	Evening	Night	Daily		
Site Data						77.5%	•		97.429		
Barrier Height:	0.0 feet		/	Aedium 1	rucks:	84.8%	4.9%	10.3%	1.849		
Barrier Type (0-Wall, 1-Berm).				Heavy 7	rucks:	86.5%	2.7%	10.8%	0.749		
Centerline Dist. to Barrier.			Noine	Course E	levation	n lin fi	o o fi				
Centerline Dist. to Observer.	50.0 feet		NOISe 3	Auto		5 ( <i>III I</i>	eel)				
Barrier Distance to Observer.	0.0 feet		Madi	um Truck		297					
Observer Height (Above Pad).	5.0 feet			avy Truck		200	Grade Ad	iustment	.00		
Pad Elevation.	0.0 feet			•				Juotimoni	. 0.0		
Road Elevation	0.0 feet		Lane E		t Distand		feet)				
Road Grade.			Auto								
Left View.				um Truck							
Right View.	90.0 degre	ees	Hea	avy Truck	(s: 45.	000					
FHWA Noise Model Calculation	ons										
VehicleType REMEL	Traffic Flow	Distan	ice Finit	e Road	Fresn	el	Barrier Att	en Ber	m Atten		
Autos: 68.4			0.56	-1.20		-4.65		000	0.00		
Medium Trucks: 79.4		-	0.59	-1.20		-4.87		000	0.00		
Heavy Trucks: 84.2			0.58	-1.20		-5.43	0.0	000	0.00		
Unmitigated Noise Levels (wi			,	1		1					
VehicleType Leq Peak H Autos:	our Leq Da 30.2	58.3	eq Evening 56		Night 50.5	-	Ldn 59.1		NEL 59		
	50.2 54.0	58.3 52.5	56. 46.	-	50.5 44.6		59. 53.1	-	59. 53.		
	54.0 54.9	52.5 53.4	40.		44.0		53.		53.		
	62.1	60.3	57.		52.5		61.0		61.		
Centerline Distance to Noise	Contour (in fee	et)									
		~	70 dBA	65	dBA	6	60 dBA	55	dBA		
		Ldn:	13		27	· · · · ·	59	1	26		

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	FHV	VA-RD-77-108	HIGH	IWAY	NOISE PR	EDICTI		ODEL			
Scenario: Road Name: Road Segment:								Bear \ 13078	/alley Mark	etplace	
	PECIFIC IN	IPUT DATA			0					S	
Highway Data					Site Con	ditions (	Hard		,		
Average Daily Tr	, ,	4,970 vehicles						Autos:			
Peak Hour P	•	10.00%				dium Tru		,			
	ur Volume:	497 vehicles			Hea	avy Truc	KS (3+	Axles).	15		
	cle Speed:	45 mph		ľ	Vehicle N	lix					
Near/Far Lane	Distance:	44 feet		Ī	Vehi	cleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	97.42
Barri	er Heiaht:	0.0 feet			Me	dium Tr	ucks:	84.8%	4.9%	10.3%	1.84
Barrier Type (0-Wal		0.0			H	leavy Tr	ucks:	86.5%	2.7%	10.8%	0.74
Centerline Dist.	to Barrier:	50.0 feet		ŀ	Noise So	urce Ele	vatio	ns (in f	eet)		
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 (A	bove Pad):	5.0 feet				y Trucks		3.006	Grade Ad	liustmen	0.0
Pad	Elevation:	0.0 feet								,	
Road	Elevation:	0.0 feet			Lane Equ	iivalent	Distai	nce (in	feet)		
Ro	ad Grade:	0.0%				Autos		5.177			
	Left View:	-90.0 degree	s			n Trucks		1.981			
F	Right View:	90.0 degree	s		Heav	y Trucks	: 4	5.000			
FHWA Noise Model	Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	inel	Barrier At	ten Bei	m Attei
Autos:	68.46	-4.99		0.5	66	-1.20		-4.65	0.	000	0.0
Medium Trucks:	79.45	-22.23		0.5	-	-1.20		-4.87		000	0.0
Heavy Trucks:	84.25	-26.18		0.5	58	-1.20		-5.43	0.	000	0.0
Unmitigated Noise I			barri		,						
	eq Peak Hou			Leq E	vening	Leq I			Ldn	-	NEL
Autos:	62		80.9		59.2		53		61.		62
Medium Trucks:	56		55.1		48.7		47		55.		55
Heavy Trucks:	57		56.0		47.0		48		56.		56
Vehicle Noise:	64		62.9		59.8		55	.1	63.	6	64
Centerline Distance	to Noise Co	ontour (in feet)		=-	dBA	65 0		-	60 dBA		dBA
			dni		<i>dBA</i>	65 C			88		<i>aba</i> 189
			.dn: IEL :		19 20	4	-		88 94		189 202
		C/1		4			+		34	4	202

Y NOISE PREDICTION MODEL
Project Name: Bear Valley Marketplace Job Number: 13078
NOISE MODEL INPUTS
Site Conditions (Hard = 10, Soft = 15)
Autos: 15
Medium Trucks (2 Axles): 15
Heavy Trucks (3+ Axles): 15
Vehicle Mix
VehicleType Day Evening Night Daily Autos: 77.5% 12.9% 9.6% 97.429
Medium Trucks: 84.8% 4.9% 10.3% 1.849
Heavy Trucks: 86.5% 2.7% 10.8% 0.749
Heavy Trucks. 60.5% 2.1% 10.6% 0.74
Noise Source Elevations (in feet)
Autos: 0.000
Medium Trucks: 2.297
Heavy Trucks: 8.006 Grade Adjustment: 0.0
Lana Frankisland Distance (in fact)
Lane Equivalent Distance (in feet) Autos: 45 177
Medium Trucks: 44.981 Heavy Trucks: 45.000
Heavy Hucks. 45.000
e Finite Road Fresnel Barrier Atten Berm Atten
0.56 -1.20 -4.65 0.000 0.00
0.59 -1.20 -4.87 0.000 0.00
0.58 -1.20 -5.43 0.000 0.00
tenuation)
Y Evening Leq Night Ldn CNEL
58.3 52.3 60.9 61.
47.0 40.4 54.0 55
47.9 46.4 54.8 55.
46.2 47.4 55.8 55.
46.2         47.4         55.8         55.           59.0         54.3         62.8         63.
46.2         47.4         55.8         55.           59.0         54.3         62.8         63.           70 dBA         65 dBA         60 dBA         55 dBA
46.2         47.4         55.8         55.           59.0         54.3         62.8         63.

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	FHV	VA-RD-77-108	HIGHW	AY N	DISE PF	REDICTIC	ON MO	DEL			
Scenario	2033 WP					Project N	lame: I	Bear V	alley Mark	etplace	
Road Name	2nd Ave					Job Nu	mber:	13078			
Road Segment	t: n/o Bear Va	alley									
	PECIFIC IN	IPUT DATA							LINPUT	S	
Highway Data				S	ite Con	ditions (F	Hard =	10, So	ft = 15)		
Average Daily T	raffic (Adt):	7,920 vehicles	5					Autos:	15		
Peak Hour F	Percentage:	10.00%			Me	dium Truc	cks (2 A	Axles):	15		
Peak Ho	our Volume:	792 vehicles	5		He	avy Truck	(3+ A	(xles)	15		
Veh	icle Speed:	45 mph		V	ehicle I	Nix					
Near/Far Lan	e Distance:	44 feet		-		cleType		Dav	Evening	Night	Dailv
Site Data					-		utos:	77.5%	•	9.6%	97.429
Barr	ier Height:	0.0 feet			Me	edium Tru	icks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-Wa	all, 1-Berm):	0.0			ŀ	leavy Tru	icks:	86.5%	2.7%	10.8%	0.74
Centerline Dist		50.0 feet		N	oise So	urce Ele	vation	s (in fe	et)		
Centerline Dist. to		50.0 feet				Autos:	0.0	000			
Barrier Distance to		0.0 feet			Mediur	n Trucks:	2.5	297			
Observer Height (A	,	5.0 feet			Heav	y Trucks:	8.0	006	Grade Ad	iustmen	t: 0.0
	d Elevation:	0.0 feet		-							
	d Elevation:	0.0 feet		L	ane Equ	ivalent l			eet)		
R	oad Grade:	0.0%				Autos:					
	Left View:	-90.0 degree				n Trucks:					
	Right View:	90.0 degree	s		Heav	y Trucks:	45.	000			
FHWA Noise Model											
VehicleType	REMEL	Traffic Flow	Dista		Finite		Fresn		Barrier Att		rm Atten
Autos:	68.46	-2.96		0.56		-1.20		-4.65		000	0.00
Medium Trucks:	79.45	-20.20		0.59		-1.20		-4.87		000	0.00
Heavy Trucks:	84.25	-24.16		0.58		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise					<u> </u>			1			
	eq Peak Hou			.eq Eve		Leq N			Ldn		NEL 64.
Autos:	64 58		63.0 57.1		61.2 50.8		55.1 49.2		63.8 57.7		
Medium Trucks:	58		57.1 58.1		50.8 49.0				57.1		57.
Heavy Trucks:	59						50.3				58.
Vehicle Noise:	00		65.0		61.8		57.1		65.7	r	66.
Centerline Distance	e to Noise Co	ontour (in feet)		70 di	84	65 d	RA	6	0 dBA	55	i dBA
			Ldn:	26		55		0	119		257
			VEL:	20		59			128		276
		Ci	•====-	20					.20	4	2.0

	FHW	/A-RD-77-108	HIGHW	AY NOIS	SE PREDICI	ION MO	DEL			
Scenario: 203 Road Name: He Road Segment: n/o	speria					t Name: lumber:		/alley Mark	etplace	
SITE SPEC	IFIC INI	PUT DATA				NOISE	NODE		s	
Highway Data				Site	Conditions	(Hard =	10, Se	oft = 15)		
Average Daily Traffic	(Adt): 2	5,450 vehicles					Autos:	15		
Peak Hour Perce	ntage:	10.00%			Medium T	rucks (2 /	Axles):	15		
Peak Hour Vo	olume:	2,545 vehicles			Heavy Tru	icks (3+ /	Axles):	15		
Vehicle S		45 mph		Veh	icle Mix					
Near/Far Lane Dis	tance:	72 feet			VehicleTyp	e	Day	Evening	Night	Daily
Site Data						Autos:	77.5%	5 12.9%	9.6%	97.429
Barrier H	eiaht:	0.0 feet			Medium 1	rucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-Wall, 1-E		0.0			Heavy 1	rucks:	86.5%	5 2.7%	10.8%	0.749
Centerline Dist. to E	arrier:	62.0 feet		Noi	se Source E	levation	s (in fi	eet)		
Centerline Dist. to Obs	erver:	62.0 feet			Auto		000			
Barrier Distance to Obs	erver:	0.0 feet		N	ledium Truci		297			
Observer Height (Above		5.0 feet			Heavy Truck	(s: 8.	006	Grade Ad	iustment	: 0.0
Pad Elev		0.0 feet		1		4 Distant	<i>C</i>			
Road Elev		0.0 feet		Lan	e Equivalen Auto		725	reet)		
Road (	Frade: View:	0.0% -90.0 degree			Auto Iedium Truci		725 550			
	View: View:	90.0 degree			Heavy Truck		567			
•			-							
FHWA Noise Model Calc										
		Traffic Flow	Distan		inite Road	Fresr		Barrier Att		m Atten
Autos: Medium Trucks:	68.46 79.45	2.11		-0.20	-1.20 -1.20		-4.70 -4.88		000	0.00
Heavy Trucks:	79.45 84.25	-15.13		-0.17	-1.20		-4.88		000	0.00
							-0.52	0.0	000	0.00
Unmitigated Noise Leve						Allented	1	Ldn	0	NEL
VehicleType Leq P Autos:	eak Hour 69.3		37.3	eq Eveni	ng Leq 65.5	Night 59.4	1	Lan 68.1		VEL 68
Medium Trucks:	62.9	-	57.5 51.4		55.1	53.5	-	62.0		62.
Heavy Trucks:	63.		52.4		53.3	54.6		62.9		63.
Vehicle Noise:	71.	0	59.3		66.1	61.4	1	70.0	)	70.
Centerline Distance to N	loise Co	ntour (in feet)								
				70 dBA	65	dBA	(	60 dBA	55	dBA
			.dn:	62	1	33		287	6	18

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FI	IWA-RD-77-108	HIGHW	AY N	OISE PR	REDICTI	ON MOI	DEL			
Scenario: 2033 WP								/alley Marke	etplace	
Road Name: 2nd Ave					Job N	umber: 1	3078			
Road Segment: s/o Bear	/alley									
SITE SPECIFIC	NPUT DATA								5	
Highway Data			s	Site Con	ditions		- ·	,		
Average Daily Traffic (Adt):		s					Autos:			
Peak Hour Percentage:	10.00%					icks (2 A	/			
Peak Hour Volume:	238 vehicle	s		Hea	avy Truc	:ks (3+ A	xles).	15		
Vehicle Speed:			ν	/ehicle N	<i>lix</i>					
Near/Far Lane Distance:	44 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data					4	utos:	77.5%		9.6%	97.42%
Barrier Height:	0.0 feet			Me	edium Tr	ucks:	84.8%	6 4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm):				H	leavy Tr	ucks:	86.5%	6 2.7%	10.8%	0.74%
Centerline Dist. to Barrier:	50.0 feet			loise So	urce El	evations	in f	eet)		
Centerline Dist. to Observer:	50.0 feet		-		Auto		000			
Barrier Distance to Observer:	0.0 feet			Mediur	n Trucks		97			
Observer Height (Above Pad):	5.0 feet				v Trucks		006	Grade Adj	ustment	: 0.0
Pad Elevation:	0.0 feet									
Road Elevation:	0.0 1000		L	ane Equ				feet)		
Road Grade:	0.070				Autos					
Left View:	00.0 009.0	es			n Trucks					
Right View:	90.0 degre	es		Heav	y Trucks	s: 45.0	000			
FHWA Noise Model Calculatio	ns									
VehicleType REMEL	Traffic Flow	Distar	псе	Finite	Road	Fresn	e/	Barrier Atte	en Ber	m Atten
Autos: 68.4	6 -8.19		0.56	6	-1.20		-4.65	0.0	000	0.00
Medium Trucks: 79.4	5 -25.42		0.59	)	-1.20		-4.87	0.0	000	0.00
Heavy Trucks: 84.2	5 -29.38		0.58	3	-1.20		-5.43	0.0	000	0.00
Unmitigated Noise Levels (wit	hout Topo and	barrier a	attenu	uation)						
VehicleType Leq Peak H			eq Ev	rening	Leq	Night		Ldn		NEL
	59.6	57.7		56.0		49.9		58.5		59.
	53.4	51.9		45.5		44.0		52.5		52.
Heavy Trucks:	54.3	52.8		43.8		45.0		53.4	l	53.
Vehicle Noise:	61.5	59.7		56.6		51.9		60.4	ļ.	60.9
	Contour (in feet	9								
Centerline Distance to Noise				Ť		10.4		50 dBA	EE	dBA
Centerline Distance to Noise			70 d		65 (	3BA		ou abA	55	UDA
Centerline Distance to Noise		Ldn:	70 d 12		65 ( 2			54 54		15

	FHV	VA-RD-77-108 I	HIGHW	AY N	OISE PR	EDICT	ION MO	DEL			
Road Nam	io: 2033 WP e: Hesperia nt: s/o Jasmine	•					t Name: I lumber: '		'alley Mark	etplace	
SITE	SPECIFIC IN	PUT DATA							L INPUT	s	
Highway Data				5	Site Cond	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 2	25,520 vehicles					,	Autos:	15		
Peak Hour	Percentage:	10.00%			Med	dium Tr	ucks (2 A	(xles):	15		
Peak H	our Volume:	2,552 vehicles			Hea	avy Tru	cks (3+ A	(xles)	15		
Ve	hicle Speed:	45 mph		1	/ehicle N	liv					
Near/Far La	ne Distance:	72 feet				cleType		Dav	Evening	Night	Daily
Site Data				-	venio			Day 77.5%	•	9.6%	
Ba	rier Height:	0.0 feet			Me	dium T		84.8%		10.3%	
вал Barrier Type (0-W		0.0 teet			н	leavy T	rucks:	86.5%	2.7%	10.8%	
Centerline Di	. ,	62.0 feet									
Centerline Dist		62.0 feet		^	voise So		levations		eet)		
Barrier Distance	to Observer:	0.0 feet				Auto		000			
Observer Height (	Above Pad):	5.0 feet			Mediun			297	Over et a . A .et		
	ad Elevation:	0.0 feet			Heavy	y Truck	(S. 8.0	006	Grade Ad	usiment	0.0
Roa	ad Elevation:	0.0 feet		L	.ane Equ	iivalen	t Distand	e (in :	feet)		
1	Road Grade:	0.0%				Auto	s: 50.	725			
	Left View:	-90.0 degrees	3		Mediun	n Truck	s: 50.	550			
	Right View:	90.0 degree	3		Heavy	y Truck	s: 50.	567			
FHWA Noise Mode	el Calculation	5									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite I	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	68.46	2.12		-0.20	)	-1.20		-4.70	0.0	000	0.000
Medium Trucks:	79.45	-15.12		-0.17	7	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-19.08		-0.18	3	-1.20		-5.32	0.0	000	0.00
Unmitigated Noise	e Levels (with										
	Leq Peak Hou			.eq Ev	•	Leq	Night		Ldn		NEL
Autos:	69		7.3		65.5		59.5		68.1		68.7
Medium Trucks:	63		1.4		55.1		53.5		62.0	-	62.2
Heavy Trucks:	63		2.4		53.3		54.6		62.9		63.1
Vehicle Noise:	71	.0 6	9.3		66.1		61.5	,	70.0	)	70.8
Centerline Distand	e to Noise Co	ontour (in feet)						r			
				70 d			dBA	6	60 dBA		dBA
			dn:	62	-		33		288		20
		CN	EL:	66	5	1	43		308	6	65

Sunday, July 18, 2021

	FHV	VA-RD-77-108	HIGHWA	N N	DISE PF	REDICTIC	ON MO	DEL			
Scenario Road Name Road Segmen		3				Project N Job Nu			alley Mark	etplace	
SITE S	SPECIFIC IN	PUT DATA				N	DISE N	IODE	L INPUT	s	-
Highway Data				S	ite Con	ditions (F	Hard =	10, So	ft = 15)		
	Percentage: our Volume:	5,040 vehicles 10.00% 504 vehicles				dium Truc avy Truck	cks (2 A		15 15 15		
	nicle Speed:	45 mph		V	ehicle I	Nix					
Near/Far Lar	e Distance:	44 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						AL	itos:	77.5%	12.9%	9.6%	6 97.42
Bar	rier Height:	0.0 feet			Me	edium Tru	icks:	84.8%	4.9%	10.3%	5 1.849
Barrier Type (0-Wa	all, 1-Berm):	0.0			ŀ	leavy Tru	icks:	86.5%	2.7%	10.8%	6 0.74
Centerline Dis		50.0 feet		N	oise Sc	urce Ele	vations	s (in fe	et)		
Centerline Dist. t		50.0 feet				Autos:	0.0	000			-
Barrier Distance t		0.0 feet			Mediui	n Trucks:	2.2	297			
Observer Height (/	,	5.0 feet			Heav	v Trucks:	8.0	006	Grade Ad	iustmen	t: 0.0
	d Elevation:	0.0 feet		-							
	d Elevation:	0.0 feet		L	ane Equ	uivalent l			eet)		
F	Road Grade:	0.0%				Autos:					
	Left View: Right View:	-90.0 degree 90.0 degree				m Trucks: y Trucks:					
FHWA Noise Mode	I Calculation:	5									
VehicleType	REMEL	Traffic Flow	Distan	ce	Finite	Road	Fresn	el	Barrier Att	en Be	rm Atten
Autos:	68.46	-4.93		0.56		-1.20		-4.65	0.0	000	0.00
Medium Trucks:	79.45	-22.17		0.59		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-26.12		0.58		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrier a	ttenu	ation)						
	Leq Peak Hou			q Eve	ening	Leq N			Ldn		NEL
Autos:	62		61.0		59.2		53.2		61.8	-	62.
Medium Trucks:	56		55.2		48.8		47.3		55.7		55.
Heavy Trucks:	57		56.1		47.1		48.3		56.7		56.
Vehicle Noise:	64		63.0		59.8		55.2		63.7	7	64
Centerline Distanc	e to Noise Co	ntour (in feet)		70 dl	84	65 d	RA	6	0 dBA	55	5 dBA
			Ldn:	19		41		- ·	88		190
			IEL:	20		44			95		204
		Cr	VLL.	20		44			50		204

	FHW	/A-RD-77-108 HIG	HWAY	NOISE PR	REDICTIO	N MOI	DEL			
Scenar	io: 2033 WP				Project N	ame: E	lear V	alley Mark	etplace	
Road Nam	e: Bear Valley				Job Nur	nber: 1	3078			
Road Segme	nt: e/o 7th Ave									
SITE	SPECIFIC IN	PUT DATA			NO	ISE N	ODE	L INPUT	5	
Highway Data				Site Con	ditions (H	lard =	10, So	ft = 15)		
Average Daily	Traffic (Adt): 4	6,590 vehicles				A	utos:	15		
Peak Hour	Percentage:	10.00%		Me	dium Truc	ks (2 A	xles):	15		
Peak H	lour Volume:	4,659 vehicles		He	avy Truck	s (3+ A	xles):	15		
Ve	hicle Speed:	45 mph		Vehicle I	Mix					
Near/Far La	ne Distance:	72 feet			icleType		Dav	Evening	Night	Dailv
Site Data					Au	tos:	, 77.5%	12.9%	9.6%	97.429
Ba	rrier Height:	0.0 feet		Me	edium Tru	cks:	34.8%	4.9%	10.3%	1.84%
Barrier Type (0-W		0.0		ŀ	leavy Tru	cks:	36.5%	2.7%	10.8%	0.74%
Centerline Di	. ,	62.0 feet		Noine Co	ource Elev	otiona	lin fe	ati		
Centerline Dist.	to Observer:	62.0 feet		Noise St	Autos:	0.0		el)		
Barrier Distance	to Observer:	0.0 feet		Modiu	m Trucks:	2.2				
Observer Height	(Above Pad):	5.0 feet			v Trucks:	8.0		Grade Ad	iustment	0.0
P	ad Elevation:	0.0 feet			·				aounom	0.0
	ad Elevation:	0.0 feet		Lane Eq	uivalent D			feet)		
	Road Grade:	0.0%			Autos:	50.7				
	Left View:	-90.0 degrees			m Trucks:					
	Right View:	90.0 degrees		Heav	y Trucks:	50.5	67			
FHWA Noise Mod	el Calculations									
VehicleType	REMEL	Traffic Flow D	istance	Finite	Road	Fresn		Barrier Atte	en Ber	m Atten
Autos:	68.46	4.73	-0.2		-1.20		4.70		000	0.00
Medium Trucks:	79.45	-12.51	-0.		-1.20		4.88		000	0.00
Heavy Trucks:	84.25	-16.46	-0.	18	-1.20		-5.32	0.0	000	0.00
Unmitigated Nois	e Levels (witho	ut Topo and barr	rier atte	nuation)						
VehicleType	Leq Peak Hou			Evening	Leq Ni	•		Ldn		VEL
Autos:	71.			68.1		62.1		70.7		71.
Medium Trucks:	65.			57.7		56.2		64.6		64.
Heavy Trucks:	66.			56.0		57.2		65.6		65.
Vehicle Noise:	73.	6 71.9	)	68.7		64.1		72.6	6	73.
Centerline Distan	ce to Noise Co	ntour (in feet)		,						
				dBA	65 dE		6	0 dBA		dBA
		Ldn:		93	199			430		25
		CNEL:		99	214			461	9	93

l	FHW	A-RD-77-108	HIG	HWAY I	NOISE PF	REDICTI	ON MO	DDEL				
Scenario: 2033 W Road Name: Bear Va Road Segment: w/o 7th	lley							Bear \ 13078	/alley Ma	arketpl	ace	
SITE SPECIFIC	IN	PUT DATA							L INPU	ITS		
Highway Data					Site Con	ditions	Hard		,			
Average Daily Traffic (Adt		5,490 vehicles	;					Autos				
Peak Hour Percentage	Ð.:	10.00%				dium Tru						
Peak Hour Volume	e: -	4,549 vehicles	;		He	avy Truc	:ks (3+	Axles)	: 15			
Vehicle Speed	d:	45 mph		-	Vehicle I	Mix						
Near/Far Lane Distance	e:	72 feet		-		icleType		Day	Evenin	g Ni	ght	Daily
Site Data						A	utos:	77.5%	6 12.9	% 9	9.6%	97.42%
Barrier Heigh	<i>4</i> -	0.0 feet			Me	edium Tr	ucks:	84.8%	6 4.9	% 10	0.3%	1.84%
Barrier Type (0-Wall, 1-Berm		0.0			ŀ	leavy Tr	ucks:	86.5%	6 2.7	% 10	0.8%	0.74%
Centerline Dist. to Barrie	r:	62.0 feet			Noise So	urce El	evatior	ns (in f	eet)			
Centerline Dist. to Observe	r:	62.0 feet		-		Autos		000				
Barrier Distance to Observe	r:	0.0 feet			Mediu	n Trucks		297				
Observer Height (Above Pad	):	5.0 feet				v Trucks		006	Grade	Adiusti	ment:	0.0
Pad Elevation	n:	0.0 feet										
Road Elevation	1:	0.0 feet			Lane Eq	uivalent	Distar	nce (in	feet)			
Road Grade	e:	0.0%				Autos	s: 50	.725				
Left View	V:	-90.0 degree	s		Mediur	n Trucks	s: 50	.550				
Right View	V.	90.0 degree	S		Heav	y Trucks	s: 50	.567				
FHWA Noise Model Calculat												
VehicleType REMEL		Traffic Flow	Di	stance	Finite		Fres		Barrier		Berr	n Atten
Autos: 68		4.63		-0.2		-1.20		-4.70		0.000		0.00
	.45	-12.61		-0.1		-1.20		-4.88		0.000		0.000
Heavy Trucks: 84	.25	-16.57		-0.1	8	-1.20		-5.32		0.000		0.000
Unmitigated Noise Levels (w												
VehicleType Leq Peak				Leq E	vening	Leq I	Night		Ldn		CN	IEL
Autos:	71.		69.8		68.0		62			0.6		71.
Medium Trucks:	65.		64.0		57.6		56		-	4.5		64.
Heavy Trucks:	66.		64.9		55.9		57			5.5		65.
Vehicle Noise:	73.	5	71.8		68.6		64	.0	7	2.5		73.0
Centerline Distance to Noise	Co	ntour (in feet)	1					-				
			l		dBA	65 0			60 dBA			dBA
			Ldn:	C	)1		96		423		9	11
			IFL:	-	18	21			453		-	77

FH	WA-RD-77-108 HI	GHWAY	NOISE P	REDICTIO		- <u> </u>		
Scenario: 2033 WP Road Name: Bear Valley Road Segment: w/o 3rd Av					ame: Bea nber: 130	r Valley Mark 78	etplace	
SITE SPECIFIC I	IPUT DATA			NO	ISE MOD	DEL INPUT	S	
Highway Data			Site Cor	nditions (H	lard = 10,	Soft = 15)		
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume:	46,910 vehicles 10.00% 4,691 vehicles			edium Truc eavy Truck:		s): 15		
Vehicle Speed:	45 mph		Mahiala		-	-		
Near/Far Lane Distance:	72 feet		Vehicle		Dav	. Evening	Night	Dailu
Site Data			ver	nicleType	tos: 77.		Night 9.6%	Daily 97.42%
				Au Iedium Tru			9.0%	
Barrier Height: Barrier Type (0-Wall, 1-Berm):	0.0 feet 0.0			Heavy True			10.3%	
Centerline Dist. to Barrier:	62.0 feet		Noise S	ource Elev	ations (in	foot)		-
Centerline Dist. to Observer:	62.0 feet		110/30 0	Autos:	0.000	neery		
Barrier Distance to Observer:	0.0 feet			im Trucks:	2.297			
Observer Height (Above Pad):	5.0 feet					Grade Ad	iustment	. 0.0
Pad Elevation:	0.0 feet		неа	vy Trucks:	8.006	Grade Au	Justinent	0.0
Road Elevation:	0.0 feet		Lane Eq	uivalent D	istance (i	in feet)		
Road Grade:	0.0%			Autos:	50.725			
Left View:	-90.0 degrees		Mediu	ım Trucks:	50.550			
Right View:	90.0 degrees		Hea	vy Trucks:	50.567			
FHWA Noise Model Calculation								
VehicleType REMEL		Distance		e Road	Fresnel	Barrier Att		m Atten
Autos: 68.46		-0.		-1.20	-4.7		000	0.000
Medium Trucks: 79.45	-12.48	-0.	17	-1.20	-4.8	8 0.0	000	0.000
Heavy Trucks: 84.25	-16.43	-0.	18	-1.20	-5.3	82 0.0	000	0.000
Unmitigated Noise Levels (with	out Topo and ba	rrier atte	nuation)					
VehicleType Leq Peak Ho	ur Leq Day	Leq	Evening	Leq Ni	ght	Ldn		NEL
Autos: 71	.8 69	.9	68.2	2	62.1	70.	7	71.3
Medium Trucks: 65	5.6 64	.1	57.7	7	56.2	64.6	5	64.9
	65		56.0		57.2	65.0		65.7
	3.7 71	.9	68.8	5	64.1	72.0	D	73.1
Centerline Distance to Noise C	ontour (in feet)	70	) dBA	65 dE	BA	60 dBA	55	dBA
	Ld		93	200		431		30

Sunday, July 18, 2021

Sunday, July 18, 2021

	FH	WA-RD-77-10	B HIGH	IWAY N	OISE PI	REDICTI	ON MO	DEL			
	2033 WP 2: Bear Valle 2: e/o 3rd Ave	,					Name: umber:		alley Mark	etplace	
	PECIFIC II	NPUT DATA							LINPUT	S	
Highway Data				s	ite Con	ditions					
Average Daily	, ,	- 1	es					Autos:	15		
Peak Hour I		10.00%				dium Tru			15		
	our Volume:	4,547 vehicle	s		He	avy Truc	:KS (3+7	axies):	15		
	icle Speed:	45 mph		v	'ehicle l	Mix					
Near/Far Lar	e Distance:	72 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	97.42
Bar	rier Height:	0.0 feet			M	edium Tr	ucks:	84.8%	4.9%	10.3%	1.849
Barrier Type (0-Wa	all, 1-Berm):	0.0			1	Heavy Tr	ucks:	86.5%	2.7%	10.8%	0.74
Centerline Dis	t. to Barrier:	62.0 feet		٨	loise Sc	ource Ele	evation	s (in fe	et)		
Centerline Dist. t	o Observer:	62.0 feet				Autos		000			
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Trucks		297			
Observer Height (/	Above Pad):	5.0 feet			Heav	vy Trucks	: 8	006	Grade Ad	iustmen	t: 0.0
	d Elevation:	0.0 feet				·					
	d Elevation:	0.0 feet		L	ane Eq	uivalent			eet)		
F	load Grade:	0.0%				Autos		725			
	Left View:	-90.0 degre				m Trucks		550			
	Right View:	90.0 degre	es		Heav	ry Trucks	s: 50.	567			
FHWA Noise Mode	I Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresr	el	Barrier Att	en Be	rm Atter
Autos:	68.46			-0.20		-1.20		-4.70		000	0.00
Medium Trucks:	79.45			-0.17		-1.20		-4.88		000	0.00
Heavy Trucks:	84.25	-16.57	,	-0.18		-1.20		-5.32	0.0	000	0.00
Unmitigated Noise			barri	er attenı	uation)						
,1	Leq Peak Ho		·	Leq Ev	•	Leq I			Ldn		NEL
Autos:		1.7	69.8		68.0		62.0		70.6	-	71
Medium Trucks:		5.5	64.0		57.6		56.0		64.	-	64
Heavy Trucks:		6.3	64.9		55.9		57.1		65.	-	65
Vehicle Noise:	73	3.5	71.8		68.6		64.0	)	72.	5	73
Centerline Distanc	e to Noise C	ontour (in fee	t)								
			L	70 d		65 0		6	0 dBA		dBA
		_	Ldn: NEL:	91 98		19 21			423 453		911 977

	FHV	VA-RD-77-108	HIGHW	AY NO	DISE PREDICT		EL				
	io: 2033 WP			Project Name: Bear Valley Marketplace							
	e: Bear Valley				Job I	lumber: 1	3078				
Road Segme	nt: e/o 2nd Ave	9									
	SPECIFIC IN	PUT DATA				NOISE M					
Highway Data				S	ite Conditions			· ·			
Average Daily	( )		s				utos:	15			
	Percentage:	10.00%			Medium T		,	15			
	lour Volume:	4,529 vehicle	S		Heavy Tru	icks (3+ A	kles):	15			
	hicle Speed:	45 mph		V	ehicle Mix						
Near/Far La	ne Distance:	72 feet			VehicleTyp	e D	Day E	vening Ni	ght Daily		
Site Data						Autos: 7	7.5%	12.9% 9	9.6% 97.42%		
Bai	rrier Height:	0.0 feet		٦	Medium 1	Trucks: 8	4.8%	4.9% 10	0.3% 1.84%		
Barrier Type (0-W	•	0.0			Heavy 1	rucks: 8	6.5%	2.7% 10	0.74%		
Centerline Di	st. to Barrier:	62.0 feet		N	oise Source E	levations	(in feet	)			
Centerline Dist.	to Observer:	62.0 feet		-	Auto		•	/			
Barrier Distance	to Observer:	0.0 feet			Medium Truck						
Observer Height (		5.0 feet			Heavy Truck			rade Adjusti	ment: 0.0		
	ad Elevation:	0.0 feet									
	ad Elevation:	0.0 feet		L	ane Equivalen			et)			
	Road Grade:	0.0%			Auto						
	Left View:	-90.0 degre			Medium Truck						
	Right View:	90.0 degre	es		Heavy Truck	(s: 50.5	67				
FHWA Noise Mode	el Calculation:	5									
VehicleType	REMEL	Traffic Flow	Distan		Finite Road	Fresne		arrier Atten	Berm Atten		
Autos:	68.46	4.61		-0.20	-1.20		4.70	0.000	0.00		
Medium Trucks:	79.45	-12.63		-0.17			4.88	0.000	0.00		
Heavy Trucks:	84.25	-16.59		-0.18	-1.20	-	5.32	0.000	0.00		
Unmitigated Noise											
VehicleType	Leq Peak Hou			q Eve	•	Night	L	dn	CNEL		
Autos:	71		69.8		68.0	62.0		70.6	71.		
Medium Trucks:	65		63.9		57.6	56.0		64.5	64.		
Heavy Trucks:	66	-	64.9		55.8	57.1		65.4	65.		
Vehicle Noise:	73		71.8		68.6	63.9		72.5	72.		
Centerline Distand	ce to Noise Co	ntour (in feet	)								
				70 dl		dBA		dBA	55 dBA		
			Ldn: NEL:	91 97		96 10		22 52	908 974		

APPENDIX 8.1:

**ON-SITE TRAFFIC NOISE LEVEL CALCULATIONS** 



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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 6/2/2013

Scenario: Backyard No Wall Road Name: Third/Second Avenue Lot No: Project Name: Bear Valley Marketplace Job Number: 13078 Analyst: B. Lawson

SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)						
Average Daily	Traffic (Adt): 7,	920 vehicles				Au	tos:	15		
Peak Hour	Percentage:	10%		Me	dium Trucł	ks (2 Axle	es):	15		
Peak F	lour Volume:	792 vehicles		He	avy Trucks	: (3+ Axle	es):	15		
Ve	hicle Speed:	50 mph	,	Vehicle I	Mix					
Near/Far La	ne Distance:	44 feet	_		icleType	Da	av	Evening	Night	Daily
Site Data					Aut		.5%	12.9%	9.6%	-
Ba	rrier Height:	0.0 feet		М	edium Truc	:ks: 84	.8%	4.9%	10.3%	1.84%
Barrier Type (0-W	•	0.0			Heavy Truc	:ks: 86	5.5%	2.7%	10.8%	0.74%
	ist. to Barrier:	87.0 feet	_		=	- (* (*		- ()		
Centerline Dist.		87.0 feet	1	Noise So	ource Elev			et)		
Barrier Distance		0.0 feet			Autos:	2.00				
Observer Height	(Above Pad):	5.0 feet			m Trucks:	4.00		Creada Adi		
•	ad Elevation:	0.0 feet		Heav	/y Trucks:	8.00	06	Grade Adjı	istment.	0.0
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent D	istance	(in fe	eet)		
Barr	ier Elevation:	0.0 feet			Autos:	84.2	26			
	Road Grade:	0.0%		Mediu	m Trucks:	84.1	78			
				Heav	/y Trucks:	84.22	26			
FHWA Noise Mod	el Calculations									
VehicleType	REMEL T	raffic Flow D	Distance	Finite	Road	Fresnel	E	Barrier Atte	n Ber	m Atten
Autos:	71.12	-3.42	-3.5	0	-1.20	-4.	86	0.00	00	0.000
Medium Trucks:	78.79	-20.66	-3.5	0	-1.20	-4.	.98	0.00	00	0.000
Heavy Trucks:	83.02	-24.62	-3.5	0	-1.20	-5.	20	0.00	00	0.000
Unmitigated Noise	e Levels (withou	t Topo and barr	rier atten	uation)						
VehicleType	Leq Peak Hour	Leq Day	Leq E	vening	Leq Nig	ght		Ldn	Cl	VEL
Autos:	63.0	61.1		59.3		53.3		61.9		62.5
Medium Trucks:	53.4	51.9	)	45.6		44.0		52.5		52.7
Heavy Trucks:	53.7	52.3	3	43.2		44.5		52.9		53.0
Vehicle Noise:	63.9	62.1		59.6		54.3		62.8		63.4
Mitigated Noise L	evels (with Topo	and barrier atte	enuation	)						
VehicleType	Leq Peak Hour	Leq Day	-	vening	Leq Nig			Ldn	Cl	VEL
Autos:		61.1		59.3		53.3		61.9		62.5
Medium Trucks:		51.9		45.6		44.0		52.5		52.7
Heavy Trucks:		52.3	3	43.2		44.5		52.9		53.0
Vehicle Noise:	63.9	62.1	l	59.6		54.3		62.8		63.4
Centerline Distan	ce to Noise Cont	tour (in feet)	70 0	dBA	65 dB	A	60	0 dBA	55	dBA
		CNEL	.:	31		68		146		314

## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 6/2/2013

Scenario: Backyard No Wall Road Name: Third/Second Avenue Lot No: Project Name: Bear Valley Marketplace Job Number: 13078 Analyst: B. Lawson

Site Data         Autos:         77.5%         12.9%         9.6%         9           Barrier Height:         0.0 feet         Medium Trucks:         84.8%         4.9%         10.3%	SITE SPECIFIC INPUT DATA Highway Data				<b>NOISE MODEL INPUTS</b> Site Conditions (Hard = 10, Soft = 15)						
Peak Hour Percentage:         10%         Medium Trucks (2 Axles):         15           Peak Hour Volume:         792 vehicles         15         Heavy Trucks (3+ Axles):         15           Vehicle Speed:         50 mph         Heavy Trucks (3+ Axles):         15           Site Data         Autos:         77.5%         12.9%         9.6%         9           Barrier Type (0-Wall, 1-Berm):         0.0         Medium Trucks:         84.8%         4.9%         10.3%           Centerline Dist. to Dbserver:         72.0 feet         Medium Trucks:         84.8%         4.9%         10.3%           Barrier Height (Above Pad):         5.0 feet         Medium Trucks:         8.006         Grade Adjustment:         0           Barrier Elevation:         0.0 feet         Autos:         2.000         Medium Trucks:         68.622           Road Grade:         0.0%         Emite Distance (in feet)         Autos:         68.622           FHWA Noise Model Calculations         Vehicle Type         Remet         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berrier           Wehicle Type         Remet         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berrier </th											
Peak Hour Volume:         792 vehicles           Vehicle Speed:         50 mph           Near/Far Lane Distance:         44 feet           Site Data         Autos:         77.5%         12.9%         9.6%         9           Barrier Height:         0.0 feet         Medium Trucks:         84.8%         4.9%         10.3%           Barrier Type (0-Wall, 1-Berm):         0.0         Medium Trucks:         84.8%         4.9%         10.3%           Centerline Dist. to Observer:         72.0 feet         Medium Trucks:         8.006         Grade Adjustment:         0           Barrier Distance to Observer:         0.0 feet         Moise Source Elevations (in feet)         Autos:         7.7%         10.3%           Observer Height (Above Pad):         5.0 feet         Autos:         6.8.622         Medium Trucks:         8.006         Grade Adjustment:         0           Barrier Elevation:         0.0 feet         Lane Equivalent Distance (in feet)         Autos:         68.622           FHWA Noise Model Calculations         Vehicle Type         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berrier           Autos:         71.12         -3.42         -2.17         -1.20         -4.66	Average Daily	Traffic (Adt): 7	,920 vehicles				Auto	os: 15			
Vehicle Speed:         50 mph Near/Far Lane Distance:         44 feet           Site Data         Autos:         77.5%         12.9%         9.6%         9           Barrier Height:         0.0 feet         Autos:         77.5%         12.9%         9.6%         9           Barrier Type (0-Wall, 1-Berm):         0.0         Feet         Autos:         2.7%         10.3%           Barrier Dist. to Observer:         72.0 feet         Autos:         2.7%         10.8%           Barrier Dist. to Observer:         0.0 feet         Autos:         2.00         Medium Trucks:         4.000           Deserver Height (Above Pad):         5.0 feet         Autos:         68.522         Medium Trucks:         68.622           Road Elevation:         0.0 feet         Autos:         68.564         Heavy Trucks:         68.622           FHWA Noise Model Calculations         Vehicle Type         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Bernier           Autos:         71.12         -3.42         -2.17         -1.20         -4.86         0.000           Medium Trucks:         83.02         -24.62         -2.17         -1.20         -5.26         0.000	Peak Hour	Percentage:	10%		Me	dium Truck	s (2 Axle	s <i>):</i> 15			
Near/Far Lane Distance:         44 feet         Vehicle Type         Day         Evening         Night         I           Site Data         Autos:         77.5%         12.9%         9.6%         9           Barrier Type (0-Wall, 1-Berm):         0.0         Medium Trucks:         84.8%         4.9%         10.3%           Centerline Dist. to Barrier:         72.0 feet         Medium Trucks:         86.5%         2.7%         10.8%           Barrier Distance to Observer:         0.0 feet         Autos:         2.000         Medium Trucks:         8.006         Grade Adjustment: 0           Pad Elevation:         0.0 feet         Autos:         68.622         Medium Trucks:         68.622           FHWA Noise Model Calculations         0.0%         Medium Trucks:         68.622         Medium Trucks:         68.622           FHWA Noise Model Calculations         0.0%         Distance         Finite Road         Fresnel         Barrier Atten         Berrier Atten           Autos:         71.12         -3.42         -2.17         -1.20         -4.86         0.000           Medium Trucks:         83.02         -24.62         -2.17         -1.20         -5.26         0.000           Medium Trucks:         53.0         53.6	Peak F	lour Volume:	792 vehicles		He	avy Trucks	(3+ Axle	s <i>):</i> 15			
Near/Far Lane Distance:         44 feet         VehicleType         Day         Evening         Night         A           Site Data         Autos:         77.5%         12.9%         9.6%         9           Barrier Type (0-Wall, 1-Berm):         0.0         Autos:         77.5%         12.9%         9.6%         9           Centerline Dist. to Barrier:         72.0 feet         Medium Trucks:         84.8%         4.9%         10.3%           Barrier Distance to Observer:         0.0 feet         Autos:         72.0 leet         Autos:         2.7%         10.8%           Observer Height (Above Pad):         5.0 feet         Autos:         8.006         Grade Adjustment: 0           Pad Elevation:         0.0 feet         Autos:         68.622         Medium Trucks:         68.622           Road Grade:         0.0%         Distance         Finite Road         Fresnel         Barrier Atten         Berrier           Autos:         71.12         -3.42         -2.17         -1.20         -4.86         0.000           Heavy Trucks:         83.02         -24.62         -2.16         -1.20         -4.86         0.000           Heavy Trucks:         78.79         -20.66         -2.16         -1.20         -4.86	Ve	hicle Speed:	50 mph	,	Vehicle	Mix					
Site Data         Autos:         77.5%         12.9%         9.6%         9           Barrier Type (0-Wall, 1-Berm):         0.0          Medium Trucks:         84.8%         4.9%         10.3%           Centerline Dist, to Barrier:         72.0 feet          Medium Trucks:         86.5%         2.7%         10.8%           Barrier Distance to Observer:         72.0 feet          Autos:         2.000         Medium Trucks:         80.06         Grade Adjustment: 0         0           Distance to Observer:         0.0 feet         Autos:         2.000         Medium Trucks:         8.006         Grade Adjustment: 0           Road Elevation:         0.0 feet         Autos:         68.622         Medium Trucks:         68.622           FHWA Noise Model Calculations         Vehicle Type         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Bermier Atten <td< td=""><td>Near/Far La</td><td>ne Distance:</td><td>44 feet</td><td></td><td></td><td></td><td>Dav</td><td>/ Evenina</td><td>Niaht</td><td>Daily</td></td<>	Near/Far La	ne Distance:	44 feet				Dav	/ Evenina	Niaht	Daily	
Barrier Type (0-Wall, 1-Berm):         0.0           Centerline Dist. to Observer:         72.0 feet           Centerline Dist. to Observer:         72.0 feet           Barrier Distance to Observer:         0.0 feet           Barrier Distance to Observer:         0.0 feet           Moise Source Elevations (in feet)         Autos:           Road Elevation:         0.0 feet           Barrier Elevation:         0.0 feet           Road Elevation:         0.0 feet           Road Grade:         0.0%           VehicleType         REMEL           VehicleType         Laq Pay           Leq Pay         Leq Night           Leq Pay         Leq Night           Autos:         64.3           62.4         60.7           55.0         53.6           44.6         45.8           Medium Trucks:         54.8           53.3         46.9           45.4         53.8 <td< td=""><td>Site Data</td><td></td><td></td><td></td><td></td><td></td><td>-</td><td>-</td><td>-</td><td></td></td<>	Site Data						-	-	-		
Barrier Type (0-Wall, 1-Berm):         0.0           Centerline Dist. to Barrier:         72.0 feet           Barrier Distance to Observer:         72.0 feet           Barrier Distance to Observer:         0.0 feet           Barrier Distance to Observer:         0.0 feet           Road Elevation:         0.0 feet           Barrier Elevation:         0.0 feet           Road Grade:         0.0%           Heavy Trucks:         68.622           Medium Trucks:         68.622           Medium Trucks:         68.622           Medium Trucks:         68.622           Medium Trucks:         68.62           FHWA Noise Model Calculations         Distance           VehicleType         REMEL         Traffic Flow         Distance           Autos:         71.12         -3.42         -2.17         -1.20         -4.86         0.000           Medium Trucks:         78.79         -20.66         -2.16         -1.20         -4.86         0.000           Medium Trucks:         58.30         -24.62         -2.17         -1.20         -5.26         0.000           Medium Trucks:         55.0         53.6         44.6         45.8         54.2           VehicleType	Ba	rrier Height	0.0 feet		М	edium Truc	ks: 84.8	3% 4.9%	10.3%	1.84%	
Centerline Dist. to Barrier:         72.0 feet           Centerline Dist. to Observer:         72.0 feet           Barrier Distance to Observer:         0.0 feet           Observer Height (Above Pad):         5.0 feet           Pad Elevation:         0.0 feet           Barrier Elevation:         0.0 feet           Road Elevation:         0.0 feet           Barrier Elevation:         0.0 feet           Road Grade:         0.0%           FHWA Noise Model Calculations         Calculations           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berrier           Medium Trucks:         71.12         -3.42         -2.17         -1.20         -4.86         0.000           Medium Trucks:         78.79         -20.66         -2.16         -1.20         -4.86         0.000           Medium Trucks:         78.79         -20.66         -2.16         -1.20         -4.86         0.000           Medium Trucks:         54.8         53.3         46.9         45.4         53.8           Heavy Trucks:         55.0         53.6         64.2         60.7         54.6         63.2           Medium Trucks:		•				Heavy Truc	ks: 86.	5% 2.7%	10.8%	0.74%	
Centerline Dist. to Observer:         72.0 feet         Noise Source Events (in feet)           Barrier Distance to Observer:         0.0 feet         Autos:         2.000           Observer Height (Above Pad):         5.0 feet         Autos:         4.000           Pad Elevation:         0.0 feet         Medium Trucks:         4.000           Barrier Elevation:         0.0 feet         Lane Equivalent Distance (in feet)           Barrier Elevation:         0.0 feet         Autos:         68.622           Road Grade:         0.0%         Eane Equivalent Distance (in feet)           Autos:         71.12         -3.42         -2.17         -1.20         -4.86         0.000           Medium Trucks:         78.79         -20.66         -2.16         -1.20         -4.86         0.000           Medium Trucks:         78.79         -20.66         -2.16         -1.20         -4.86         0.000           Medium Trucks:         78.30         -24.62         -2.17         -1.20         -5.26         0.000           Unmitigated Noise Levels (without Topo and barrier attenuation)         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNE           Vehicle Type         Leq Peak Hour         Leq Day <td< td=""><td>••••</td><td>,</td><td></td><td></td><td></td><td></td><td>- (<b>†</b> /<b>†</b></td><td>(</td><td></td><td></td></td<>	••••	,					- ( <b>†</b> / <b>†</b>	(			
Barrier Distance to Observer:       0.0 feet       Autos:       2.000         Observer Height (Above Pad):       5.0 feet       4.000       Heavy Trucks:       4.000         Pad Elevation:       0.0 feet       Barrier Elevation:       0.0 feet       Lane Equivalent Distance (in feet)         Barrier Elevation:       0.0 feet       Autos:       68.622         Road Grade:       0.0%       Medium Trucks:       68.622         FHWA Noise Mode/ Calculation:       Traffic Flow       Distance       Finite Road       Fresnel       Barrier Atten       Berrier         Vehicle Type       REMEL       Traffic Flow       Distance       Finite Road       Fresnel       Barrier Atten       Berrier         Medium Trucks:       78.79       -20.66       -2.16       -1.20       -4.86       0.000         Medium Trucks:       83.02       -24.62       -2.17       -1.20       -5.26       0.000         Unmitigated Noise Levels (without Topo and barrier attenuation)       Leq Peak Hour       Leq Day       Leq Revening       Leq Night       Ldn       CNE         Autos:       64.3       62.4       60.7       54.6       63.2       64.2       64.2       64.2       64.2         Vehicle Noise:       65.0       6				1	Noise So			2			
Observer Height (Above Pad):         5.0 feet         Medium Trucks:         4.000           Pad Elevation:         0.0 feet         8.006         Grade Adjustment: 0           Barrier Elevation:         0.0 feet         Autos:         68.622           Road Grade:         0.0%         Medium Trucks:         68.622           FHWA Noise Model Calculations         Medium Trucks:         68.622           Vehicle Type         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berrier           Autos:         71.12         -3.42         -2.17         -1.20         -4.86         0.000           Medium Trucks:         78.79         -20.66         -2.16         -1.20         -4.99         0.000           Heavy Trucks:         83.02         -24.62         -2.17         -1.20         -5.26         0.000           Umitigated Noise Levels (without Topo and barrier attenuation)         Ldq Right         Ldn         CNE           Vehicle Type         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNE           Medium Trucks:         55.0         53.6         44.6         45.8         54.2         53.8           Medium Truc											
Pad Elevation:       0.0 feet       Heavy Trucks:       8.006       Glade Adjustment.       0         Barrier Elevation:       0.0 feet       Autos:       68.622       Autos:       68.622         FHWA Noise Model Calculations       0.0%       Medium Trucks:       68.622       Medium Trucks:       68.622         Vehicle Type       REMEL       Traffic Flow       Distance       Finite Road       Fresnel       Barrier Atten       Berminian         Autos:       71.12       -3.42       -2.17       -1.20       -4.86       0.000         Medium Trucks:       78.79       -20.66       -2.16       -1.20       -4.99       0.000         Heavy Trucks:       83.02       -24.62       -2.17       -1.20       -5.26       0.000         Unmitigated Noise Levels (without Topo and barrier attenuation)       Vehicle Type       Leq Day       Leq Evening       Leq Night       Ldn       CNE         Autos:       54.8       53.3       46.9       45.4       53.8       54.2       Vehicle Noise:       55.0       53.6       64.2         Medium Trucks:       54.8       53.3       46.9       45.4       53.8       54.2         Vehicle Noise:       65.2       63.4       60.9 <t< td=""><td>Observer Height</td><td>(Above Pad):</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Observer Height	(Above Pad):									
Barrier Elevation:       0.0 feet       Autos:       68.622         Road Grade:       0.0%       Medium Trucks:       68.524         FHWA Noise Model Calculations       Distance       Finite Road       Fresnel       Barrier Atten       Berrier         VehicleType       REMEL       Traffic Flow       Distance       Finite Road       Fresnel       Barrier Atten       Berrier         Autos:       71.12       -3.42       -2.17       -1.20       -4.86       0.000         Medium Trucks:       78.79       -20.66       -2.16       -1.20       -4.99       0.000         Medium Trucks:       78.79       -20.66       -2.17       -1.20       -5.26       0.000         Unmitigated Noise Levels (without Topo and barrier attenuation)       VehicleType       Leq Peak Hour       Leq Day       Leq Night       Ldn       CNE         Autos:       64.3       62.4       60.7       54.6       63.2       0.000       0.000         Medium Trucks:       55.0       53.6       44.6       45.8       54.2       0.000         Vehicle Noise:       65.2       63.4       60.9       55.6       64.2       0.000         Medium Trucks:       54.8       53.3       46.9	•	,			Heav	/y Trucks:	8.00	Grade Adj	ustment.	0.0	
Road Grade:       0.0%       Medium Trucks:       68.564 Heavy Trucks:       68.622         FHWA Noise Model Calculations       Interface       Finite Flow       Distance       Finite Road       Fresnel       Barrier Atten       Berm.         Autos:       71.12       -3.42       -2.17       -1.20       -4.86       0.000         Medium Trucks:       78.79       -20.66       -2.16       -1.20       -4.99       0.000         Heavy Trucks:       83.02       -24.62       -2.17       -1.20       -5.26       0.000         Ummitigated Noise Levels (without Topo and barrier attenuation)       Leq Evening       Leq Night       Ldn       CNE         Vehicle Type       Leq Peak Hour       Leq Day       Leq Evening       Leq Night       Ldn       CNE         Autos:       64.3       62.4       60.7       54.6       63.2       64.2         Medium Trucks:       55.0       53.6       44.6       45.8       54.2       Vehicle Noise:       65.2       63.4       60.9       55.6       64.2         Wetice Noise:       64.3       62.4       60.7       54.6       63.2       Medium Trucks:       54.8       53.3       46.9       45.4       53.8         Heavy Tr	Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent Di	istance (i	n feet)			
Heavy Trucks: $68.622$ FHWA Noise Model CalculationsVehicleTypeREMELTraffic FlowDistanceFinite RoadFresnelBarrier AttenBerrierAutos: $71.12$ $-3.42$ $-2.17$ $-1.20$ $-4.86$ $0.000$ Medium Trucks: $78.79$ $-20.66$ $-2.16$ $-1.20$ $-4.99$ $0.000$ Heavy Trucks: $83.02$ $-24.62$ $-2.17$ $-1.20$ $-5.26$ $0.000$ Unmitigated Noise Levels (without Topo and barrier attenuation)VehicleTypeLeq Peak HourLeq DayLeq EveningLeq NightLdnCNEAutos: $64.3$ $62.4$ $60.7$ $54.6$ $63.2$ $64.2$ $64.2$ $64.2$ Medium Trucks: $55.0$ $53.6$ $44.6$ $45.8$ $54.2$ $54.2$ $64.2$ $60.9$ $55.6$ $64.2$ Mitigated NoiseLeq Peak HourLeq DayLeq EveningLeq NightLdnCNEAutos: $65.2$ $63.4$ $60.9$ $55.6$ $64.2$ $64.2$ Medium Trucks: $54.8$ $53.3$ $46.9$ $45.4$ $53.8$ $64.2$ Medium Trucks: $54.8$ $53.3$ $46.9$ $45.4$ $53.8$ $64.2$ Medium Trucks: $54.8$ $53.3$ $46.9$ $45.4$ $53.8$ $63.2$ Medium Trucks: $54.8$ $53.3$ $46.9$ $45.4$ $53.8$ $63.2$ Medium Trucks: $54.8$ $53.3$ $46.9$ $45.4$ $53.8$ $53.6$	Barr	ier Elevation:	0.0 feet			Autos:	68.62	2			
FHWA Noise Model Calculations           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berrier           Autos:         71.12         -3.42         -2.17         -1.20         -4.86         0.000           Medium Trucks:         78.79         -20.66         -2.16         -1.20         -4.99         0.000           Heavy Trucks:         83.02         -24.62         -2.17         -1.20         -5.26         0.000           Unmitigated Noise Levels (without Topo and barrier attenuation)         Leq Poak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNE           Autos:         64.3         62.4         60.7         54.6         63.2         64.3         64.4         60.9		Road Grade:	0.0%		Mediu	m Trucks:	68.56	4			
Vehicle Type         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm.           Autos:         71.12         -3.42         -2.17         -1.20         -4.86         0.000           Medium Trucks:         78.79         -20.66         -2.16         -1.20         -4.99         0.000           Heavy Trucks:         83.02         -24.62         -2.17         -1.20         -5.26         0.000           Ummitigated Noise Levels (without Topo and barrier attenuation)         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNE           Autos:         64.3         62.4         60.7         54.6         63.2         63.2         64.2         60.7         54.6         63.2         64.2         60.7         54.6         64.2         60.7         54.6         63.2         64.2         60.7         55.6         64.2         66.2         64.2         60.7         55.6         64.2         66.2         64.2         60.7         55.6         64.2         66.2         64.2         60.7         54.6         63.2         64.2         60.7         54.6         63.2         64.2         60.7         64.3         62.					Heav	y Trucks:	68.62	2			
Vehicle Type         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm.           Autos:         71.12         -3.42         -2.17         -1.20         -4.86         0.000           Medium Trucks:         78.79         -20.66         -2.16         -1.20         -4.99         0.000           Heavy Trucks:         83.02         -24.62         -2.17         -1.20         -5.26         0.000           Ummitigated Noise Levels (without Topo and barrier attenuation)         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNE           Medium Trucks:         64.3         62.4         60.7         54.6         63.2         63.2           Medium Trucks:         55.0         53.6         44.6         45.8         54.2         54.2           Vehicle Noise:         65.2         63.4         60.9         55.6         64.2         54.2           Weincle Type         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNE           Medium Trucks:         54.8         53.3         46.9         55.6         64.2         54.2         54.6         63.2											
Autos:       71.12       -3.42       -2.17       -1.20       -4.86       0.000         Medium Trucks:       78.79       -20.66       -2.16       -1.20       -4.99       0.000         Heavy Trucks:       83.02       -24.62       -2.17       -1.20       -5.26       0.000         Unmitigated Noise Levels (without Topo and barrier attenuation)       Leq Peak Hour       Leq Day       Leq Evening       Leq Night       Ldn       CNE         Autos:       64.3       62.4       60.7       54.6       63.2       63.2         Medium Trucks:       54.8       53.3       46.9       45.4       53.8         Heavy Trucks:       55.0       53.6       44.6       45.8       54.2         Vehicle Noise:       65.2       63.4       60.9       55.6       64.2         Mitigated Noise Levels (with Topo and barrier attenuation)       Vehicle Type       Leq Peak Hour       Leq Day       Leq Evening       Leq Night       Ldn       CNE         Medium Trucks:       54.8       53.3       46.9       45.4       53.8       64.2       CNE         Metigated Noise Levels (with Topo and barrier attenuation)       Vehicle Noise:       54.8       53.3       46.9       45.4       53.8     <			roffic Flow	Viatanaa	Finito	Pood	Franci	Porrior Att	on Por	m Atton	
Medium Trucks:       78.79       -20.66       -2.16       -1.20       -4.99       0.000         Heavy Trucks:       83.02       -24.62       -2.17       -1.20       -5.26       0.000         Ummitigated Noise Levels (without Topo and barrier attenuation)       Leq Peak Hour       Leq Day       Leq Evening       Leq Night       Ldn       CNE         Vehicle Type       Leq Peak Hour       Leq Day       Leq Evening       45.4       53.8       63.2         Medium Trucks:       54.8       53.3       46.9       45.4       53.8       64.2         Medium Trucks:       54.8       53.3       46.9       45.4       53.8         Heavy Trucks:       55.0       53.6       44.6       45.8       54.2         Vehicle Noise:       65.2       63.4       60.9       55.6       64.2         Mitigated Noise Levels (with Topo and barrier atteruation)       Vehicle Type       Leq Peak Hour       Leq Day       Leq Evening       Leq Night       Ldn       CNE         Medium Trucks:       54.8       53.3       46.9       45.4       53.8       63.2         Wehicle Noise:       64.3       62.4       60.7       54.6       63.2         Medium Trucks:       54.8										0.000	
Heavy Trucks:       83.02 $-24.62$ $-2.17$ $-1.20$ $-5.26$ $0.00$ Unmitigated Noise Levels (without Topo and barrier attenuation)       Leq Peak Hour       Leq Day       Leq Evening       Leq Night       Ldn       CNE         Autos:       64.3       62.4       60.7       54.6       63.2         Medium Trucks:       54.8       53.3       46.9       45.4       53.8         Heavy Trucks:       55.0       53.6       44.6       45.8       54.2         Vehicle Noise:       65.2       63.4       60.9       55.6       64.2         Wehicle Type       Leq Peak Hour       Leq Day       Leq Evening       Leq Night       Ldn       CNE         Mitigated Noise Levels (with Topo and barrier atternuation)       55.6       64.2       64.2       64.3       65.4       65.2         Vehicle Type       Leq Peak Hour       Leq Day       Leq Evening       Leq Night       Ldn       CNE         Medium Trucks:       54.8       53.3       46.9       45.4       53.8       63.2         Medium Trucks:       54.8       53.3       46.9       45.4       53.8       64.2         Medium Trucks:       55.0       53.6       44.										0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)           VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNE           Autos:         64.3         62.4         60.7         54.6         63.2           Medium Trucks:         54.8         53.3         46.9         45.4         53.8           Heavy Trucks:         55.0         53.6         44.6         45.8         54.2           Vehicle Noise:         65.2         63.4         60.9         55.6         64.2           Mitigated Noise Levels (with Topo and barrier atternuation)         Leq Night         Ldn         CNE           Vehicle Type         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNE           Mitigated Noise Levels (with Topo and barrier atternuation)         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNE           Autos:         64.3         62.4         60.7         54.6         63.2         Evening         Leq Night         Ldn         CNE           Medium Trucks:         54.8         53.3         46.9         45.4         53.8         Evening         Leq Night         54.2										0.000	
VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNE           Autos:         64.3         62.4         60.7         54.6         63.2           Medium Trucks:         54.8         53.3         46.9         45.4         53.8           Heavy Trucks:         55.0         53.6         44.6         45.8         54.2           Vehicle Noise:         65.2         63.4         60.9         55.6         64.2           Mitigated Noise Levels (with Topo and barrier attenuation)         Leq Evening         Leq Night         Ldn         CNE           VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNE           Mitigated Noise Levels (with Topo and barrier attenuation)         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNE           Autos:         64.3         62.4         60.7         54.6         63.2         63.2           Medium Trucks:         54.8         53.3         46.9         45.4         53.8         64.2           Medium Trucks:         55.0         53.6         44.6         45.8         54.2         55.6         64.2	-					1.20	0.2	0 0.0		0.000	
Autos:       64.3       62.4       60.7       54.6       63.2         Medium Trucks:       54.8       53.3       46.9       45.4       53.8         Heavy Trucks:       55.0       53.6       44.6       45.8       54.2         Vehicle Noise:       65.2       63.4       60.9       55.6       64.2         Mitigated Noise Levels (with Topo and barrier attenuation)       Leq Day       Leq Evening       Leq Night       Ldn       CNE         Autos:       64.3       62.4       60.7       54.6       63.2       64.2       64.2         Mitigated Noise Levels (with Topo and barrier attenuation)       Leq Peak Hour       Leq Day       Leq Evening       Leq Night       Ldn       CNE         Autos:       64.3       62.4       60.7       54.6       63.2         Medium Trucks:       54.8       53.3       46.9       45.4       53.8         Heavy Trucks:       55.0       53.6       44.6       45.8       54.2         Vehicle Noise:       65.2       63.4       60.9       55.6       64.2         Vehicle Noise:       65.2       63.4       60.9       55.6       64.2         Centerline Distance to Noise Contour (in feet)       70 dBA </td <td></td> <td></td> <td>•</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>			•								
Medium Trucks:       54.8       53.3       46.9       45.4       53.8         Heavy Trucks:       55.0       53.6       44.6       45.8       54.2         Vehicle Noise:       65.2       63.4       60.9       55.6       64.2         Mitigated Noise Levels (with Topo and barrier attenuation)       Leq Day       Leq Evening       Leq Night       Ldn       CNE         Vehicle Type       Leq Peak Hour       Leq Day       Leq Evening       Leq Night       53.8       63.2         Medium Trucks:       64.3       62.4       60.7       54.6       63.2       63.4       63.2         Medium Trucks:       54.8       53.3       46.9       45.4       53.8       54.2       54.2         Vehicle Noise:       55.0       53.6       44.6       45.8       54.2       54.2         Vehicle Noise:       65.2       63.4       60.9       55.6       64.2       55.6         Vehicle Noise:       65.2       63.4       60.9       55.6       64.2       55.6         Vehicle Noise:       65.2       63.4       60.9       55.6       64.2       55.6         Vehicle Noise:       65.2       63.4       60.9       55.6       64.2 <td></td> <td>-</td> <td>1 1</td> <td>-</td> <td>-</td> <td>Leq Nig</td> <td></td> <td></td> <td></td> <td></td>		-	1 1	-	-	Leq Nig					
Heavy Trucks:       55.0       53.6       44.6       45.8       54.2         Vehicle Noise:       65.2       63.4       60.9       55.6       64.2         Mitigated Noise Levels (with Topo and barrier attenuation)       Leq Day       Leq Evening       Leq Night       Ldn       CNE         Vehicle Type       Leq Peak Hour       Leq Day       Leq Evening       Leq Night       Ldn       CNE         Autos:       64.3       62.4       60.7       54.6       63.2       63.4       64.3         Medium Trucks:       54.8       53.3       46.9       45.4       53.8       54.2       65.4       60.4       65.4       65.4       65.4       65.4       65.4       65.4       65.4       65.4       65.4       65.4										63.8	
Vehicle Noise:65.263.460.955.664.2Mitigated Noise Levels (with Topo and barrier attenuation)Leq PointLeq NightLdnCNEVehicleTypeLeq Peak HourLeq DayLeq EveningLeq NightLdnCNEAutos:64.362.460.754.663.2Medium Trucks:54.853.346.945.453.8Heavy Trucks:55.053.644.645.854.2Vehicle Noise:65.263.460.955.664.2Centerline Distance to Noise Contour (in feet)70 dBA65 dBA60 dBA55 dE										54.1	
Mitigated Noise Levels (with Topo and barrier attenuation)VehicleTypeLeq Peak HourLeq DayLeq EveningLeq NightLdnCNEAutos:64.362.460.754.663.263.464.365.464.365.466.364.265.466.364.365.466.366.364.365.466.366.364.365.466.3	-									54.3	
VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNE           Autos:         64.3         62.4         60.7         54.6         63.2         64.3         64.3         64.3         64.3         64.3         64.9         45.4         53.8         53.8         53.8         54.8         53.8         54.2         54.8         54.2         54.2         54.2         54.2         54.2         54.2         54.2         54.2         54.2         54.2         54.2         54.2         54.2         54.2         54.2         54.2         54.2         55.6         64.2         55.6         54.2         55.6         54.2         55.6         54.2         55.6         54.2         55.6         54.2         55.6	venicie ivoise:	65.2	63.4	+	60.9		55.6	64.2	2	64.7	
Autos:       64.3       62.4       60.7       54.6       63.2         Medium Trucks:       54.8       53.3       46.9       45.4       53.8         Heavy Trucks:       55.0       53.6       44.6       45.8       54.2         Vehicle Noise:       65.2       63.4       60.9       55.6       64.2         Centerline Distance to Noise Contour (in feet)       70 dBA       65 dBA       60 dBA       55 dBA	-			T							
Medium Trucks:       54.8       53.3       46.9       45.4       53.8         Heavy Trucks:       55.0       53.6       44.6       45.8       54.2         Vehicle Noise:       65.2       63.4       60.9       55.6       64.2         Centerline Distance to Noise Contour (in feet)       70 dBA       65 dBA       60 dBA       55 dBA				-	-						
Heavy Trucks:       55.0       53.6       44.6       45.8       54.2         Vehicle Noise:       65.2       63.4       60.9       55.6       64.2         Centerline Distance to Noise Contour (in feet)       70 dBA       65 dBA       60 dBA       55 dBA										63.8	
Vehicle Noise:         65.2         63.4         60.9         55.6         64.2           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA										54.1	
Centerline Distance to Noise Contour (in feet)70 dBA65 dBA60 dBA55 dBA										54.3	
	Vehicle Noise:	65.2	63.4	1	60.9		55.6	64.2	2	64.7	
CNEL: 32 69 148	Centerline Distan	ce to Noise Con	tour (in feet)	70 0	dBA	65 dB	A	60 dBA	55	dBA	
			CNEL	.:	32		69	148		319	

Scenario: Backyard No Wall Road Name: Bear Valley Road Lot No:

	SPECIFIC INP	UT DATA						LINPUTS	6	
Highway Data			S	Site Con	ditions (H	Hard = 1	0, So	oft = 15)		
Average Daily	Traffic (Adt): 45,	470 vehicles				A	utos:	15		
Peak Hour	Percentage:	10%		Mee	dium Truc	cks (2 A	xles):	15		
Peak H	lour Volume: 4,	547 vehicles		Hea	avy Truck	is (3+ A	xles):	15		
Ve	hicle Speed:	50 mph	V	/ehicle N	<i>lix</i>					
Near/Far La	ne Distance:	72 feet	-		cleType	L	Day	Evening	Night	Daily
Site Data							7.5%	-	9.6%	
Ba	rrier Height:	0.0 feet		Me	ədium Tru	icks: 8	34.8%	4.9%	10.3%	1.84%
Barrier Type (0-W	•	0.0		F	leavy Tru	icks: 8	36.5%	2.7%	10.8%	0.74%
Centerline Di	,	'45.0 feet		laiaa Sa	uree Ele	votiono	(in fo			
Centerline Dist.	to Observer: 7	'45.0 feet	N	voise 30			•	el)		
Barrier Distance	to Observer:	0.0 feet		Madium	Autos:		000			
Observer Height (	Above Pad):	5.0 feet			n Trucks:		000	Crada Adi	untmont	
	ad Elevation:	0.0 feet		Heav	y Trucks:	8.	006	Grade Adj	usimeni.	0.0
Roa	ad Elevation:	0.0 feet	L	ane Equ	uivalent 🛛	Distance	e (in f	eet)		
Barri	ier Elevation:	0.0 feet			Autos:	744.	136			
	Road Grade:	0.0%		Mediur	n Trucks:	744.	130			
				Heav	y Trucks:	744.	136			
FHWA Noise Mod						_				<b>A</b>
VehicleType			Distance	Finite		Fresne		Barrier Atte		m Atten
Autos:	71.12	4.17	-17.69		-1.20		4.89	0.0		0.000
Medium Trucks:	78.79	-13.07	-17.69		-1.20		4.90	0.0		0.000
Heavy Trucks:	83.02	-17.03	-17.69	9	-1.20	-	4.93	0.0	00	0.000
Unmitigated Noise		-							1	
VehicleType	Leq Peak Hour	Leq Day	Leq Ev	•	Leq N	-		Ldn		VEL
Autos:	56.4	54.		52.7		46.7		55.3		55.9
Medium Trucks:	46.8	45.3		39.0		37.4		45.9		46.1
Heavy Trucks:	47.1	45.		36.6		37.9		46.2		46.4
Vehicle Noise:	57.3	55.	5	53.0		47.6		56.2		56.8
Mitigated Noise Le	evels (with Topo	and barrier at	,							
VehicleType	Leq Peak Hour	Leq Day	Leq Ev	-	Leq N	-		Ldn		VEL
Autos:	56.4	54.	5	52.7		46.7		55.3	5	55.9
Medium Trucks:	46.8	45.3		39.0		37.4		45.9		46.1
Heavy Trucks:	47.1	45.	7	36.6		37.9		46.2		46.4
Vehicle Noise:	57.3	55.	5	53.0		47.6		56.2		56.8
Centerline Distand	ce to Noise Cont	our (in feet)	70 d	IBA	65 dl	BA	6	0 dBA	55	dBA
		CNEL	<u>L:</u>	98		210		453		975

Scenario: Backyard No Wall Road Name: Bear Valley Road Lot No:

SITE	SPECIFIC IN	PUT DATA					EL INPUTS		
Highway Data			5	Site Con	ditions (H	lard = 10, S	oft = 15)		
Average Daily	Traffic (Adt): 4	5,470 vehicles				Autos	: 15		
Peak Hour	Percentage:	10%		Mee	dium Truc	ks (2 Axles)	: 15		
Peak H	lour Volume:	4,547 vehicles		Hea	avy Truck	s (3+ Axles)	: 15		
Ve	hicle Speed:	50 mph	١	/ehicle N	<i>lix</i>				
Near/Far La	ne Distance:	72 feet			cleType	Day	Evening	Night Da	aily
Site Data						itos: 77.5%	-	9.6% 97.4	
Bai	rrier Height:	0.0 feet		Me	edium Tru	cks: 84.89	% 4.9%	10.3% 1.8	84%
Barrier Type (0-W	•	0.0		F	leavy Tru	cks: 86.5%	% 2.7%	10.8% 0.7	74%
Centerline Dis		733.0 feet		Vaice Se	uroo Elo	vations (in f	iont)		
Centerline Dist.	to Observer:	733.0 feet	ſ	voise so		-	eet)		
Barrier Distance	to Observer:	0.0 feet		Madiur	Autos: n Trucks:	2.000 4.000			
Observer Height (	Above Pad):	5.0 feet					Grada Adiu	ustment: 0.0	
Pa	ad Elevation:	0.0 feet		Heav	y Trucks:	8.006	Graue Aujt		
Roa	ad Elevation:	0.0 feet	L	ane Equ	ivalent D	)istance (in	feet)		
Barri	er Elevation:	0.0 feet			Autos:	732.122			
I	Road Grade:	0.0%		Mediur	n Trucks:	732.116			
				Heav	y Trucks:	732.122			
FHWA Noise Mode	el Calculations	;							
VehicleType	REMEL		Distance	Finite		Fresnel	Barrier Atte		
Autos:	71.12	4.17	-17.59	9	-1.20	-4.89			.000
Medium Trucks:	78.79	-13.07	-17.59	9	-1.20	-4.90	0.00		.000
Heavy Trucks:	83.02	-17.03	-17.59	9	-1.20	-4.93	0.00	00 00	.000
Unmitigated Noise	e Levels (witho	out Topo and ba	nrier atten	uation)					
VehicleType	Leq Peak Hou	r Leq Day	Leq Ev	/ening	Leq N	ght	Ldn	CNEL	
Autos:	56.	5 54	.6	52.8		46.8	55.4	:	56.0
Medium Trucks:	46.	9 45	.4	39.1		37.5	46.0	4	46.2
Heavy Trucks:	47.	2 45	.8	36.7		38.0	46.4		46.5
Vehicle Noise:	57.	4 55	.6	53.1		47.8	56.3	:	56.9
Mitigated Noise Le			,						
VehicleType	Leq Peak Hou		Leq Ev	-	Leq N	-	Ldn	CNEL	
Autos:	56.			52.8		46.8	55.4		56.0
Medium Trucks:	46.			39.1		37.5	46.0		46.2
Heavy Trucks:	47.			36.7		38.0	46.4		46.5
Vehicle Noise:	57.	4 55	.6	53.1		47.8	56.3		56.9
Centerline Distand	e to Noise Co	ntour (in feet)	70 c	IBA	65 dE	BA	60 dBA	55 dBA	
		CNE		98		210	453		975

Scenario: Backyard No Wall Road Name: Bear Valley Road Lot No:

SITES	SPECIFIC IN	PUT DATA					EL INPUTS	
Highway Data				Site Cond	ditions (l	lard = 10, S	oft = 15)	
Average Daily	Traffic (Adt): 4	5,470 vehicles				Autos	: 15	
Peak Hour	Percentage:	10%		Med	dium Truc	ks (2 Axles)	: 15	
Peak H	our Volume:	4,547 vehicles		Hea	avy Truck	rs (3+ Axles)	: 15	
Vel	hicle Speed:	50 mph		Vehicle N	lix			
Near/Far Lar	ne Distance:	72 feet			cleType	Day	Evening	Night Daily
Site Data						utos: 77.59	-	9.6% 97.42%
Bar	rier Height:	0.0 feet		Me	edium Tru	icks: 84.89	% 4.9%	10.3% 1.84%
Barrier Type (0-Wa	•	0.0		H	leavy Tru	icks: 86.59	% 2.7%	10.8% 0.74%
Centerline Dis		615.0 feet	_	No 'o o O o			(	
Centerline Dist. t		615.0 feet	1	Noise So		vations (in f	eet)	
Barrier Distance		0.0 feet			Autos:			
Observer Height (/		5.0 feet			n Trucks:		Que els Aslin	
• •	ad Elevation:	0.0 feet		Heav	y Trucks:	8.006	Grade Adjl	istment: 0.0
Roa	ad Elevation:	0.0 feet		Lane Equ	livalent l	Distance (in	feet)	
Barrie	er Elevation:	0.0 feet			Autos:	613.953		
F	Road Grade:	0.0%		Mediun	n Trucks:	613.946		
				Heav	y Trucks:	613.953		
		_						
FHWA Noise Mode	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	n Berm Atten
Autos:	71.12	4.17	-16.4		-1.20	-4.89		
Medium Trucks:	78.79	-13.07	-16.4		-1.20	-4.90		
Heavy Trucks:	83.02	-17.03	-16.4		-1.20	-4.94		
-								
		-		2	1001	iaht	Ldn	CNEL
VehicleType Autos:	Leq Peak Hou 57.	1 1	5.7	vening 54.0	Leq N	47.9	56.6	57.2
Medium Trucks:	48.		6.6	40.2		38.7	47.1	47.4
Heavy Trucks:	48.		6.9	37.9		39.1	47.1	47.4
Vehicle Noise:	58		6.7	54.3		48.9	57.5	58.0
						40.9	57.5	50.0
Mitigated Noise Le	· ·			<i>,</i>				
VehicleType	Leq Peak Hou		-	vening	Leq N	-	Ldn	CNEL
· ·	57.		5.7	54.0		47.9	56.6	57.2
Autos:			6.6	40.2		38.7	47.1	47.4
Medium Trucks:	48.			07.0		00 4	·	4 - 0
Medium Trucks: Heavy Trucks:	48.	.4 4	6.9	37.9		39.1	47.5	47.6
Medium Trucks: Heavy Trucks: Vehicle Noise:	48. 58.	.4 4 .5 5	6.9 6.7	54.3		48.9	57.5	58.0
Medium Trucks: Heavy Trucks:	48. 58.	.4 4 .5 5	6.9 6.7		65 d	48.9		

Scenario: Backyard No Wall Road Name: Bear Valley Road Lot No:

SITES	SPECIFIC IN	PUT DATA				NOISE MO			5	
Highway Data				Site Cor	ditions	(Hard = 1	0, So	ft = 15)		
Average Daily	Traffic (Adt): 4	5,470 vehicles				A	utos:	15		
Peak Hour	Percentage:	10%		Me	edium Tr	rucks (2 Ax	des):	15		
Peak H	our Volume:	4,547 vehicles		He	avy Tru	cks (3+ Ax	des):	15		
Vel	hicle Speed:	50 mph		Vehicle	Mix					
Near/Far Lar	ne Distance:	72 feet	_		nicleType	e D	Day	Evening	Night	Daily
Site Data							, 7.5%	-	9.6%	-
Bar	rier Height:	0.0 feet		M	ledium 1	rucks: 8	4.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wa	•	0.0			Heavy T	rucks: 8	6.5%	2.7%	10.8%	0.74%
Centerline Dis	,	465.0 feet	_	Noice S	ouroo E	lovations	(in fo	<u>at</u> )		
Centerline Dist.	to Observer:	465.0 feet	_	Noise S		levations	( <i>m ie</i> )00	et)		
Barrier Distance t	to Observer:	0.0 feet		Madiu	Auto m Truck		000			
Observer Height ()	Above Pad):	5.0 feet						Grade Adj	ustmont	· 0 0
Pa	d Elevation:	0.0 feet		пеа	vy Truck	<i>S.</i> 0.0	006	Graue Auj	usuneni	. 0.0
Roa	ad Elevation:	0.0 feet		Lane Eq	uivalen	t Distance	e (in fe	eet)		
Barrie	er Elevation:	0.0 feet			Auto	os: 463.6	514			
F	Road Grade:	0.0%		Mediu	m Truck	ks: 463.6	605			
				Hea	vy Truck	ks: 463.6	514			
FHWA Noise Mode	el Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresne	/ I	Barrier Atte	en Ber	m Atten
Autos:	71.12	4.17	-14.6	51	-1.20	-2	4.89	0.0	00	0.000
Medium Trucks:	78.79	-13.07	-14.6	51	-1.20	-2	4.91	0.0	00	0.000
Heavy Trucks:	83.02	-17.03	-14.6	61	-1.20	-2	4.95	0.0	00	0.000
Unmitigated Noise	Levels (witho	ut Topo and b	arrier atter	nuation)						
VehicleType	Leq Peak Hou	- Leq Day	Leq E	vening	Leq	Night		Ldn	Cl	NEL
Autos:	59.	5 5	7.6	55.8		49.8		58.4		59.0
Medium Trucks:	49.	9 4	8.4	42.0		40.5		49.0		49.2
Heavy Trucks:	50.	2 4	8.8	39.7		41.0		49.3		49.5
Vehicle Noise:	60.	4 5	8.6	56.1		50.7		59.3		59.8
Mitigated Noise Le	evels (with Top		attenuatior	1)						
VehicleType	Leq Peak Hou	· Leq Day	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	59.	5 5	7.6	55.8		49.8		58.4		59.0
Medium Trucks:	49.	9 4	8.4	42.0		40.5		49.0		49.2
Heavy Trucks:	50.	2 4	8.8	39.7		41.0		49.3		49.5
Vehicle Noise:	60.	4 5	8.6	56.1		50.7		59.3		59.8
Centerline Distanc	e to Noise Co	ntour (in feet)	70	dBA	65	dBA	6	0 dBA	55	dBA
		CN	EL:	98		210		453		977

APPENDIX 10.1:

CADNAA OPERATIONAL NOISE MODEL INPUTS



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13078 - Bear Valley Marketplace CadnaA Noise Prediction Model: 13078-02\_Exterior.cna Date: 14.07.21 Analyst: B. Lawson

## Calculation Configuration

Configurat	ion
Parameter	Value
General	
Country	(user defined)
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	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	5.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	274.32
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		Lir	nit. Valı	Je		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)
RECEIVERS		R1	46.8	37.9	46.8	65.0	55.0	0.0				5.00	r	6244681.76	2481878.97	3030.55
RECEIVERS		R2	52.2	38.6	50.5	65.0	55.0	0.0				5.00	r	6245555.59	2481398.17	3023.00
RECEIVERS		R3	52.5	47.2	54.8	65.0	55.0	0.0				5.00	r	6245457.98	2480969.81	3034.23
RECEIVERS		R4	50.1	46.5	53.6	65.0	55.0	0.0				5.00	r	6244336.73	2480362.15	3058.79
RECEIVERS		R5	53.6	40.6	52.1	65.0	55.0	0.0				5.00	r	6243995.47	2481475.93	3045.00
REC_ONSITE		MF1	48.3	37.5	47.5	65.0	55.0	0.0				5.00	r	6244151.63	2481762.27	3038.55
REC_ONSITE		MF2	47.6	35.2	46.2	65.0	55.0	0.0				5.00	r	6245313.46	2481681.52	3022.45
REC_ONSITE		MF3	60.4	48.7	59.3	65.0	55.0	0.0				5.00	r	6245004.89	2481225.09	3033.11
REC_ONSITE		MF4	57.5	45.0	56.1	65.0	55.0	0.0				5.00	r	6244709.87	2481212.13	3039.29
REC_ONSITE		MF5	63.8	47.1	61.5	65.0	55.0	0.0				5.00	r	6244357.10	2481094.22	3041.21
REC_ONSITE		MF6	64.8	50.1	62.8	65.0	55.0	0.0				5.00	r	6244137.69	2480944.07	3045.80

## Point Source(s)

Name	М.	ID	R	esult. PW	/L		Lw/L	i	Op	erating Ti	me	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		AC01	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6245210.58	2480620.04	3061.00
POINTSOURCE		AC02	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6245270.50	2480620.48	3061.00
POINTSOURCE		AC03	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6245302.30	2480914.65	3053.00
POINTSOURCE		AC04	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6245300.00	2480979.48	3053.00
POINTSOURCE		AC05	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6245296.95	2480800.76	3057.00
POINTSOURCE		AC06	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6244990.77	2481027.21	3058.94

Name	M.	ID		esult. PW			Lw/L			erating T		Height			oordinates	
			Day	Evening	Night	Туре	Value		Day	Special	Night	(0)		X	Y	Z
DOINTCOURCE		1007	(dBA) 88.9	(dBA)	(dBA)	1	00.0	dB(A)	(min)	(min)	(min)	(ft)	~	(ft)	(ft)	(ft)
POINTSOURCE		AC07 AC08	88.9	88.9 88.9	88.9 88.9	Lw	88.9 88.9		585.00 585.00	0.00	252.00 252.00		g g	6244968.01 6244881.44	2481075.90 2481005.48	
POINTSOURCE		AC09	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00		ъ g	6244900.63	2481077.05	3061.10
POINTSOURCE		AC10	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00		g	6244841.86	2480990.42	3061.10
POINTSOURCE		AC11	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00		g	6244840.35	2481099.42	3061.10
POINTSOURCE	1	AC12	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6244589.14	2480992.48	3061.10
POINTSOURCE		AC13	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6244590.90	2481095.80	3061.10
POINTSOURCE		AC14	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6244516.57	2481018.43	3061.10
POINTSOURCE		AC15	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6244989.81	2480640.78	3064.39
POINTSOURCE		AC16	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00		g	6244798.82	2480639.55	3067.03
POINTSOURCE		AC17	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00		g	6244472.70	2480685.54	
POINTSOURCE		AC18	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00		g	6244261.41	2480811.59	3065.89
POINTSOURCE POINTSOURCE		DOCK01 DOCK02	103.4 103.4	103.4 103.4	103.4 103.4	Lw	103.4 103.4		900.00 900.00	0.00	0.00	5.00 5.00	r r	6244541.76 6244489.27	2481112.37 2481064.96	3040.57 3041.00
POINTSOURCE		DOCK02 DOCK03	103.4	103.4	103.4	Lw	103.4		900.00	0.00	0.00	5.00	r	6244489.27	2481064.96	3027.97
POINTSOURCE		DOCK03	103.4	103.4	103.4	Lw	103.4		900.00	0.00	0.00	5.00	r	6245294.68	2481400.99	3027.57
POINTSOURCE		DOCK05	103.4	103.4	103.4	Lw	103.4		900.00	0.00	0.00	5.00	r	6245208.24	2481461.61	
POINTSOURCE		DOCK06	103.4	103.4	103.4	Lw	103.4		900.00	0.00	0.00	5.00	r	6245113.53	2481309.32	3031.00
POINTSOURCE	1	DOCK07	103.4	103.4	103.4	Lw	103.4		900.00	0.00	0.00	5.00	r	6245297.71	2481306.19	3027.00
POINTSOURCE	1	DOCK08	103.4	103.4	103.4	Lw	103.4		900.00	0.00	0.00	5.00	r	6245111.48	2481386.87	3029.38
POINTSOURCE		DOCK09	103.4	103.4	103.4	Lw	103.4		900.00	0.00	0.00	5.00	r	6245297.89	2481382.57	3025.97
POINTSOURCE		DOCK11	103.4	103.4	103.4	Lw	103.4		900.00	0.00	0.00	5.00	r	6245168.90	2481262.32	3029.59
POINTSOURCE		DOCK12	103.4	103.4	103.4	Lw	103.4		900.00	0.00	0.00	5.00	r	6245265.48	2481260.68	
POINTSOURCE		DT01	83.2	83.2	83.2	Lw	83.2						r	6244556.76	2480674.00	
POINTSOURCE		DT02	83.2	83.2	83.2	Lw	83.2					3.00	r	6244795.30	2480696.90	
POINTSOURCE		DT03	83.2	83.2	83.2	Lw	83.2					3.00	r	6244973.26	2480592.76	3044.38
POINTSOURCE		DT04 DT05	83.2 83.2	83.2 83.2	83.2 83.2	Lw Lw	83.2 83.2					3.00 3.00	r	6244325.91 6245121.06	2480820.88 2480626.44	
POINTSOURCE		DT05	83.2	83.2	83.2	Lw	83.2					3.00	۱ ۲	6245121.06	2480626.44	3039.70
POINTSOURCE		GAS01	79.9	79.9	79.9	Lw	79.9					5.00	r	6244207.64		
POINTSOURCE		GAS01 GAS02	79.9	79.9	79.9	Lw	79.9					5.00	r	6244253.69	2480688.15	
POINTSOURCE		GAS03	79.9	79.9	79.9	Lw	79.9					5.00	r	6244294.14	2480688.58	
POINTSOURCE		PARK01	87.8	87.8	87.8	Lw	87.8					5.00	r	6244131.50		
POINTSOURCE	1	PARK02	87.8	87.8	87.8	Lw	87.8					5.00	r	6244359.53	2480768.35	3046.24
POINTSOURCE	I	PARK03	87.8	87.8	87.8	Lw	87.8					5.00	r	6244986.67	2481116.02	3036.52
POINTSOURCE	I	PARK04	87.8	87.8	87.8	Lw	87.8					5.00	r	6244888.95	2481116.56	3039.61
POINTSOURCE		PARK05	87.8	87.8	87.8	Lw	87.8					5.00	r	6245281.82	2481056.27	3033.06
POINTSOURCE		PARK06	87.8	87.8	87.8	Lw	87.8					5.00	r	6244981.56	2480730.14	
POINTSOURCE		PARK07	87.8	87.8	87.8	Lw	87.8					5.00	r	6245247.77	2480658.87	3041.00
POINTSOURCE		PARK08	87.8	87.8	87.8	Lw	87.8					5.00	r	6245143.06	2480659.68	3041.00
POINTSOURCE POINTSOURCE		PARK09 PARK10	87.8 87.8	87.8 87.8	87.8 87.8	Lw Lw	87.8 87.8					5.00 5.00	r r	6245123.07 6245195.25	2480836.19 2480699.07	
POINTSOURCE		PARK10	87.8	87.8	87.8	Lw	87.8					5.00	r	6245228.39		
POINTSOURCE		PARK11	87.8	87.8	87.8	Lw	87.8					5.00	r	6245163.26		
POINTSOURCE		PARK13	87.8	87.8	87.8	Lw	87.8					5.00	r	6245154.01	2480784.02	
POINTSOURCE		PARK14	87.8	87.8	87.8	Lw	87.8					5.00	r	6245098.96	2480783.84	3038.41
POINTSOURCE		PARK15	87.8	87.8	87.8	Lw	87.8					5.00	r	6245239.89	2480945.45	3033.00
POINTSOURCE	I	PARK16	87.8	87.8	87.8	Lw	87.8					5.00	r	6245144.91	2480908.87	3033.45
POINTSOURCE		PARK17	87.8	87.8	87.8	Lw	87.8					5.00	r		2480949.91	3033.00
POINTSOURCE		PARK18	87.8	87.8	87.8	Lw	87.8					5.00	-	6245099.49		
POINTSOURCE		PARK19	87.8	87.8	87.8	Lw	87.8						r	6245135.57		
POINTSOURCE		PARK20	87.8	87.8	87.8	Lw	87.8						r	6245281.62		
POINTSOURCE		PARK21 PARK22	87.8 87.8	87.8 87.8	87.8 87.8	Lw	87.8 87.8						r	6245226.02 6245166.50	2481054.65 2481055.67	
POINTSOURCE		PARK22 PARK23	87.8 87.8	87.8	87.8	Lw Lw	87.8 87.8						r r	6245166.50	2481055.67	
POINTSOURCE		PARK23 PARK24	87.8	87.8	87.8	Lw	87.8						r	6244948.29		
POINTSOURCE		PARK25	87.8	87.8	87.8	Lw	87.8						r	6244888.96		
POINTSOURCE		PARK26	87.8	87.8	87.8	Lw	87.8						r	6244895.70		
POINTSOURCE		PARK27	87.8	87.8	87.8	Lw	87.8						r	6244894.18		
POINTSOURCE		PARK28	87.8	87.8	87.8	Lw	87.8						r	6244799.28		
POINTSOURCE		PARK29	87.8	87.8	87.8	Lw	87.8					5.00	r	6244844.99	2480646.62	3045.00
POINTSOURCE		PARK30	87.8	87.8	87.8	Lw	87.8					5.00	r	6244615.93		
POINTSOURCE		PARK31	87.8	87.8	87.8	Lw	87.8						r	6244545.18		
POINTSOURCE		PARK32	87.8	87.8	87.8	Lw	87.8						r	6244499.72		
POINTSOURCE		PARK33	87.8	87.8	87.8	Lw	87.8						r	6244680.67		
POINTSOURCE		PARK34	87.8	87.8	87.8	Lw	87.8						r	6244628.34	2480655.93	
POINTSOURCE		PARK35	87.8	87.8	87.8	Lw	87.8						r	6244627.97		
		PARK36	87.8	87.8	87.8	Lw	87.8						r r	6245011.69	2480804.42 2480842.63	
POINTSOURCE POINTSOURCE		PARK37 PARK38	87.8 87.8	87.8 87.8	87.8 87.8	Lw Lw	87.8 87.8						r r	6245011.22 6245010.71		
POINTSOURCE		PARK38 PARK39	87.8	87.8	87.8	Lw	87.8						r	6243010.71		
POINTSOURCE		PARK39 PARK40	87.8	87.8	87.8	Lw	87.8						r	6244955.00		
POINTSOURCE		PARK41	87.8	87.8	87.8	Lw	87.8						r	6244956.80		
POINTSOURCE		PARK41	87.8	87.8	87.8	Lw	87.8					5.00	-	6244890.40		
POINTSOURCE		PARK43	87.8	87.8	87.8	Lw	87.8						r	6244889.89		
POINTSOURCE		PARK44	87.8	87.8	87.8	Lw	87.8						r	6244890.53		
		PARK45	87.8	87.8	87.8	Lw	87.8					5.00	r	6244824.15		3043.11

Name	М.	ID	R	esult. PW	'L		Lw/L	i	Ope	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		PARK46	87.8	87.8	87.8	Lw	87.8					5.00	r	6244823.62	2480842.45	3042.15
POINTSOURCE		PARK47	87.8	87.8	87.8	Lw	87.8					5.00	r	6244824.27	2480880.63	3041.15
POINTSOURCE		PARK48	87.8	87.8	87.8	Lw	87.8					5.00	r	6244626.41	2480806.49	3044.03
POINTSOURCE		PARK49	87.8	87.8	87.8	Lw	87.8					5.00	r	6244627.01	2480841.31	3043.73
POINTSOURCE		PARK50	87.8	87.8	87.8	Lw	87.8					5.00	r	6244626.52	2480878.39	3042.90
POINTSOURCE		PARK51	87.8	87.8	87.8	Lw	87.8					5.00	r	6244560.12	2480805.38	3045.55
POINTSOURCE		PARK52	87.8	87.8	87.8	Lw	87.8					5.00	r	6244560.73	2480841.31	3045.00
POINTSOURCE		PARK53	87.8	87.8	87.8	Lw	87.8					5.00	r	6244561.36	2480878.37	3043.80
POINTSOURCE		PARK54	87.8	87.8	87.8	Lw	87.8					5.00	r	6244494.94	2480804.24	3045.45
POINTSOURCE		PARK55	87.8	87.8	87.8	Lw	87.8					5.00	r	6244495.61	2480843.55	3045.00
POINTSOURCE		PARK56	87.8	87.8	87.8	Lw	87.8					5.00	r	6244496.32	2480885.10	3043.69
POINTSOURCE		PARK57	87.8	87.8	87.8	Lw	87.8					5.00	r	6244428.68	2480805.37	3045.00
POINTSOURCE		PARK58	87.8	87.8	87.8	Lw	87.8					5.00	r	6244429.32	2480842.43	3045.00
POINTSOURCE		PARK59	87.8	87.8	87.8	Lw	87.8					5.00	r	6244197.79	2480814.61	3047.00
POINTSOURCE		PARK60	87.8	87.8	87.8	Lw	87.8					5.00	r	6244228.05	2480770.39	3047.77
POINTSOURCE		PARK61	87.8	87.8	87.8	Lw	87.8					5.00	r	6244278.23	2480769.53	3047.37
POINTSOURCE		PARK62	87.8	87.8	87.8	Lw	87.8					5.00	r	6244129.21	2480645.46	3050.36
POINTSOURCE		PARK63	87.8	87.8	87.8	Lw	87.8					5.00	r	6244127.86	2480699.06	3049.85
POINTSOURCE		TRASH01	89.0	89.0	89.0	Lw	89		150.00	0.00	90.00	5.00	r	6244918.04	2480582.47	3047.99
POINTSOURCE		TRASH02	89.0	89.0	89.0	Lw	89		150.00	0.00	90.00	5.00	r	6244347.92	2480854.91	3045.30
POINTSOURCE		TRASH03	89.0	89.0	89.0	Lw	89		150.00	0.00	90.00	5.00	r	6245169.33	2480657.77	3041.00
POINTSOURCE		TRASH04	89.0	89.0	89.0	Lw	89		150.00	0.00	90.00	5.00	r	6244616.24	2480635.43	3047.00
POINTSOURCE		TUNNEL01	106.0	106.0	106.0	Lw	106		900.00	0.00	0.00	8.00	r	6244216.36	2480845.31	3049.29
POINTSOURCE		TUNNEL02	106.0	106.0	106.0	Lw	106		900.00	0.00	0.00	8.00	r	6244278.67	2480845.09	3049.01
POINTSOURCE		VAC01	86.0	86.0	86.0	Lw	86		900.00	0.00	0.00	3.00	r	6244128.48	2480768.13	3046.92
POINTSOURCE		VAC02	86.0	86.0	86.0	Lw	86		900.00	0.00	0.00	3.00	r	6244128.29	2480757.42	3047.04
POINTSOURCE		VAC03	86.0	86.0	86.0	Lw	86		900.00	0.00	0.00	3.00	r	6244128.14	2480748.12	3047.12
POINTSOURCE		VAC04	86.0	86.0	86.0	Lw	86		900.00	0.00	0.00	3.00	r	6244128.00	2480739.95	3047.19

## Building(s)

Dunun	<u>'8'</u>	<u> </u>									
Name	М.	ID	RB	Residents	Absorption	Height			Coordinat	es	
						Begin		х	У	z	Ground
						(ft)		(ft)	(ft)	(ft)	(ft)
BUILDING		BUILDING00001	х	0		15.00	r	6245068.44	2481508.14	3037.84	3022.83
								6245332.09	2481507.72	3037.84	3016.50
								6245333.10	2481293.52	3037.84	3020.80
								6245311.00	2481294.48	3037.84	3021.71
							F	6245310.60	2481476.08	3037.84	3018.18
								6245098.17	2481476.79	3037.84	3022.74
							F	6245097.40	2481294.63	3037.84	3026.00
								6245068.90	2481295.70	3037.84	3026.15
BUILDING		BUILDING00002	х	0		15.00	r	6245124.44	2481447.24	3038.72	3023.72
							F	6245282.75	2481447.45	3038.72	3020.72
								6245284.22	2481294.36	3038.72	3022.00
							F	6245125.91	2481294.14	3038.72	3025.98
BUILDING		BUILDING00003	х	0		20.00	r	6245080.05	2481232.65	3047.52	3027.52
								6245307.06	2481234.02	3047.52	3022.43
							F	6245307.30	2481077.45	3047.52	3027.42
							F	6245072.19	2481079.13	3047.52	3029.89
							F	6245072.28	2481221.14	3047.52	3027.96
BUILDING		BUILDING00004	х	0		20.00	r	6245270.38	2480994.27	3048.00	3028.00
							F	6245333.26	2480995.53	3048.00	3028.00
							F	6245333.70	2480884.94	3048.00	3031.06
							F	6245267.95	2480886.06	3048.00	3029.39
BUILDING		BUILDING00005	х	0		20.00	r	6245265.05	2480826.34	3052.00	3032.00
								6245328.07	2480825.27	3052.00	3032.04
							F	6245327.88	2480773.88	3052.00	3033.67
								6245265.55	2480775.62	3052.00	3032.64
BUILDING		BUILDING00006	х	0		20.00	r	6245189.23	2480639.87	3056.00	3036.00
								6245287.12	2480634.09	3056.00	3036.00
								6245286.48	2480596.41	3056.00	3036.00
							Γ	6245187.81	2480596.72	3056.00	3037.05
BUILDING		BUILDING00007	х	0		20.00	r	6244970.66	2480681.97	3059.39	3039.39
								6245005.61	2480682.06	3059.39	3038.04
							Γ	6245012.21	2480666.87	3059.39	3038.32
								6245007.70	2480603.22	3059.39	3040.27
								6244971.41	2480605.21	3059.39	3040.81
BUILDING		BUILDING00008	х	0		20.00	r	6244783.65	2480685.84	3062.03	3042.03
								6244817.94	2480687.31	3062.03	3041.19
								6244818.45	2480596.85	3062.03	3042.75
								6244784.21	2480598.12	3062.03	3043.99
BUILDING		BUILDING00009	х	0		20.00	r	6244449.74	2480714.83	3061.61	3041.61
								6244547.65	2480710.42	3061.61	3042.00
								6244547.31	2480650.12	3061.61	3042.00
								6244445.91	2480651.16	3061.61	3042.00
BUILDING		BUILDING00010	х	0		20.00	r	6244468.47	2481050.29	3056.10	3036.10

Name	M.	ID	RB	Residents	Absorption	Height			Coordinat	es	
						Begin		х	У	z	Ground
						(ft)		(ft)	(ft)	(ft)	(ft)
								6244558.91	2481049.43	3056.10	3036.00
								6244557.99	2481115.92	3056.10	3035.63
								6244856.07	2481115.64	3056.10	3035.01
								6244858.47	2481055.30	3056.10	3034.91
								6244883.16	2481056.25	3056.10	3034.59
								6244880.40	2481095.35	3056.10	3034.75
								6244924.23	2481093.92	3056.10	3034.17
								6244922.87	2481054.20	3056.10	3034.06
								6244899.58	2481054.59	3056.10	3034.37
								6244899.83	2480988.81	3056.10	3034.00
								6244857.36	2480990.21	3056.10	3034.00
								6244859.20	2480977.16	3056.10	3034.00
								6244559.02	2480975.42	3056.10	3036.00
								6244557.23	2480991.22	3056.10	3036.00
								6244469.51	2480990.65	3056.10	3036.98
BUILDING		BUILDING00011	х	0		20.00	r	6244946.18	2481094.92	3053.94	3033.94
								6245012.64	2481094.47	3053.94	3031.62
								6245011.89	2481010.20	3053.94	3032.41
								6244968.69	2481008.88	3053.94	3033.07
								6244968.09	2481054.11	3053.94	3033.61
								6244946.86	2481054.47	3053.94	3034.00
BUILDING		BUILDING00012	х	0		20.00	r	6244232.83	2480853.51	3060.89	3040.89
								6244273.98	2480854.29	3060.89	3040.80
								6244273.76	2480833.59	3060.89	3041.30
								6244312.59	2480832.66	3060.89	3040.99
								6244312.46	2480793.55	3060.89	3041.51
								6244225.89	2480793.14	3060.89	3042.10
								6244226.02	2480832.52	3060.89	3041.41
								6244233.00	2480832.13	3060.89	3041.39

APPENDIX 11.1:

CADNAA CONSTRUCTION NOISE MODEL INPUTS

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13078 - Bear Valley Marketplace CadnaA Noise Prediction Model: 13078-02\_Construction.cna Date: 14.07.21 Analyst: B. Lawson

## Calculation Configuration

Configurat	tion
Parameter	Value
General	
Country	(user defined)
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	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	5.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	274.32
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)	
A (manual fr) (222)	
Aircraft (???)	

#### **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	75.3	75.3	82.0	65.0	55.0	0.0				5.00	r	6244681.76	2481878.97	3030.55
RECEIVERS		R2	70.5	70.5	77.2	65.0	55.0	0.0				5.00	r	6245555.59	2481398.17	3023.00
RECEIVERS		R3	73.7	73.7	80.3	65.0	55.0	0.0				5.00	r	6245457.98	2480969.81	3034.23
RECEIVERS		R4	71.7	71.7	78.3	65.0	55.0	0.0				5.00	r	6244336.73	2480362.15	3058.79
RECEIVERS		R5	73.1	73.1	79.7	65.0	55.0	0.0				5.00	r	6243995.47	2481475.93	3045.00
REC_ONSITE		MF1	82.7	82.7	89.4	65.0	55.0	0.0				5.00	r	6244151.63	2481762.27	3038.55
REC_ONSITE		MF2	82.6	82.6	89.3	65.0	55.0	0.0				5.00	r	6245313.46	2481681.52	3022.45
REC_ONSITE		MF3	83.6	83.6	90.2	65.0	55.0	0.0				5.00	r	6245004.89	2481225.09	3033.11
REC_ONSITE		MF4	83.8	83.8	90.5	65.0	55.0	0.0				5.00	r	6244709.87	2481212.13	3039.29
REC_ONSITE		MF5	83.7	83.7	90.3	65.0	55.0	0.0				5.00	r	6244357.10	2481094.22	3041.21
REC_ONSITE		MF6	82.9	82.9	89.6	65.0	55.0	0.0				5.00	r	6244137.69	2480944.07	3045.80

## Area Source(s)

Name	М.	ID	Result. PWL			Result. PWL"			Lw / Li			Operating Time			Height
			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		CONSTRUCTION	130.7	130.7	130.7	79.0	79.0	79.0	Lw"	79					8

Name	ŀ	lei	ght	Coordinates						
	Begin		End	x	у	z	Ground			
	(ft)		(ft)	(ft)	(ft)	(ft)	(ft)			
SITEBOUNDARY	8.00	r		6244107.25	2481830.68	3038.98	3030.98			

Name	Hei	ight	Coordinates						
	Begin	End	x	У	z	Ground			
	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)			
			6245344.20	2481832.89	3027.49	3019.49			
			6245343.36	2480929.23	3037.47	3029.47			
			6245359.31	2480926.05	3037.85	3029.85			
			6245363.17	2480811.02	3041.38	3033.38			
			6245342.80	2480811.37	3041.23	3033.23			
			6245344.56	2480572.69	3049.65	3041.65			
			6245323.77	2480548.31	3049.99	3041.99			
			6245323.57	2480536.67	3050.00	3042.00			
			6245245.01	2480538.01	3050.05	3042.05			
			6245245.24	2480551.10	3049.14	3041.14			
			6245102.59	2480549.16	3050.34	3042.34			
			6245100.97	2480539.01	3050.64	3042.64			
			6245001.94	2480534.87	3051.18	3043.18			
			6245002.19	2480549.42	3050.72	3042.72			
			6244785.33	2480547.29	3052.00	3044.00			
			6244773.74	2480550.40	3052.00	3044.00			
			6244761.02	2480572.44	3052.00	3044.00			
			6244685.37	2480573.73	3052.00	3044.00			
			6244680.84	2480563.62	3052.00	3044.00			
			6244663.11	2480547.92	3052.30	3044.30			
			6244436.09	2480547.42	3052.67	3044.67			
			6244427.46	2480553.39	3052.98	3044.98			
			6244420.46	2480569.52	3052.54	3044.54			
			6244370.99	2480570.36	3053.58	3045.58			
			6244369.42	2480563.11	3054.00	3046.00			
			6244359.06	2480553.10	3054.00	3046.00			
			6244134.88	2480548.19	3055.15	3047.15			
			6244134.73	2480539.46	3055.33	3047.33			
			6244126.00	2480539.61	3055.41	3047.41			
			6244107.31	2480553.02	3055.30	3047.30			
			6244094.61	2480576.52	3055.08	3047.08			
			6244101.94	2480579.31	3054.94	3046.94			
			6244106.55	2480849.89	3052.00	3044.00			
			6244127.18	2480865.55	3051.48	3043.48			
			6244127.88	2480906.28	3050.39	3042.39			
			6244104.60	2480906.68	3050.54	3042.54			