# Rubidoux Warehouse

## NOISE IMPACT ANALYSIS

### CITY OF JURUPA VALLEY

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# LIST OF ABBREVIATED TERMS

| | |
|---|---|
| (1) | Reference |
| ADT | Average Daily Traffic |
| ANSI | American National Standards Institute |
| Calveno | California Vehicle Noise |
| CEQA | California Environmental Quality Act |
| CNEL | Community Noise Equivalent Level |
| dBA | A-weighted decibels |
| EPA | Environmental Protection Agency |
| FHWA | Federal Highway Administration |
| FTA | Federal Transit Administration |
| INCE | Institute of Noise Control Engineering |
| $L_{eq}$ | Equivalent continuous (average) sound level |
| $L_{max}$ | Maximum level measured over the time interval |
| $L_{min}$ | Minimum level measured over the time interval |
| mph | Miles per hour |
| OPR | Office of Planning and Research |
| PPV | Peak particle velocity |
| Project | Rubidoux Warehouse |
| REMEL | Reference Energy Mean Emission Level |
| RMS | Root-mean-square |
| VdB | Vibration Decibels |

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# EXECUTIVE SUMMARY

Urban Crossroads, Inc. has prepared this noise study to determine the potential noise impacts and the necessary noise mitigation measures, if any, for the proposed Rubidoux Warehouse development ("Project"). The Project site is located west of Avalon Street at 26th Street in the City of Jurupa Valley. The Project is proposed to consist of the following uses:

- 1,261,904 square feet of High-Cube Fulfillment Center use (Building 1)
- 37,454 square feet of General Light Industrial use (Building 2)

This study has been prepared to satisfy applicable City of Jurupa Valley standards and thresholds of significance based on guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1)

The results of this Rubidoux Warehouse 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.

**TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS**

| Analysis | Report Section | Significance Findings | |
|---|---|---|---|
| | | Unmitigated | Mitigated |
| Off-Site Traffic Noise | 7 | *Less Than Significant* | - |
| Operational Noise | 9 | *Less Than Significant* | - |
| Operational Vibration | | *Less Than Significant* | - |
| Construction Noise | 10 | *Less Than Significant* | - |
| Construction Vibration | | *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 Rubidoux Warehouse ("Project"). This noise study briefly describes the proposed Project, provides information regarding noise fundamentals, describes the local regulatory setting, provides 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 impacts.

## 1.1 SITE LOCATION

The proposed Rubidoux Warehouse site is located west of Avalon Street at 26th Street in the City of Jurupa Valley, as shown on Exhibit 1-A. The Project site is mostly vacant. Existing land uses near the site consist mostly of nearby industrial land uses with some nearby residential homes located south and east of the Project site. California State Route 60 is located approximately 0.5 miles south of the Project site, and the private Flabob Airport is located roughly 1.5 miles south of the Project site.

## 1.2 PROJECT DESCRIPTION

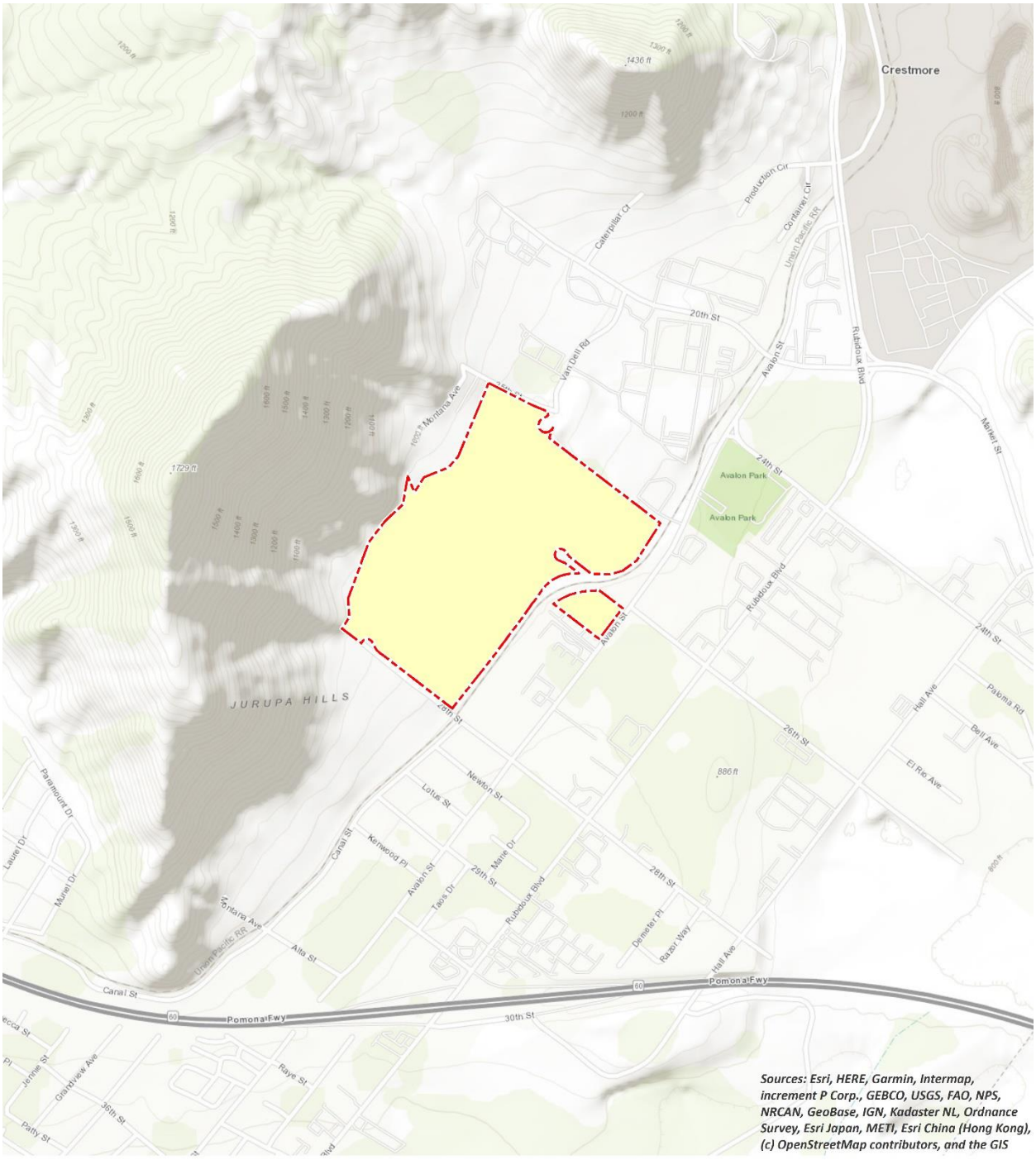
Exhibit 1-B illustrates the preliminary site plan. As indicated on Exhibit 1-B, the Project is proposed to consist of the following uses:

- 1,261,904 square feet of High-Cube Fulfillment Center use (Building 1)
- 37,454 square feet of General Light Industrial use (Building 2)

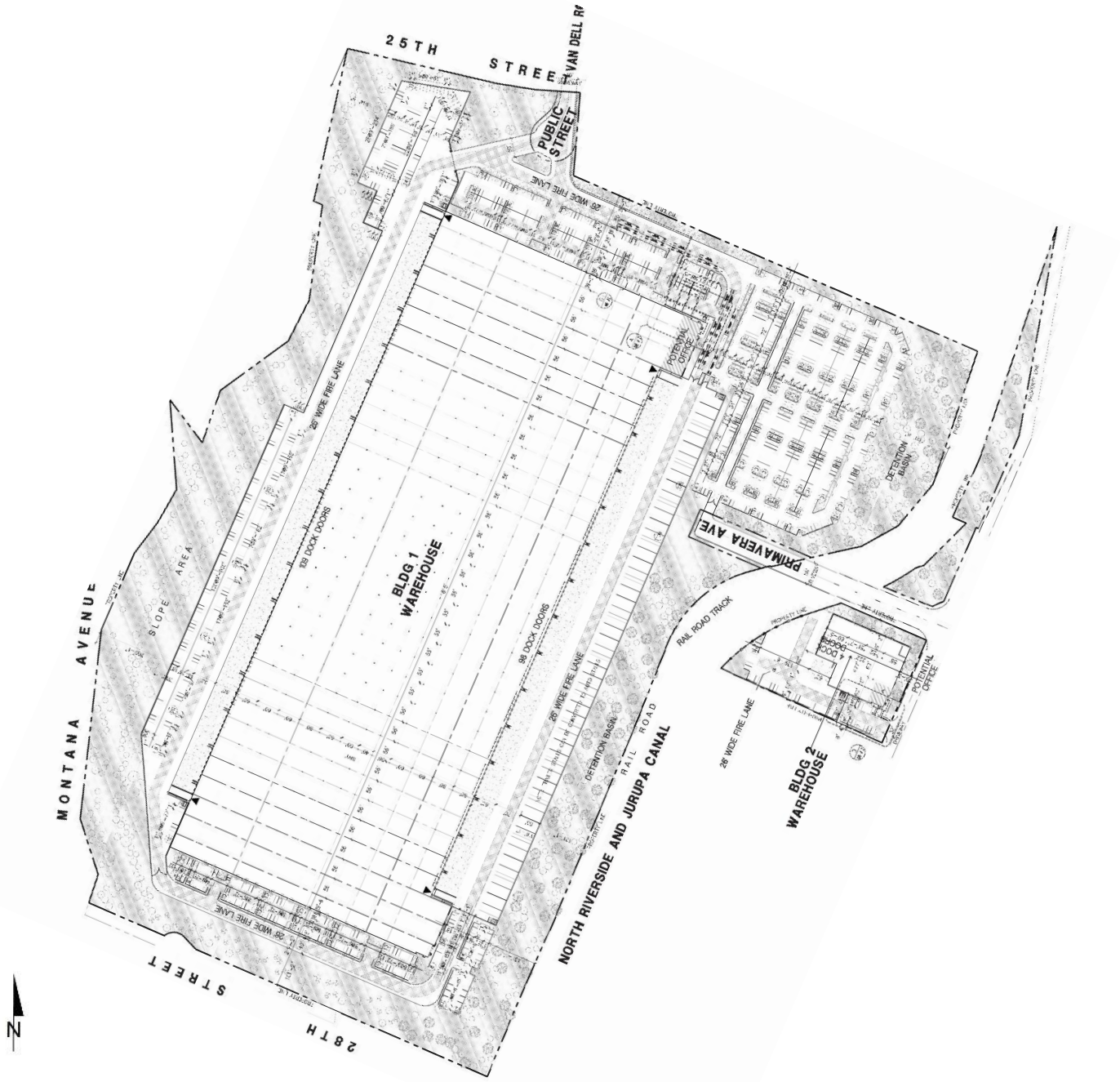
At the time this noise analysis was prepared, the future tenants of the proposed Project were unknown. The on-site Project-related noise sources are expected to include: loading dock activity, entry gate & truck movements, roof-top air conditioning units, parking lot vehicle movements and trash enclosure activity. This noise analysis is intended to describe noise level impacts associated with the expected typical operational activities at the Project site. To present a conservative approach, this report assumes the Project will operate 24-hours daily for seven days per week.

The proposed Project is anticipated to generate a total of 2,874 actual vehicle trip-ends per day with 516 truck trip-ends per day. (2) This noise study relies on the actual Project trips (as opposed to the passenger car equivalents) to accurately account for the effect of individual truck trips on the study area roadway network.

## EXHIBIT 1-A: LOCATION MAP



## EXHIBIT 1-B: SITE PLAN



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# 2 FUNDAMENTALS

Noise has been 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.

**EXHIBIT 2-A: TYPICAL NOISE LEVELS**

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

*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. (3) 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. (4) 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 (typically one hour) and is commonly used to describe the "average" noise levels within the environment.

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. To account for this, the Community Noise Equivalent Level (CNEL), representing a composite 24-hour noise level is utilized. The CNEL is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time-of-day corrections require the addition of 5 decibels to dBA $L_{eq}$ sound levels in the evening from 7:00 p.m. to 10:00 p.m., and the addition of 10 decibels to dBA $L_{eq}$ sound levels at night between 10:00 p.m. and 7:00 a.m. These additions are made to account for the noise sensitive time periods during the evening and night hours when 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 Jurupa Valley 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. (3)

### 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. (5)

### 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. (3)

### 2.3.4 SHIELDING

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

## 2.4 NOISE CONTROL

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

## 2.5 NOISE BARRIER ATTENUATION

Effective noise barriers can reduce noise levels by up to 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. (5)

## 2.6 LAND USE COMPATIBILITY WITH NOISE

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

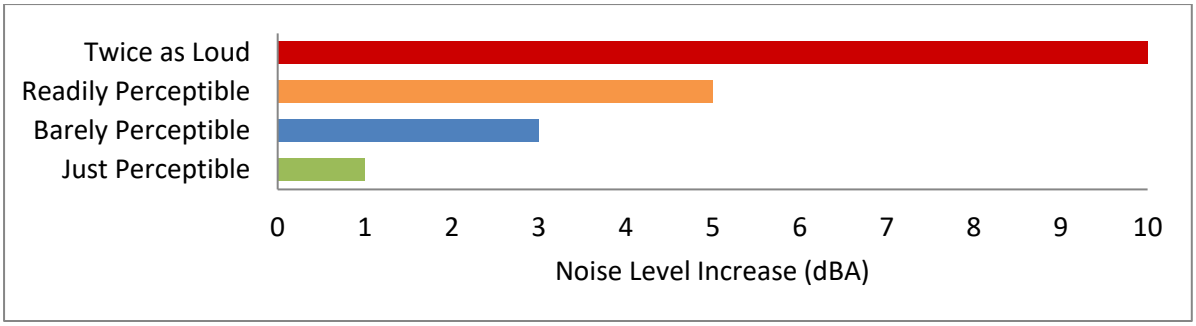
## 2.7 COMMUNITY RESPONSE TO NOISE

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. (7) 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. (7) 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*. (5)

**EXHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION**




## 2.8 EXPOSURE TO HIGH NOISE LEVELS

The Occupational Safety and Health Administration (OSHA) sets legal limits on noise exposure in the workplace. The permissible exposure limit (PEL) for a worker over an eight-hour day is 90 dBA. The OSHA standard uses a 5 dBA exchange rate. This means that when the noise level is increased by 5 dBA, the amount of time a person can be exposed to a certain noise level to receive the same dose is cut in half. The National Institute for Occupational Safety and Health (NIOSH) has recommended that all worker exposures to noise should be controlled below a level equivalent to 85 dBA for eight hours to minimize occupational noise induced hearing loss. NIOSH also recommends a 3 dBA exchange rate so that every increase by 3 dBA doubles the amount of the noise and halves the recommended amount of exposure time. (8)

OSHA has implemented requirements to protect all workers in general industry (e.g. the manufacturing and the service sectors) for employers to implement a Hearing Conservation Program where workers are exposed to a time weighted average noise level of 85 dBA or higher over an eight-hour work shift. Hearing Conservation Programs require employers to measure noise levels, provide free annual hearing exams and free hearing protection, provide training, and conduct evaluations of the adequacy of the hearing protectors in use unless changes to tools, equipment and schedules are made so that they are less noisy and worker exposure to noise is less than the 85 dBA. This noise study does not evaluate the noise exposure of workers within a project or construction site based on CEQA requirements, and instead, evaluates Project-related operational and construction noise levels at the nearby sensitive receiver locations in the Project study area.

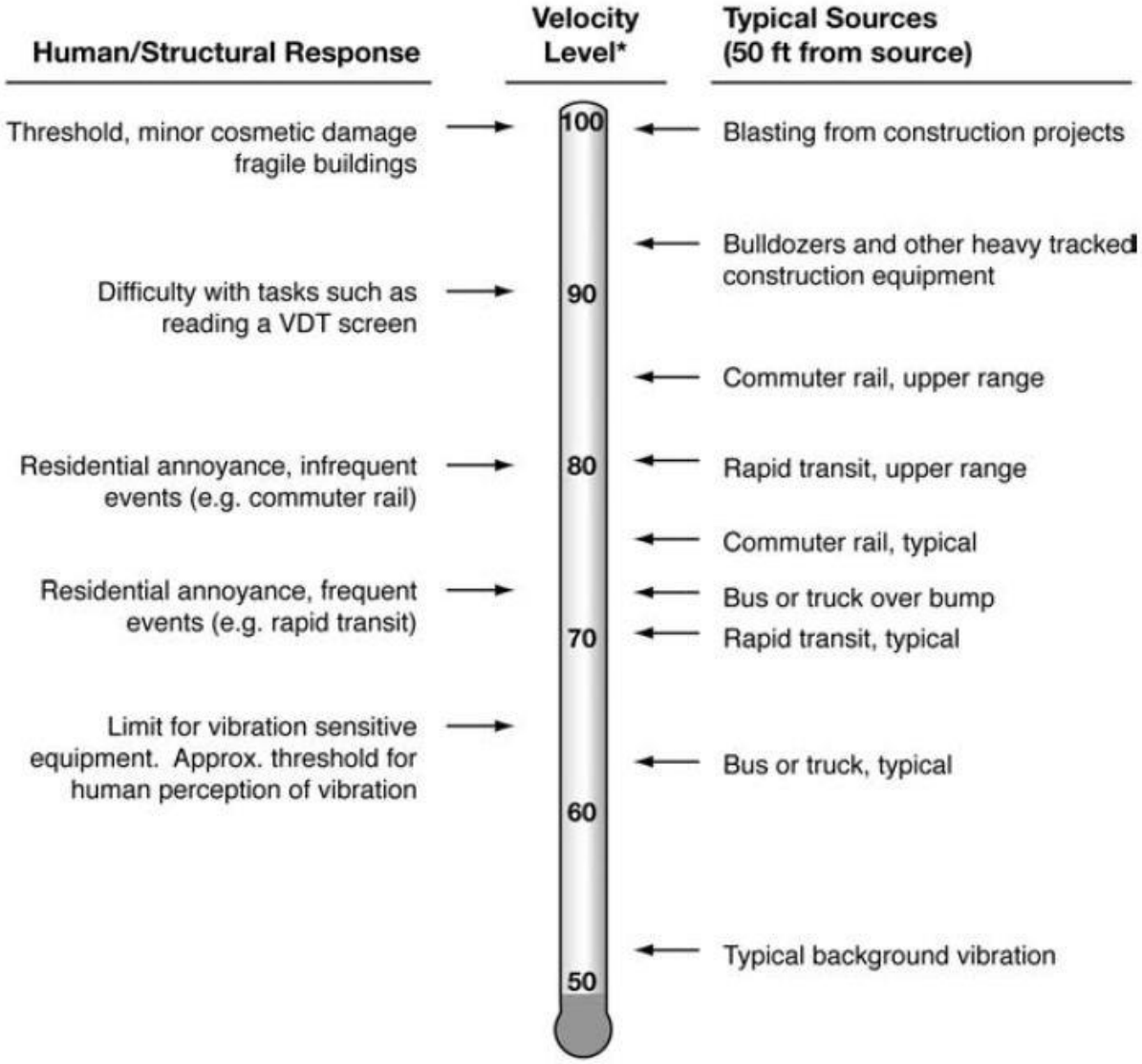
## 2.9 VIBRATION

Per the Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* (9), vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure-borne noise. Sources of ground-borne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency.

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

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

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




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

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

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# 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). (10) The purpose of the Noise Element is to *limit the exposure of the community to excessive noise levels*. In addition, the California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including environmental noise impacts.

## 3.2 CITY OF JURUPA VALLEY GENERAL PLAN

The City of Jurupa Valley adopted the General Plan on September 7, 2017 (11) The Noise Element identifies several polices to minimize the impacts of excessive noise levels throughout the community and establishes noise level compatibility guidelines for all land uses.

### 3.2.1 POLICIES AND PROGRAMS

To protect City of Jurupa Valley residents from excessive noise, the Noise Element contains the following policies and programs related to the Project:

*NE 1.1 Utilize the Land Use/Noise Compatibility Matrix, Figure 7-3, to determine the compatibility of proposed development, including General Plan amendments, specific plan amendments, town center plans, and rezoning's, with existing land uses and/or noise exposure due to transportation sources.*

*NE 1.3 New or Modified Stationary Noise Sources. Noise created by new stationary noise sources, or by existing stationary noise sources that undergo modifications that may increase noise levels, shall be mitigated so as not exceed the noise level standards of Figure 7-3. This policy does not apply to noise levels associated with agricultural operations existing in 2017.*

*NE 1.4 Acoustical Assessment. Require an acoustical assessment for proposed General Plan amendments and rezones that exceed the "Normally Acceptable" thresholds of the Land Use/Noise Compatibility Matrix.*

*NE 1.5 Noise-Sensitive Uses. Consider the following uses noise sensitive and discourage these uses in areas in excess of 65 CNEL: schools, hospitals, assisted living facilities, mental care facilities, residential uses, libraries, passive recreational uses, and places of worship.*

*NE 3.1 Noise Analysis. Require that a noise analysis be conducted by an acoustical specialist for all proposed development projects that have the potential to generate significant noise near a noise-sensitive land use, or on or near land designated for noise-sensitive land uses, and ensure that recommended mitigation measures are implemented.*

*NE 3.5 Construction Noise. Limit commercial construction activities adjacent to or within 200 feet of residential uses to weekdays, between 7:00 a.m. and 6:00 p.m., and limit high-noise-generating construction activities (e.g., grading, demolition, pile driving) near sensitive receptors to weekdays between 9:00 a.m. and 3:00 p.m.*

To ensure noise-sensitive land uses are protected from high levels of noise (NE 1.1), Figure 7-3 of the Noise Element identifies guidelines to evaluate proposed developments based on exterior and interior noise level limits for land uses and requires a noise analysis to determine needed mitigation measures if necessary. The Noise Element requires an acoustical assessment for proposed General Plan amendments and rezones that exceed the "Normally Acceptable" thresholds of the Land Use/Noise Compatibility Matrix (NE 1.4) and identifies residential use as a noise-sensitive land use (NE 1.5) discouraging new development in areas with transportation related levels more than 65 dBA CNEL. To control stationary noise sources from Industrial, commercial, and manufacturing facilities that may affect sensitive land uses, Policy (NE 3.1) requires that a noise analysis be conducted by an acoustical specialist for all proposed development projects. Maximum noise exposure levels from stationary sources for noise-sensitive uses are regulated by the Municipal Code. To prevent high levels of construction noise from impacting noise-sensitive land uses, Policy NE 3.5 limits construction activities within 200 feet of residential uses to weekdays, between 7:00 a.m. and 6:00 p.m., and limit high-noise-generating construction activities (e.g., grading, demolition, pile driving) near sensitive receptors to weekdays between 9:00 a.m. and 3:00 p.m.

### 3.2.2 LAND USE COMPATIBILITY

The noise criteria identified in the City of Jurupa Valley Noise Element (Figure 7-3) are guidelines to evaluate the land use compatibility of transportation related noise. The compatibility criteria, shown on Exhibit 3-A, provides the city with a planning tool to gauge the compatibility of land uses relative to existing and future exterior noise levels. The *Land Use/Noise Compatibility Matrix* describes categories of compatibility and not specific noise standards. The warehouse/industrial use of the Project is considered *normally acceptable* with unmitigated exterior noise levels of less than 75 dBA CNEL based on the *Industrial, Manufacturing, Utilities, Agriculture* land use compatibility criteria shown on Exhibit 3-A.

Residential designated land uses in the Project study area are considered *normally acceptable* with exterior noise levels below 60 dBA CNEL, and *conditionally acceptable* with exterior noise levels of up to 70 dBA CNEL. For *conditionally acceptable* exterior noise levels, of up to 80 dBA CNEL for Project land uses, *new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and the needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice*. (11)

## 3.3 OPERATIONAL NOISE STANDARDS

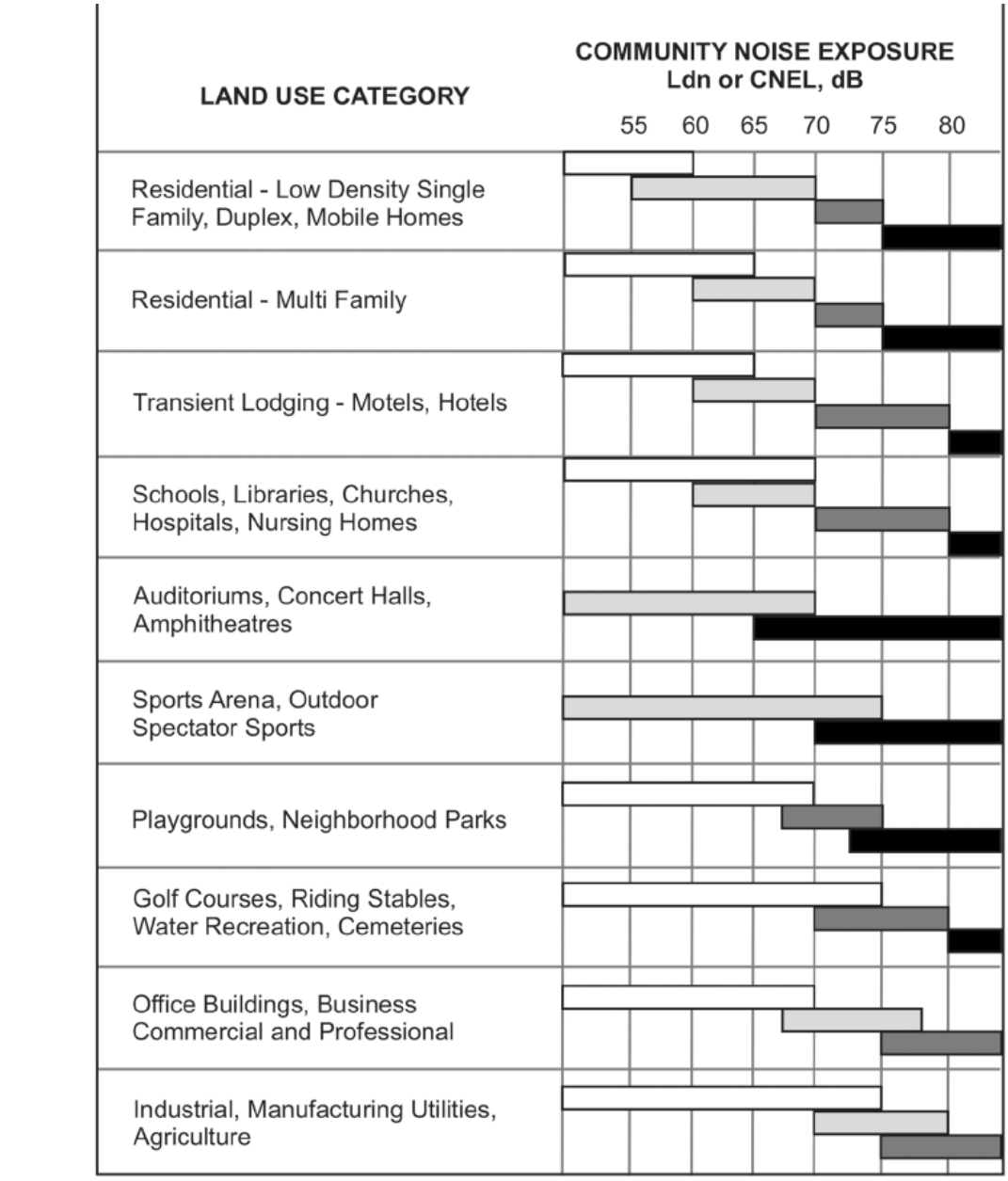
To analyze noise impacts originating from a designated fixed location or private property such as Rubidoux Warehouse Project, stationary-source (operational) noise such as the expected loading dock activity, entry gate & truck movements, roof-top air conditioning units, parking lot vehicle movements and trash enclosure activity are typically evaluated against standards established under a jurisdiction's Municipal Code.

However, Section 11.05.010 of the City of Jurupa Valley Municipal Code (12) indicates that this chapter is not intended to establish city-wide standards regulating noise. Therefore, potential Project related stationary-source (operational) noise impacts are limited to the generation of a substantial temporary or permanent relative increase in the ambient noise levels. The City of Jurupa Valley Municipal Code is included in Appendix 3.1

## 3.4 CONSTRUCTION NOISE STANDARDS

To control noise impacts associated with the construction of the proposed Project, the City of Jurupa Valley Municipal Code has established limits to the hours of operation. Section 11.05.020 indicates that noise associated with any private construction activity located within one-quarter of a mile from an inhabited dwelling is considered exempt between the hours of 6:00 a.m. and 6:00 p.m., during the months of June through September, and 7:00 a.m. and 6:00 p.m., during the months of October through May. (12) In addition, City of Jurupa Valley General Plan Noise Element Policy NE 3.5 limits commercial construction activities adjacent to or within 200 feet of residential uses to weekdays, between 7:00 a.m. and 6:00 p.m., as well as limiting high-noise-generating construction activities (e.g., grading, demolition, pile driving) near sensitive receptors to weekdays between 9:00 a.m. and 3:00 p.m. (11)

**EXHIBIT 3-A: LAND USE/NOISE COMPATIBILITY MATRIX**




**NORMALLY ACCEPTABLE**
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

**CONDITIONALLY ACCEPTABLE**
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air sup systems or air conditioning will normally suffice.

**NORMALLY UNACCEPTABLE**
New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise reduction features included in the design.

**CLEARLY UNACCEPTABLE**
New construction or development should generally not be undertaken.

*Source: Jurupa Valley General Plan, 2017 Figure 7-3.*

Neither the General Plan nor Municipal Code establish numeric maximum acceptable construction source noise levels at potentially affected receivers for CEQA analysis purposes. Therefore, this analysis relies on a numerical daytime construction threshold based on Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual.* 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 $L_{eq}$ as a reasonable threshold for noise sensitive land use. (9 p. 179)

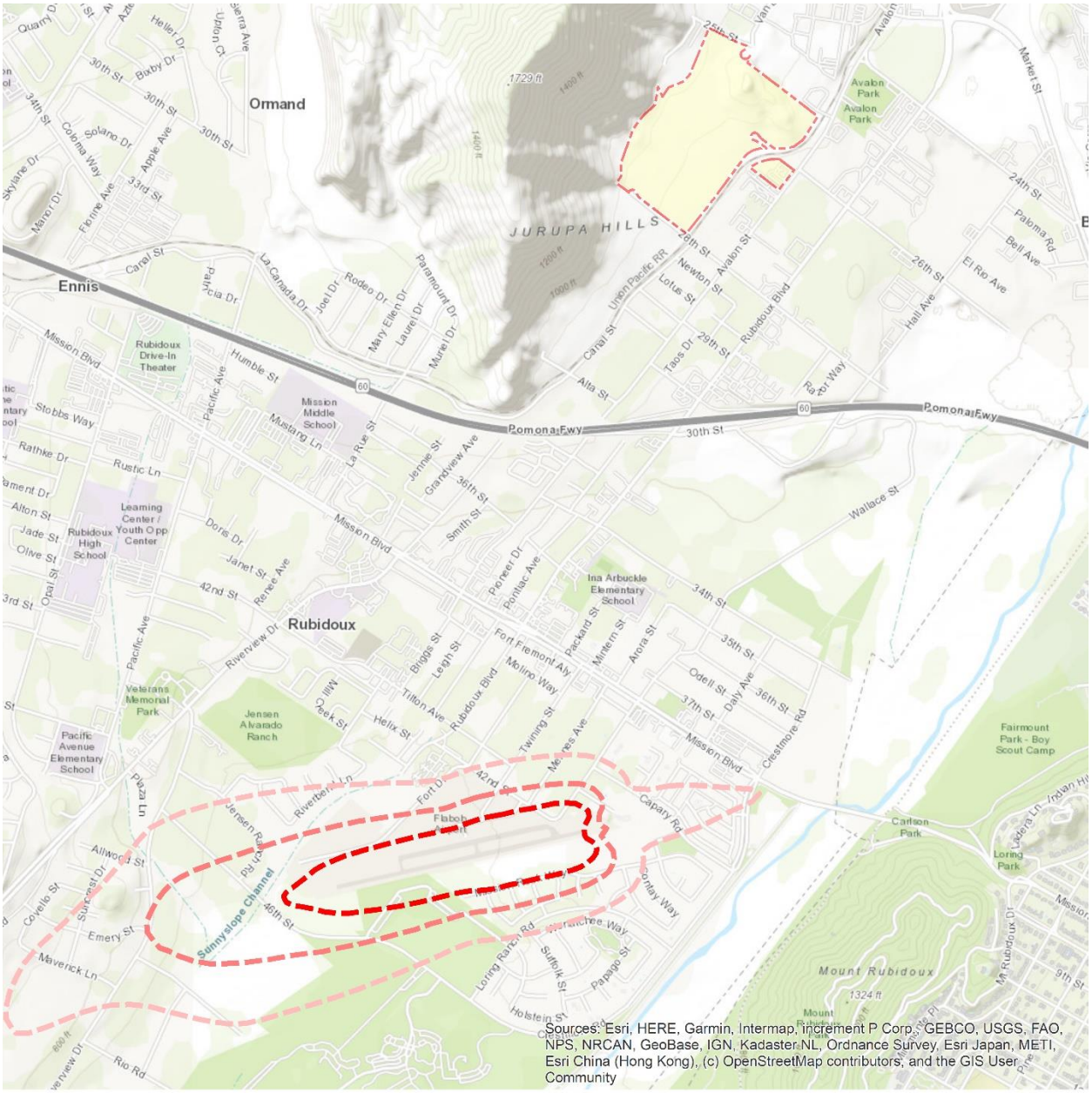
## 3.5 CONSTRUCTION VIBRATION STANDARDS

To analyze vibration impacts originating from the operation and construction of the Rubidoux Warehouse, vibration-generating activities are evaluated against standards identified by the City of Jurupa Valley as a threshold of 0.2 inches per second (in/sec) peak-particle-velocity (PPV) during either long-term operation or construction of the Project. (13) This analysis focuses on the potential ground-borne vibration associated with vehicular traffic and construction activities. Ground-borne vibration levels from automobile traffic are generally overshadowed by vibration generated by heavy trucks that roll over the same uneven roadway surfaces. However, due to the rapid drop-off rate of ground-borne vibration and the short duration of the associated events, vehicular traffic-induced ground-borne vibration is rarely perceptible beyond the roadway right-of-way, and rarely results in vibration levels that cause damage to buildings in the vicinity.

## 3.6 FLABOB AIRPORT LAND USE COMPATIBILITY

The Flabob Airport is located approximately 1.5 miles south of the Project site. The *Riverside County Airport Land Use Compatibility Plan Policy Document* includes policies for determining the land use compatibility of the Project. The Flabob Airport Compatibility, Map FL-1, indicates that the Project site is located outside the Airport Influence Area Boundaries. Therefore, airport noise level impacts are considered *less than significant.*

## EXHIBIT 3-B: FLABOB FUTURE AIRPORT NOISE CONTOURS




**LEGEND:**

Site Boundary | 65 dBA CNEL | 60 dBA CNEL | 55 dBA CNEL

*Source: Riverside County Airport Land Use Compatibility Plan, W3-5*

# 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. (10) For the purposes of this report, impacts would be potentially significant if the Project results in or causes:

- (Threshold 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?
- (Threshold B) Generation of excessive ground-borne vibration or ground-borne noise levels.
- (Threshold 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 INCREASE (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. According to the City of Jurupa Valley, a noticeable increase of 3 dBA or more than City standards is considered a significant impact. (13) The City of Jurupa Valley noise related CEQA thresholds guidance is provided in Appendix 4.1.

## 4.2 VIBRATION (THRESHOLD B)

As described in Section 3.5, the vibration impacts originating from the construction of the Rubidoux Warehouse, vibration-generating activities are appropriately evaluated the thresholds of significance identified by the City of Jurupa Valley. The City of Jurupa Valley maintains a 0.2 inches per second (in/sec) peak-particle-velocity (PPV) vibration threshold during Project construction.

## 4.3 CEQA GUIDELINES NOT FURTHER ANALYZED (THRESHOLD C)

As previously indicated in Section 3.6, the noise contour boundaries of Flabob Airport are presented on Exhibit 3-B of this report and show that the Project site is located outside the Airport Influence Area Boundaries. Therefore, airport noise level impacts are considered *less than significant,* and no further noise analysis is provided under Guideline 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.

**TABLE 4-1: SIGNIFICANCE CRITERIA SUMMARY**

| Analysis | Receiving Land Use | Condition(s) | Significance Criteria | |
|---|---|---|---|---|
| | | | Daytime | Nighttime |
| Off-Site | Noise-Sensitive | If ambient is < 65 dBA CNEL[1] | Project plus ambient > 65 dBA CNEL and a ≥ 3 dBA CNEL Project increase[2] | |
| | Non-Noise-Sensitive | If ambient is < 70 dBA CNEL[1] | Project plus ambient > 70 dBA CNEL and a ≥ 3 dBA CNEL Project increase[2] | |
| Operational | Noise-Sensitive | Exterior Noise Level Standards[2] | 65 dBA $L_{eq}$ | 45 dBA $L_{eq}$ |
| | | If ambient is > 65 dBA $L_{eq}$[1] | ≥ 3 dBA $L_{eq}$ Project increase[2] | |
| | | Vibration Level Threshold[2] | 0.2 in/sec PPV | |
| Construction | Noise-Sensitive | Limit typical construction activities to weekdays between 7:00 a.m. and 6:00 p.m. Limit grading, demolition, pile driving to weekdays between 9:00 a.m. and 3:00 p.m.[3] | | |
| | | Noise Level Threshold[4] | 80 dBA $L_{eq}$ | 70 dBA $L_{eq}$ |
| | | Vibration Level Threshold[2] | 0.2 in/sec PPV | |

[1] City of Jurupa Valley General Plan Noise Element Policy NE 1.5 and Figure 7-3 *normally acceptable* noise exposure.
[2] City of Jurupa Valley noise related CEQA thresholds guidance for noise sensitive receivers (Appendix 4.1).
[3] City of Jurupa Valley Municipal Code, Section 11.05.020.(9).
[4] Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual.
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.; "PPV" = Peak Particle Velocity

# 5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, 24-hour noise level measurements were taken at six 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, February 12th, 2020. 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 daytime and nighttime hourly noise levels and calculate the 24-hour CNEL. The long-term noise readings were recorded using Piccolo Type 2 integrating sound level meter and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (14)

## 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*. (3) Further, FTA guidance states, t*hat 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*. (9)

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. (9) 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 average or equivalent 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. Appendix 5.2 provides a summary of the existing hourly ambient noise levels described below:

- Location L1 represents the noise levels north of the Project site on 25th Street near existing single-family residential home at 6041 25th Street. The noise levels at this location consist primarily of traffic noise from 25th Street and activity from R&S Madrigal Grading Construction. The noise level measurements collected show an overall 24-hour exterior noise level of 74.8 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 68.2 dBA $L_{eq}$ with an average nighttime noise level of 68.3 dBA $L_{eq}$.
- Location L2 represents the noise levels Located east of the Project site on Avalon Street near Avalon Park. Noise levels at this location account for traffic on Avalon Street as well as activity from Avalon Park. The noise level measurements collected show an overall 24-hour exterior noise level of 67.4 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 62.7 dBA $L_{eq}$ with an average nighttime noise level of 60.5 dBA $L_{eq}$.
- Location L3 represents the noise levels east of the Project site near existing single-family home at 2562 Avalon Street. The 24-hour CNEL indicates that the overall exterior noise level is 70.1 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 65.5 dBA $L_{eq}$ with an average nighttime noise level of 63.2 dBA $L_{eq}$. Traffic from Avalon Street and activity from Sierra Pacific Electrical represent the primary source of noise at this location.
- Location L4 represents the noise levels southeast of the Project site on 26th Street near existing single-family homes at 5638 26th Street. The noise level measurements collected show an overall 24-hour exterior noise level of 63.1 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 57.0 dBA $L_{eq}$ with an average nighttime noise level of 56.4 dBA $L_{eq}$. The noise levels at this location consist primarily of traffic noise from Avalon Street.
- Location L5 represents the noise levels south of the Project site on 28th Street near existing single-family homes at 5769 28th Street. The 24-hour CNEL indicates that the overall exterior noise level is 66.3dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 62.3 dBA $L_{eq}$ with an average nighttime noise level of 58.8 dBA $L_{eq}$. Traffic on 28th Street represents the primary source of noise at this location.
- Location L6 represents the noise levels near the southern boundary of the Project site on the intersection of Canal Street and 28th Street. The 24-hour CNEL indicates that the overall exterior noise level is 64.6dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 56.1 dBA $L_{eq}$ with an average nighttime noise level of 58.3 dBA $L_{eq}$. Traffic on 28th Street and Canal Street represents the primary source of noise at this location.

Table 5-1 provides the (energy average) noise levels used to describe the daytime and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. Appendix 5.2 provides summary worksheets of the noise levels for each hour as well as the minimum, maximum, $L_1$, $L_2$, $L_5$, $L_8$, $L_{25}$, $L_{50}$, $L_{90}$, $L_{95}$, and $L_{99}$ percentile noise levels observed during the daytime and nighttime periods.

The background ambient noise levels in the Project study area are dominated by the transportation-related noise associated with surface streets as well as activity from surrounding industrial uses. The 24-hour existing noise level measurement results are shown on Table 5-1.

**TABLE 5-1: 24-HOUR AMBIENT NOISE LEVEL MEASUREMENTS**

| Location[1] | Description | Energy Average Noise Level (dBA $L_{eq}$)[2] | | CNEL |
|---|---|---|---|---|
| | | Daytime | Nighttime | |
| L1 | Located north of the Project site on 25th Street near existing single-family residential home at 6041 25th Street. | 68.2 | 68.3 | 74.8 |
| L2 | Located east of the Project site on Avalon Street near Avalon Park. | 62.7 | 60.5 | 67.4 |
| L3 | Located east of the Project site near existing single-family home at 2562 Avalon Street. | 65.5 | 63.2 | 70.1 |
| L4 | Located southeast of the Project site on 26th Street near existing single-family homes at 5638 26th Street. | 57.0 | 56.4 | 63.1 |
| L5 | Located south of the Project site on 28th Street near existing single-family homes at 5769 28th Street. | 62.3 | 58.8 | 66.3 |
| L6 | Located near the southern boundary of the Project site on the intersection of Canal Street and 28th Street. | 56.1 | 58.3 | 64.6 |

[1] See Exhibit 5-A for the noise level measurement locations.
[2] Energy (logarithmic) average levels. The long-term 24-hour measurement worksheets are included in Appendix 5.2.
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

## EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS

# 6 METHODS AND PROCEDURES

The following section outlines the methods and procedures used to model and analyze the future traffic noise environment. Consistent with the City of Jurupa Valley General Plan *Land Use/Noise Compatibility Matrix*, 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. (15) 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. (16) 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. (17)

## 6.2 OFF-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 6-1 presents the roadway parameters used to assess the Project's off-site dBA CNEL transportation noise impacts. Table 6-1 identifies the 24 study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per the City of Jurupa Valley General Plan Circulation Element, and the posted vehicle speeds. The ADT volumes used in this study area presented on Table 6-2 are based on the *Rubidoux Warehouse Traffic Impact Analysis*, prepared by Urban Crossroads, Inc. for the following traffic scenarios under both Without and With Project conditions, for the proposed Project: Existing 2020, Existing plus Ambient Growth (EA) 2023, EA plus Cumulative (EAC) 2023, and Horizon Year (HY) 2040. (2)

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

| ID | Roadway | Segment | Receiving Land Use[1] | Distance from Centerline to Receiving Land Use (Feet)[2] | Vehicle Speed (mph)[3] |
|---|---|---|---|---|---|
| 1 | Cedar Ave. | n/o I-10 WB Ramps | Sensitive | 52' | 40 |
| 2 | Cedar Ave. | s/o I-10 EB Ramps | Sensitive | 52' | 45 |
| 3 | Cedar Ave. | n/o Santa Ana Av. | Sensitive | 52' | 45 |
| 4 | Cedar Ave. | s/o Santa Ana Av. | Sensitive | 52' | 45 |
| 5 | Cedar Ave. | s/o Jurupa Av. | Sensitive | 52' | 45 |
| 6 | Cedar Ave. | s/o 7th Street | Sensitive | 52' | 50 |
| 7 | Rubidoux Bl. | s/o El Rivino Rd | Sensitive | 59' | 50 |
| 8 | Rubidoux Bl. | s/o Market St. | Non-Sensitive | 59' | 50 |
| 9 | Rubidoux Bl. | s/o 24th St. | Non-Sensitive | 59' | 50 |
| 10 | Rubidoux Bl. | s/o 26th St. | Non-Sensitive | 59' | 50 |
| 11 | Rubidoux Bl. | s/o 34th St. | Sensitive | 59' | 50 |
| 12 | Market St. | n/o Rivera St. | Sensitive | 59' | 45 |
| 13 | Market St. | s/o SR-60 EB Ramps | Sensitive | 50' | 45 |
| 14 | Riverside Av. | n/o Agua Mansa Rd. | Non-Sensitive | 52' | 55 |
| 15 | Agua Mansa Rd. | n/o Market St. | Non-Sensitive | 50' | 45 |
| 16 | Slover Av. | w/o Cedar Ave. | Sensitive | 52' | 50 |
| 17 | Slover Av. | e/o Cedar Ave. | Sensitive | 52' | 50 |
| 18 | Santa Ana Ave. | w/o Cedar Ave. | Sensitive | 44' | 40 |
| 19 | Santa Ana Ave. | e/o Cedar Ave. | Sensitive | 44' | 40 |
| 20 | Jurupa Ave. | w/o Cedar Ave. | Sensitive | 52' | 40 |
| 21 | Jurupa Ave. | e/o Cedar Ave. | Sensitive | 52' | 40 |
| 22 | 7th St. | w/o Cedar Ave. | Sensitive | 25' | 45 |
| 23 | Market St. | e/o Rubidoux Bl. | Non-Sensitive | 59' | 45 |
| 24 | Agua Mansa Rd. | e/o Riverside Ave. | Sensitive | 52' | 45 |

[1] Noise sensitive uses limited to noise sensitive residential land uses.
[2] Distance to receiving land use is based upon the right-of-way distances.
[3] Rubidoux Warehouse Traffic Impact Analysis.

## TABLE 6-2: AVERAGE DAILY TRAFFIC VOLUMES

| ID | Roadway | Segment | Average Daily Traffic Volumes[1] | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Existing | | Existing + Ambient (EA) | | Existing + Ambient + Cumulative (EAC) | | Horizon Year 2040 | |
| | | | Without Project | Proposed Project | Without Project | Proposed Project | Without Project | Proposed Project | Without Project | Proposed Project |
| 1 | Cedar Ave. | n/o I-10 WB Ramps | 51,709 | 51,803 | 54,874 | 54,968 | 60,400 | 60,494 | 65,849 | 65,944 |
| 2 | Cedar Ave. | s/o I-10 EB Ramps | 35,289 | 36,192 | 37,449 | 38,352 | 53,300 | 54,203 | 57,019 | 57,923 |
| 3 | Cedar Ave. | n/o Santa Ana Av. | 25,338 | 26,360 | 26,889 | 27,910 | 41,065 | 42,086 | 43,736 | 44,757 |
| 4 | Cedar Ave. | s/o Santa Ana Av. | 24,556 | 25,648 | 26,060 | 27,151 | 40,616 | 41,707 | 43,204 | 44,296 |
| 5 | Cedar Ave. | s/o Jurupa Av. | 24,345 | 25,508 | 25,835 | 26,998 | 36,257 | 37,420 | 38,823 | 39,986 |
| 6 | Cedar Ave. | s/o 7th Street | 25,512 | 26,698 | 27,073 | 28,259 | 36,386 | 37,572 | 39,075 | 40,261 |
| 7 | Rubidoux Bl. | s/o El Rivino Rd | 25,038 | 26,224 | 26,570 | 27,756 | 34,894 | 36,080 | 37,533 | 38,719 |
| 8 | Rubidoux Bl. | s/o Market St. | 24,068 | 25,125 | 25,541 | 26,598 | 36,129 | 37,186 | 38,666 | 39,723 |
| 9 | Rubidoux Bl. | s/o 24th St. | 24,265 | 25,322 | 25,750 | 26,807 | 36,019 | 37,076 | 38,576 | 39,634 |
| 10 | Rubidoux Bl. | s/o 26th St. | 24,163 | 24,937 | 25,642 | 26,416 | 35,948 | 36,722 | 38,494 | 39,269 |
| 11 | Rubidoux Bl. | s/o 34th St. | 24,848 | 24,942 | 26,369 | 26,463 | 31,223 | 31,317 | 33,842 | 33,936 |
| 12 | Market St. | n/o Rivera St. | 24,065 | 24,690 | 25,538 | 26,163 | 32,894 | 33,519 | 35,430 | 36,056 |
| 13 | Market St. | s/o SR-60 EB Ramps | 33,051 | 33,145 | 35,074 | 35,168 | 37,627 | 37,721 | 41,110 | 41,204 |
| 14 | Riverside Av. | n/o Agua Mansa Rd. | 27,794 | 27,938 | 29,495 | 29,639 | 35,597 | 35,741 | 53,994 | 54,138 |
| 15 | Agua Mansa Rd. | n/o Market St. | 17,783 | 18,071 | 18,871 | 19,159 | 25,426 | 25,714 | 27,301 | 27,589 |
| 16 | Slover Av. | w/o Cedar Ave. | 15,100 | 15,171 | 16,024 | 16,095 | 22,117 | 22,188 | 23,709 | 23,779 |
| 17 | Slover Av. | e/o Cedar Ave. | 11,432 | 11,480 | 12,132 | 12,179 | 16,517 | 16,564 | 17,722 | 17,769 |
| 18 | Santa Ana Ave. | w/o Cedar Ave. | 8,647 | 8,694 | 9,177 | 9,224 | 10,175 | 10,222 | 11,086 | 11,133 |
| 19 | Santa Ana Ave. | e/o Cedar Ave. | 6,307 | 6,330 | 6,693 | 6,716 | 8,253 | 8,276 | 8,918 | 8,941 |
| 20 | Jurupa Ave. | w/o Cedar Ave. | 5,716 | 5,740 | 6,066 | 6,090 | 17,722 | 17,746 | 18,325 | 18,348 |
| 21 | Jurupa Ave. | e/o Cedar Ave. | 5,986 | 6,033 | 6,352 | 6,400 | 9,428 | 9,476 | 10,059 | 10,106 |
| 22 | 7th St. | w/o Cedar Ave. | 6,781 | 6,804 | 7,196 | 7,219 | 10,298 | 10,321 | 11,012 | 11,036 |
| 23 | Market St. | e/o Rubidoux Bl. | 26,649 | 27,327 | 28,280 | 28,958 | 36,262 | 36,940 | 39,071 | 39,748 |
| 24 | Agua Mansa Rd. | e/o Riverside Ave. | 13,350 | 13,494 | 14,167 | 14,311 | 36,262 | 36,406 | 17,862 | 18,006 |

[1] Rubidoux Warehouse Traffic Impact Analysis.

To quantify the off-site noise levels, the Project related truck trips were added to the heavy truck category in the FHWA noise prediction model. The addition of the Project related truck trips increases the percentage of heavy trucks in the vehicle mix. This approach recognizes that the FHWA noise prediction model is significantly influenced by the number of heavy trucks in the vehicle mix.

Table 6-3 provides the time of day (daytime, evening, and nighttime) vehicle splits. The daily Project truck trip-ends were assigned to the individual off-site study area roadway segments based on the Project truck trip distribution percentages documented in the *Traffic Impact Analysis*. Using the Project truck trips in combination with the Project trip distribution, Urban Crossroads, Inc. calculated the number of additional Project truck trips and vehicle mix percentages for each of the study area roadway segments. Table 6-4 shows the traffic flow by vehicle type (vehicle mix) used for all without Project traffic scenarios, and tables 6-5 to 6-12 show the vehicle mixes used for the with Project traffic scenarios for both the proposed Project.

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

**TABLE 6-3: TIME OF DAY VEHICLE SPLITS**

| Vehicle Type | Time of Day Splits[1] | | | Total of Time of Day Splits |
|---|---|---|---|---|
| | Daytime | Evening | Nighttime | |
| Autos | 71.28% | 9.81% | 18.91% | 100.00% |
| Medium Trucks | 77.26% | 6.50% | 16.25% | 100.00% |
| Heavy Trucks | 68.16% | 9.02% | 22.82% | 100.00% |

Based on an existing 24-hour vehicle count taken on Rubidoux Boulevard north of 30th Street (05/23/2019).
"Daytime" = 7:00 a.m. to 7:00 p.m.; "Evening" = 7:00 p.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

**TABLE 6-4: WITHOUT PROJECT VEHICLE MIX**

| Classification | Total % Traffic Flow | | | Total |
|---|---|---|---|---|
| | Autos | Medium Trucks | Heavy Trucks | |
| All Segments | 75.75% | 10.13% | 14.13% | 100.00% |

Based on an existing 24-hour vehicle count taken on Rubidoux Boulevard north of 30th Street (05/23/2019).

**TABLE 6-5: EXISTING 2020 WITH PROJECT VEHICLE MIX**

| ID | Roadway | Segment | With Project[1] | | | |
|---|---|---|---|---|---|---|
| | | | Autos | Medium Trucks | Heavy Trucks | Total[2] |
| 1 | Cedar Ave. | n/o I-10 WB Ramps | 75.79% | 10.11% | 14.10% | 100.00% |
| 2 | Cedar Ave. | s/o I-10 EB Ramps | 76.14% | 9.97% | 13.90% | 100.00% |
| 3 | Cedar Ave. | n/o Santa Ana Av. | 76.39% | 9.86% | 13.75% | 100.00% |
| 4 | Cedar Ave. | s/o Santa Ana Av. | 76.48% | 9.83% | 13.70% | 100.00% |
| 5 | Cedar Ave. | s/o Jurupa Av. | 76.55% | 9.80% | 13.66% | 100.00% |
| 6 | Cedar Ave. | s/o 7th Street | 76.53% | 9.80% | 13.67% | 100.00% |
| 7 | Rubidoux Bl. | s/o El Rivino Rd | 76.55% | 9.80% | 13.66% | 100.00% |
| 8 | Rubidoux Bl. | s/o Market St. | 75.84% | 10.09% | 14.06% | 100.00% |
| 9 | Rubidoux Bl. | s/o 24th St. | 75.84% | 10.09% | 14.06% | 100.00% |
| 10 | Rubidoux Bl. | s/o 26th St. | 75.57% | 10.21% | 14.22% | 100.00% |
| 11 | Rubidoux Bl. | s/o 34th St. | 75.84% | 10.09% | 14.07% | 100.00% |
| 12 | Market St. | n/o Rivera St. | 75.74% | 10.13% | 14.13% | 100.00% |
| 13 | Market St. | s/o SR-60 EB Ramps | 75.82% | 10.10% | 14.08% | 100.00% |
| 14 | Riverside Av. | n/o Agua Mansa Rd. | 75.78% | 10.12% | 14.11% | 100.00% |
| 15 | Agua Mansa Rd. | n/o Market St. | 75.85% | 10.09% | 14.07% | 100.00% |
| 16 | Slover Av. | w/o Cedar Ave. | 75.86% | 10.08% | 14.06% | 100.00% |
| 17 | Slover Av. | e/o Cedar Ave. | 75.85% | 10.09% | 14.07% | 100.00% |
| 18 | Santa Ana Ave. | w/o Cedar Ave. | 75.88% | 10.07% | 14.05% | 100.00% |
| 19 | Santa Ana Ave. | e/o Cedar Ave. | 75.84% | 10.09% | 14.07% | 100.00% |
| 20 | Jurupa Ave. | w/o Cedar Ave. | 75.85% | 10.09% | 14.07% | 100.00% |
| 21 | Jurupa Ave. | e/o Cedar Ave. | 75.94% | 10.05% | 14.01% | 100.00% |
| 22 | 7th St. | w/o Cedar Ave. | 75.83% | 10.09% | 14.08% | 100.00% |
| 23 | Market St. | e/o Rubidoux Bl. | 75.59% | 10.20% | 14.21% | 100.00% |
| 24 | Agua Mansa Rd. | e/o Riverside Ave. | 75.81% | 10.10% | 14.09% | 100.00% |

[1] Rubidoux Warehouse Traffic Impact Analysis.
[2] Total of vehicle mix percentage values rounded to the nearest one-hundredth.

**TABLE 6-6: EA 2023 WITH PROJECT VEHICLE MIX**

| ID | Roadway | Segment | With Project[1] | | | |
|---|---|---|---|---|---|---|
| | | | Autos | Medium Trucks | Heavy Trucks | Total[2] |
| 1 | Cedar Ave. | n/o I-10 WB Ramps | 75.79% | 10.11% | 14.10% | 100.00% |
| 2 | Cedar Ave. | s/o I-10 EB Ramps | 76.11% | 9.98% | 13.91% | 100.00% |
| 3 | Cedar Ave. | n/o Santa Ana Av. | 76.35% | 9.88% | 13.77% | 100.00% |
| 4 | Cedar Ave. | s/o Santa Ana Av. | 76.44% | 9.84% | 13.72% | 100.00% |
| 5 | Cedar Ave. | s/o Jurupa Av. | 76.50% | 9.81% | 13.68% | 100.00% |
| 6 | Cedar Ave. | s/o 7th Street | 76.49% | 9.82% | 13.69% | 100.00% |
| 7 | Rubidoux Bl. | s/o El Rivino Rd | 76.50% | 9.81% | 13.68% | 100.00% |
| 8 | Rubidoux Bl. | s/o Market St. | 75.84% | 10.09% | 14.07% | 100.00% |
| 9 | Rubidoux Bl. | s/o 24th St. | 75.84% | 10.09% | 14.07% | 100.00% |
| 10 | Rubidoux Bl. | s/o 26th St. | 75.58% | 10.20% | 14.22% | 100.00% |
| 11 | Rubidoux Bl. | s/o 34th St. | 75.83% | 10.09% | 14.07% | 100.00% |
| 12 | Market St. | n/o Rivera St. | 75.74% | 10.13% | 14.13% | 100.00% |
| 13 | Market St. | s/o SR-60 EB Ramps | 75.81% | 10.10% | 14.09% | 100.00% |
| 14 | Riverside Av. | n/o Agua Mansa Rd. | 75.78% | 10.12% | 14.11% | 100.00% |
| 15 | Agua Mansa Rd. | n/o Market St. | 75.84% | 10.09% | 14.07% | 100.00% |
| 16 | Slover Av. | w/o Cedar Ave. | 75.85% | 10.08% | 14.06% | 100.00% |
| 17 | Slover Av. | e/o Cedar Ave. | 75.84% | 10.09% | 14.07% | 100.00% |
| 18 | Santa Ana Ave. | w/o Cedar Ave. | 75.87% | 10.08% | 14.05% | 100.00% |
| 19 | Santa Ana Ave. | e/o Cedar Ave. | 75.83% | 10.09% | 14.08% | 100.00% |
| 20 | Jurupa Ave. | w/o Cedar Ave. | 75.84% | 10.09% | 14.07% | 100.00% |
| 21 | Jurupa Ave. | e/o Cedar Ave. | 75.93% | 10.05% | 14.02% | 100.00% |
| 22 | 7th St. | w/o Cedar Ave. | 75.83% | 10.09% | 14.08% | 100.00% |
| 23 | Market St. | e/o Rubidoux Bl. | 75.60% | 10.19% | 14.21% | 100.00% |
| 24 | Agua Mansa Rd. | e/o Riverside Ave. | 75.81% | 10.10% | 14.09% | 100.00% |

[1] Rubidoux Warehouse Traffic Impact Analysis.
[2] Total of vehicle mix percentage values rounded to the nearest one-hundredth.

**TABLE 6-7: EAC 2023 WITH PROJECT VEHICLE MIX**

| ID | Roadway | Segment | With Project[1] | | | |
|---|---|---|---|---|---|---|
| | | | Autos | Medium Trucks | Heavy Trucks | Total[2] |
| 1 | Cedar Ave. | n/o I-10 WB Ramps | 75.78% | 10.11% | 14.10% | 100.00% |
| 2 | Cedar Ave. | s/o I-10 EB Ramps | 76.01% | 10.02% | 13.97% | 100.00% |
| 3 | Cedar Ave. | n/o Santa Ana Av. | 76.15% | 9.96% | 13.89% | 100.00% |
| 4 | Cedar Ave. | s/o Santa Ana Av. | 76.19% | 9.94% | 13.86% | 100.00% |
| 5 | Cedar Ave. | s/o Jurupa Av. | 76.29% | 9.90% | 13.81% | 100.00% |
| 6 | Cedar Ave. | s/o 7th Street | 76.31% | 9.90% | 13.80% | 100.00% |
| 7 | Rubidoux Bl. | s/o El Rivino Rd | 76.33% | 9.89% | 13.79% | 100.00% |
| 8 | Rubidoux Bl. | s/o Market St. | 75.81% | 10.10% | 14.08% | 100.00% |
| 9 | Rubidoux Bl. | s/o 24th St. | 75.81% | 10.10% | 14.08% | 100.00% |
| 10 | Rubidoux Bl. | s/o 26th St. | 75.63% | 10.18% | 14.19% | 100.00% |
| 11 | Rubidoux Bl. | s/o 34th St. | 75.82% | 10.10% | 14.08% | 100.00% |
| 12 | Market St. | n/o Rivera St. | 75.74% | 10.13% | 14.13% | 100.00% |
| 13 | Market St. | s/o SR-60 EB Ramps | 75.81% | 10.10% | 14.09% | 100.00% |
| 14 | Riverside Av. | n/o Agua Mansa Rd. | 75.77% | 10.12% | 14.11% | 100.00% |
| 15 | Agua Mansa Rd. | n/o Market St. | 75.82% | 10.10% | 14.08% | 100.00% |
| 16 | Slover Av. | w/o Cedar Ave. | 75.82% | 10.10% | 14.08% | 100.00% |
| 17 | Slover Av. | e/o Cedar Ave. | 75.82% | 10.10% | 14.08% | 100.00% |
| 18 | Santa Ana Ave. | w/o Cedar Ave. | 75.86% | 10.08% | 14.06% | 100.00% |
| 19 | Santa Ana Ave. | e/o Cedar Ave. | 75.82% | 10.10% | 14.08% | 100.00% |
| 20 | Jurupa Ave. | w/o Cedar Ave. | 75.78% | 10.11% | 14.11% | 100.00% |
| 21 | Jurupa Ave. | e/o Cedar Ave. | 75.87% | 10.08% | 14.05% | 100.00% |
| 22 | 7th St. | w/o Cedar Ave. | 75.80% | 10.10% | 14.09% | 100.00% |
| 23 | Market St. | e/o Rubidoux Bl. | 75.63% | 10.18% | 14.19% | 100.00% |
| 24 | Agua Mansa Rd. | e/o Riverside Ave. | 75.77% | 10.12% | 14.11% | 100.00% |

[1] Rubidoux Warehouse Traffic Impact Analysis.
[2] Total of vehicle mix percentage values rounded to the nearest one-hundredth.

**TABLE 6-8: HY 2040 WITH PROJECT VEHICLE MIX**

| ID | Roadway | Segment | With Project[1] | | | |
|---|---|---|---|---|---|---|
| | | | Autos | Medium Trucks | Heavy Trucks | Total[2] |
| 1 | Cedar Ave. | n/o I-10 WB Ramps | 75.78% | 10.11% | 14.10% | 100.00% |
| 2 | Cedar Ave. | s/o I-10 EB Ramps | 75.99% | 10.03% | 13.98% | 100.00% |
| 3 | Cedar Ave. | n/o Santa Ana Av. | 76.13% | 9.97% | 13.90% | 100.00% |
| 4 | Cedar Ave. | s/o Santa Ana Av. | 76.17% | 9.95% | 13.88% | 100.00% |
| 5 | Cedar Ave. | s/o Jurupa Av. | 76.26% | 9.92% | 13.83% | 100.00% |
| 6 | Cedar Ave. | s/o 7th Street | 76.27% | 9.91% | 13.82% | 100.00% |
| 7 | Rubidoux Bl. | s/o El Rivino Rd | 76.29% | 9.90% | 13.81% | 100.00% |
| 8 | Rubidoux Bl. | s/o Market St. | 75.81% | 10.11% | 14.09% | 100.00% |
| 9 | Rubidoux Bl. | s/o 24th St. | 75.81% | 10.11% | 14.09% | 100.00% |
| 10 | Rubidoux Bl. | s/o 26th St. | 75.63% | 10.18% | 14.19% | 100.00% |
| 11 | Rubidoux Bl. | s/o 34th St. | 75.81% | 10.10% | 14.09% | 100.00% |
| 12 | Market St. | n/o Rivera St. | 75.74% | 10.13% | 14.13% | 100.00% |
| 13 | Market St. | s/o SR-60 EB Ramps | 75.80% | 10.10% | 14.09% | 100.00% |
| 14 | Riverside Av. | n/o Agua Mansa Rd. | 75.76% | 10.12% | 14.12% | 100.00% |
| 15 | Agua Mansa Rd. | n/o Market St. | 75.81% | 10.10% | 14.09% | 100.00% |
| 16 | Slover Av. | w/o Cedar Ave. | 75.82% | 10.10% | 14.08% | 100.00% |
| 17 | Slover Av. | e/o Cedar Ave. | 75.81% | 10.10% | 14.09% | 100.00% |
| 18 | Santa Ana Ave. | w/o Cedar Ave. | 75.85% | 10.09% | 14.07% | 100.00% |
| 19 | Santa Ana Ave. | e/o Cedar Ave. | 75.81% | 10.10% | 14.09% | 100.00% |
| 20 | Jurupa Ave. | w/o Cedar Ave. | 75.78% | 10.11% | 14.11% | 100.00% |
| 21 | Jurupa Ave. | e/o Cedar Ave. | 75.86% | 10.08% | 14.06% | 100.00% |
| 22 | 7th St. | w/o Cedar Ave. | 75.80% | 10.11% | 14.09% | 100.00% |
| 23 | Market St. | e/o Rubidoux Bl. | 75.64% | 10.17% | 14.18% | 100.00% |
| 24 | Agua Mansa Rd. | e/o Riverside Ave. | 75.80% | 10.11% | 14.10% | 100.00% |

[1] Rubidoux Warehouse Traffic Impact Analysis.
[2] Total of vehicle mix percentage values rounded to the nearest one-hundredth.

## 6.3 VIBRATION ASSESSMENT

This analysis focuses on the potential ground-borne vibration associated with vehicular traffic and construction activities. Ground-borne vibration levels from automobile traffic are generally overshadowed by vibration generated by heavy trucks that roll over the same uneven roadway surfaces. However, due to the rapid drop-off rate of ground-borne vibration and the short duration of the associated events, vehicular traffic-induced ground-borne vibration is rarely perceptible beyond the roadway right-of-way, and rarely results in vibration levels that cause damage to buildings in the vicinity.

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 6-13. 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. The FTA provides the following equation: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$

**TABLE 6-13: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT**

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

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

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# 7 OFF-SITE TRANSPORTATION NOISE IMPACTS

To assess the off-site transportation CNEL noise level impacts associated with the proposed Project, noise contours were developed based on the *Rubidoux Warehouse Traffic Impact Analysis*. (2) Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway.

## 7.1 TRAFFIC NOISE CONTOURS

Noise contours were used to assess the Project's incremental 24-hour dBA CNEL traffic-related noise impacts at land uses adjacent to roadways conveying Project traffic. The noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA 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 7-12 present a summary of the exterior dBA CNEL traffic noise levels without barrier attenuation for the proposed Project. Roadway segments are analyzed from the without Project to the with Project conditions in each of the following timeframes: Existing 2020, Existing plus Ambient Growth (EA) 2023, Existing plus Ambient Growth plus Cumulative (EAC) 2023, and Horizon Year (HY) 2040. Appendix 7.1 includes a summary of the dBA CNEL traffic noise level contours for each of the traffic scenarios.

**TABLE 7-1: EXISTING 2020 WITHOUT PROJECT NOISE CONTOURS**

| ID | Road | Segment | Receiving Land Use[1] | CNEL at Receiving Land Use (dBA)[2] | Distance to Contour from Centerline (Feet) | | |
|---|---|---|---|---|---|---|---|
| | | | | | 70 dBA CNEL | 65 dBA CNEL | 60 dBA CNEL |
| 1 | Cedar Ave. | n/o I-10 WB Ramps | Sensitive | 81.9 | 323 | 695 | 1498 |
| 2 | Cedar Ave. | s/o I-10 EB Ramps | Sensitive | 81.1 | 286 | 616 | 1328 |
| 3 | Cedar Ave. | n/o Santa Ana Av. | Sensitive | 79.7 | 229 | 494 | 1065 |
| 4 | Cedar Ave. | s/o Santa Ana Av. | Sensitive | 79.5 | 225 | 484 | 1043 |
| 5 | Cedar Ave. | s/o Jurupa Av. | Sensitive | 79.5 | 223 | 481 | 1037 |
| 6 | Cedar Ave. | s/o 7th Street | Sensitive | 80.5 | 260 | 561 | 1208 |
| 7 | Rubidoux Bl. | s/o El Rivino Rd | Sensitive | 79.4 | 250 | 538 | 1160 |
| 8 | Rubidoux Bl. | s/o Market St. | Non-Sensitive | 79.2 | 243 | 524 | 1129 |
| 9 | Rubidoux Bl. | s/o 24th St. | Non-Sensitive | 79.3 | 245 | 527 | 1136 |
| 10 | Rubidoux Bl. | s/o 26th St. | Non-Sensitive | 79.2 | 244 | 526 | 1132 |
| 11 | Rubidoux Bl. | s/o 34th St. | Sensitive | 79.4 | 249 | 536 | 1154 |
| 12 | Market St. | n/o Rivera St. | Sensitive | 78.4 | 215 | 464 | 1000 |
| 13 | Market St. | s/o SR-60 EB Ramps | Sensitive | 82.1 | 319 | 688 | 1482 |
| 14 | Riverside Av. | n/o Agua Mansa Rd. | Non-Sensitive | 81.6 | 308 | 664 | 1431 |
| 15 | Agua Mansa Rd. | n/o Market St. | Non-Sensitive | 78.1 | 172 | 371 | 800 |
| 16 | Slover Av. | w/o Cedar Ave. | Sensitive | 78.2 | 184 | 395 | 852 |
| 17 | Slover Av. | e/o Cedar Ave. | Sensitive | 77.0 | 152 | 328 | 708 |
| 18 | Santa Ana Ave. | w/o Cedar Ave. | Sensitive | 75.0 | 95 | 205 | 442 |
| 19 | Santa Ana Ave. | e/o Cedar Ave. | Sensitive | 73.7 | 77 | 166 | 358 |
| 20 | Jurupa Ave. | w/o Cedar Ave. | Sensitive | 72.3 | 74 | 160 | 345 |
| 21 | Jurupa Ave. | e/o Cedar Ave. | Sensitive | 72.5 | 77 | 165 | 356 |
| 22 | 7th St. | w/o Cedar Ave. | Sensitive | 78.7 | 96 | 206 | 443 |
| 23 | Market St. | e/o Rubidoux Bl. | Non-Sensitive | 78.9 | 231 | 497 | 1070 |
| 24 | Agua Mansa Rd. | e/o Riverside Ave. | Sensitive | 76.9 | 150 | 322 | 695 |

[1] Noise sensitive uses limited to noise sensitive residential land uses.

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

**TABLE 7-2: EXISTING 2020 WITH PROJECT NOISE CONTOURS**

| ID | Road | Segment | Receiving Land Use[1] | CNEL at Receiving Land Use (dBA)[2] | Distance to Contour from Centerline (Feet) | | |
|---|---|---|---|---|---|---|---|
| | | | | | 70 dBA CNEL | 65 dBA CNEL | 60 dBA CNEL |
| 1 | Cedar Ave. | n/o I-10 WB Ramps | Sensitive | 81.9 | 323 | 695 | 1498 |
| 2 | Cedar Ave. | s/o I-10 EB Ramps | Sensitive | 81.2 | 288 | 621 | 1338 |
| 3 | Cedar Ave. | n/o Santa Ana Av. | Sensitive | 79.7 | 232 | 500 | 1076 |
| 4 | Cedar Ave. | s/o Santa Ana Av. | Sensitive | 79.6 | 227 | 489 | 1055 |
| 5 | Cedar Ave. | s/o Jurupa Av. | Sensitive | 79.6 | 226 | 487 | 1049 |
| 6 | Cedar Ave. | s/o 7th Street | Sensitive | 80.6 | 263 | 567 | 1222 |
| 7 | Rubidoux Bl. | s/o El Rivino Rd | Sensitive | 79.5 | 253 | 545 | 1173 |
| 8 | Rubidoux Bl. | s/o Market St. | Non-Sensitive | 79.4 | 250 | 538 | 1159 |
| 9 | Rubidoux Bl. | s/o 24th St. | Non-Sensitive | 79.4 | 251 | 541 | 1166 |
| 10 | Rubidoux Bl. | s/o 26th St. | Non-Sensitive | 79.4 | 250 | 539 | 1161 |
| 11 | Rubidoux Bl. | s/o 34th St. | Sensitive | 79.4 | 249 | 536 | 1154 |
| 12 | Market St. | n/o Rivera St. | Sensitive | 78.5 | 219 | 472 | 1017 |
| 13 | Market St. | s/o SR-60 EB Ramps | Sensitive | 82.1 | 319 | 688 | 1483 |
| 14 | Riverside Av. | n/o Agua Mansa Rd. | Non-Sensitive | 81.6 | 309 | 666 | 1435 |
| 15 | Agua Mansa Rd. | n/o Market St. | Non-Sensitive | 78.1 | 174 | 374 | 806 |
| 16 | Slover Av. | w/o Cedar Ave. | Sensitive | 78.2 | 184 | 396 | 852 |
| 17 | Slover Av. | e/o Cedar Ave. | Sensitive | 77.0 | 153 | 329 | 708 |
| 18 | Santa Ana Ave. | w/o Cedar Ave. | Sensitive | 75.0 | 95 | 205 | 442 |
| 19 | Santa Ana Ave. | e/o Cedar Ave. | Sensitive | 73.7 | 77 | 166 | 358 |
| 20 | Jurupa Ave. | w/o Cedar Ave. | Sensitive | 72.3 | 74 | 160 | 345 |
| 21 | Jurupa Ave. | e/o Cedar Ave. | Sensitive | 72.5 | 77 | 165 | 356 |
| 22 | 7th St. | w/o Cedar Ave. | Sensitive | 78.7 | 96 | 206 | 444 |
| 23 | Market St. | e/o Rubidoux Bl. | Non-Sensitive | 79.0 | 235 | 507 | 1092 |
| 24 | Agua Mansa Rd. | e/o Riverside Ave. | Sensitive | 76.9 | 150 | 324 | 698 |

[1] Noise sensitive uses limited to noise sensitive residential land uses.

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

**TABLE 7-3: EA 2023 WITHOUT PROJECT NOISE CONTOURS**

| ID | Road | Segment | Receiving Land Use[1] | CNEL at Receiving Land Use (dBA)[2] | Distance to Contour from Centerline (Feet) | | |
|---|---|---|---|---|---|---|---|
| | | | | | 70 dBA CNEL | 65 dBA CNEL | 60 dBA CNEL |
| 1 | Cedar Ave. | n/o I-10 WB Ramps | Sensitive | 82.1 | 336 | 723 | 1558 |
| 2 | Cedar Ave. | s/o I-10 EB Ramps | Sensitive | 81.4 | 298 | 641 | 1382 |
| 3 | Cedar Ave. | n/o Santa Ana Av. | Sensitive | 79.9 | 239 | 514 | 1108 |
| 4 | Cedar Ave. | s/o Santa Ana Av. | Sensitive | 79.8 | 234 | 504 | 1085 |
| 5 | Cedar Ave. | s/o Jurupa Av. | Sensitive | 79.8 | 232 | 501 | 1079 |
| 6 | Cedar Ave. | s/o 7th Street | Sensitive | 80.8 | 271 | 584 | 1257 |
| 7 | Rubidoux Bl. | s/o El Rivino Rd | Sensitive | 79.7 | 260 | 560 | 1206 |
| 8 | Rubidoux Bl. | s/o Market St. | Non-Sensitive | 79.5 | 253 | 545 | 1175 |
| 9 | Rubidoux Bl. | s/o 24th St. | Non-Sensitive | 79.5 | 255 | 548 | 1181 |
| 10 | Rubidoux Bl. | s/o 26th St. | Non-Sensitive | 79.5 | 254 | 547 | 1178 |
| 11 | Rubidoux Bl. | s/o 34th St. | Sensitive | 79.6 | 259 | 557 | 1200 |
| 12 | Market St. | n/o Rivera St. | Sensitive | 78.7 | 224 | 483 | 1040 |
| 13 | Market St. | s/o SR-60 EB Ramps | Sensitive | 82.3 | 332 | 716 | 1542 |
| 14 | Riverside Av. | n/o Agua Mansa Rd. | Non-Sensitive | 81.9 | 321 | 691 | 1489 |
| 15 | Agua Mansa Rd. | n/o Market St. | Non-Sensitive | 78.3 | 179 | 386 | 832 |
| 16 | Slover Av. | w/o Cedar Ave. | Sensitive | 78.5 | 191 | 411 | 886 |
| 17 | Slover Av. | e/o Cedar Ave. | Sensitive | 77.3 | 159 | 342 | 736 |
| 18 | Santa Ana Ave. | w/o Cedar Ave. | Sensitive | 75.3 | 99 | 213 | 459 |
| 19 | Santa Ana Ave. | e/o Cedar Ave. | Sensitive | 73.9 | 80 | 173 | 372 |
| 20 | Jurupa Ave. | w/o Cedar Ave. | Sensitive | 72.6 | 77 | 167 | 359 |
| 21 | Jurupa Ave. | e/o Cedar Ave. | Sensitive | 72.8 | 80 | 172 | 370 |
| 22 | 7th St. | w/o Cedar Ave. | Sensitive | 79.0 | 99 | 214 | 461 |
| 23 | Market St. | e/o Rubidoux Bl. | Non-Sensitive | 79.1 | 240 | 517 | 1113 |
| 24 | Agua Mansa Rd. | e/o Riverside Ave. | Sensitive | 77.1 | 156 | 335 | 723 |

[1] Noise sensitive uses limited to noise sensitive residential land uses.

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

**TABLE 7-4: EA 2023 WITH PROJECT NOISE CONTOURS**

| ID | Road | Segment | Receiving Land Use[1] | CNEL at Receiving Land Use (dBA)[2] | Distance to Contour from Centerline (Feet) | | |
|---|---|---|---|---|---|---|---|
| | | | | | 70 dBA CNEL | 65 dBA CNEL | 60 dBA CNEL |
| 1 | Cedar Ave. | n/o I-10 WB Ramps | Sensitive | 82.2 | 336 | 723 | 1558 |
| 2 | Cedar Ave. | s/o I-10 EB Ramps | Sensitive | 81.4 | 300 | 646 | 1391 |
| 3 | Cedar Ave. | n/o Santa Ana Av. | Sensitive | 80.0 | 241 | 519 | 1119 |
| 4 | Cedar Ave. | s/o Santa Ana Av. | Sensitive | 79.9 | 236 | 509 | 1096 |
| 5 | Cedar Ave. | s/o Jurupa Av. | Sensitive | 79.8 | 235 | 506 | 1090 |
| 6 | Cedar Ave. | s/o 7th Street | Sensitive | 80.8 | 274 | 590 | 1271 |
| 7 | Rubidoux Bl. | s/o El Rivino Rd | Sensitive | 79.7 | 263 | 566 | 1220 |
| 8 | Rubidoux Bl. | s/o Market St. | Non-Sensitive | 79.6 | 260 | 559 | 1205 |
| 9 | Rubidoux Bl. | s/o 24th St. | Non-Sensitive | 79.7 | 261 | 562 | 1211 |
| 10 | Rubidoux Bl. | s/o 26th St. | Non-Sensitive | 79.7 | 260 | 560 | 1206 |
| 11 | Rubidoux Bl. | s/o 34th St. | Sensitive | 79.6 | 259 | 557 | 1201 |
| 12 | Market St. | n/o Rivera St. | Sensitive | 78.8 | 228 | 491 | 1057 |
| 13 | Market St. | s/o SR-60 EB Ramps | Sensitive | 82.3 | 332 | 716 | 1542 |
| 14 | Riverside Av. | n/o Agua Mansa Rd. | Non-Sensitive | 81.9 | 322 | 693 | 1492 |
| 15 | Agua Mansa Rd. | n/o Market St. | Non-Sensitive | 78.4 | 181 | 389 | 838 |
| 16 | Slover Av. | w/o Cedar Ave. | Sensitive | 78.5 | 191 | 412 | 887 |
| 17 | Slover Av. | e/o Cedar Ave. | Sensitive | 77.3 | 159 | 342 | 736 |
| 18 | Santa Ana Ave. | w/o Cedar Ave. | Sensitive | 75.3 | 99 | 213 | 460 |
| 19 | Santa Ana Ave. | e/o Cedar Ave. | Sensitive | 73.9 | 80 | 173 | 372 |
| 20 | Jurupa Ave. | w/o Cedar Ave. | Sensitive | 72.6 | 77 | 167 | 359 |
| 21 | Jurupa Ave. | e/o Cedar Ave. | Sensitive | 72.8 | 80 | 172 | 370 |
| 22 | 7th St. | w/o Cedar Ave. | Sensitive | 79.0 | 99 | 214 | 462 |
| 23 | Market St. | e/o Rubidoux Bl. | Non-Sensitive | 79.3 | 244 | 527 | 1135 |
| 24 | Agua Mansa Rd. | e/o Riverside Ave. | Sensitive | 77.2 | 157 | 337 | 726 |

[1] Noise sensitive uses limited to noise sensitive residential land uses.

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

**TABLE 7-5: EAC 2023 WITHOUT PROJECT NOISE CONTOURS**

| ID | Road | Segment | Receiving Land Use[1] | CNEL at Receiving Land Use (dBA)[2] | Distance to Contour from Centerline (Feet) | | |
|---|---|---|---|---|---|---|---|
| | | | | | 70 dBA CNEL | 65 dBA CNEL | 60 dBA CNEL |
| 1 | Cedar Ave. | n/o I-10 WB Ramps | Sensitive | 82.6 | 358 | 771 | 1661 |
| 2 | Cedar Ave. | s/o I-10 EB Ramps | Sensitive | 82.9 | 377 | 811 | 1748 |
| 3 | Cedar Ave. | n/o Santa Ana Av. | Sensitive | 81.8 | 317 | 682 | 1469 |
| 4 | Cedar Ave. | s/o Santa Ana Av. | Sensitive | 81.7 | 314 | 677 | 1458 |
| 5 | Cedar Ave. | s/o Jurupa Av. | Sensitive | 81.2 | 291 | 628 | 1352 |
| 6 | Cedar Ave. | s/o 7th Street | Sensitive | 82.0 | 330 | 711 | 1531 |
| 7 | Rubidoux Bl. | s/o El Rivino Rd | Sensitive | 80.8 | 312 | 672 | 1447 |
| 8 | Rubidoux Bl. | s/o Market St. | Non-Sensitive | 81.0 | 319 | 687 | 1481 |
| 9 | Rubidoux Bl. | s/o 24th St. | Non-Sensitive | 81.0 | 318 | 686 | 1478 |
| 10 | Rubidoux Bl. | s/o 26th St. | Non-Sensitive | 81.0 | 318 | 685 | 1476 |
| 11 | Rubidoux Bl. | s/o 34th St. | Sensitive | 80.4 | 289 | 624 | 1343 |
| 12 | Market St. | n/o Rivera St. | Sensitive | 79.8 | 265 | 571 | 1231 |
| 13 | Market St. | s/o SR-60 EB Ramps | Sensitive | 82.6 | 348 | 750 | 1616 |
| 14 | Riverside Av. | n/o Agua Mansa Rd. | Non-Sensitive | 82.7 | 364 | 783 | 1687 |
| 15 | Agua Mansa Rd. | n/o Market St. | Non-Sensitive | 79.6 | 219 | 471 | 1015 |
| 16 | Slover Av. | w/o Cedar Ave. | Sensitive | 79.9 | 237 | 510 | 1099 |
| 17 | Slover Av. | e/o Cedar Ave. | Sensitive | 78.6 | 195 | 420 | 904 |
| 18 | Santa Ana Ave. | w/o Cedar Ave. | Sensitive | 75.7 | 106 | 228 | 492 |
| 19 | Santa Ana Ave. | e/o Cedar Ave. | Sensitive | 74.8 | 92 | 199 | 428 |
| 20 | Jurupa Ave. | w/o Cedar Ave. | Sensitive | 77.2 | 158 | 340 | 734 |
| 21 | Jurupa Ave. | e/o Cedar Ave. | Sensitive | 74.5 | 104 | 224 | 482 |
| 22 | 7th St. | w/o Cedar Ave. | Sensitive | 80.5 | 126 | 272 | 586 |
| 23 | Market St. | e/o Rubidoux Bl. | Non-Sensitive | 80.2 | 283 | 610 | 1314 |
| 24 | Agua Mansa Rd. | e/o Riverside Ave. | Sensitive | 81.2 | 291 | 628 | 1352 |

[1] Noise sensitive uses limited to noise sensitive residential land uses.

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

**TABLE 7-6: EAC 2023 WITH PROJECT CONDITIONS NOISE CONTOURS**

| ID | Road | Segment | Receiving Land Use[1] | CNEL at Receiving Land Use (dBA)[2] | Distance to Contour from Centerline (Feet) | | |
|---|---|---|---|---|---|---|---|
| | | | | | 70 dBA CNEL | 65 dBA CNEL | 60 dBA CNEL |
| 1 | Cedar Ave. | n/o I-10 WB Ramps | Sensitive | 82.6 | 358 | 771 | 1661 |
| 2 | Cedar Ave. | s/o I-10 EB Ramps | Sensitive | 82.9 | 378 | 815 | 1757 |
| 3 | Cedar Ave. | n/o Santa Ana Av. | Sensitive | 81.8 | 319 | 686 | 1479 |
| 4 | Cedar Ave. | s/o Santa Ana Av. | Sensitive | 81.8 | 316 | 682 | 1468 |
| 5 | Cedar Ave. | s/o Jurupa Av. | Sensitive | 81.3 | 294 | 632 | 1363 |
| 6 | Cedar Ave. | s/o 7th Street | Sensitive | 82.1 | 333 | 716 | 1543 |
| 7 | Rubidoux Bl. | s/o El Rivino Rd | Sensitive | 80.9 | 314 | 677 | 1459 |
| 8 | Rubidoux Bl. | s/o Market St. | Non-Sensitive | 81.1 | 325 | 699 | 1507 |
| 9 | Rubidoux Bl. | s/o 24th St. | Non-Sensitive | 81.1 | 324 | 698 | 1504 |
| 10 | Rubidoux Bl. | s/o 26th St. | Non-Sensitive | 81.1 | 323 | 697 | 1501 |
| 11 | Rubidoux Bl. | s/o 34th St. | Sensitive | 80.4 | 290 | 624 | 1344 |
| 12 | Market St. | n/o Rivera St. | Sensitive | 79.9 | 269 | 579 | 1247 |
| 13 | Market St. | s/o SR-60 EB Ramps | Sensitive | 82.6 | 348 | 750 | 1616 |
| 14 | Riverside Av. | n/o Agua Mansa Rd. | Non-Sensitive | 82.7 | 364 | 785 | 1691 |
| 15 | Agua Mansa Rd. | n/o Market St. | Non-Sensitive | 79.6 | 220 | 474 | 1021 |
| 16 | Slover Av. | w/o Cedar Ave. | Sensitive | 79.9 | 237 | 510 | 1099 |
| 17 | Slover Av. | e/o Cedar Ave. | Sensitive | 78.6 | 195 | 420 | 905 |
| 18 | Santa Ana Ave. | w/o Cedar Ave. | Sensitive | 75.7 | 106 | 229 | 492 |
| 19 | Santa Ana Ave. | e/o Cedar Ave. | Sensitive | 74.8 | 92 | 199 | 428 |
| 20 | Jurupa Ave. | w/o Cedar Ave. | Sensitive | 77.2 | 158 | 341 | 734 |
| 21 | Jurupa Ave. | e/o Cedar Ave. | Sensitive | 74.5 | 104 | 224 | 482 |
| 22 | 7th St. | w/o Cedar Ave. | Sensitive | 80.6 | 126 | 272 | 586 |
| 23 | Market St. | e/o Rubidoux Bl. | Non-Sensitive | 80.3 | 287 | 619 | 1334 |
| 24 | Agua Mansa Rd. | e/o Riverside Ave. | Sensitive | 81.2 | 292 | 629 | 1355 |

[1] Noise sensitive uses limited to noise sensitive residential land uses.

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

**TABLE 7-7: HY 2040 WITHOUT PROJECT CONDITIONS NOISE CONTOURS**

| ID | Road | Segment | Receiving Land Use[1] | CNEL at Receiving Land Use (dBA)[2] | Distance to Contour from Centerline (Feet) | | |
|---|---|---|---|---|---|---|---|
| | | | | | 70 dBA CNEL | 65 dBA CNEL | 60 dBA CNEL |
| 1 | Cedar Ave. | n/o I-10 WB Ramps | Sensitive | 82.9 | 379 | 817 | 1760 |
| 2 | Cedar Ave. | s/o I-10 EB Ramps | Sensitive | 83.2 | 394 | 849 | 1828 |
| 3 | Cedar Ave. | n/o Santa Ana Av. | Sensitive | 82.0 | 330 | 711 | 1532 |
| 4 | Cedar Ave. | s/o Santa Ana Av. | Sensitive | 82.0 | 327 | 705 | 1520 |
| 5 | Cedar Ave. | s/o Jurupa Av. | Sensitive | 81.5 | 305 | 657 | 1415 |
| 6 | Cedar Ave. | s/o 7th Street | Sensitive | 82.3 | 346 | 745 | 1606 |
| 7 | Rubidoux Bl. | s/o El Rivino Rd | Sensitive | 81.2 | 327 | 705 | 1519 |
| 8 | Rubidoux Bl. | s/o Market St. | Non-Sensitive | 81.3 | 334 | 719 | 1549 |
| 9 | Rubidoux Bl. | s/o 24th St. | Non-Sensitive | 81.3 | 333 | 718 | 1547 |
| 10 | Rubidoux Bl. | s/o 26th St. | Non-Sensitive | 81.3 | 333 | 717 | 1545 |
| 11 | Rubidoux Bl. | s/o 34th St. | Sensitive | 80.7 | 305 | 658 | 1418 |
| 12 | Market St. | n/o Rivera St. | Sensitive | 80.1 | 279 | 601 | 1294 |
| 13 | Market St. | s/o SR-60 EB Ramps | Sensitive | 83.0 | 369 | 796 | 1714 |
| 14 | Riverside Av. | n/o Agua Mansa Rd. | Non-Sensitive | 84.5 | 480 | 1034 | 2228 |
| 15 | Agua Mansa Rd. | n/o Market St. | Non-Sensitive | 79.9 | 229 | 494 | 1064 |
| 16 | Slover Av. | w/o Cedar Ave. | Sensitive | 80.2 | 248 | 534 | 1151 |
| 17 | Slover Av. | e/o Cedar Ave. | Sensitive | 78.9 | 204 | 440 | 948 |
| 18 | Santa Ana Ave. | w/o Cedar Ave. | Sensitive | 76.1 | 112 | 242 | 521 |
| 19 | Santa Ana Ave. | e/o Cedar Ave. | Sensitive | 75.2 | 97 | 209 | 451 |
| 20 | Jurupa Ave. | w/o Cedar Ave. | Sensitive | 77.4 | 162 | 348 | 750 |
| 21 | Jurupa Ave. | e/o Cedar Ave. | Sensitive | 74.8 | 108 | 233 | 503 |
| 22 | 7th St. | w/o Cedar Ave. | Sensitive | 80.8 | 132 | 284 | 613 |
| 23 | Market St. | e/o Rubidoux Bl. | Non-Sensitive | 80.5 | 298 | 641 | 1381 |
| 24 | Agua Mansa Rd. | e/o Riverside Ave. | Sensitive | 78.2 | 182 | 391 | 843 |

[1] Noise sensitive uses limited to noise sensitive residential land uses.

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

**TABLE 7-8: HY 2040 WITH PROJECT CONDITIONS NOISE CONTOURS**

| ID | Road | Segment | Receiving Land Use[1] | CNEL at Receiving Land Use (dBA)[2] | Distance to Contour from Centerline (Feet) | | |
|---|---|---|---|---|---|---|---|
| | | | | | 70 dBA CNEL | 65 dBA CNEL | 60 dBA CNEL |
| 1 | Cedar Ave. | n/o I-10 WB Ramps | Sensitive | 82.9 | 379 | 817 | 1760 |
| 2 | Cedar Ave. | s/o I-10 EB Ramps | Sensitive | 83.2 | 396 | 853 | 1837 |
| 3 | Cedar Ave. | n/o Santa Ana Av. | Sensitive | 82.1 | 332 | 716 | 1542 |
| 4 | Cedar Ave. | s/o Santa Ana Av. | Sensitive | 82.0 | 330 | 710 | 1529 |
| 5 | Cedar Ave. | s/o Jurupa Av. | Sensitive | 81.6 | 307 | 662 | 1425 |
| 6 | Cedar Ave. | s/o 7th Street | Sensitive | 82.4 | 349 | 751 | 1618 |
| 7 | Rubidoux Bl. | s/o El Rivino Rd | Sensitive | 81.2 | 330 | 711 | 1531 |
| 8 | Rubidoux Bl. | s/o Market St. | Non-Sensitive | 81.4 | 339 | 731 | 1575 |
| 9 | Rubidoux Bl. | s/o 24th St. | Non-Sensitive | 81.4 | 339 | 730 | 1573 |
| 10 | Rubidoux Bl. | s/o 26th St. | Non-Sensitive | 81.4 | 338 | 728 | 1569 |
| 11 | Rubidoux Bl. | s/o 34th St. | Sensitive | 80.7 | 305 | 658 | 1418 |
| 12 | Market St. | n/o Rivera St. | Sensitive | 80.2 | 282 | 608 | 1309 |
| 13 | Market St. | s/o SR-60 EB Ramps | Sensitive | 83.0 | 369 | 796 | 1715 |
| 14 | Riverside Av. | n/o Agua Mansa Rd. | Non-Sensitive | 84.5 | 481 | 1035 | 2231 |
| 15 | Agua Mansa Rd. | n/o Market St. | Non-Sensitive | 80.0 | 231 | 497 | 1070 |
| 16 | Slover Av. | w/o Cedar Ave. | Sensitive | 80.2 | 248 | 534 | 1151 |
| 17 | Slover Av. | e/o Cedar Ave. | Sensitive | 78.9 | 204 | 440 | 948 |
| 18 | Santa Ana Ave. | w/o Cedar Ave. | Sensitive | 76.1 | 112 | 242 | 521 |
| 19 | Santa Ana Ave. | e/o Cedar Ave. | Sensitive | 75.2 | 97 | 209 | 451 |
| 20 | Jurupa Ave. | w/o Cedar Ave. | Sensitive | 77.4 | 162 | 348 | 750 |
| 21 | Jurupa Ave. | e/o Cedar Ave. | Sensitive | 74.8 | 108 | 233 | 503 |
| 22 | 7th St. | w/o Cedar Ave. | Sensitive | 80.8 | 132 | 284 | 613 |
| 23 | Market St. | e/o Rubidoux Bl. | Non-Sensitive | 80.6 | 302 | 650 | 1400 |
| 24 | Agua Mansa Rd. | e/o Riverside Ave. | Sensitive | 78.2 | 182 | 393 | 847 |

[1] Noise sensitive uses limited to noise sensitive residential land uses.

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

## 7.2 EXISTING 2020 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 to fully analyze all the existing traffic scenarios identified in the *Rubidoux Warehouse Traffic Impact Analysis* prepared by Urban Crossroads, Inc. The future EAC and Horizon Year 2040 traffic noise conditions that include all cumulative projects are used to determine the significance of the Project off-site traffic noise level increases on the study area roadway segments. Table 7-1 shows the Existing without Project CNEL noise levels. The Existing without Project exterior noise levels are expected to range from 72.3 to 82.1 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-2 shows the Existing with Project will also range from 72.3 to 82.1 dBA CNEL. Table 7-9 shows that the Project off-site traffic noise level increases will range from 0.0 to 0.2 dBA CNEL.

## 7.3 EA 2023 PROJECT TRAFFIC NOISE LEVEL INCREASES

Table 7-3 presents the Existing plus Ambient Growth (EA) without Project CNEL noise levels. The EA without Project exterior noise levels are expected to range from 72.6 to 82.3 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-47 shows the EA with Project will also range from 72.6 to 82.3 dBA CNEL. Table 7-10 shows that the Project off-site traffic noise level increases under will range from 0.0 to 0.2 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 due to unmitigated Project-related traffic noise levels.

## 7.4 EAC 2023 PROJECT TRAFFIC NOISE LEVEL INCREASES

Table 7-5 presents the Existing plus Ambient Growth plus Cumulative (EAC) without Project CNEL noise levels. The EAC without Project exterior noise levels are expected to range from 74.5 to 82.9 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-6 shows that the EAC with Project will range from 74.5 to 82.9 dBA CNEL. Table 7-11 shows that the Project off-site traffic noise level increases will range from 0.0 to 0.1 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 due to unmitigated Project-related traffic noise levels.

## 7.5 HY 2040 PROJECT TRAFFIC NOISE LEVEL INCREASES

Table 7-7 presents the Horizon Year (HY) without Project CNEL noise levels. The HY without Project exterior noise levels are expected to range from 74.8 to 84.5 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-8 shows that the HY with Project will range from 74.8 to 84.5 dBA CNEL. Table 7-12 shows that the Project off-site traffic noise level increases under will range from 0.0 to 0.1 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 due to unmitigated Project-related traffic noise levels.

**TABLE 7-9: EXISTING 2020 WITH PROJECT TRAFFIC NOISE LEVEL INCREASES**

| ID | Road | Segment | Receiving Land Use[1] | CNEL at Receiving Land Use (dBA)[2] | | | Noise Sensitive Land Use? | Exterior Noise Standard | Incremental Noise Level Increase Threshold[3] | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | No Project | With Project | Project Addition | | | Limit | Exceeded? |
| 1 | Cedar Ave. | n/o I-10 WB Ramps | Sensitive | 81.9 | 81.9 | 0.0 | Yes | 65 | 3 | No |
| 2 | Cedar Ave. | s/o I-10 EB Ramps | Sensitive | 81.1 | 81.2 | 0.0 | Yes | 65 | 3 | No |
| 3 | Cedar Ave. | n/o Santa Ana Av. | Sensitive | 79.7 | 79.7 | 0.1 | Yes | 65 | 3 | No |
| 4 | Cedar Ave. | s/o Santa Ana Av. | Sensitive | 79.5 | 79.6 | 0.1 | Yes | 65 | 3 | No |
| 5 | Cedar Ave. | s/o Jurupa Av. | Sensitive | 79.5 | 79.6 | 0.1 | Yes | 65 | 3 | No |
| 6 | Cedar Ave. | s/o 7th Street | Sensitive | 80.5 | 80.6 | 0.1 | Yes | 65 | 3 | No |
| 7 | Rubidoux Bl. | s/o El Rivino Rd | Sensitive | 79.4 | 79.5 | 0.1 | Yes | 65 | 3 | No |
| 8 | Rubidoux Bl. | s/o Market St. | Non-Sensitive | 79.2 | 79.4 | 0.2 | No | 70 | 3 | No |
| 9 | Rubidoux Bl. | s/o 24th St. | Non-Sensitive | 79.3 | 79.4 | 0.2 | No | 70 | 3 | No |
| 10 | Rubidoux Bl. | s/o 26th St. | Non-Sensitive | 79.2 | 79.4 | 0.2 | No | 70 | 3 | No |
| 11 | Rubidoux Bl. | s/o 34th St. | Sensitive | 79.4 | 79.4 | 0.0 | Yes | 65 | 3 | No |
| 12 | Market St. | n/o Rivera St. | Sensitive | 78.4 | 78.5 | 0.1 | Yes | 65 | 3 | No |
| 13 | Market St. | s/o SR-60 EB Ramps | Sensitive | 82.1 | 82.1 | 0.0 | Yes | 65 | 3 | No |
| 14 | Riverside Av. | n/o Agua Mansa Rd. | Non-Sensitive | 81.6 | 81.6 | 0.0 | No | 70 | 3 | No |
| 15 | Agua Mansa Rd. | n/o Market St. | Non-Sensitive | 78.1 | 78.1 | 0.1 | No | 70 | 3 | No |
| 16 | Slover Av. | w/o Cedar Ave. | Sensitive | 78.2 | 78.2 | 0.0 | Yes | 65 | 3 | No |
| 17 | Slover Av. | e/o Cedar Ave. | Sensitive | 77.0 | 77.0 | 0.0 | Yes | 65 | 3 | No |
| 18 | Santa Ana Ave. | w/o Cedar Ave. | Sensitive | 75.0 | 75.0 | 0.0 | Yes | 65 | 3 | No |
| 19 | Santa Ana Ave. | e/o Cedar Ave. | Sensitive | 73.7 | 73.7 | 0.0 | Yes | 65 | 3 | No |
| 20 | Jurupa Ave. | w/o Cedar Ave. | Sensitive | 72.3 | 72.3 | 0.0 | Yes | 65 | 3 | No |
| 21 | Jurupa Ave. | e/o Cedar Ave. | Sensitive | 72.5 | 72.5 | 0.0 | Yes | 65 | 3 | No |
| 22 | 7th St. | w/o Cedar Ave. | Sensitive | 78.7 | 78.7 | 0.0 | Yes | 65 | 3 | No |
| 23 | Market St. | e/o Rubidoux Bl. | Non-Sensitive | 78.9 | 79.0 | 0.1 | No | 70 | 3 | No |
| 24 | Agua Mansa Rd. | e/o Riverside Ave. | Sensitive | 76.9 | 76.9 | 0.0 | Yes | 65 | 3 | No |

[1] Noise sensitive uses limited to noise sensitive residential land uses.

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

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

**TABLE 7-10: EA 2023 WITH PROJECT TRAFFIC NOISE LEVEL INCREASES**

| ID | Road | Segment | Receiving Land Use[1] | CNEL at Receiving Land Use (dBA)[2] | | | Noise Sensitive Land Use? | Exterior Noise Standard | Incremental Noise Level Increase Threshold[3] | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | No Project | With Project | Project Addition | | | Limit | Exceeded? |
| 1 | Cedar Ave. | n/o I-10 WB Ramps | Sensitive | 82.1 | 82.2 | 0.0 | Yes | 65 | 3 | No |
| 2 | Cedar Ave. | s/o I-10 EB Ramps | Sensitive | 81.4 | 81.4 | 0.0 | Yes | 65 | 3 | No |
| 3 | Cedar Ave. | n/o Santa Ana Av. | Sensitive | 79.9 | 80.0 | 0.1 | Yes | 65 | 3 | No |
| 4 | Cedar Ave. | s/o Santa Ana Av. | Sensitive | 79.8 | 79.9 | 0.1 | Yes | 65 | 3 | No |
| 5 | Cedar Ave. | s/o Jurupa Av. | Sensitive | 79.8 | 79.8 | 0.1 | Yes | 65 | 3 | No |
| 6 | Cedar Ave. | s/o 7th Street | Sensitive | 80.8 | 80.8 | 0.1 | Yes | 65 | 3 | No |
| 7 | Rubidoux Bl. | s/o El Rivino Rd | Sensitive | 79.7 | 79.7 | 0.1 | Yes | 65 | 3 | No |
| 8 | Rubidoux Bl. | s/o Market St. | Non-Sensitive | 79.5 | 79.6 | 0.2 | No | 70 | 3 | No |
| 9 | Rubidoux Bl. | s/o 24th St. | Non-Sensitive | 79.5 | 79.7 | 0.2 | No | 70 | 3 | No |
| 10 | Rubidoux Bl. | s/o 26th St. | Non-Sensitive | 79.5 | 79.7 | 0.2 | No | 70 | 3 | No |
| 11 | Rubidoux Bl. | s/o 34th St. | Sensitive | 79.6 | 79.6 | 0.0 | Yes | 65 | 3 | No |
| 12 | Market St. | n/o Rivera St. | Sensitive | 78.7 | 78.8 | 0.1 | Yes | 65 | 3 | No |
| 13 | Market St. | s/o SR-60 EB Ramps | Sensitive | 82.3 | 82.3 | 0.0 | Yes | 65 | 3 | No |
| 14 | Riverside Av. | n/o Agua Mansa Rd. | Non-Sensitive | 81.9 | 81.9 | 0.0 | No | 70 | 3 | No |
| 15 | Agua Mansa Rd. | n/o Market St. | Non-Sensitive | 78.3 | 78.4 | 0.1 | No | 70 | 3 | No |
| 16 | Slover Av. | w/o Cedar Ave. | Sensitive | 78.5 | 78.5 | 0.0 | Yes | 65 | 3 | No |
| 17 | Slover Av. | e/o Cedar Ave. | Sensitive | 77.3 | 77.3 | 0.0 | Yes | 65 | 3 | No |
| 18 | Santa Ana Ave. | w/o Cedar Ave. | Sensitive | 75.3 | 75.3 | 0.0 | Yes | 65 | 3 | No |
| 19 | Santa Ana Ave. | e/o Cedar Ave. | Sensitive | 73.9 | 73.9 | 0.0 | Yes | 65 | 3 | No |
| 20 | Jurupa Ave. | w/o Cedar Ave. | Sensitive | 72.6 | 72.6 | 0.0 | Yes | 65 | 3 | No |
| 21 | Jurupa Ave. | e/o Cedar Ave. | Sensitive | 72.8 | 72.8 | 0.0 | Yes | 65 | 3 | No |
| 22 | 7th St. | w/o Cedar Ave. | Sensitive | 79.0 | 79.0 | 0.0 | Yes | 65 | 3 | No |
| 23 | Market St. | e/o Rubidoux Bl. | Non-Sensitive | 79.1 | 79.3 | 0.1 | No | 70 | 3 | No |
| 24 | Agua Mansa Rd. | e/o Riverside Ave. | Sensitive | 77.1 | 77.2 | 0.0 | Yes | 65 | 3 | No |

[1] Noise sensitive uses limited to noise sensitive residential land uses.

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

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

**TABLE 7-11: EAC 2023 WITH PROJECT TRAFFIC NOISE LEVEL INCREASES**

| ID | Road | Segment | Receiving Land Use[1] | CNEL at Receiving Land Use (dBA)[2] | | | Noise Sensitive Land Use? | Exterior Noise Standard | Incremental Noise Level Increase Threshold[3] | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | No Project | With Project | Project Addition | | | Limit | Exceeded? |
| 1 | Cedar Ave. | n/o I-10 WB Ramps | Sensitive | 82.6 | 82.6 | 0.0 | Yes | 65 | 3 | No |
| 2 | Cedar Ave. | s/o I-10 EB Ramps | Sensitive | 82.9 | 82.9 | 0.0 | Yes | 65 | 3 | No |
| 3 | Cedar Ave. | n/o Santa Ana Av. | Sensitive | 81.8 | 81.8 | 0.0 | Yes | 65 | 3 | No |
| 4 | Cedar Ave. | s/o Santa Ana Av. | Sensitive | 81.7 | 81.8 | 0.0 | Yes | 65 | 3 | No |
| 5 | Cedar Ave. | s/o Jurupa Av. | Sensitive | 81.2 | 81.3 | 0.1 | Yes | 65 | 3 | No |
| 6 | Cedar Ave. | s/o 7th Street | Sensitive | 82.0 | 82.1 | 0.1 | Yes | 65 | 3 | No |
| 7 | Rubidoux Bl. | s/o El Rivino Rd | Sensitive | 80.8 | 80.9 | 0.1 | Yes | 65 | 3 | No |
| 8 | Rubidoux Bl. | s/o Market St. | Non-Sensitive | 81.0 | 81.1 | 0.1 | No | 70 | 3 | No |
| 9 | Rubidoux Bl. | s/o 24th St. | Non-Sensitive | 81.0 | 81.1 | 0.1 | No | 70 | 3 | No |
| 10 | Rubidoux Bl. | s/o 26th St. | Non-Sensitive | 81.0 | 81.1 | 0.1 | No | 70 | 3 | No |
| 11 | Rubidoux Bl. | s/o 34th St. | Sensitive | 80.4 | 80.4 | 0.0 | Yes | 65 | 3 | No |
| 12 | Market St. | n/o Rivera St. | Sensitive | 79.8 | 79.9 | 0.1 | Yes | 65 | 3 | No |
| 13 | Market St. | s/o SR-60 EB Ramps | Sensitive | 82.6 | 82.6 | 0.0 | Yes | 65 | 3 | No |
| 14 | Riverside Av. | n/o Agua Mansa Rd. | Non-Sensitive | 82.7 | 82.7 | 0.0 | No | 70 | 3 | No |
| 15 | Agua Mansa Rd. | n/o Market St. | Non-Sensitive | 79.6 | 79.6 | 0.0 | No | 70 | 3 | No |
| 16 | Slover Av. | w/o Cedar Ave. | Sensitive | 79.9 | 79.9 | 0.0 | Yes | 65 | 3 | No |
| 17 | Slover Av. | e/o Cedar Ave. | Sensitive | 78.6 | 78.6 | 0.0 | Yes | 65 | 3 | No |
| 18 | Santa Ana Ave. | w/o Cedar Ave. | Sensitive | 75.7 | 75.7 | 0.0 | Yes | 65 | 3 | No |
| 19 | Santa Ana Ave. | e/o Cedar Ave. | Sensitive | 74.8 | 74.8 | 0.0 | Yes | 65 | 3 | No |
| 20 | Jurupa Ave. | w/o Cedar Ave. | Sensitive | 77.2 | 77.2 | 0.0 | Yes | 65 | 3 | No |
| 21 | Jurupa Ave. | e/o Cedar Ave. | Sensitive | 74.5 | 74.5 | 0.0 | Yes | 65 | 3 | No |
| 22 | 7th St. | w/o Cedar Ave. | Sensitive | 80.5 | 80.6 | 0.0 | Yes | 65 | 3 | No |
| 23 | Market St. | e/o Rubidoux Bl. | Non-Sensitive | 80.2 | 80.3 | 0.1 | No | 70 | 3 | No |
| 24 | Agua Mansa Rd. | e/o Riverside Ave. | Sensitive | 81.2 | 81.2 | 0.0 | Yes | 65 | 3 | No |

[1] Noise sensitive uses limited to noise sensitive residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.
[3] Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?

**TABLE 7-12: HY 2040 WITH PROJECT TRAFFIC NOISE LEVEL INCREASES**

| ID | Road | Segment | Receiving Land Use[1] | CNEL at Receiving Land Use (dBA)[2] | | | Noise Sensitive Land Use? | Exterior Noise Standard | Incremental Noise Level Increase Threshold[3] | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | No Project | With Project | Project Addition | | | Limit | Exceeded? |
| 1 | Cedar Ave. | n/o I-10 WB Ramps | Sensitive | 82.9 | 82.9 | 0.0 | Yes | 65 | 3 | No |
| 2 | Cedar Ave. | s/o I-10 EB Ramps | Sensitive | 83.2 | 83.2 | 0.0 | Yes | 65 | 3 | No |
| 3 | Cedar Ave. | n/o Santa Ana Av. | Sensitive | 82.0 | 82.1 | 0.0 | Yes | 65 | 3 | No |
| 4 | Cedar Ave. | s/o Santa Ana Av. | Sensitive | 82.0 | 82.0 | 0.0 | Yes | 65 | 3 | No |
| 5 | Cedar Ave. | s/o Jurupa Av. | Sensitive | 81.5 | 81.6 | 0.0 | Yes | 65 | 3 | No |
| 6 | Cedar Ave. | s/o 7th Street | Sensitive | 82.3 | 82.4 | 0.0 | Yes | 65 | 3 | No |
| 7 | Rubidoux Bl. | s/o El Rivino Rd | Sensitive | 81.2 | 81.2 | 0.1 | Yes | 65 | 3 | No |
| 8 | Rubidoux Bl. | s/o Market St. | Non-Sensitive | 81.3 | 81.4 | 0.1 | No | 70 | 3 | No |
| 9 | Rubidoux Bl. | s/o 24th St. | Non-Sensitive | 81.3 | 81.4 | 0.1 | No | 70 | 3 | No |
| 10 | Rubidoux Bl. | s/o 26th St. | Non-Sensitive | 81.3 | 81.4 | 0.1 | No | 70 | 3 | No |
| 11 | Rubidoux Bl. | s/o 34th St. | Sensitive | 80.7 | 80.7 | 0.0 | Yes | 65 | 3 | No |
| 12 | Market St. | n/o Rivera St. | Sensitive | 80.1 | 80.2 | 0.1 | Yes | 65 | 3 | No |
| 13 | Market St. | s/o SR-60 EB Ramps | Sensitive | 83.0 | 83.0 | 0.0 | Yes | 65 | 3 | No |
| 14 | Riverside Av. | n/o Agua Mansa Rd. | Non-Sensitive | 84.5 | 84.5 | 0.0 | No | 70 | 3 | No |
| 15 | Agua Mansa Rd. | n/o Market St. | Non-Sensitive | 79.9 | 80.0 | 0.0 | No | 70 | 3 | No |
| 16 | Slover Av. | w/o Cedar Ave. | Sensitive | 80.2 | 80.2 | 0.0 | Yes | 65 | 3 | No |
| 17 | Slover Av. | e/o Cedar Ave. | Sensitive | 78.9 | 78.9 | 0.0 | Yes | 65 | 3 | No |
| 18 | Santa Ana Ave. | w/o Cedar Ave. | Sensitive | 76.1 | 76.1 | 0.0 | Yes | 65 | 3 | No |
| 19 | Santa Ana Ave. | e/o Cedar Ave. | Sensitive | 75.2 | 75.2 | 0.0 | Yes | 65 | 3 | No |
| 20 | Jurupa Ave. | w/o Cedar Ave. | Sensitive | 77.4 | 77.4 | 0.0 | Yes | 65 | 3 | No |
| 21 | Jurupa Ave. | e/o Cedar Ave. | Sensitive | 74.8 | 74.8 | 0.0 | Yes | 65 | 3 | No |
| 22 | 7th St. | w/o Cedar Ave. | Sensitive | 80.8 | 80.8 | 0.0 | Yes | 65 | 3 | No |
| 23 | Market St. | e/o Rubidoux Bl. | Non-Sensitive | 80.5 | 80.6 | 0.1 | No | 70 | 3 | No |
| 24 | Agua Mansa Rd. | e/o Riverside Ave. | Sensitive | 78.2 | 78.2 | 0.0 | Yes | 65 | 3 | No |

[1] Noise sensitive uses limited to noise sensitive residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.
[3] Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?

# 8 RECEIVER LOCATIONS

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

Receiver locations are in outdoor living areas (e.g., backyards) 10 feet from any existing or proposed barriers or at the building façade, whichever is closer to the Project site, based on FHWA guidance, and consistent with additional guidance provided by Caltrans and the FTA, as previously described in Section 5.2. Receiver locations in the Project study area include nearby residential and park uses, as described below. Other 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: Located approximately 231 feet north of the Project site, R1 represents existing residential home north of 25$^{th}$ Street. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment.

R2: Location R2 represents Avalon Park located east of the Project site at roughly 352 feet, on the east side of Avalon Street. A 24-hour noise measurement was taken near this location, L2, to describe the existing ambient noise environment.

R3: Location R3 represents the existing residential home on the south side of Avalon Street at approximately 105 feet from the Project site. A 24-hour noise measurement near this location, L3, is used to describe the existing ambient noise environment.

R4: Location R4 represents the existing residential home on the north side of Avalon Street at approximately 41 feet from the Project site. However, this location is no longer used for residential purposes and is currently supporting trucking related commercial land use activities. A 24-hour noise measurement near this location, L4, is used to describe the existing ambient noise environment.

R5: Location R5 represents the existing residential homes on the south side of 28$^{th}$ Street at approximately 178 feet from the Project site. A 24-hour noise measurement was taken near this location, L5, to describe the existing ambient noise environment.

R6: Location R6 represents the existing residential homes located south of the Project site at roughly 108 feet, north of 28th Street. A 24-hour noise measurement was taken near this location, L6, to describe the existing ambient noise environment.

**EXHIBIT 8-A: RECEIVER LOCATIONS**

# 9 OPERATIONAL NOISE IMPACTS

This section analyzes the potential stationary-source operational noise impacts at the nearby receiver locations, identified in Section 8, resulting from the operation of the proposed Rubidoux Warehouse Project. Exhibit 9-A identifies the representative receiver locations and noise source locations used to assess the hourly average $L_{eq}$ operational noise levels consistent with the City of Jurupa Valley Municipal Code, 11.05.040.

## 9.1 OPERATIONAL NOISE SOURCES

This operational noise analysis is intended to describe noise level impacts associated with the expected typical of daytime and nighttime activities at the Project site. To present the potential worst-case noise conditions, this analysis assumes the Project would be operational 24 hours per day, seven days per week. Consistent with similar warehouse uses, the Project business operations would primarily be conducted within the enclosed buildings, except for traffic movement, parking, as well as loading and unloading of trucks at designated loading bays. The on-site Project-related noise sources are expected to include: loading dock activity, entry gate & truck movements, roof-top air conditioning units, parking lot vehicle movements and trash enclosure activity.

## 9.2 REFERENCE NOISE LEVELS

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

## EXHIBIT 9-A: OPERATIONAL NOISE SOURCE LOCATIONS

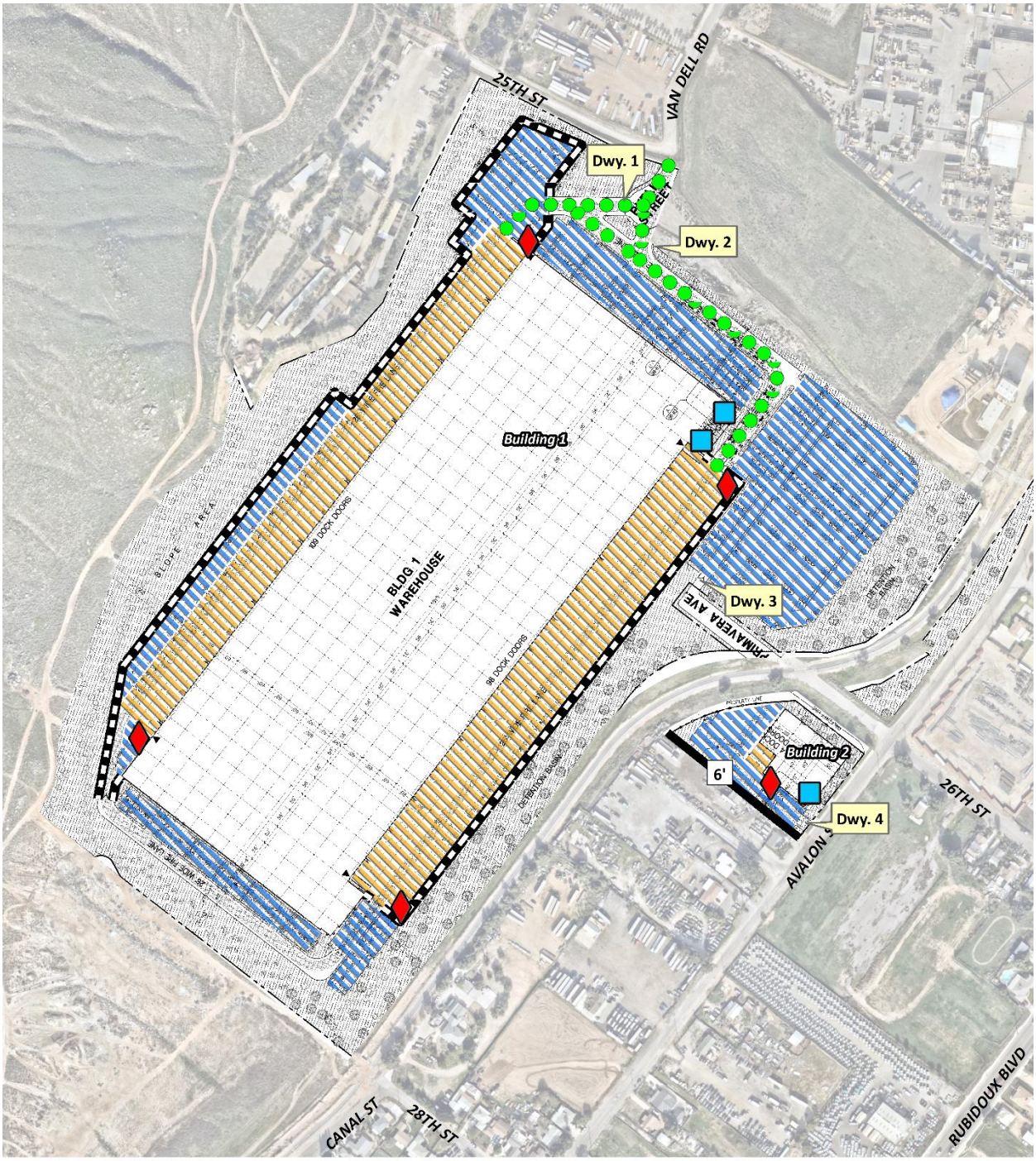

**TABLE 9-1: REFERENCE NOISE LEVEL MEASUREMENTS**

| Noise Source[1] | Noise Source Height (Feet) | Min./Hour[2] | | Reference Noise Level @ 50' (dBA $L_{eq}$) | Sound Power Level (dBA)[3] |
|---|---|---|---|---|---|
| | | Day | Night | | |
| Loading Dock Activity | 8' | 60 | 60 | 62.8 | 103.4 |
| Entry Gate & Truck Movements | 8' | -[4] | -[4] | 58.0 | 89.7 |
| Roof-Top Air Conditioning Units | 5' | 39 | 28 | 57.2 | 88.9 |
| Parking Lot Vehicle Movements | 5' | 60 | 60 | 41.7 | 79.0 |
| Trash Enclosure Activity | 5' | 20 | 20 | 57.3 | 94.0 |

[1] As measured by Urban Crossroads, Inc.

[2] Anticipated duration (minutes within the hour) of noise activity during typical hourly conditions expected at the Project site. "Day" = 7:00 a.m. to 10:00 p.m.; "Night" = 10:00 p.m. to 7:00 a.m.

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

[4] Entry Gate & Truck Movements are calculate based on the number of events by time of day (See Table 9-2).

### 9.2.1 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. (14)

### 9.2.2 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 $L_{eq}$.

The loading dock activity noise level measurement was taken over a fifteen-minute period and represents multiple noise sources taken from the center of activity. The reference noise level measurement includes employees unloading a docked truck container included the squeaking of the truck's shocks when weight was removed from the truck, employees playing music over a radio, as well as a forklift horn and backup alarm. In addition, during the noise level measurement a truck entered the loading dock area and proceeded to reverse and dock in a nearby loading bay, adding truck engine, idling, air brakes noise, in addition to on-going idling of an already docked truck.

The noise level measurements represent the typical weekday general light industrial logistics warehouse operation in a single building with a loading dock area on the eastern side of the building façade. In addition, since this reference noise level describes the peak noise source activity, it is also used in the noise prediction model as area source to conservatively describe the entire loading dock area even though during normal operations, the loading dock noise source activity will occur at different locations throughout the loading dock area.

### 9.2.3 ENTRY GATE & TRUCK MOVEMENTS

An entry gate and truck movements reference noise level measurement were taken at over a 15-minute period and represent multiple noise sources producing a reference noise level of 58.0 dBA $L_{eq}$ at 50 feet. The noise sources included at this measurement location account for the rattling and squeaking during normal opening and closing operations, the gate closure equipment, truck engines idling outside the entry gate, truck movements through the entry gate, and background truck court activities and forklift backup alarm noise. Consistent with the *Rubidoux Warehouse Trip Generation Assessment* prepared by Urban Crossroads, Inc., the Project is expected to generate a total of approximately 752 two-way truck trips per day. (2) Using the estimated number of truck trips in combination with time-of-day vehicle splits, the number of entry gate and truck movements were calculated. As shown on Table 9-2, this information is then used to calculate the entry gate and truck movements operational noise source activity based on the number of events by time of day.

**TABLE 9-2: ENTRY GATE & TRUCK MOVEMENTS BY LOCATION**

| Entry Gate & Truck Movement Location[1] | Total Building Truck Trips[2] | Trip Dist.[3] | Truck Trips by Location[4] | Time of Day Vehicle Splits[5] | | | Truck Movements[6] | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Day | Evening | Night | Day | Evening | Night |
| Driveway 1 | 516 | 53% | 274 | 68.16% | 9.02% | 22.82% | 186 | 25 | 62 |
| Driveway 2 | 516 | 47% | 243 | 68.16% | 9.02% | 22.82% | 165 | 22 | 55 |
| Driveway 4 | 38 | 100% | 38 | 68.16% | 9.02% | 22.82% | 26 | 3 | 9 |

[1] Driveway locations as shown on the Site Plan Exhibit 9-A.
[2] Total Building truck trips according to Table 4-2 of the Rubidoux Warehouse Traffic Impact Analysis.
[3] Project truck trip distribution according to Exhibit 4-1 of the Rubidoux Warehouse Traffic Impact Analysis.
[4] Calculated trip trucks per location represents the product of the total project truck trips by and the trip distribution.
[5] Heavy truck time of day vehicle splits as shown on Table 6-3.
[6] Calculated time of day entry gate and truck movements by location.

### 9.2.4 ROOF-TOP AIR CONDITIONING UNITS

To assess the noise levels created by the roof-top air conditioning units, reference noise level represents 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 $L_{eq}$. Based on the typical operating conditions observed over a four-day measurement period, the roof-top air conditioning units are estimated to operate for and average 39 minutes per hour during the daytime hours, and 28 minutes per hour during the nighttime hours. These operating conditions reflect peak summer cooling requirements with measured temperatures approaching 96 degrees Fahrenheit (°F) with average daytime temperatures of 82°F. For this

noise analysis, the air conditioning units are expected to be located on the roof of the Project buildings. The noise attenuation provided by the existing parapet wall is not reflected in this reference noise level measurement.

### 9.2.5 PARKING LOT VEHICLE MOVEMENTS

To determine the noise levels associated with parking lot vehicle movements, Urban Crossroads collected reference noise level measurements over a 24-hour period at the parking lot for the Panasonic Avionics Corporation in the City of Lake Forest. The peak hour of activity measured over the 24-hour noise level measurement period occurred between 12:00 p.m. to 1:00 p.m., or the typical lunch hour for employees working in the area. The measured reference noise level at 50 feet from parking lot vehicle movements was measured at 41.7 dBA $L_{eq}$. The parking lot noise levels are mainly due to cars pulling in and out of spaces during peak lunch hour activity and employees talking. Noise associated with parking lot vehicle movements is expected to operate for the entire hour (60 minutes).

### 9.2.6 TRASH ENCLOSURE

To describe the noise levels associated with a trash enclosure, Urban Crossroads collected a reference noise level measurement at an existing commercial and office park trash enclosure within a parking lot on the northeast corner of Baker Street and Red Hill Avenue. The measured reference noise level at the uniform 50-foot reference distance is 57.3 dBA $L_{eq}$ for the trash enclosure activity. The trash enclosure activity noise levels include two metal gates opening and closing, metal scraping against concrete floor sounds, dumpster movement on metal wheels, trash dropping into the metal dumpster, and background parking lot vehicle movements. Noise associated with trash enclosure activities is conservatively expected to occur for 20 minutes per hour.

## 9.3 CADNAA NOISE PREDICTION MODEL

To fully describe the exterior operational noise levels from the Project, Urban Crossroads, Inc. developed a noise prediction model using the CadnaA (Computer Aided Noise Abatement) computer program. CadnaA can analyze the noise level of multiple types of noise sources and calculates the noise levels at any location using the spatially accurate Project site plan and includes the effects of topography, buildings, and multiple barriers in its calculations using the latest standards to predict outdoor noise impacts. Appendix 9.2 includes the detailed noise model inputs used to estimate the Project operational noise levels presented in this section. Using the spatially accurate Project site plan and flown aerial imagery from Nearmap, a CadnaA noise prediction model of the Project study area was developed. The noise model provides a three-dimensional representation of the Project study area using the following key data inputs:

- Ground absorption;
- Multiple reflections at buildings and barriers;
- Reference noise level sources by type (area, point, etc.) and noise source height;
- Multiple noise receiver locations and heights;
- Topography and earthen berms;
- Barrier and building heights.

Using the ISO 9613 protocol, the CadnaA noise prediction model 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 calculations at each receiver location and the partial noise level contributions by noise source. The reference sound power level ($L_w$) for the highest noise source expected at the Project site was input into the CadnaA noise prediction model. 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.

## 9.4 PROJECT OPERATIONAL NOISE LEVELS

Using the reference noise levels to represent the proposed Project operations that include loading dock activity, entry gate & truck movements, roof-top air conditioning units, parking lot vehicle movements and trash enclosure 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. In addition, the operational noise analysis includes the planned 14-foot-high perimeter wall as shown on Exhibit 9-A.

### 9.4.1 PROJECT OPERATIONAL NOISE LEVELS

Table 9-3 shows the Project operational noise levels by noise source during the daytime hours of 7:00 a.m. to 10:00 p.m. The Project daytime hourly noise levels at the off-site receiver locations are expected to range from 39.7 to 48.0 dBA $L_{eq}$.

**TABLE 9-3: DAYTIME PROJECT OPERATIONAL NOISE LEVELS**

| Noise Source[1] | Operational Noise Levels by Receiver Location (dBA Leq) | | | | | |
|---|---|---|---|---|---|---|
| | R1 | R2 | R3 | R4 | R5 | R6 |
| Loading Dock Activity | 35.7 | 37.1 | 37.3 | 46.3 | 42.6 | 41.2 |
| Entry Gate & Truck Movements | 38.3 | 35.4 | 35.3 | 36.3 | 22.8 | 21.4 |
| Roof-Top Air Conditioning Units | 23.1 | 28.1 | 30.2 | 38.4 | 26.3 | 24.4 |
| Parking Lot Vehicle Movements | 18.2 | 19.8 | 21.0 | 28.1 | 27.5 | 24.0 |
| Trash Enclosure Activity | 25.5 | 19.2 | 18.4 | 39.1 | 27.1 | 24.1 |
| **Total (All Noise Sources)** | **40.5** | **39.7** | **40.0** | **48.0** | **43.0** | **41.5** |

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

Tables 9-4 shows the Project operational noise levels by source during the nighttime hours of 10:00 p.m. to 7:00 a.m. The Project nighttime hourly noise levels at the off-site receiver locations are expected to range from 38.1 to 47.4 dBA $L_{eq}$. The differences between the daytime and nighttime noise levels are largely related to the duration of noise activity (Table 9-1). Appendix 9.1 includes the detailed noise model inputs including the planned 14-foot-high perimeter walls.

**TABLE 9-4: NIGHTTIME PROJECT OPERATIONAL NOISE LEVELS**

| Noise Source[1] | Operational Noise Levels by Receiver Location (dBA Leq) | | | | | |
|---|---|---|---|---|---|---|
| | R1 | R2 | R3 | R4 | R5 | R6 |
| Loading Dock Activity | 35.7 | 37.1 | 37.3 | 46.3 | 42.6 | 41.2 |
| Entry Gate & Truck Movements | 33.5 | 30.6 | 30.5 | 31.7 | 18.1 | 16.7 |
| Roof-Top Air Conditioning Units | 20.7 | 25.7 | 27.8 | 36.0 | 23.9 | 22.0 |
| Parking Lot Vehicle Movements | 18.2 | 19.8 | 21.0 | 28.1 | 27.5 | 24.0 |
| Trash Enclosure Activity | 24.6 | 18.2 | 17.4 | 38.1 | 26.1 | 23.1 |
| **Total (All Noise Sources)** | **38.1** | **38.3** | **38.6** | **47.4** | **42.9** | **41.4** |

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

### 9.4.2 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 Jurupa Valley exterior noise level standards at nearby receiver locations. Table 9-5 shows the operational noise levels associated with Rubidoux Warehouse Project will satisfy the City of Jurupa Valley 65 dBA $L_{eq}$ daytime and 45 dBA $L_{eq}$ nighttime exterior noise level standards at nearby receiver locations R1, R2, R3, R5 and R6. However, the operational analysis shows that exterior noise levels at receiver location R4 will exceed the City of Jurupa Valley 45 dBA $L_{eq}$ nighttime exterior noise level standards. A review of the existing conditions at receiver location R4 shows that the buildings are no longer used for residential purposes. Receiver location R4 is currently supporting trucking related commercial uses. Therefore, R4 does not represent a noise sensitive residential use, and the Project-related nighttime operational noise level impacts at R4 are considered *less than significant*.

**TABLE 9-5: OPERATIONAL NOISE LEVEL COMPLIANCE**

| Receiver Location[1] | Project Operational Noise Levels (dBA Leq)[2] | | Noise Level Standards (dBA Leq)[3] | | Noise Level Standards Exceeded?[4] | |
|---|---|---|---|---|---|---|
| | Daytime | Nighttime | Daytime | Nighttime | Daytime | Nighttime |
| R1 | 40.5 | 38.1 | 65 | 45 | No | No |
| R2 | 39.7 | 38.3 | 65 | 45 | No | No |
| R3 | 40.0 | 38.6 | 65 | 45 | No | No |
| R4 | 48.0 | 47.4 | 65 | 45 | No | Yes[5] |
| R5 | 43.0 | 42.9 | 65 | 45 | No | No |
| R6 | 41.5 | 41.4 | 65 | 45 | No | No |

[1] See Exhibit 8-A for the receiver locations.
[2] Proposed Project operational noise levels as shown on Tables 9-3 and 9-4.
[3] Exterior noise level standards for residential land use, as shown on Table 4-1.
[4] Do the estimated Project operational noise source activities exceed the noise level standards?
[5] This is location is no longer used for residential purposes and is currently supporting trucking related commercial use.
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

## 9.5 PROJECT OPERATIONAL NOISE LEVEL INCREASES

To describe the Project operational noise level increases, the Project operational noise levels are combined with the existing ambient noise levels measurements for the nearby receiver locations potentially impacted by Project operational noise sources. Since the units used to measure noise, decibels (dB), are logarithmic units, the Project-operational and existing ambient noise levels cannot be combined using standard arithmetic equations. (3) Instead, they must be logarithmically added using the following base equation:

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

Where "SPL1," "SPL2," etc. are equal to the sound pressure levels being combined, or in this case, the Project-operational and existing ambient noise levels. The difference between the combined Project and ambient noise levels describes the Project noise level increases to the existing ambient noise environment. Noise levels that would be experienced at receiver locations when Project-source noise is added to the daytime and nighttime ambient conditions are presented on Tables 9-8 and 9-9, respectively. As indicated on Tables 9-8 and 9-9, the Project will generate an unmitigated daytime and nighttime operational noise level increases ranging from 0.0 to 0.5 dBA $L_{eq}$ at the nearby receiver locations. Project-related operational noise level increases will satisfy the operational noise level increase significance criteria presented in Table 4-1, the increases at the sensitive receiver locations will be *less than significant.*

## 9.6 REFLECTION

Field studies conducted by the FHWA have shown that the reflection from barriers and buildings does not substantially increase noise levels. (5) If all the noise striking a structure was reflected to a given receiving point, the increase would be theoretically limited to 3 dBA. Further, not all the acoustical energy is reflected back to same point. Some of the energy would go over the

structure, some is reflected to points other than the given receiving point, some is scattered by ground coverings (e.g., grass and other plants), and some is blocked by intervening structures and/or obstacles (e.g., the noise source itself). Additionally, some of the reflected energy is lost due to the longer path that the noise must travel. FHWA measurements made to quantify reflective increases in traffic noise have not shown an increase of greater than 1-2 dBA; an increase that is not perceptible to the average human ear.

## 9.7 OPERATIONAL VIBRATION IMPACTS

To assess the potential vibration impacts from truck haul trips associated with operational activities the City of Jurupa Valley threshold for vibration of 0.2 in/sec PPV is used. Truck vibration levels are dependent on vehicle characteristics, load, speed, and pavement conditions. Typical vibration levels for the Rubidoux Warehouse heavy truck activity at normal traffic speeds will approach 0.004 in/sec PPV at 25 feet based on the FTA *Transit Noise Impact and Vibration Assessment.* (9 p. 113) Trucks transiting on site will be travelling at very low speeds so it is expected that delivery truck vibration impacts at nearby homes will satisfy the 0.2 in/sec PPV threshold, and therefore, will be *less than significant*.

**TABLE 9-8: DAYTIME PROJECT OPERATIONAL NOISE LEVEL INCREASES**

| Receiver Location[1] | Total Project Operational Noise Level[2] | Measurement Location[3] | Reference Ambient Noise Levels[4] | Combined Project and Ambient[5] | Project Increase[6] | Increase Criteria[7] | Increase Criteria Exceeded?[7] |
|---|---|---|---|---|---|---|---|
| R1 | 40.5 | L1 | 68.2 | 68.2 | 0.0 | 3 | No |
| R2 | 39.7 | L2 | 62.7 | 62.7 | 0.0 | 3 | No |
| R3 | 40.0 | L3 | 65.5 | 65.5 | 0.0 | 3 | No |
| R4 | 48.0 | L4 | 57.0 | 57.5 | 0.5 | 3 | No |
| R5 | 43.0 | L5 | 62.3 | 62.4 | 0.1 | 3 | No |
| R6 | 41.5 | L6 | 56.1 | 56.2 | 0.1 | 3 | No |

[1] See Exhibit 8-A for the receiver locations.
[2] Total Project daytime operational noise levels as shown on Table 9-3.
[3] Reference noise level measurement locations as shown on Exhibit 5-A.
[4] Observed daytime ambient noise levels as shown on Table 5-1.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increase expected with the addition of the proposed Project activities.
[7] Significance increase criteria as shown on Table 4-1.

**TABLE 9-9: NIGHTTIME OPERATIONAL NOISE LEVEL INCREASES**

| Receiver Location[1] | Total Project Operational Noise Level[2] | Measurement Location[3] | Reference Ambient Noise Levels[4] | Combined Project and Ambient[5] | Project Increase[6] | Increase Criteria[7] | Increase Criteria Exceeded?[7] |
|---|---|---|---|---|---|---|---|
| R1 | 38.1 | L1 | 68.3 | 68.3 | 0.0 | 3 | No |
| R2 | 38.3 | L2 | 60.5 | 60.5 | 0.0 | 3 | No |
| R3 | 38.6 | L3 | 63.2 | 63.2 | 0.0 | 3 | No |
| R4 | 47.4 | L4 | 56.4 | 56.9 | 0.5 | 3 | No |
| R5 | 42.9 | L5 | 58.8 | 58.9 | 0.1 | 3 | No |
| R6 | 41.4 | L6 | 58.3 | 58.4 | 0.1 | 3 | No |

[1] See Exhibit 8-A for the receiver locations.
[2] Total Project nighttime operational noise levels as shown on Table 9-4.
[3] Reference noise level measurement locations as shown on Exhibit 5-A.
[4] Observed nighttime ambient noise levels as shown on Table 5-1.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increase expected with the addition of the proposed Project activities.
[7] Significance increase criteria as shown on Table 4-1.

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# 10 CONSTRUCTION IMPACTS

This section analyzes potential average dBA $L_{eq}$ impacts resulting from the short-term construction activities associated with the development of the Project. Exhibit 10-A shows the construction noise source locations in relation to the nearby sensitive receiver locations previously described in Section 8.

To prevent high levels of construction noise from impacting noise-sensitive land uses, City of Jurupa Valley General Plan Noise Element Policy NE 3.5 limits construction activities within 200 feet of residential uses to weekdays, between 7:00 a.m. and 6:00 p.m., and limit high-noise-generating construction activities (e.g., grading, demolition, pile driving) near sensitive receptors to weekdays between 9:00 a.m. and 3:00 p.m.

## 10.1 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. The number and mix of construction equipment are expected to occur in the following stages, based on the *Rubidoux Warehouse Air Quality Impact Analysis* for the Project: (18)

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

This construction noise analysis was prepared using reference noise level measurements taken by Urban Crossroads, Inc. to describe the typical construction activity noise levels for each stage of Project construction.

## 10.2 CONSTRUCTION REFERENCE NOISE LEVELS

To describe the Project construction noise levels, measurements were collected for similar activities at several construction sites. Table 10-1 provides a summary of the construction reference noise level measurements. Since the reference noise levels were collected at varying distances of 30 feet and 50 feet, all construction noise level measurements presented on Table 10-1 have been adjusted for consistency to describe a uniform reference distance of 50 feet.

## EXHIBIT 10-A: CONSTRUCTION NOISE SOURCE LOCATIONS

**TABLE 10-1: CONSTRUCTION REFERENCE NOISE LEVELS**

| Construction Stage | Reference Construction Activity[1] | Reference Noise Level @ 50 Feet | | Highest Reference Noise Level | |
|---|---|---|---|---|---|
| | | (dBA $L_{eq}$) | (dBA $L_{max}$) | (dBA $L_{eq}$) | (dBA $L_{max}$) |
| Site Preparation/ Demolition | Scraper, Water Truck, & Dozer Activity | 75.3 | 83.3 | 75.3 | 83.3 |
| | Backhoe | 64.2 | 72.0 | | |
| | Water Truck Pass-By & Backup Alarm | 71.9 | 77.9 | | |
| Grading | Rough Grading Activities | 73.5 | 80.4 | 73.5 | 80.4 |
| | Water Truck Pass-By & Backup Alarm | 71.9 | 77.9 | | |
| | Construction Vehicle Maintenance Activities | 67.5 | 70.4 | | |
| Building Construction | Foundation Trenching | 68.2 | 70.5 | 71.6 | 78.8 |
| | Framing | 62.3 | 72.3 | | |
| | Concrete Mixer Backup Alarms & Air Brakes | 71.6 | 78.8 | | |
| Paving | Concrete Mixer Truck Movements | 71.2 | 73.1 | 71.2 | 73.1 |
| | Concrete Paver Activities | 65.6 | 71.3 | | |
| | Concrete Mixer Pour & Paving Activities | 65.9 | 71.9 | | |
| Architectural Coating | Air Compressors | 65.2 | 67.0 | 65.2 | 67.0 |
| | Generator | 64.9 | 67.0 | | |
| | Crane | 62.3 | 65.2 | | |

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.

## 10.3 CONSTRUCTION NOISE ANALYSIS

Using the reference construction equipment noise levels and the CadnaA noise prediction model, calculations of the Project construction noise level impacts at the nearby sensitive receiver locations were completed. 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 10-2, the unmitigated construction noise levels are expected to range from 51.1 to 69.1 dBA $L_{eq}$ at the nearby receiver locations. To demonstrate compliance with the City of Jurupa Valley daytime and nighttime thresholds during short-term Project construction activities, this analysis relies on the $L_{eq}$ thresholds of significance outlined in Section 3.5 and summarized on Table 4-1. To supplement the $L_{eq}$ construction noise analysis, Table 10-3 shows that the unmitigated $L_{max}$ construction noise levels will range from 52.9 dBA $L_{max}$ to 77.1 dBA $L_{max}$. However, since City of Jurupa Valley relies on the $L_{eq}$ noise metric to assess the construction noise levels, the $L_{max.}$ construction noise levels are presented for informational purposes only.

**TABLE 10-2: CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY ($L_{EQ}$)**

| Receiver Location[1] | Construction Noise Levels (dBA $L_{eq}$) | | | | | |
|---|---|---|---|---|---|---|
| | Site Prep/Demo | Grading | Building Construction | Paving | Architectural Coating | Highest Levels[2] |
| R1 | 61.2 | 59.4 | 57.5 | 57.1 | 51.1 | 61.2 |
| R2 | 61.2 | 59.4 | 57.5 | 57.1 | 51.1 | 61.2 |
| R3 | 64.5 | 62.7 | 60.8 | 60.4 | 54.4 | 64.5 |
| R4 | 69.1 | 67.3 | 65.4 | 65.0 | 59.0 | 69.1 |
| R5 | 65.3 | 63.5 | 61.6 | 61.2 | 55.2 | 65.3 |
| R6 | 61.7 | 59.9 | 58.0 | 57.6 | 51.6 | 61.7 |

[1] Noise receiver locations are shown on Exhibit 10-A.
[2] Construction noise level calculations based on distance from the project site boundaries (construction activity area) to nearby receiver locations. CadnaA construction noise model inputs are included in Appendix 10.1.

**TABLE 10-3: CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY ($L_{MAX}$)**

| Receiver Location[1] | Construction Noise Levels (dBA $L_{max}$) | | | | | |
|---|---|---|---|---|---|---|
| | Site Prep/Demo | Grading | Building Construction | Paving | Architectural Coating | Highest Levels[2] |
| R1 | 69.2 | 66.3 | 64.7 | 59.0 | 52.9 | 69.2 |
| R2 | 69.2 | 66.3 | 64.7 | 59.0 | 52.9 | 69.2 |
| R3 | 72.5 | 69.6 | 68.0 | 62.3 | 56.2 | 72.5 |
| R4 | 77.1 | 74.2 | 72.6 | 66.9 | 60.8 | 77.1 |
| R5 | 73.3 | 70.4 | 68.8 | 63.1 | 57.0 | 73.3 |
| R6 | 69.7 | 66.8 | 65.2 | 59.5 | 53.4 | 69.7 |

[1] Noise receiver locations are shown on Exhibit 10-A.
[2] Construction noise level calculations based on distance from the project site boundaries (construction activity area) to nearby receiver locations. CadnaA construction noise model inputs are included in Appendix 10.1.

## 10.4 NIGHTTIME CONCRETE POUR ANALYSIS

The Project may require nighttime concrete pouring activities as a part of Project construction. Nighttime concrete pouring activities are often used to support reduced concrete mixer truck transit times and lower air temperatures than during the daytime hours. Since the nighttime concrete pours will take place outside the permitted City of Jurupa Valley General Plan Noise Element Policy NE 3.5 hourly limits, the Project Applicant will be required to obtain authorization for nighttime work from the City of Jurupa Valley.

The reference paving equipment activity noise levels, shown on Table 10-1, were collected during a nighttime concrete pour at an industrial construction site to represent these activities. As shown on Table 10-2, the concrete pouring equipment noise levels are expected to range from 57.1 to 65.0 dBA $L_{eq}$ when equipment is operating at the closest point from the edge of Project construction activities to the nearby receiver locations. Appendix 10.1 includes the detailed CadnaA construction noise model inputs.

## 10.5 CONSTRUCTION NOISE LEVEL COMPLIANCE

Table 10-4 shows the highest construction noise levels at the potentially impacted receiver locations will satisfy the City of Jurupa Valley 80 dBA $L_{eq}$ daytime and 70 dBA $L_{eq}$ nighttime thresholds (requiring authorization for nighttime work from the City of Jurupa Valley) during short-term Project construction activities. Therefore, the noise impacts due to Project construction noise including nighttime concrete pouring activities are considered *less than significant* at all noise sensitive receiver locations.

**TABLE 10-4: CONSTRUCTION NOISE LEVEL COMPLIANCE**

| Receiver Location[1] | Construction Noise Levels (dBA $L_{eq}$) | | | | | |
|---|---|---|---|---|---|---|
| | Highest Daytime Construction Noise Levels[2] | Nighttime Construction Noise Levels (Concrete Pours) | Threshold[3] | | Threshold Exceeded?[4] | |
| | | | Daytime | Nighttime | Daytime | Nighttime |
| R1 | 61.2 | 57.1 | 80 | 70 | No | No |
| R2 | 61.2 | 57.1 | 80 | 70 | No | No |
| R3 | 64.5 | 60.4 | 80 | 70 | No | No |
| R4 | 69.1 | 65.0 | 80 | 70 | No | No |
| R5 | 65.3 | 61.2 | 80 | 70 | No | No |
| R6 | 61.7 | 57.6 | 80 | 70 | No | No |

[1] Noise receiver locations are shown on Exhibit 10-A.
[2] Estimated construction noise levels during worst-case operating conditions, as shown on Table 10-2. Nighttime construction noise levels based on reference concrete pour noise levels (Paving stage) shown on Table 10-2.
[3] Construction noise level threshold as shown on Table 4-1.
[4] Do the estimated Project construction noise levels exceed the construction noise level threshold?

## 10.6 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. The proposed Project's construction activities most likely to cause vibration impacts are:

- Heavy Construction Equipment: Although all heavy mobile construction equipment has the potential of causing at least some perceptible vibration while operating close to buildings, the vibration is usually short-term and is not of sufficient magnitude to cause building damage.
- Trucks: Trucks hauling building materials to construction sites can be sources of vibration intrusion if the haul routes pass through residential neighborhoods on streets with bumps or potholes. Repairing the bumps and potholes generally eliminates the problem.

Ground-borne vibration levels resulting from construction activities occurring within the Project site were estimated by data published by the FTA. Construction activities that would have the potential to generate low levels of ground-borne vibration within the Project site include grading. Using the vibration source level of construction equipment provided on Table 6-13 and the

construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts. Table 10-5 presents the expected Project related vibration levels at the nearby receiver locations.

At distances ranging from 41 to 352 feet from Project construction activities, construction vibration velocity levels are estimated to range from 0.0017 to 0.0424 in/sec PPV and will remain below the City of Jurupa Valley threshold of 0.2 in/sec PPV at all receiver locations, as shown on Table 10-5. Therefore, the Project-related vibration impacts are considered *less than significant* during the construction activities at the Project site. Moreover, the impacts at the site of the nearest receivers 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.

**TABLE 10-5: UNMITIGATED PROJECT CONSTRUCTION VIBRATION LEVELS**

| Receiver[1] | Distance to Const. Activity (Feet) | Receiver Vibration Levels (in/sec) PPV[2] | | | | | Threshold (in/sec) PPV | Threshold Exceeded?[4] |
|---|---|---|---|---|---|---|---|---|
| | | Small Bulldozer | Jack-hammer | Loaded Trucks | Large Bulldozer | Peak Vibration | | |
| R1 | 231' | 0.0001 | 0.0012 | 0.0027 | 0.0032 | 0.0032 | 0.2 | No |
| R2 | 352' | 0.0001 | 0.0007 | 0.0014 | 0.0017 | 0.0017 | 0.2 | No |
| R3 | 105' | 0.0003 | 0.0041 | 0.0088 | 0.0103 | 0.0103 | 0.2 | No |
| R4 | 41' | 0.0014 | 0.0167 | 0.0362 | 0.0424 | 0.0424 | 0.2 | No |
| R5 | 108' | 0.0003 | 0.0039 | 0.0085 | 0.0099 | 0.0099 | 0.2 | No |
| R6 | 178' | 0.0002 | 0.0018 | 0.0040 | 0.0047 | 0.0047 | 0.2 | No |

[1] Receiver locations are shown on Exhibit 10-A.
[2] Based on the Vibration Source Levels of Construction Equipment included on Table 6-13.
[4] Does the vibration level exceed the maximum acceptable vibration threshold?

# 11 REFERENCES


1. **State of California.** *California Environmental Quality Act, Appendix G.* 2018.
2. **Urban Crossroads, Inc.** *Rubidoux Warehouse Traffic Impact Analysis.* October 2020.
3. **California Department of Transportation Environmental Program.** *Technical Noise Supplement - A Technical Supplement to the Traffic Noise Analysis Protocol.* Sacramento, CA : s.n., September 2013.
4. **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.
5. **U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning, Noise and Air Quality Branch.** *Highway Traffic Noise Analysis and Abatement Policy and Guidance.* December 2011.
6. **U.S. Department of Transportation, Federal Highway Administration.** *Highway Traffic Noise in the United States, Problem and Response.* April 2000. p. 3.
7. **U.S. Environmental Protection Agency Office of Noise Abatement and Control.** *Noise Effects Handbook-A Desk Reference to Health and Welfare Effects of Noise.* October 1979 (revised July 1981). EPA 550/9/82/106.
8. **Occupational Safety and Health Administration.** *Standard 29 CRF, Part 1910.*
9. **U.S. Department of Transportation, Federal Transit Administration.** *Transit Noise and Vibration Impact Assessment Manual.* September 2018.
10. **Office of Planning and Research.** *State of California General Plan Guidelines.* October 2017.
11. **City of Jurupa Valley.** *General Plan Noise Element.* September 2017.
12. —. *Municipal Code, Chapter 11.05 - Noise Regulations.*
13. **City of Jurupa Valley Planning Department.** *Noise Thresholds of Significance Guidance (MA16170, Project: Agua Mansa Commerce Park Specific Plan, Noise Comment 2).* December 19, 2018.
14. **American National Standards Institute (ANSI).** *Specification for Sound Level Meters ANSI S1.4-2014/IEC 61672-1:2013.*
15. **U.S. Department of Transportation, Federal Highway Administration.** *FHWA Highway Traffic Noise Prediction Model.* December 1978. FHWA-RD-77-108.
16. **California Department of Transportation Environmental Program, Office of Environmental Engineering.** *Use of California Vehicle Noise Reference Energy Mean Emission Levels (Calveno REMELs) in FHWA Highway Traffic Noise Prediction.* September 1995. TAN 95-03.
17. **California Department of Transportation.** *Traffic Noise Attenuation as a Function of Ground and Vegetation Final Report.* June 1995. FHWA/CA/TL-95/23.
18. **Urban Crossroads, Inc.** *Rubidoux Warehouse Air Quality Impact Analysis.* October 2020.


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# 12 CERTIFICATION

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

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**EDUCATION**

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

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

**PROFESSIONAL REGISTRATIONS**

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

**PROFESSIONAL AFFILIATIONS**

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

**PROFESSIONAL CERTIFICATIONS**

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

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# APPENDIX 3.1:

# CITY OF JURUPA VALLEY MUNICIPAL CODE

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CHAPTER 11.05. - NOISE REGULATIONS

Sec. 11.05.010. - Intent.

At certain levels, sound becomes noise and may jeopardize the health, safety or general welfare of City of Jurupa Valley residents and degrade their quality of life. Pursuant to its police power, the City Council declares that noise shall be regulated in the manner described in this chapter. This chapter is intended to establish city-wide standards regulating noise. This chapter is not intended to establish thresholds of significance for the purpose of any analysis required by the California Environmental Quality Act (Pub. Resources Code Section 21000 *et seq.* ) and no such thresholds are established.

(Ord. No. 2012-01, § 1(11.10.010), 2-16-2012)

Sec. 11.05.020. - Exemptions.

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

(1) Facilities owned or operated by or for a governmental agency;

(2) Capital improvement projects of a governmental agency;

(3) The maintenance or repair of public properties;

(4) Public safety personnel in the course of executing their official duties, including, but not limited to, sworn peace officers, emergency personnel and public utility personnel. This exemption includes, without limitation, sound emanating from all equipment used by such personnel, whether stationary or mobile;

(5) Public or private schools and school-sponsored activities;

(6) Agricultural operations on land designated "agriculture" in the Jurupa Valley General Plan, or land zoned A-1 (light agriculture), A-P (light agriculture with poultry), A-2 (heavy agriculture), or A-D (agriculture-dairy), provided such operations are carried out in a manner consistent with accepted industry standards. This exemption includes, without limitation, sound emanating from all equipment used during such operations, whether stationary or mobile;

(7) Wind energy conversion systems (WECS), provided such systems comply with the WECS noise provisions of Jurupa Valley Municipal Code or Title 9;

(8) Private construction projects located one-quarter (¼) of a mile or more from an inhabited dwelling;

(9) Private construction projects located within one-quarter (¼) of a mile from an inhabited dwelling, provided that:

(a) Construction does not occur between the hours of six (6:00) p.m. and six (6:00) a.m. during the months of June through September; and

(b) Construction does not occur between the hours of six (6:00) p.m. and seven (7:00) a.m. during the months of October through May;

(10) Property maintenance, including, but not limited to, the operation of lawnmowers, leaf blowers, etc., provided such maintenance occurs between the hours of seven (7:00) a.m. and eight (8:00) p.m.;

(11) Motor vehicles, other than off-highway vehicles. This exemption does not include sound emanating from motor vehicle sound systems;

(12) Heating and air conditioning equipment;

(13) Safety, warning and alarm devices, including, but not limited to, house and car alarms, and other warning devices that are designed to protect the public health, safety, and welfare; or

(14) The discharge of firearms consistent with all state laws.

(Ord. No. 2012-01, § 1(11.10.020), 2-16-2012)

Sec. 11.05.030. - Definitions.

The following words, terms and phrases, when used in this chapter, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

*Audio equipment* means a television, stereo, radio, tape player, compact disc player, mp3 player, iPod or other similar device.

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

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

(2) "Maximum sound level (Lmax)" means the maximum sound level measured on a sound level meter.

*Governmental agency* means the United States, the State of California, Riverside County, City of Jurupa Valley, any city within Riverside County, any special district within Riverside County or any combination of these agencies.

*Land use permit* means a discretionary permit issued by Jurupa Valley pursuant to Jurupa Valley Municipal Code or Title 9.

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

*Motor vehicle sound system* means a stereo, radio, tape player, compact disc player, mp3 player, iPod or other similar device.

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

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

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

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

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

*Sensitive receptor* means a land use that is identified as sensitive to noise in the noise element of the Jurupa Valley General Plan, as applicable to the City of Jurupa Valley by Chapter 1.35, including, but not limited to, residences, schools, hospitals, churches, rest homes, cemeteries or public libraries.

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

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

(Ord. No. 2012-01, § 1(11.10.040), 2-16-2012)

Sec. 11.05.040. - General sound level standards.

No person shall create any sound, or allow the creation of any sound, on any property that causes the exterior sound level on any other occupied property to exceed the sound level standards set forth in Table 1 of this section or that violates the special sound source standards set forth in Section 11.05.060.

***Table 1***
***Sound Level Standards (Db Lmax)***

| *General Plan Foundation Component* | *General Plan Land Use Designation* | *General Plan Land Use Designation Name* | *Density* | *Maximum Decibel Level* | |
|---|---|---|---|---|---|
| | | | | *7 a.m.—10 p.m.* | *10 p.m.—7 a.m.* |
| *Community Development* | EDR | Estate density residential | 2 AC | 55 | 45 |
| | VLDR | Very low density residential | 1 AC | 55 | 45 |
| | LDR | Low density residential | 1/2 AC | 55 | 45 |
| | MDR | Medium density residential | 2—5 | 55 | 45 |
| | MHDR | Medium high density residential | 5—8 | 55 | 45 |
| | HDR | High density residential | 8—14 | 55 | 45 |
| | VHDR | Very high density residential | 14—20 | 55 | 45 |
| | HTDR | Highest density residential | 20+ | 55 | 45 |
| | CR | Retail commercial | | 65 | 55 |
| | CO | Office commercial | | 65 | 55 |
| | CT | Tourist commercial | | 65 | 55 |
| | CC | Community center | | 65 | 55 |
| | I | Light industrial | | 75 | 55 |
| | HI | Heavy industrial | | 75 | 75 |

| | | | | | |
|---|---|---|---|---|---|
| | BP | Business park | | 65 | 45 |
| | PF | Public facility | | 65 | 45 |
| | SP | Specific plan—Residential | | 55 | 45 |
| | | Specific plan—Commercial | | 65 | 55 |
| | | Specific plan—Light Industrial | | 75 | 55 |
| | | Specific plan—Heavy Industrial | | 75 | 75 |
| *Rural Community* | EDR | Estate density residential | 2 AC | 55 | 45 |
| | VLDR | Very low density residential | AC | 55 | 45 |
| | LDR | Low density residential | 1/2 AC | 55 | 45 |
| *Rural* | RR | Rural residential | 5 AC | 45 | 45 |
| | RM | Rural mountainous | 10 AC | 45 | 45 |
| | RD | Rural desert | 0 AC | 45 | 45 |
| *Agriculture* | AG | Agriculture | 10 AC | 45 | 45 |
| *Open Space* | C | Conservation | | 45 | 45 |
| | CH | Conservation habitat | | 45 | 45 |
| | REC | Recreation | | 45 | 45 |
| | RUR | Rural | 20 AC | 45 | 45 |
| | W | Watershed | | 45 | 45 |
| | MR | Mineral resources | | 75 | 45 |

(Ord. No. 2012-01, § 1(11.10.040), 2-16-2012)

Sec. 11.05.050. - Sound level measurement methodology.

If the sound standard being applied is measured in decibels, then sound level measurements pursuant to this section shall be required to establish a violation of this chapter. If the sound standard being applied is not measured in decibels, then sound level measurements are not required to establish a violation of this chapter. Sound level measurements may be made anywhere within the boundaries of an occupied property. The actual location of a sound level measurement shall be at the discretion of the Enforcement Officials identified in Section 11.05.080. Sound level measurements shall be made with a sound level meter. Immediately before a measurement is made, the sound level meter shall be calibrated utilizing an acoustical calibrator meeting the standards of the American National Standards Institute. Following a sound level measurement, the calibration of the sound level meter shall be re-verified. Sound level meters and calibration equipment shall be certified annually.

(Ord. No. 2012-01, § 1(11.10.050), 2-16-2012)

Sec. 11.05.060. - Special sound sources standards.

The general sound level standards set forth in Section 11.05.040 apply to sound emanating from all sources, including the following special sound sources, and the person creating, or allowing the creation of, the sound is subject to the requirements of that section. The following special sound sources are also subject to the following additional standards, the failure to comply with which constitute separate violations of this chapter:

(1) *Motor vehicles.*

(a) *Off-highway vehicles.*

(i) No person shall operate an off-highway vehicle unless it is equipped with a USDA-qualified spark arrester and a constantly operating and properly maintained muffler. A muffler is not considered constantly operating and properly maintained if it is equipped with a cutout, bypass or similar device.

(ii) No person shall operate an off-highway vehicle unless the noise emitted by the vehicle is not more than ninety-six (96) dBA if the vehicle was manufactured on or after January 1, 1986, or is not more than one hundred and one (101) dBA if the vehicle was manufactured before January 1, 1986. For purposes of this subsection, emitted noise shall be measured a distance of twenty (20) inches from the vehicle tailpipe using test procedures established by the Society of Automotive Engineers under Standard J-1287.

(b) *Sound systems.* No person shall operate a motor vehicle sound system, whether affixed to the vehicle or not, between the hours of ten (10:00) p.m. and eight (8:00) a.m., such that the sound system is audible to the human ear inside any inhabited dwelling. No person shall operate a motor vehicle sound system, whether affixed to the vehicle or not, at any other time such that the sound system is audible to the human ear at a distance greater than one hundred (100) feet from the vehicle. Sound level measurements may be used, but are not required to establish a violation of this subsection.

(2) *Power tools and equipment.* No person shall operate any power tools or equipment between the hours of ten (10:00) p.m. and eight (8:00) a.m. such that the power tools or equipment are audible to the human ear inside an inhabited dwelling other than a dwelling in which the power tools or equipment may be located. No person shall operate any power tools or equipment at any other time such that the power tools or equipment are audible to the human ear at a

distance greater than one hundred (100) feet from the power tools or equipment. Sound level measurements may be used, but are not required to establish a violation of this subsection.

(3) *Audio equipment.* No person shall operate any audio equipment, whether portable or not, such that the equipment is audible to the human ear at a distance greater than one hundred (100) feet from the equipment. Sound level measurements may be used, but are not required to establish a violation of this subsection.

(4) *Sound-amplifying equipment and live music.* No person shall install, use or operate sound-amplifying equipment, or perform, or allow to be performed, live music if the sound emanating from sound-amplifying equipment or live music is audible to the human ear at a distance greater than one hundred (100) feet from the equipment or music. To the extent that these requirements conflict with any conditions of approval attached to an underlying land use permit, these requirements shall control. Sound level measurements may be used, but are not required to establish a violation of this subsection.

(Ord. No. 2012-01, § 1(11.10.060), 2-16-2012; Ord. No. 2015-08, § 1, 6-18-2015)

Sec. 11.05.070. - Exceptions.

Exceptions may be requested from the standards set forth in Section 11.10.040 or 11.10.060 of this chapter and may be characterized as construction-related or continuous-events exceptions.

(1) *Application and processing.*

(a) *Construction-related exceptions.* An application for a construction-related exception shall be made to and considered by the Building Official of the city on forms provided by the Building and Safety Division and shall be accompanied by the appropriate filing fee. No public hearing is required.

(b) *Continuous events exceptions.* An application for a continuous events exception shall be made to the Planning Director on forms provided by the Planning Department and shall be accompanied by the appropriate filing fee. Upon receipt of an application for a continuous events exception, the Planning Director shall set the matter for public hearing before the Planning Commission, notice of which shall be given as provided in Section 9.240.250 of this Code. Notwithstanding the above, an application for a continuous events exception that is associated with an application for a land use permit shall be processed concurrently with the land use permit in the same manner that the land use permit is required to be processed.

(2) *Requirements for approval.* The appropriate decision-making body or officer shall not approve an exception application unless the applicant demonstrates that the activities described in the application would not be detrimental to the health, safety or general welfare of the community. In determining whether activities are detrimental to the health, safety or general welfare of the community, the appropriate decision-making body or officer shall consider such factors as the proposed duration of the activities and their location in relation to sensitive receptors. If an exception application is approved, reasonable conditions may be imposed to minimize the public detriment, including, but not limited to, restrictions on sound level, sound duration and operating hours.

(3) *Appeals.* The Building Official's decision on an application for a construction-relation exception is considered final. After making a decision on an application for a continuous-events exception, the appropriate decision-making body or officer shall mail notice of the decision to the applicant. Within ten (10) calendar days after the mailing of such notice, the applicant or interested person may appeal the decision pursuant to and in accordance with the provisions of Chapter 2.40 of this Code.

(Ord. No. 2012-01, § 1(11.10.070), 2-16-2012; Ord. No. 2015-08, § 2, 6-18-2015; Ord. No. 2016-04, § 11(11.10.070), 4-7-2016)

Sec. 11.05.080. - Violations and penalties.

A. Violation of the provisions of this chapter may be enforced pursuant to the enforcement provisions set forth in Title 1 of this Code, including Chapter 1.10, Code Enforcement Generally, Chapter 1.15, Criminal Prosecution, Chapter 1.20, Administrative Penalties, or Chapter 1.25, Public Nuisance Injunctions.

B. The fine schedule for a violation of this chapter enforced pursuant to Chapter 1.20, shall be in the amount of:

(1) Two hundred dollars ($200) for the first violation occurring within a three hundred and sixty-six (366) day period;

(2) Five hundred dollars ($500) for a second violation occurring within three hundred and sixty-six (366) days of the first violation;

(3) Seven hundred and fifty dollars ($750) for a third violation occurring within three hundred and sixty-six (366) days of the first violation; or

(4) One thousand dollars ($1,000) for a fourth violation and each subsequent violation occurring within three hundred and sixty-six (366) days of the first violation.

C. The fines set forth in subsection (B) of this section may be modified by a resolution of the City Council establishing an administrative citation schedule not to exceed one thousand dollars ($1,000) per violation and which may include increased fines for repeat violations and penalties.

D. The City Manager or his designee may reduce the fines set forth in subsections (B) or (C) of this section in the event he or she finds that the violation is not likely to reoccur, the violator cooperated with Enforcement Officials in attempting to enforce the provisions of this chapter and resolve the issues giving rise to the violation, the actions of the violator giving rise to the violation were not malicious and were not taken in deliberate disregard of the provisions of this chapter, and the ends of justice would not be served by imposing the full fine.

(Ord. No. 2012-01, § 1(11.10.080), 2-16-2012)

Sec. 11.05.090. - Duty to cooperate.

No person shall refuse to cooperate with, or obstruct, the Enforcement Officials identified in Section 11.05.080 when they are engaged in the process of enforcing the provisions of this chapter. This duty to cooperate may require a person to extinguish a sound source so that it can be determined whether sound emanating from the source violates the provisions of this chapter.

(Ord. No. 2012-01, § 1(11.10.090), 2-16-2012)

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# APPENDIX 4.1:

# CITY OF JURUPA VALLEY CEQA THRESHOLDS

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| Noise Impact Analysis October 30, 2018 | | Comment |
|---|---|---|
| | | increase and, if appropriate, the project's contribution to a potentially significant cumulative traffic noise increase. |
| 2 | Global | Sec. 11.05.010 of the Municipal Code states in part: "*...This chapter is intended to establish city-wide standards regulating noise. This chapter is not intended to establish thresholds of significance for the purpose of any analysis required by the California Environmental Quality Act (Pub. Resources Code Section 21000 et seq.) and no such thresholds are established...*"<br><br>**Please use the following standards for CEQA significance thresholds and revise report throughout:**<br><br>• Construction Noise: For sensitive residential land uses nearby, the daytime and nighttime 8-hour standards are 80 dBA Leq and 70 dBA Leq, respectively (FTA Transit Noise and Vibration Impact Assessment).<br><br>• Operational Noise (stationary): During operation of the Project, a significant noise-related impact would occur if Project operational noise at a noise-sensitive receptor exceeds:<br>o 65 dBA Leq (10 minutes) between 7:00 a.m. and 10:00 p.m., or<br>o 45 dBA Leq (10 min) between 10:00 p.m. and 7:00 a.m.<br><br>• Operational Noise (traffic): Project-related traffic increases the noise level at a:<br><br>o Residential land use by 3 dBA or more to 65 dBA CNEL or above; or<br>o Commercial land use by 3 dBA or more to 70 dBA CNEL or above.<br><br>• Vibration: A significant vibration-related impact would occur if the Project would expose a vibration-sensitive receptor to vibration levels that exceed 0.2 in/sec PPV during either long-term operation or construction of the Project<br><br>*Note: The Municipal Code noise standards may be used for planning purposes only (i.e. to demonstrate that the project meets the City code requirements for site plan approval).* |
| 3 | Page 23 | Construction exemptions for San Bernardino County are not discussed and are contained in Section 83.01.080(g) (3), i.e., 7 am – 7pm, except Sundays and federal holidays. |
| 4 | Page 24 and global | Policy NE 4.4 is intended for train operation but is being used to assess projects. Please convert this RMS level to VdB so that it can |

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# APPENDIX 5.1:

# STUDY AREA PHOTOS

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JN:12722 Study Area Photos

L1_E
34, 0' 40.610000", 117, 24' 0.910000"

L1_N
34, 0' 40.610000", 117, 24' 0.910000"

L1_S
34, 0' 40.610000", 117, 24' 0.910000"

L1_W
34, 0' 40.610000", 117, 24' 0.910000"

L2_E
34, 0' 56.000000", 117, 23' 38.120000"

L2_N
34, 0' 56.210000", 117, 23' 38.390000"

# JN:12722 Study Area Photos

L2_S
34, 0' 56.040000", 117, 23' 38.120000"

L2_W
34, 0' 55.990000", 117, 23' 38.140000"

L3_E
34, 0' 52.340000", 117, 23' 40.640000"

L3_N
34, 0' 52.360000", 117, 23' 40.610000"

L3_S
34, 0' 52.360000", 117, 23' 40.610000"

L3_W
34, 0' 52.350000", 117, 23' 40.610000"

JN:12722 Study Area Photos

L4_E
34, 0' 50.060000", 117, 23' 44.400000"

L4_N
34, 0' 50.040000", 117, 23' 44.400000"

L4_S
34, 0' 50.040000", 117, 23' 44.400000"

L4_W
34, 0' 50.060000", 117, 23' 44.400000"

L5_E
34, 0' 38.620000", 117, 23' 58.410000"

L5_N
34, 0' 38.640000", 117, 23' 58.440000"

JN:12722 Study Area Photos

L5_S
34, 0' 38.640000", 117, 23' 58.410000"

L5_W
34, 0' 38.620000", 117, 23' 58.410000"

L6_E
34, 1' 7.720000", 117, 23' 57.560000"

L6_N
34, 1' 8.970000", 117, 24' 0.090000"

L6_S
34, 1' 7.660000", 117, 23' 57.590000"

L6_W
34, 1' 7.720000", 117, 23' 57.590000"

# APPENDIX 5.2:

# NOISE LEVEL MEASUREMENT WORKSHEETS

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# 24-Hour Noise Level Measurement Summary

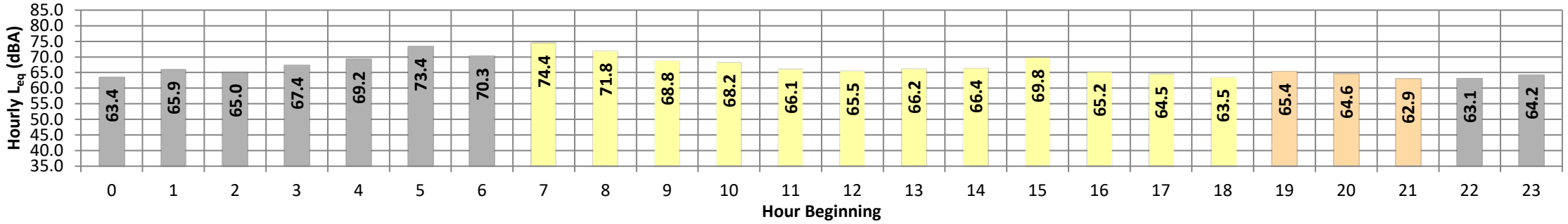
*Date:* Wednesday, February 12, 2020
*Project:* Rubidoux Warehouse

*Location:* L1 - Located north of the Project site on 25th Street near existing single-family residential home at 6041 25th Street.

*Meter:* Piccolo I

*JN:* 12722
*Analyst:* P. Mara

***Hourly $L_{eq}$ dBA Readings (unadjusted)***




| Timeframe | Hour | $L_{eq}$ | $L_{max}$ | $L_{min}$ | L1% | L2% | L5% | L8% | L25% | L50% | L90% | L95% | L99% | $L_{eq}$ | Adj. | Adj. $L_{eq}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Night | 0 | 63.4 | 70.1 | 59.5 | 67.0 | 66.0 | 65.0 | 65.0 | 64.0 | 63.0 | 61.0 | 60.0 | 60.0 | 63.4 | 10.0 | 73.4 |
| | 1 | 65.9 | 74.1 | 61.1 | 71.0 | 70.0 | 69.0 | 68.0 | 66.0 | 64.0 | 62.0 | 62.0 | 62.0 | 65.9 | 10.0 | 75.9 |
| | 2 | 65.0 | 71.2 | 61.3 | 69.0 | 68.0 | 67.0 | 66.0 | 65.0 | 64.0 | 63.0 | 62.0 | 62.0 | 65.0 | 10.0 | 75.0 |
| | 3 | 67.4 | 73.7 | 63.4 | 70.0 | 70.0 | 69.0 | 69.0 | 68.0 | 67.0 | 65.0 | 65.0 | 64.0 | 67.4 | 10.0 | 77.4 |
| | 4 | 69.2 | 85.8 | 64.9 | 72.0 | 71.0 | 71.0 | 70.0 | 69.0 | 68.0 | 67.0 | 66.0 | 65.0 | 69.2 | 10.0 | 79.2 |
| | 5 | 73.4 | 96.9 | 67.0 | 83.0 | 79.0 | 73.0 | 72.0 | 71.0 | 70.0 | 68.0 | 68.0 | 68.0 | 73.4 | 10.0 | 83.4 |
| | 6 | 70.3 | 87.3 | 65.8 | 80.0 | 74.0 | 71.0 | 70.0 | 69.0 | 68.0 | 67.0 | 67.0 | 66.0 | 70.3 | 10.0 | 80.3 |
| Day | 7 | 74.4 | 97.7 | 65.6 | 83.0 | 78.0 | 71.0 | 70.0 | 69.0 | 68.0 | 67.0 | 66.0 | 66.0 | 74.4 | 0.0 | 74.4 |
| | 8 | 71.8 | 97.5 | 63.7 | 80.0 | 74.0 | 70.0 | 69.0 | 68.0 | 66.0 | 65.0 | 64.0 | 64.0 | 71.8 | 0.0 | 71.8 |
| | 9 | 68.8 | 92.4 | 63.5 | 75.0 | 72.0 | 69.0 | 69.0 | 67.0 | 66.0 | 65.0 | 65.0 | 64.0 | 68.8 | 0.0 | 68.8 |
| | 10 | 68.2 | 90.5 | 62.2 | 75.0 | 72.0 | 70.0 | 69.0 | 67.0 | 66.0 | 64.0 | 64.0 | 63.0 | 68.2 | 0.0 | 68.2 |
| | 11 | 66.1 | 79.9 | 61.4 | 70.0 | 69.0 | 68.0 | 68.0 | 66.0 | 65.0 | 63.0 | 63.0 | 62.0 | 66.1 | 0.0 | 66.1 |
| | 12 | 65.5 | 87.1 | 59.5 | 71.0 | 70.0 | 68.0 | 67.0 | 65.0 | 63.0 | 61.0 | 61.0 | 60.0 | 65.5 | 0.0 | 65.5 |
| | 13 | 66.2 | 81.0 | 61.1 | 71.0 | 70.0 | 68.0 | 67.0 | 66.0 | 65.0 | 63.0 | 62.0 | 62.0 | 66.2 | 0.0 | 66.2 |
| | 14 | 66.4 | 89.4 | 58.3 | 75.0 | 69.0 | 66.0 | 66.0 | 64.0 | 63.0 | 62.0 | 61.0 | 59.0 | 66.4 | 0.0 | 66.4 |
| | 15 | 69.8 | 91.7 | 59.0 | 80.0 | 77.0 | 73.0 | 70.0 | 66.0 | 65.0 | 62.0 | 61.0 | 60.0 | 69.8 | 0.0 | 69.8 |
| | 16 | 65.2 | 82.6 | 59.4 | 71.0 | 70.0 | 68.0 | 67.0 | 65.0 | 63.0 | 61.0 | 61.0 | 60.0 | 65.2 | 0.0 | 65.2 |
| | 17 | 64.5 | 79.4 | 58.4 | 69.0 | 68.0 | 67.0 | 66.0 | 65.0 | 63.0 | 61.0 | 61.0 | 60.0 | 64.5 | 0.0 | 64.5 |
| | 18 | 63.5 | 72.6 | 58.7 | 69.0 | 68.0 | 67.0 | 66.0 | 63.0 | 62.0 | 61.0 | 60.0 | 60.0 | 63.5 | 0.0 | 63.5 |
| Evening | 19 | 65.4 | 77.4 | 61.3 | 70.0 | 69.0 | 68.0 | 67.0 | 65.0 | 64.0 | 63.0 | 63.0 | 62.0 | 65.4 | 5.0 | 70.4 |
| | 20 | 64.6 | 81.7 | 60.5 | 70.0 | 68.0 | 65.0 | 65.0 | 64.0 | 63.0 | 62.0 | 61.0 | 61.0 | 64.6 | 5.0 | 69.6 |
| | 21 | 62.9 | 77.1 | 58.3 | 67.0 | 66.0 | 65.0 | 64.0 | 63.0 | 62.0 | 60.0 | 59.0 | 59.0 | 62.9 | 5.0 | 67.9 |
| Night | 22 | 63.1 | 68.8 | 59.2 | 66.0 | 65.0 | 65.0 | 64.0 | 63.0 | 62.0 | 61.0 | 61.0 | 60.0 | 63.1 | 10.0 | 73.1 |
| | 23 | 64.2 | 74.5 | 59.8 | 69.0 | 68.0 | 67.0 | 66.0 | 64.0 | 63.0 | 61.0 | 61.0 | 61.0 | 64.2 | 10.0 | 74.2 |

| Timeframe | Hour | $L_{eq}$ | $L_{max}$ | $L_{min}$ | L1% | L2% | L5% | L8% | L25% | L50% | L90% | L95% | L99% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Day | Min | 63.5 | 72.6 | 58.3 | 69.0 | 68.0 | 66.0 | 66.0 | 63.0 | 62.0 | 61.0 | 60.0 | 59.0 |
| | Max | 74.4 | 97.7 | 65.6 | 83.0 | 78.0 | 73.0 | 70.0 | 69.0 | 68.0 | 67.0 | 66.0 | 66.0 |
| Energy Average | | 68.8 | Average: | | 74.1 | 71.4 | 68.8 | 67.8 | 65.9 | 64.6 | 62.9 | 62.4 | 61.7 |
| Evening | Min | 62.9 | 77.1 | 58.3 | 67.0 | 66.0 | 65.0 | 64.0 | 63.0 | 62.0 | 60.0 | 59.0 | 59.0 |
| | Max | 65.4 | 81.7 | 61.3 | 70.0 | 69.0 | 68.0 | 67.0 | 65.0 | 64.0 | 63.0 | 63.0 | 62.0 |
| Energy Average | | 64.4 | Average: | | 69.0 | 67.7 | 66.0 | 65.3 | 64.0 | 63.0 | 61.7 | 61.0 | 60.7 |
| Night | Min | 63.1 | 68.8 | 59.2 | 66.0 | 65.0 | 65.0 | 64.0 | 63.0 | 62.0 | 61.0 | 60.0 | 60.0 |
| | Max | 73.4 | 96.9 | 67.0 | 83.0 | 79.0 | 73.0 | 72.0 | 71.0 | 70.0 | 68.0 | 68.0 | 68.0 |
| Energy Average | | 68.3 | Average: | | 71.9 | 70.1 | 68.6 | 67.8 | 66.6 | 65.4 | 63.9 | 63.6 | 63.1 |

| $L_{eq}$ (dBA) | | |
|---|---|---|
| 24-Hour | Daytime | Nighttime |
| 68.2 | 68.2 | 68.3 |

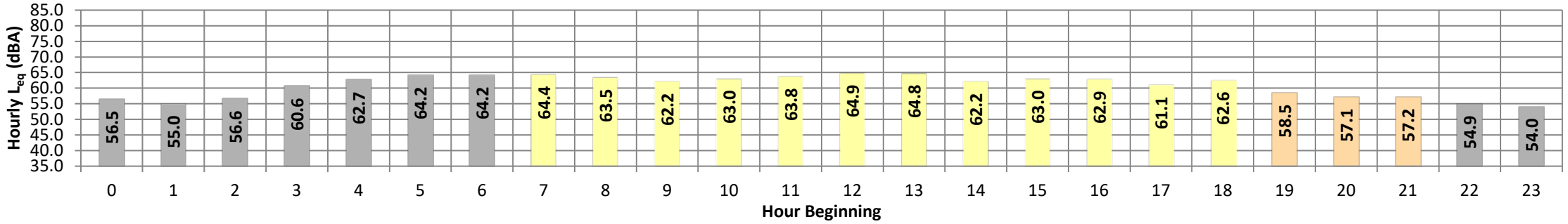
| 24-Hour CNEL (dBA) |
|---|
| 74.8 |

## 24-Hour Noise Level Measurement Summary

*Date:* Wednesday, February 12, 2020 *Location:* L2 - Located east of the Project site on Avalon Street near Avalon Park. *Meter:* Piccolo I *JN:* 12722

*Project:* Rubidoux Warehouse *Analyst:* P. Mara

***Hourly $L_{eq}$ dBA Readings (unadjusted)***




| Timeframe | Hour | $L_{eq}$ | $L_{max}$ | $L_{min}$ | L1% | L2% | L5% | L8% | L25% | L50% | L90% | L95% | L99% | $L_{eq}$ | Adj. | Adj. $L_{eq}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Night | 0 | 56.5 | 81.4 | 41.5 | 70.0 | 65.0 | 55.0 | 51.0 | 46.0 | 44.0 | 43.0 | 42.0 | 42.0 | 56.5 | 10.0 | 66.5 |
| | 1 | 55.0 | 80.2 | 41.4 | 68.0 | 62.0 | 52.0 | 48.0 | 45.0 | 44.0 | 42.0 | 41.0 | 41.0 | 55.0 | 10.0 | 65.0 |
| | 2 | 56.6 | 84.3 | 41.5 | 68.0 | 61.0 | 52.0 | 50.0 | 48.0 | 46.0 | 43.0 | 42.0 | 42.0 | 56.6 | 10.0 | 66.6 |
| | 3 | 60.6 | 84.6 | 43.6 | 74.0 | 71.0 | 62.0 | 57.0 | 52.0 | 51.0 | 45.0 | 44.0 | 44.0 | 60.6 | 10.0 | 70.6 |
| | 4 | 62.7 | 85.7 | 49.7 | 74.0 | 71.0 | 65.0 | 61.0 | 61.0 | 60.0 | 51.0 | 51.0 | 50.0 | 62.7 | 10.0 | 72.7 |
| | 5 | 64.2 | 81.4 | 59.9 | 74.0 | 72.0 | 69.0 | 65.0 | 62.0 | 61.0 | 61.0 | 60.0 | 60.0 | 64.2 | 10.0 | 74.2 |
| | 6 | 64.2 | 81.3 | 60.0 | 75.0 | 72.0 | 69.0 | 65.0 | 61.0 | 61.0 | 60.0 | 60.0 | 60.0 | 64.2 | 10.0 | 74.2 |
| Day | 7 | 64.4 | 83.2 | 59.3 | 75.0 | 73.0 | 68.0 | 66.0 | 61.0 | 60.0 | 60.0 | 59.0 | 59.0 | 64.4 | 0.0 | 64.4 |
| | 8 | 63.5 | 81.9 | 59.1 | 73.0 | 72.0 | 68.0 | 65.0 | 61.0 | 60.0 | 59.0 | 59.0 | 59.0 | 63.5 | 0.0 | 63.5 |
| | 9 | 62.2 | 79.7 | 57.3 | 73.0 | 70.0 | 67.0 | 63.0 | 59.0 | 59.0 | 58.0 | 58.0 | 57.0 | 62.2 | 0.0 | 62.2 |
| | 10 | 63.0 | 85.7 | 56.7 | 74.0 | 72.0 | 68.0 | 65.0 | 58.0 | 58.0 | 57.0 | 57.0 | 57.0 | 63.0 | 0.0 | 63.0 |
| | 11 | 63.8 | 81.9 | 56.0 | 74.0 | 73.0 | 70.0 | 68.0 | 60.0 | 58.0 | 57.0 | 57.0 | 56.0 | 63.8 | 0.0 | 63.8 |
| | 12 | 64.9 | 87.0 | 55.7 | 76.0 | 73.0 | 69.0 | 66.0 | 60.0 | 58.0 | 56.0 | 56.0 | 56.0 | 64.9 | 0.0 | 64.9 |
| | 13 | 64.8 | 88.6 | 56.7 | 75.0 | 73.0 | 70.0 | 68.0 | 60.0 | 59.0 | 58.0 | 58.0 | 57.0 | 64.8 | 0.0 | 64.8 |
| | 14 | 62.2 | 80.4 | 43.9 | 74.0 | 72.0 | 69.0 | 67.0 | 57.0 | 50.0 | 47.0 | 46.0 | 45.0 | 62.2 | 0.0 | 62.2 |
| | 15 | 63.0 | 80.5 | 45.0 | 75.0 | 73.0 | 70.0 | 68.0 | 57.0 | 51.0 | 47.0 | 46.0 | 46.0 | 63.0 | 0.0 | 63.0 |
| | 16 | 62.9 | 83.9 | 45.1 | 74.0 | 72.0 | 70.0 | 67.0 | 58.0 | 52.0 | 49.0 | 48.0 | 46.0 | 62.9 | 0.0 | 62.9 |
| | 17 | 61.1 | 81.8 | 45.4 | 72.0 | 71.0 | 68.0 | 66.0 | 56.0 | 51.0 | 47.0 | 47.0 | 46.0 | 61.1 | 0.0 | 61.1 |
| | 18 | 62.6 | 89.8 | 47.3 | 73.0 | 70.0 | 67.0 | 65.0 | 55.0 | 52.0 | 50.0 | 49.0 | 48.0 | 62.6 | 0.0 | 62.6 |
| Evening | 19 | 58.5 | 80.3 | 44.8 | 70.0 | 68.0 | 64.0 | 61.0 | 52.0 | 49.0 | 47.0 | 47.0 | 45.0 | 58.5 | 5.0 | 63.5 |
| | 20 | 57.1 | 79.8 | 48.0 | 70.0 | 66.0 | 57.0 | 54.0 | 51.0 | 50.0 | 49.0 | 49.0 | 48.0 | 57.1 | 5.0 | 62.1 |
| | 21 | 57.2 | 79.7 | 45.5 | 70.0 | 66.0 | 57.0 | 54.0 | 52.0 | 51.0 | 48.0 | 47.0 | 46.0 | 57.2 | 5.0 | 62.2 |
| Night | 22 | 54.9 | 78.3 | 41.3 | 68.0 | 64.0 | 55.0 | 51.0 | 47.0 | 46.0 | 42.0 | 42.0 | 41.0 | 54.9 | 10.0 | 64.9 |
| | 23 | 54.0 | 76.8 | 40.2 | 68.0 | 62.0 | 53.0 | 48.0 | 44.0 | 43.0 | 41.0 | 40.0 | 40.0 | 54.0 | 10.0 | 64.0 |

| Timeframe | Hour | $L_{eq}$ | $L_{max}$ | $L_{min}$ | L1% | L2% | L5% | L8% | L25% | L50% | L90% | L95% | L99% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Day | Min | 61.1 | 79.7 | 43.9 | 72.0 | 70.0 | 67.0 | 63.0 | 55.0 | 50.0 | 47.0 | 46.0 | 45.0 |
| | Max | 64.9 | 89.8 | 59.3 | 76.0 | 73.0 | 70.0 | 68.0 | 61.0 | 60.0 | 60.0 | 59.0 | 59.0 |
| Energy Average | | 63.3 | Average: | | 74.0 | 72.0 | 68.7 | 66.2 | 58.5 | 55.7 | 53.8 | 53.3 | 52.7 |
| Evening | Min | 57.1 | 79.7 | 44.8 | 70.0 | 66.0 | 57.0 | 54.0 | 51.0 | 49.0 | 47.0 | 47.0 | 45.0 |
| | Max | 58.5 | 80.3 | 48.0 | 70.0 | 68.0 | 64.0 | 61.0 | 52.0 | 51.0 | 49.0 | 49.0 | 48.0 |
| Energy Average | | 57.6 | Average: | | 70.0 | 66.7 | 59.3 | 56.3 | 51.7 | 50.0 | 48.0 | 47.7 | 46.3 |
| Night | Min | 54.0 | 76.8 | 40.2 | 68.0 | 61.0 | 52.0 | 48.0 | 44.0 | 43.0 | 41.0 | 40.0 | 40.0 |
| | Max | 64.2 | 85.7 | 60.0 | 75.0 | 72.0 | 69.0 | 65.0 | 62.0 | 61.0 | 61.0 | 60.0 | 60.0 |
| Energy Average | | 60.5 | Average: | | 71.0 | 66.7 | 59.1 | 55.1 | 51.8 | 50.7 | 47.6 | 46.9 | 46.7 |

| $L_{eq}$ (dBA) | | |
|---|---|---|
| 24-Hour | Daytime | Nighttime |
| 62.0 | 62.7 | 60.5 |

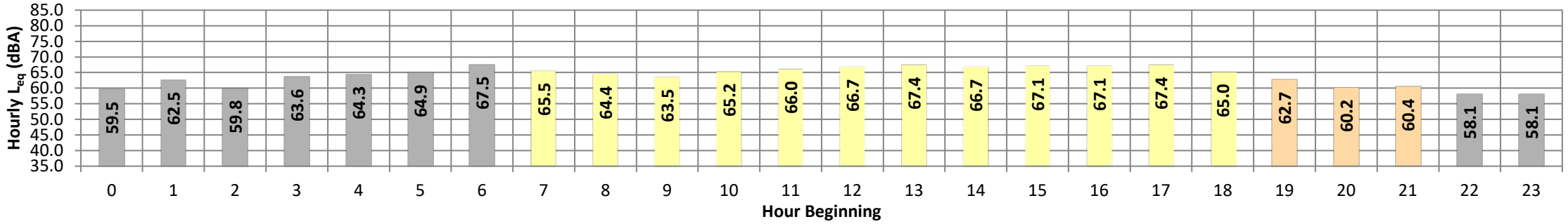
| 24-Hour CNEL (dBA) |
|---|
| 67.4 |

# 24-Hour Noise Level Measurement Summary

*Date:* Wednesday, February 12, 2020 *Location:* L3 - Located east of the Project site near existing single-family home at 2562 Avalon Street. *Meter:* Piccolo I *JN:* 12722

*Project:* Rubidoux Warehouse *Analyst:* P. Mara

***Hourly $L_{eq}$ dBA Readings (unadjusted)***




| Timeframe | Hour | $L_{eq}$ | $L_{max}$ | $L_{min}$ | L1% | L2% | L5% | L8% | L25% | L50% | L90% | L95% | L99% | $L_{eq}$ | Adj. | Adj. $L_{eq}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Night | 0 | 59.5 | 82.7 | 42.0 | 74.0 | 69.0 | 60.0 | 55.0 | 47.0 | 46.0 | 43.0 | 43.0 | 42.0 | 59.5 | 10.0 | 69.5 |
| | 1 | 62.5 | 88.5 | 42.6 | 76.0 | 71.0 | 61.0 | 56.0 | 50.0 | 48.0 | 45.0 | 44.0 | 43.0 | 62.5 | 10.0 | 72.5 |
| | 2 | 59.8 | 86.0 | 42.7 | 72.0 | 66.0 | 58.0 | 53.0 | 49.0 | 47.0 | 44.0 | 44.0 | 43.0 | 59.8 | 10.0 | 69.8 |
| | 3 | 63.6 | 86.1 | 45.1 | 77.0 | 74.0 | 67.0 | 63.0 | 52.0 | 50.0 | 47.0 | 46.0 | 45.0 | 63.6 | 10.0 | 73.6 |
| | 4 | 64.3 | 86.0 | 47.4 | 77.0 | 75.0 | 69.0 | 65.0 | 54.0 | 53.0 | 49.0 | 48.0 | 48.0 | 64.3 | 10.0 | 74.3 |
| | 5 | 64.9 | 86.3 | 52.0 | 77.0 | 75.0 | 71.0 | 68.0 | 58.0 | 55.0 | 53.0 | 53.0 | 52.0 | 64.9 | 10.0 | 74.9 |
| | 6 | 67.5 | 90.6 | 51.0 | 79.0 | 78.0 | 74.0 | 72.0 | 60.0 | 54.0 | 52.0 | 52.0 | 51.0 | 67.5 | 10.0 | 77.5 |
| Day | 7 | 65.5 | 87.2 | 49.8 | 78.0 | 75.0 | 72.0 | 68.0 | 57.0 | 52.0 | 51.0 | 50.0 | 50.0 | 65.5 | 0.0 | 65.5 |
| | 8 | 64.4 | 85.7 | 49.8 | 77.0 | 75.0 | 71.0 | 67.0 | 56.0 | 52.0 | 51.0 | 50.0 | 50.0 | 64.4 | 0.0 | 64.4 |
| | 9 | 63.5 | 82.8 | 48.4 | 76.0 | 74.0 | 70.0 | 66.0 | 54.0 | 51.0 | 49.0 | 49.0 | 49.0 | 63.5 | 0.0 | 63.5 |
| | 10 | 65.2 | 86.6 | 47.9 | 77.0 | 76.0 | 72.0 | 69.0 | 55.0 | 51.0 | 49.0 | 49.0 | 48.0 | 65.2 | 0.0 | 65.2 |
| | 11 | 66.0 | 85.1 | 48.0 | 78.0 | 76.0 | 73.0 | 71.0 | 59.0 | 52.0 | 50.0 | 49.0 | 49.0 | 66.0 | 0.0 | 66.0 |
| | 12 | 66.7 | 87.3 | 48.1 | 78.0 | 77.0 | 73.0 | 71.0 | 59.0 | 53.0 | 49.0 | 49.0 | 49.0 | 66.7 | 0.0 | 66.7 |
| | 13 | 67.4 | 85.6 | 48.6 | 79.0 | 77.0 | 75.0 | 72.0 | 61.0 | 53.0 | 50.0 | 50.0 | 49.0 | 67.4 | 0.0 | 67.4 |
| | 14 | 66.7 | 83.6 | 43.0 | 78.0 | 77.0 | 74.0 | 72.0 | 61.0 | 50.0 | 45.0 | 45.0 | 44.0 | 66.7 | 0.0 | 66.7 |
| | 15 | 67.1 | 85.4 | 44.3 | 79.0 | 77.0 | 74.0 | 72.0 | 62.0 | 52.0 | 46.0 | 45.0 | 44.0 | 67.1 | 0.0 | 67.1 |
| | 16 | 67.1 | 86.7 | 44.5 | 78.0 | 77.0 | 74.0 | 72.0 | 61.0 | 52.0 | 47.0 | 46.0 | 45.0 | 67.1 | 0.0 | 67.1 |
| | 17 | 67.4 | 94.1 | 44.8 | 77.0 | 76.0 | 73.0 | 71.0 | 60.0 | 51.0 | 47.0 | 46.0 | 46.0 | 67.4 | 0.0 | 67.4 |
| | 18 | 65.0 | 87.4 | 45.5 | 76.0 | 74.0 | 72.0 | 70.0 | 58.0 | 50.0 | 47.0 | 47.0 | 46.0 | 65.0 | 0.0 | 65.0 |
| Evening | 19 | 62.7 | 82.7 | 43.9 | 75.0 | 73.0 | 69.0 | 65.0 | 53.0 | 49.0 | 45.0 | 45.0 | 44.0 | 62.7 | 5.0 | 67.7 |
| | 20 | 60.2 | 81.3 | 43.3 | 74.0 | 71.0 | 61.0 | 57.0 | 50.0 | 48.0 | 45.0 | 45.0 | 44.0 | 60.2 | 5.0 | 65.2 |
| | 21 | 60.4 | 81.6 | 44.2 | 74.0 | 71.0 | 62.0 | 58.0 | 51.0 | 48.0 | 46.0 | 45.0 | 44.0 | 60.4 | 5.0 | 65.4 |
| Night | 22 | 58.1 | 80.0 | 41.2 | 72.0 | 68.0 | 58.0 | 53.0 | 47.0 | 45.0 | 43.0 | 43.0 | 42.0 | 58.1 | 10.0 | 68.1 |
| | 23 | 58.1 | 80.8 | 40.7 | 73.0 | 67.0 | 57.0 | 51.0 | 47.0 | 44.0 | 42.0 | 41.0 | 41.0 | 58.1 | 10.0 | 68.1 |

| Timeframe | Hour | $L_{eq}$ | $L_{max}$ | $L_{min}$ | L1% | L2% | L5% | L8% | L25% | L50% | L90% | L95% | L99% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Day | Min | 63.5 | 82.8 | 43.0 | 76.0 | 74.0 | 70.0 | 66.0 | 54.0 | 50.0 | 45.0 | 45.0 | 44.0 |
| | Max | 67.4 | 94.1 | 49.8 | 79.0 | 77.0 | 75.0 | 72.0 | 62.0 | 53.0 | 51.0 | 50.0 | 50.0 |
| Energy Average | | 66.2 | Average: | | 77.6 | 75.9 | 72.8 | 70.1 | 58.6 | 51.6 | 48.4 | 47.9 | 47.4 |
| Evening | Min | 60.2 | 81.3 | 43.3 | 74.0 | 71.0 | 61.0 | 57.0 | 50.0 | 48.0 | 45.0 | 45.0 | 44.0 |
| | Max | 62.7 | 82.7 | 44.2 | 75.0 | 73.0 | 69.0 | 65.0 | 53.0 | 49.0 | 46.0 | 45.0 | 44.0 |
| Energy Average | | 61.3 | Average: | | 74.3 | 71.7 | 64.0 | 60.0 | 51.3 | 48.3 | 45.3 | 45.0 | 44.0 |
| Night | Min | 58.1 | 80.0 | 40.7 | 72.0 | 66.0 | 57.0 | 51.0 | 47.0 | 44.0 | 42.0 | 41.0 | 41.0 |
| | Max | 67.5 | 90.6 | 52.0 | 79.0 | 78.0 | 74.0 | 72.0 | 60.0 | 55.0 | 53.0 | 53.0 | 52.0 |
| Energy Average | | 63.2 | Average: | | 75.2 | 71.4 | 63.9 | 59.6 | 51.6 | 49.1 | 46.4 | 46.0 | 45.2 |

| $L_{eq}$ (dBA) | | |
|---|---|---|
| 24-Hour | Daytime | Nighttime |
| 64.8 | 65.5 | 63.2 |

| 24-Hour CNEL (dBA) |
|---|
| 70.1 |

# 24-Hour Noise Level Measurement Summary

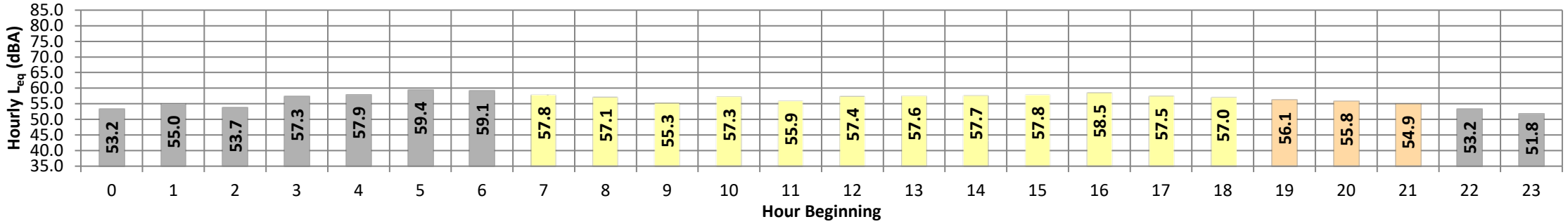
*Date:* Wednesday, February 12, 2020
*Project:* Rubidoux Warehouse

*Location:* L4 - Located southeast of the Project site on 26th Street near existing single-family homes at 5638 26th Street.

*Meter:* Piccolo I

*JN:* 12722
*Analyst:* P. Mara

***Hourly $L_{eq}$ dBA Readings (unadjusted)***




| Timeframe | Hour | $L_{eq}$ | $L_{max}$ | $L_{min}$ | L1% | L2% | L5% | L8% | L25% | L50% | L90% | L95% | L99% | $L_{eq}$ | Adj. | Adj. $L_{eq}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Night | 0 | 53.2 | 73.9 | 45.2 | 64.0 | 59.0 | 56.0 | 54.0 | 51.0 | 49.0 | 47.0 | 46.0 | 45.0 | 53.2 | 10.0 | 63.2 |
| | 1 | 55.0 | 76.8 | 45.0 | 67.0 | 63.0 | 56.0 | 54.0 | 51.0 | 49.0 | 46.0 | 46.0 | 45.0 | 55.0 | 10.0 | 65.0 |
| | 2 | 53.7 | 74.1 | 44.7 | 65.0 | 60.0 | 55.0 | 54.0 | 52.0 | 50.0 | 46.0 | 46.0 | 45.0 | 53.7 | 10.0 | 63.7 |
| | 3 | 57.3 | 80.1 | 46.7 | 69.0 | 66.0 | 60.0 | 57.0 | 53.0 | 51.0 | 49.0 | 48.0 | 47.0 | 57.3 | 10.0 | 67.3 |
| | 4 | 57.9 | 82.1 | 49.0 | 70.0 | 67.0 | 62.0 | 59.0 | 53.0 | 52.0 | 50.0 | 50.0 | 49.0 | 57.9 | 10.0 | 67.9 |
| | 5 | 59.4 | 78.9 | 50.5 | 71.0 | 68.0 | 64.0 | 61.0 | 56.0 | 54.0 | 52.0 | 52.0 | 51.0 | 59.4 | 10.0 | 69.4 |
| | 6 | 59.1 | 82.3 | 50.4 | 70.0 | 68.0 | 64.0 | 60.0 | 55.0 | 53.0 | 51.0 | 51.0 | 51.0 | 59.1 | 10.0 | 69.1 |
| Day | 7 | 57.8 | 80.0 | 46.5 | 68.0 | 67.0 | 63.0 | 60.0 | 53.0 | 50.0 | 48.0 | 48.0 | 47.0 | 57.8 | 0.0 | 57.8 |
| | 8 | 57.1 | 81.1 | 44.4 | 68.0 | 66.0 | 62.0 | 60.0 | 51.0 | 48.0 | 46.0 | 45.0 | 45.0 | 57.1 | 0.0 | 57.1 |
| | 9 | 55.3 | 74.3 | 44.1 | 67.0 | 65.0 | 61.0 | 58.0 | 51.0 | 48.0 | 45.0 | 45.0 | 44.0 | 55.3 | 0.0 | 55.3 |
| | 10 | 57.3 | 82.1 | 44.1 | 68.0 | 66.0 | 62.0 | 60.0 | 52.0 | 49.0 | 46.0 | 46.0 | 45.0 | 57.3 | 0.0 | 57.3 |
| | 11 | 55.9 | 74.9 | 43.7 | 67.0 | 65.0 | 61.0 | 59.0 | 53.0 | 50.0 | 46.0 | 46.0 | 45.0 | 55.9 | 0.0 | 55.9 |
| | 12 | 57.4 | 80.3 | 43.1 | 68.0 | 65.0 | 62.0 | 60.0 | 53.0 | 49.0 | 45.0 | 45.0 | 43.0 | 57.4 | 0.0 | 57.4 |
| | 13 | 57.6 | 77.7 | 43.8 | 69.0 | 67.0 | 64.0 | 61.0 | 53.0 | 50.0 | 46.0 | 46.0 | 44.0 | 57.6 | 0.0 | 57.6 |
| | 14 | 57.7 | 77.4 | 41.5 | 68.0 | 67.0 | 64.0 | 62.0 | 55.0 | 49.0 | 45.0 | 44.0 | 42.0 | 57.7 | 0.0 | 57.7 |
| | 15 | 57.8 | 76.2 | 42.8 | 69.0 | 67.0 | 64.0 | 62.0 | 54.0 | 50.0 | 46.0 | 46.0 | 44.0 | 57.8 | 0.0 | 57.8 |
| | 16 | 58.5 | 78.5 | 44.2 | 69.0 | 67.0 | 65.0 | 62.0 | 55.0 | 51.0 | 48.0 | 47.0 | 45.0 | 58.5 | 0.0 | 58.5 |
| | 17 | 57.5 | 81.4 | 43.8 | 68.0 | 66.0 | 63.0 | 61.0 | 53.0 | 49.0 | 46.0 | 46.0 | 45.0 | 57.5 | 0.0 | 57.5 |
| | 18 | 57.0 | 85.0 | 43.1 | 67.0 | 65.0 | 62.0 | 59.0 | 51.0 | 48.0 | 45.0 | 45.0 | 44.0 | 57.0 | 0.0 | 57.0 |
| Evening | 19 | 56.1 | 76.3 | 44.4 | 67.0 | 65.0 | 60.0 | 58.0 | 54.0 | 52.0 | 48.0 | 47.0 | 45.0 | 56.1 | 5.0 | 61.1 |
| | 20 | 55.8 | 77.2 | 45.5 | 66.0 | 63.0 | 59.0 | 57.0 | 54.0 | 52.0 | 48.0 | 48.0 | 46.0 | 55.8 | 5.0 | 60.8 |
| | 21 | 54.9 | 74.2 | 45.9 | 66.0 | 63.0 | 58.0 | 56.0 | 53.0 | 51.0 | 48.0 | 48.0 | 46.0 | 54.9 | 5.0 | 59.9 |
| Night | 22 | 53.2 | 74.6 | 44.4 | 64.0 | 59.0 | 55.0 | 53.0 | 51.0 | 49.0 | 46.0 | 45.0 | 45.0 | 53.2 | 10.0 | 63.2 |
| | 23 | 51.8 | 72.0 | 42.8 | 64.0 | 59.0 | 54.0 | 52.0 | 49.0 | 47.0 | 45.0 | 44.0 | 43.0 | 51.8 | 10.0 | 61.8 |

| Timeframe | Hour | $L_{eq}$ | $L_{max}$ | $L_{min}$ | L1% | L2% | L5% | L8% | L25% | L50% | L90% | L95% | L99% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Day | Min | 55.3 | 74.3 | 41.5 | 67.0 | 65.0 | 61.0 | 58.0 | 51.0 | 48.0 | 45.0 | 44.0 | 42.0 |
| | Max | 58.5 | 85.0 | 46.5 | 69.0 | 67.0 | 65.0 | 62.0 | 55.0 | 51.0 | 48.0 | 48.0 | 47.0 |
| Energy Average | | 57.3 | Average: | | 68.0 | 66.1 | 62.8 | 60.3 | 52.8 | 49.3 | 46.0 | 45.8 | 44.4 |
| Evening | Min | 54.9 | 74.2 | 44.4 | 66.0 | 63.0 | 58.0 | 56.0 | 53.0 | 51.0 | 48.0 | 47.0 | 45.0 |
| | Max | 56.1 | 77.2 | 45.9 | 67.0 | 65.0 | 60.0 | 58.0 | 54.0 | 52.0 | 48.0 | 48.0 | 46.0 |
| Energy Average | | 55.6 | Average: | | 66.3 | 63.7 | 59.0 | 57.0 | 53.7 | 51.7 | 48.0 | 47.7 | 45.7 |
| Night | Min | 51.8 | 72.0 | 42.8 | 64.0 | 59.0 | 54.0 | 52.0 | 49.0 | 47.0 | 45.0 | 44.0 | 43.0 |
| | Max | 59.4 | 82.3 | 50.5 | 71.0 | 68.0 | 64.0 | 61.0 | 56.0 | 54.0 | 52.0 | 52.0 | 51.0 |
| Energy Average | | 56.4 | Average: | | 67.1 | 63.2 | 58.4 | 56.0 | 52.3 | 50.4 | 48.0 | 47.6 | 46.8 |

| $L_{eq}$ (dBA) | | |
|---|---|---|
| 24-Hour | Daytime | Nighttime |
| 56.8 | 57.0 | 56.4 |

| 24-Hour CNEL (dBA) |
|---|
| 63.1 |

# 24-Hour Noise Level Measurement Summary

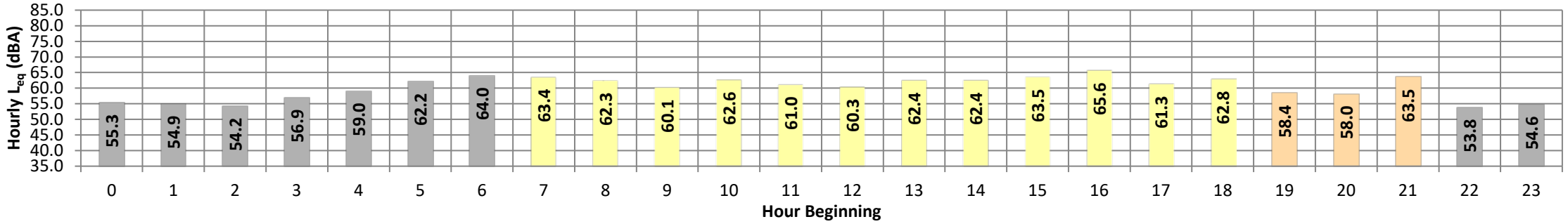
*Date:* Wednesday, February 12, 2020
*Project:* Rubidoux Warehouse

*Location:* L5 - Located south of the Project site on 28th Street near existing single-family homes at 5769 28th Street.

*Meter:* Piccolo I

*JN:* 12722
*Analyst:* P. Mara

***Hourly $L_{eq}$ dBA Readings (unadjusted)***




| Timeframe | Hour | $L_{eq}$ | $L_{max}$ | $L_{min}$ | L1% | L2% | L5% | L8% | L25% | L50% | L90% | L95% | L99% | $L_{eq}$ | Adj. | Adj. $L_{eq}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Night | 0 | 55.3 | 81.9 | 44.5 | 67.0 | 61.0 | 55.0 | 54.0 | 50.0 | 48.0 | 46.0 | 46.0 | 45.0 | 55.3 | 10.0 | 65.3 |
| | 1 | 54.9 | 81.0 | 44.6 | 66.0 | 61.0 | 55.0 | 53.0 | 50.0 | 48.0 | 46.0 | 46.0 | 45.0 | 54.9 | 10.0 | 64.9 |
| | 2 | 54.2 | 77.3 | 43.8 | 66.0 | 59.0 | 53.0 | 52.0 | 50.0 | 49.0 | 46.0 | 45.0 | 44.0 | 54.2 | 10.0 | 64.2 |
| | 3 | 56.9 | 79.0 | 45.3 | 71.0 | 66.0 | 55.0 | 53.0 | 51.0 | 49.0 | 47.0 | 47.0 | 46.0 | 56.9 | 10.0 | 66.9 |
| | 4 | 59.0 | 81.4 | 46.1 | 72.0 | 70.0 | 61.0 | 56.0 | 51.0 | 49.0 | 48.0 | 47.0 | 47.0 | 59.0 | 10.0 | 69.0 |
| | 5 | 62.2 | 83.9 | 47.7 | 74.0 | 72.0 | 68.0 | 64.0 | 55.0 | 53.0 | 51.0 | 50.0 | 49.0 | 62.2 | 10.0 | 72.2 |
| | 6 | 64.0 | 88.4 | 49.4 | 75.0 | 73.0 | 70.0 | 68.0 | 60.0 | 54.0 | 51.0 | 51.0 | 50.0 | 64.0 | 10.0 | 74.0 |
| Day | 7 | 63.4 | 80.5 | 45.1 | 74.0 | 73.0 | 70.0 | 68.0 | 61.0 | 54.0 | 47.0 | 47.0 | 46.0 | 63.4 | 0.0 | 63.4 |
| | 8 | 62.3 | 79.0 | 42.1 | 73.0 | 72.0 | 69.0 | 67.0 | 60.0 | 52.0 | 46.0 | 45.0 | 43.0 | 62.3 | 0.0 | 62.3 |
| | 9 | 60.1 | 86.7 | 41.0 | 72.0 | 69.0 | 63.0 | 58.0 | 50.0 | 46.0 | 43.0 | 42.0 | 42.0 | 60.1 | 0.0 | 60.1 |
| | 10 | 62.6 | 83.2 | 36.2 | 73.0 | 72.0 | 69.0 | 67.0 | 59.0 | 54.0 | 41.0 | 40.0 | 39.0 | 62.6 | 0.0 | 62.6 |
| | 11 | 61.0 | 83.9 | 40.7 | 73.0 | 71.0 | 68.0 | 64.0 | 51.0 | 46.0 | 42.0 | 42.0 | 41.0 | 61.0 | 0.0 | 61.0 |
| | 12 | 60.3 | 76.4 | 42.1 | 72.0 | 71.0 | 67.0 | 64.0 | 56.0 | 48.0 | 44.0 | 44.0 | 43.0 | 60.3 | 0.0 | 60.3 |
| | 13 | 62.4 | 86.0 | 42.0 | 74.0 | 72.0 | 69.0 | 65.0 | 54.0 | 48.0 | 44.0 | 43.0 | 42.0 | 62.4 | 0.0 | 62.4 |
| | 14 | 62.4 | 83.9 | 42.0 | 74.0 | 72.0 | 69.0 | 67.0 | 56.0 | 48.0 | 44.0 | 43.0 | 42.0 | 62.4 | 0.0 | 62.4 |
| | 15 | 63.5 | 83.4 | 42.7 | 74.0 | 73.0 | 70.0 | 68.0 | 59.0 | 52.0 | 46.0 | 45.0 | 43.0 | 63.5 | 0.0 | 63.5 |
| | 16 | 65.6 | 89.0 | 43.6 | 76.0 | 74.0 | 72.0 | 70.0 | 63.0 | 55.0 | 47.0 | 46.0 | 45.0 | 65.6 | 0.0 | 65.6 |
| | 17 | 61.3 | 83.8 | 41.6 | 73.0 | 71.0 | 68.0 | 65.0 | 51.0 | 47.0 | 44.0 | 43.0 | 43.0 | 61.3 | 0.0 | 61.3 |
| | 18 | 62.8 | 91.4 | 40.9 | 73.0 | 71.0 | 66.0 | 61.0 | 49.0 | 45.0 | 43.0 | 42.0 | 42.0 | 62.8 | 0.0 | 62.8 |
| Evening | 19 | 58.4 | 81.7 | 44.0 | 71.0 | 69.0 | 63.0 | 59.0 | 52.0 | 49.0 | 46.0 | 46.0 | 44.0 | 58.4 | 5.0 | 63.4 |
| | 20 | 58.0 | 80.2 | 44.7 | 71.0 | 68.0 | 62.0 | 58.0 | 52.0 | 50.0 | 47.0 | 47.0 | 45.0 | 58.0 | 5.0 | 63.0 |
| | 21 | 63.5 | 93.9 | 44.9 | 73.0 | 69.0 | 60.0 | 56.0 | 52.0 | 50.0 | 48.0 | 47.0 | 46.0 | 63.5 | 5.0 | 68.5 |
| Night | 22 | 53.8 | 76.6 | 44.0 | 64.0 | 58.0 | 54.0 | 53.0 | 50.0 | 48.0 | 46.0 | 45.0 | 44.0 | 53.8 | 10.0 | 63.8 |
| | 23 | 54.6 | 78.5 | 43.8 | 66.0 | 61.0 | 53.0 | 51.0 | 49.0 | 47.0 | 45.0 | 45.0 | 44.0 | 54.6 | 10.0 | 64.6 |

| Timeframe | Hour | $L_{eq}$ | $L_{max}$ | $L_{min}$ | L1% | L2% | L5% | L8% | L25% | L50% | L90% | L95% | L99% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Day | Min | 60.1 | 76.4 | 36.2 | 72.0 | 69.0 | 63.0 | 58.0 | 49.0 | 45.0 | 41.0 | 40.0 | 39.0 |
| | Max | 65.6 | 91.4 | 45.1 | 76.0 | 74.0 | 72.0 | 70.0 | 63.0 | 55.0 | 47.0 | 47.0 | 46.0 |
| Energy Average | | 62.6 | Average: | | 73.4 | 71.8 | 68.3 | 65.3 | 55.8 | 49.6 | 44.3 | 43.5 | 42.6 |
| Evening | Min | 58.0 | 80.2 | 44.0 | 71.0 | 68.0 | 60.0 | 56.0 | 52.0 | 49.0 | 46.0 | 46.0 | 44.0 |
| | Max | 63.5 | 93.9 | 44.9 | 73.0 | 69.0 | 63.0 | 59.0 | 52.0 | 50.0 | 48.0 | 47.0 | 46.0 |
| Energy Average | | 60.7 | Average: | | 71.7 | 68.7 | 61.7 | 57.7 | 52.0 | 49.7 | 47.0 | 46.7 | 45.0 |
| Night | Min | 53.8 | 76.6 | 43.8 | 64.0 | 58.0 | 53.0 | 51.0 | 49.0 | 47.0 | 45.0 | 45.0 | 44.0 |
| | Max | 64.0 | 88.4 | 49.4 | 75.0 | 73.0 | 70.0 | 68.0 | 60.0 | 54.0 | 51.0 | 51.0 | 50.0 |
| Energy Average | | 58.8 | Average: | | 69.0 | 64.6 | 58.2 | 56.0 | 51.8 | 49.4 | 47.3 | 46.9 | 46.0 |

| $L_{eq}$ (dBA) | | |
|---|---|---|
| 24-Hour | Daytime | Nighttime |
| 61.3 | 62.3 | 58.8 |

| 24-Hour CNEL (dBA) |
|---|
| 66.3 |

# 24-Hour Noise Level Measurement Summary

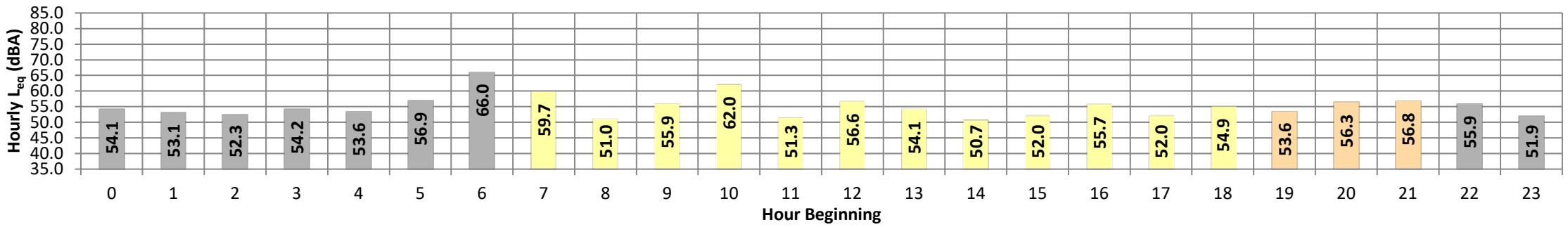
*Date:* Wednesday, February 12, 2020
*Project:* Rubidoux Warehouse

*Location:* L6 - Located near the southern boundary of the Project site on the intersection of Canal Street and 28th Street.

*Meter:* Piccolo I

*JN:* 12722
*Analyst:* P. Mara

***Hourly $L_{eq}$ dBA Readings (unadjusted)***




| Timeframe | Hour | $L_{eq}$ | $L_{max}$ | $L_{min}$ | L1% | L2% | L5% | L8% | L25% | L50% | L90% | L95% | L99% | $L_{eq}$ | Adj. | Adj. $L_{eq}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Night | 0 | 54.1 | 73.3 | 46.2 | 65.0 | 62.0 | 58.0 | 56.0 | 52.0 | 50.0 | 48.0 | 47.0 | 47.0 | 54.1 | 10.0 | 64.1 |
| | 1 | 53.1 | 73.5 | 46.8 | 62.0 | 59.0 | 55.0 | 54.0 | 52.0 | 50.0 | 48.0 | 48.0 | 47.0 | 53.1 | 10.0 | 63.1 |
| | 2 | 52.3 | 63.9 | 45.8 | 58.0 | 57.0 | 55.0 | 54.0 | 53.0 | 51.0 | 48.0 | 48.0 | 46.0 | 52.3 | 10.0 | 62.3 |
| | 3 | 54.2 | 72.6 | 49.2 | 60.0 | 59.0 | 57.0 | 56.0 | 54.0 | 52.0 | 51.0 | 50.0 | 50.0 | 54.2 | 10.0 | 64.2 |
| | 4 | 53.6 | 70.3 | 48.7 | 60.0 | 59.0 | 57.0 | 56.0 | 53.0 | 52.0 | 50.0 | 50.0 | 49.0 | 53.6 | 10.0 | 63.6 |
| | 5 | 56.9 | 71.2 | 50.8 | 64.0 | 63.0 | 60.0 | 59.0 | 56.0 | 55.0 | 53.0 | 52.0 | 52.0 | 56.9 | 10.0 | 66.9 |
| | 6 | 66.0 | 97.3 | 50.7 | 75.0 | 69.0 | 61.0 | 59.0 | 56.0 | 54.0 | 52.0 | 52.0 | 51.0 | 66.0 | 10.0 | 76.0 |
| Day | 7 | 59.7 | 83.7 | 48.3 | 71.0 | 67.0 | 62.0 | 59.0 | 55.0 | 53.0 | 50.0 | 50.0 | 49.0 | 59.7 | 0.0 | 59.7 |
| | 8 | 51.0 | 65.0 | 44.4 | 58.0 | 56.0 | 55.0 | 54.0 | 51.0 | 49.0 | 46.0 | 45.0 | 45.0 | 51.0 | 0.0 | 51.0 |
| | 9 | 55.9 | 79.2 | 43.5 | 67.0 | 61.0 | 57.0 | 55.0 | 50.0 | 47.0 | 45.0 | 44.0 | 44.0 | 55.9 | 0.0 | 55.9 |
| | 10 | 62.0 | 89.5 | 41.9 | 74.0 | 66.0 | 57.0 | 55.0 | 50.0 | 48.0 | 45.0 | 44.0 | 42.0 | 62.0 | 0.0 | 62.0 |
| | 11 | 51.3 | 73.5 | 41.7 | 62.0 | 58.0 | 54.0 | 53.0 | 49.0 | 47.0 | 43.0 | 43.0 | 42.0 | 51.3 | 0.0 | 51.3 |
| | 12 | 56.6 | 74.3 | 46.1 | 65.0 | 63.0 | 61.0 | 60.0 | 56.0 | 53.0 | 49.0 | 48.0 | 47.0 | 56.6 | 0.0 | 56.6 |
| | 13 | 54.1 | 78.0 | 42.7 | 63.0 | 60.0 | 58.0 | 56.0 | 52.0 | 49.0 | 45.0 | 44.0 | 43.0 | 54.1 | 0.0 | 54.1 |
| | 14 | 50.7 | 69.7 | 42.1 | 60.0 | 57.0 | 55.0 | 53.0 | 50.0 | 47.0 | 44.0 | 44.0 | 43.0 | 50.7 | 0.0 | 50.7 |
| | 15 | 52.0 | 72.9 | 41.9 | 60.0 | 57.0 | 55.0 | 54.0 | 51.0 | 49.0 | 45.0 | 45.0 | 43.0 | 52.0 | 0.0 | 52.0 |
| | 16 | 55.7 | 79.5 | 42.7 | 66.0 | 62.0 | 57.0 | 55.0 | 52.0 | 49.0 | 46.0 | 45.0 | 44.0 | 55.7 | 0.0 | 55.7 |
| | 17 | 52.0 | 70.1 | 42.9 | 62.0 | 59.0 | 56.0 | 54.0 | 51.0 | 48.0 | 45.0 | 45.0 | 43.0 | 52.0 | 0.0 | 52.0 |
| | 18 | 54.9 | 80.5 | 41.7 | 65.0 | 60.0 | 56.0 | 54.0 | 49.0 | 46.0 | 44.0 | 43.0 | 42.0 | 54.9 | 0.0 | 54.9 |
| Evening | 19 | 53.6 | 70.3 | 46.5 | 61.0 | 59.0 | 57.0 | 56.0 | 53.0 | 52.0 | 49.0 | 48.0 | 47.0 | 53.6 | 5.0 | 58.6 |
| | 20 | 56.3 | 81.3 | 46.4 | 62.0 | 59.0 | 56.0 | 55.0 | 53.0 | 51.0 | 48.0 | 48.0 | 47.0 | 56.3 | 5.0 | 61.3 |
| | 21 | 56.8 | 82.9 | 47.1 | 64.0 | 61.0 | 56.0 | 55.0 | 53.0 | 51.0 | 49.0 | 49.0 | 48.0 | 56.8 | 5.0 | 61.8 |
| Night | 22 | 55.9 | 86.1 | 47.2 | 61.0 | 58.0 | 55.0 | 54.0 | 52.0 | 50.0 | 48.0 | 48.0 | 48.0 | 55.9 | 10.0 | 65.9 |
| | 23 | 51.9 | 73.2 | 45.8 | 59.0 | 57.0 | 55.0 | 53.0 | 51.0 | 49.0 | 48.0 | 47.0 | 46.0 | 51.9 | 10.0 | 61.9 |

| Timeframe | Hour | $L_{eq}$ | $L_{max}$ | $L_{min}$ | L1% | L2% | L5% | L8% | L25% | L50% | L90% | L95% | L99% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Day | Min | 50.7 | 65.0 | 41.7 | 58.0 | 56.0 | 54.0 | 53.0 | 49.0 | 46.0 | 43.0 | 43.0 | 42.0 |
| | Max | 62.0 | 89.5 | 48.3 | 74.0 | 67.0 | 62.0 | 60.0 | 56.0 | 53.0 | 50.0 | 50.0 | 49.0 |
| Energy Average | | 56.2 | Average: | | 64.4 | 60.5 | 56.9 | 55.2 | 51.3 | 48.8 | 45.6 | 45.0 | 43.9 |
| Evening | Min | 53.6 | 70.3 | 46.4 | 61.0 | 59.0 | 56.0 | 55.0 | 53.0 | 51.0 | 48.0 | 48.0 | 47.0 |
| | Max | 56.8 | 82.9 | 47.1 | 64.0 | 61.0 | 57.0 | 56.0 | 53.0 | 52.0 | 49.0 | 49.0 | 48.0 |
| Energy Average | | 55.8 | Average: | | 62.3 | 59.7 | 56.3 | 55.3 | 53.0 | 51.3 | 48.7 | 48.3 | 47.3 |
| Night | Min | 51.9 | 63.9 | 45.8 | 58.0 | 57.0 | 55.0 | 53.0 | 51.0 | 49.0 | 48.0 | 47.0 | 46.0 |
| | Max | 66.0 | 97.3 | 50.8 | 75.0 | 69.0 | 61.0 | 59.0 | 56.0 | 55.0 | 53.0 | 52.0 | 52.0 |
| Energy Average | | 58.3 | Average: | | 62.7 | 60.3 | 57.0 | 55.7 | 53.2 | 51.4 | 49.6 | 49.1 | 48.4 |

| $L_{eq}$ (dBA) | | |
|---|---|---|
| 24-Hour | Daytime | Nighttime |
| 57.1 | 56.1 | 58.3 |

| 24-Hour CNEL (dBA) |
|---|
| 64.6 |

# APPENDIX 7.1:

# OFF-SITE TRAFFIC NOISE CONTOURS

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* Existing Without Project
*Road Name:* Cedar Ave.
*Road Segment:* n/o I-10 WB Ramps
*Project Name:* Rubidoux Warehouse Noi
*Job Number:* 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 51,709 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 3,620 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | 3.05 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -5.68 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -4.24 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 68.7 | 68.0 | 65.4 | 63.5 | 70.8 | 71.1 |
| Medium Trucks: | 71.2 | 70.9 | 66.1 | 65.4 | 72.9 | 73.1 |
| Heavy Trucks: | 78.0 | 77.1 | 74.3 | 73.6 | 80.6 | 80.8 |
| Vehicle Noise: | 79.2 | 78.4 | 75.4 | 74.5 | 81.6 | 81.9 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 310 | 667 | 1,437 | 3,096 |
| CNEL: | 323 | 695 | 1,498 | 3,227 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* Existing Without Project
*Road Name:* Cedar Ave.
*Road Segment:* n/o Santa Ana Av.
*Project Name:* Rubidoux Warehouse Noi
*Job Number:* 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 25,338 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,774 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -0.56 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -9.29 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -7.85 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.1 | 66.4 | 63.8 | 61.9 | 69.2 | 69.5 |
| Medium Trucks: | 69.4 | 69.0 | 64.3 | 63.5 | 71.0 | 71.3 |
| Heavy Trucks: | 75.6 | 74.7 | 71.9 | 71.2 | 78.2 | 78.5 |
| Vehicle Noise: | 77.0 | 76.2 | 73.2 | 72.3 | 79.4 | 79.7 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 220 | 474 | 1,021 | 2,201 |
| CNEL: | 229 | 494 | 1,065 | 2,294 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* Existing Without Project
*Road Name:* Cedar Ave.
*Road Segment:* s/o I-10 EB Ramps
*Project Name:* Rubidoux Warehouse Noi
*Job Number:* 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 35,289 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,470 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | 0.88 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -7.85 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -6.41 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 68.5 | 67.8 | 65.2 | 63.3 | 70.6 | 70.9 |
| Medium Trucks: | 70.8 | 70.4 | 65.7 | 64.9 | 72.5 | 72.7 |
| Heavy Trucks: | 77.0 | 76.1 | 73.4 | 72.6 | 79.6 | 79.9 |
| Vehicle Noise: | 78.4 | 77.7 | 74.6 | 73.7 | 80.8 | 81.1 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 274 | 591 | 1,274 | 2,744 |
| CNEL: | 286 | 616 | 1,328 | 2,861 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* Existing Without Project
*Road Name:* Cedar Ave.
*Road Segment:* s/o Santa Ana Av.
*Project Name:* Rubidoux Warehouse Noi
*Job Number:* 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 24,556 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,719 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -0.69 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -9.43 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -7.98 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.0 | 66.2 | 63.6 | 61.7 | 69.0 | 69.3 |
| Medium Trucks: | 69.2 | 68.9 | 64.1 | 63.3 | 70.9 | 71.1 |
| Heavy Trucks: | 75.5 | 74.6 | 71.8 | 71.1 | 78.1 | 78.3 |
| Vehicle Noise: | 76.9 | 76.1 | 73.0 | 72.2 | 79.3 | 79.5 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 216 | 464 | 1,000 | 2,155 |
| CNEL: | 225 | 484 | 1,043 | 2,247 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Cedar Ave.
Road Segment: s/o Jurupa Av.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 24,345 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,704 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -0.73 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -9.47 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -8.02 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 66.9 | 66.2 | 63.6 | 61.7 | 69.0 | 69.3 |
| Medium Trucks: | 69.2 | 68.8 | 64.1 | 63.3 | 70.9 | 71.1 |
| Heavy Trucks: | 75.4 | 74.5 | 71.8 | 71.0 | 78.0 | 78.3 |
| Vehicle Noise: | 76.8 | 76.0 | 73.0 | 72.1 | 79.2 | 79.5 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 214 | 462 | 995 | 2,143 |
| CNEL: | 223 | 481 | 1,037 | 2,234 |



## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Rubidoux Bl.
Road Segment: s/o El Rivino Rd
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 25,038 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,753 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -1.06 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -9.80 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -8.36 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.3 | 66.6 | 64.0 | 62.1 | 69.4 | 69.7 |
| Medium Trucks: | 69.4 | 69.0 | 64.3 | 63.5 | 71.1 | 71.3 |
| Heavy Trucks: | 75.2 | 74.3 | 71.5 | 70.8 | 77.8 | 78.1 |
| Vehicle Noise: | 76.8 | 76.0 | 72.9 | 72.0 | 79.1 | 79.4 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 240 | 516 | 1,112 | 2,396 |
| CNEL: | 250 | 538 | 1,160 | 2,498 |



## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Cedar Ave.
Road Segment: s/o 7th Street
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 25,512 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,786 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -0.98 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -9.72 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -8.28 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 68.4 | 67.7 | 65.1 | 63.2 | 70.5 | 70.8 |
| Medium Trucks: | 70.5 | 70.1 | 65.4 | 64.6 | 72.1 | 72.4 |
| Heavy Trucks: | 76.3 | 75.4 | 72.6 | 71.9 | 78.9 | 79.2 |
| Vehicle Noise: | 77.8 | 77.1 | 74.0 | 73.1 | 80.2 | 80.5 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 250 | 538 | 1,159 | 2,497 |
| CNEL: | 260 | 561 | 1,208 | 2,603 |



## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Rubidoux Bl.
Road Segment: s/o Market St.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 24,068 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,685 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -1.24 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -9.97 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -8.53 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.1 | 66.4 | 63.8 | 61.9 | 69.2 | 69.5 |
| Medium Trucks: | 69.2 | 68.9 | 64.1 | 63.3 | 70.9 | 71.1 |
| Heavy Trucks: | 75.0 | 74.1 | 71.4 | 70.6 | 77.6 | 77.9 |
| Vehicle Noise: | 76.6 | 75.8 | 72.7 | 71.8 | 79.0 | 79.2 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 233 | 503 | 1,083 | 2,334 |
| CNEL: | 243 | 524 | 1,129 | 2,433 |

## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* Existing Without Project
*Road Name:* Rubidoux Bl.
*Road Segment:* s/o 24th St.
*Project Name:* Rubidoux Warehouse Noi
*Job Number:* 12722

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 24,265 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 1,699 vehicles |
| *Vehicle Speed:* | 50 mph |
| *Near/Far Lane Distance:* | 48 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 59.0 feet |
| *Centerline Dist. to Observer:* | 59.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 75.75% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 10.13% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 14.13% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 54.129 |
| *Medium Trucks:* | 53.966 |
| *Heavy Trucks:* | 53.982 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 70.20 | -1.20 | -0.62 | -1.20 | *-4.69* | 0.000 | 0.000 |
| *Medium Trucks:* | 81.00 | -9.94 | -0.60 | -1.20 | *-4.88* | 0.000 | 0.000 |
| *Heavy Trucks:* | 85.38 | -8.49 | -0.60 | -1.20 | *-5.35* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 67.2 | 66.5 | 63.9 | 62.0 | 69.2 | 69.6 |
| *Medium Trucks:* | 69.3 | 68.9 | 64.2 | 63.4 | 70.9 | 71.2 |
| *Heavy Trucks:* | 75.1 | 74.2 | 71.4 | 70.7 | 77.7 | 77.9 |
| *Vehicle Noise:* | 76.6 | 75.8 | 72.8 | 71.9 | 79.0 | 79.3 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 235 | 506 | 1,089 | 2,347 |
| *CNEL:* | 245 | 527 | 1,136 | 2,447 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* Existing Without Project
*Road Name:* Rubidoux Bl.
*Road Segment:* s/o 34th St.
*Project Name:* Rubidoux Warehouse Noi
*Job Number:* 12722

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 24,848 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 1,739 vehicles |
| *Vehicle Speed:* | 50 mph |
| *Near/Far Lane Distance:* | 48 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 59.0 feet |
| *Centerline Dist. to Observer:* | 59.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 75.75% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 10.13% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 14.13% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 54.129 |
| *Medium Trucks:* | 53.966 |
| *Heavy Trucks:* | 53.982 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 70.20 | -1.10 | -0.62 | -1.20 | *-4.69* | 0.000 | 0.000 |
| *Medium Trucks:* | 81.00 | -9.84 | -0.60 | -1.20 | *-4.88* | 0.000 | 0.000 |
| *Heavy Trucks:* | 85.38 | -8.39 | -0.60 | -1.20 | *-5.35* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 67.3 | 66.6 | 64.0 | 62.1 | 69.3 | 69.7 |
| *Medium Trucks:* | 69.4 | 69.0 | 64.3 | 63.5 | 71.0 | 71.3 |
| *Heavy Trucks:* | 75.2 | 74.3 | 71.5 | 70.8 | 77.8 | 78.0 |
| *Vehicle Noise:* | 76.7 | 75.9 | 72.9 | 72.0 | 79.1 | 79.4 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 238 | 514 | 1,107 | 2,384 |
| *CNEL:* | 249 | 536 | 1,154 | 2,486 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* Existing Without Project
*Road Name:* Rubidoux Bl.
*Road Segment:* s/o 26th St.
*Project Name:* Rubidoux Warehouse Noi
*Job Number:* 12722

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 24,163 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 1,691 vehicles |
| *Vehicle Speed:* | 50 mph |
| *Near/Far Lane Distance:* | 48 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 59.0 feet |
| *Centerline Dist. to Observer:* | 59.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 75.75% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 10.13% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 14.13% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 54.129 |
| *Medium Trucks:* | 53.966 |
| *Heavy Trucks:* | 53.982 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 70.20 | -1.22 | -0.62 | -1.20 | *-4.69* | 0.000 | 0.000 |
| *Medium Trucks:* | 81.00 | -9.96 | -0.60 | -1.20 | *-4.88* | 0.000 | 0.000 |
| *Heavy Trucks:* | 85.38 | -8.51 | -0.60 | -1.20 | *-5.35* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 67.2 | 66.5 | 63.9 | 61.9 | 69.2 | 69.6 |
| *Medium Trucks:* | 69.2 | 68.9 | 64.1 | 63.4 | 70.9 | 71.1 |
| *Heavy Trucks:* | 75.1 | 74.2 | 71.4 | 70.7 | 77.7 | 77.9 |
| *Vehicle Noise:* | 76.6 | 75.8 | 72.7 | 71.9 | 79.0 | 79.2 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 234 | 504 | 1,086 | 2,340 |
| *CNEL:* | 244 | 526 | 1,132 | 2,440 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* Existing Without Project
*Road Name:* Market St.
*Road Segment:* n/o Rivera St.
*Project Name:* Rubidoux Warehouse Noi
*Job Number:* 12722

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 24,065 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 1,685 vehicles |
| *Vehicle Speed:* | 45 mph |
| *Near/Far Lane Distance:* | 48 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 59.0 feet |
| *Centerline Dist. to Observer:* | 59.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 75.75% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 10.13% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 14.13% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 54.129 |
| *Medium Trucks:* | 53.966 |
| *Heavy Trucks:* | 53.982 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 68.46 | -0.78 | -0.62 | -1.20 | *-4.69* | 0.000 | 0.000 |
| *Medium Trucks:* | 79.45 | -9.52 | -0.60 | -1.20 | *-4.88* | 0.000 | 0.000 |
| *Heavy Trucks:* | 84.25 | -8.07 | -0.60 | -1.20 | *-5.35* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 65.9 | 65.1 | 62.6 | 60.6 | 67.9 | 68.3 |
| *Medium Trucks:* | 68.1 | 67.8 | 63.0 | 62.2 | 69.8 | 70.0 |
| *Heavy Trucks:* | 74.4 | 73.5 | 70.7 | 70.0 | 77.0 | 77.2 |
| *Vehicle Noise:* | 75.8 | 75.0 | 71.9 | 71.1 | 78.2 | 78.4 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 207 | 445 | 959 | 2,066 |
| *CNEL:* | 215 | 464 | 1,000 | 2,154 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* Existing Without Project
*Road Name:* Market St.
*Road Segment:* s/o SR-60 EB Ramps
*Project Name:* Rubidoux Warehouse Noi
*Job Number:* 12722

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 33,051 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 2,314 vehicles |
| *Vehicle Speed:* | 45 mph |
| *Near/Far Lane Distance:* | 65 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 50.0 feet |
| *Centerline Dist. to Observer:* | 50.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 75.75% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 10.13% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 14.13% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 38.324 |
| *Medium Trucks:* | 38.093 |
| *Heavy Trucks:* | 38.115 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 68.46 | 0.60 | 1.63 | -1.20 | *-4.65* | 0.000 | 0.000 |
| *Medium Trucks:* | 79.45 | -8.14 | 1.67 | -1.20 | *-4.87* | 0.000 | 0.000 |
| *Heavy Trucks:* | 84.25 | -6.69 | 1.66 | -1.20 | *-5.43* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 69.5 | 68.8 | 66.2 | 64.3 | 71.6 | 71.9 |
| *Medium Trucks:* | 71.8 | 71.4 | 66.7 | 65.9 | 73.4 | 73.7 |
| *Heavy Trucks:* | 78.0 | 77.1 | 74.4 | 73.6 | 80.6 | 80.9 |
| *Vehicle Noise:* | 79.4 | 78.6 | 75.6 | 74.7 | 81.8 | 82.1 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 306 | 660 | 1,422 | 3,063 |
| *CNEL:* | 319 | 688 | 1,482 | 3,193 |

Tuesday, October 6, 2020

## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* Existing Without Project
*Road Name:* Agua Mansa Rd.
*Road Segment:* n/o Market St.
*Project Name:* Rubidoux Warehouse Noi
*Job Number:* 12722

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 17,783 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 1,245 vehicles |
| *Vehicle Speed:* | 45 mph |
| *Near/Far Lane Distance:* | 36 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 50.0 feet |
| *Centerline Dist. to Observer:* | 50.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 75.75% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 10.13% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 14.13% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 46.915 |
| *Medium Trucks:* | 46.726 |
| *Heavy Trucks:* | 46.744 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 68.46 | -2.09 | 0.31 | -1.20 | *-4.65* | 0.000 | 0.000 |
| *Medium Trucks:* | 79.45 | -10.83 | 0.34 | -1.20 | *-4.87* | 0.000 | 0.000 |
| *Heavy Trucks:* | 84.25 | -9.39 | 0.34 | -1.20 | *-5.43* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 65.5 | 64.8 | 62.2 | 60.3 | 67.5 | 67.9 |
| *Medium Trucks:* | 67.8 | 67.4 | 62.7 | 61.9 | 69.4 | 69.7 |
| *Heavy Trucks:* | 74.0 | 73.1 | 70.3 | 69.6 | 76.6 | 76.9 |
| *Vehicle Noise:* | 75.4 | 74.6 | 71.6 | 70.7 | 77.8 | 78.1 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 165 | 356 | 767 | 1,653 |
| *CNEL:* | 172 | 371 | 800 | 1,723 |

Tuesday, October 6, 2020

## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* Existing Without Project
*Road Name:* Riverside Av.
*Road Segment:* n/o Agua Mansa Rd.
*Project Name:* Rubidoux Warehouse Noi
*Job Number:* 12722

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 27,794 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 1,946 vehicles |
| *Vehicle Speed:* | 55 mph |
| *Near/Far Lane Distance:* | 48 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 52.0 feet |
| *Centerline Dist. to Observer:* | 52.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 75.75% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 10.13% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 14.13% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 46.400 |
| *Medium Trucks:* | 46.209 |
| *Heavy Trucks:* | 46.228 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 71.78 | -1.02 | 0.38 | -1.20 | *-4.66* | 0.000 | 0.000 |
| *Medium Trucks:* | 82.40 | -9.76 | 0.41 | -1.20 | *-4.87* | 0.000 | 0.000 |
| *Heavy Trucks:* | 86.40 | -8.32 | 0.41 | -1.20 | *-5.41* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 69.9 | 69.2 | 66.6 | 64.7 | 72.0 | 72.3 |
| *Medium Trucks:* | 71.9 | 71.5 | 66.8 | 66.0 | 73.5 | 73.8 |
| *Heavy Trucks:* | 77.3 | 76.4 | 73.6 | 72.9 | 79.9 | 80.1 |
| *Vehicle Noise:* | 79.0 | 78.2 | 75.1 | 74.2 | 81.3 | 81.6 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 296 | 637 | 1,372 | 2,957 |
| *CNEL:* | 308 | 664 | 1,431 | 3,083 |

Tuesday, October 6, 2020

## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* Existing Without Project
*Road Name:* Slover Av.
*Road Segment:* w/o Cedar Ave.
*Project Name:* Rubidoux Warehouse Noi
*Job Number:* 12722

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 15,100 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 1,057 vehicles |
| *Vehicle Speed:* | 50 mph |
| *Near/Far Lane Distance:* | 48 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 52.0 feet |
| *Centerline Dist. to Observer:* | 52.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 75.75% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 10.13% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 14.13% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 46.400 |
| *Medium Trucks:* | 46.209 |
| *Heavy Trucks:* | 46.228 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 70.20 | -3.26 | 0.38 | -1.20 | *-4.66* | 0.000 | 0.000 |
| *Medium Trucks:* | 81.00 | -12.00 | 0.41 | -1.20 | *-4.87* | 0.000 | 0.000 |
| *Heavy Trucks:* | 85.38 | -10.55 | 0.41 | -1.20 | *-5.41* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 66.1 | 65.4 | 62.8 | 60.9 | 68.2 | 68.5 |
| *Medium Trucks:* | 68.2 | 67.8 | 63.1 | 62.3 | 69.9 | 70.1 |
| *Heavy Trucks:* | 74.0 | 73.1 | 70.4 | 69.6 | 76.6 | 76.9 |
| *Vehicle Noise:* | 75.6 | 74.8 | 71.7 | 70.8 | 77.9 | 78.2 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 176 | 379 | 817 | 1,760 |
| *CNEL:* | 184 | 395 | 852 | 1,835 |

Tuesday, October 6, 2020

## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Slover Av.
Road Segment: e/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 11,432 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 800 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -4.47 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -13.21 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -11.76 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 64.9 | 64.2 | 61.6 | 59.7 | 67.0 | 67.3 |
| Medium Trucks: | 67.0 | 66.6 | 61.9 | 61.1 | 68.7 | 68.9 |
| Heavy Trucks: | 72.8 | 71.9 | 69.2 | 68.4 | 75.4 | 75.7 |
| Vehicle Noise: | 74.4 | 73.6 | 70.5 | 69.6 | 76.7 | 77.0 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 146 | 315 | 679 | 1,462 |
| CNEL: | 152 | 328 | 708 | 1,524 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Santa Ana Ave.
Road Segment: e/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 6,307 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 441 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 36 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 44.0 feet |
| Centerline Dist. to Observer: | 44.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 40.460 |
| Medium Trucks: | 40.241 |
| Heavy Trucks: | 40.262 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -6.08 | 1.28 | -1.20 | -4.61 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -14.82 | 1.31 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -13.38 | 1.31 | -1.20 | -5.50 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 60.5 | 59.8 | 57.2 | 55.3 | 62.6 | 62.9 |
| Medium Trucks: | 63.0 | 62.6 | 57.9 | 57.1 | 64.7 | 64.9 |
| Heavy Trucks: | 69.7 | 68.8 | 66.1 | 65.3 | 72.3 | 72.6 |
| Vehicle Noise: | 71.0 | 70.2 | 67.1 | 66.3 | 73.4 | 73.7 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 74 | 159 | 343 | 740 |
| CNEL: | 77 | 166 | 358 | 771 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Santa Ana Ave.
Road Segment: w/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 8,647 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 605 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 36 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 44.0 feet |
| Centerline Dist. to Observer: | 44.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 40.460 |
| Medium Trucks: | 40.241 |
| Heavy Trucks: | 40.262 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -4.71 | 1.28 | -1.20 | -4.61 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -13.45 | 1.31 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -12.01 | 1.31 | -1.20 | -5.50 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 61.9 | 61.2 | 58.6 | 56.6 | 63.9 | 64.3 |
| Medium Trucks: | 64.4 | 64.0 | 59.3 | 58.5 | 66.0 | 66.3 |
| Heavy Trucks: | 71.1 | 70.2 | 67.4 | 66.7 | 73.7 | 74.0 |
| Vehicle Noise: | 72.3 | 71.5 | 68.5 | 67.7 | 74.8 | 75.0 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 91 | 197 | 424 | 913 |
| CNEL: | 95 | 205 | 442 | 952 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Jurupa Ave.
Road Segment: w/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 5,716 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 400 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -6.51 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -15.25 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -13.80 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 59.2 | 58.5 | 55.9 | 54.0 | 61.2 | 61.6 |
| Medium Trucks: | 61.7 | 61.3 | 56.6 | 55.8 | 63.3 | 63.6 |
| Heavy Trucks: | 68.4 | 67.5 | 64.7 | 64.0 | 71.0 | 71.3 |
| Vehicle Noise: | 69.6 | 68.8 | 65.8 | 65.0 | 72.1 | 72.3 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 71 | 154 | 331 | 713 |
| CNEL: | 74 | 160 | 345 | 743 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Jurupa Ave.
Road Segment: e/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 5,986 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 419 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -6.31 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -15.05 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -13.60 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 59.4 | 58.7 | 56.1 | 54.2 | 61.4 | 61.8 |
| Medium Trucks: | 61.9 | 61.5 | 56.8 | 56.0 | 63.5 | 63.8 |
| Heavy Trucks: | 68.6 | 67.7 | 64.9 | 64.2 | 71.2 | 71.5 |
| Vehicle Noise: | 69.8 | 69.0 | 66.0 | 65.2 | 72.3 | 72.5 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 74 | 158 | 341 | 735 |
| CNEL: | 77 | 165 | 356 | 766 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Market St.
Road Segment: e/o Rubidoux Bl.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 26,649 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,865 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -0.34 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -9.07 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -7.63 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 66.3 | 65.6 | 63.0 | 61.1 | 68.4 | 68.7 |
| Medium Trucks: | 68.6 | 68.2 | 63.5 | 62.7 | 70.2 | 70.5 |
| Heavy Trucks: | 74.8 | 73.9 | 71.2 | 70.4 | 77.4 | 77.7 |
| Vehicle Noise: | 76.2 | 75.4 | 72.4 | 71.5 | 78.6 | 78.9 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 221 | 476 | 1,026 | 2,211 |
| CNEL: | 231 | 497 | 1,070 | 2,305 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: 7th St.
Road Segment: w/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 6,781 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 475 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 24 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 25.0 feet |
| Centerline Dist. to Observer: | 25.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 22.494 |
| Medium Trucks: | 22.098 |
| Heavy Trucks: | 22.136 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -6.28 | 5.10 | -1.20 | -4.41 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -15.02 | 5.22 | -1.20 | -4.85 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -13.57 | 5.20 | -1.20 | -5.94 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 66.1 | 65.4 | 62.8 | 60.9 | 68.1 | 68.5 |
| Medium Trucks: | 68.4 | 68.1 | 63.4 | 62.6 | 70.1 | 70.3 |
| Heavy Trucks: | 74.7 | 73.8 | 71.0 | 70.3 | 77.3 | 77.5 |
| Vehicle Noise: | 76.1 | 75.3 | 72.2 | 71.4 | 78.5 | 78.7 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 92 | 197 | 425 | 917 |
| CNEL: | 96 | 206 | 443 | 955 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Agua Mansa Rd.
Road Segment: e/o Riverside Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 13,350 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 935 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -3.34 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -12.08 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -10.63 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 64.3 | 63.6 | 61.0 | 59.1 | 66.4 | 66.7 |
| Medium Trucks: | 66.6 | 66.2 | 61.5 | 60.7 | 68.2 | 68.5 |
| Heavy Trucks: | 72.8 | 71.9 | 69.2 | 68.4 | 75.4 | 75.7 |
| Vehicle Noise: | 74.2 | 73.4 | 70.4 | 69.5 | 76.6 | 76.9 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 144 | 309 | 666 | 1,436 |
| CNEL: | 150 | 322 | 695 | 1,496 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* Existing + Project
*Road Name:* Cedar Ave.
*Road Segment:* n/o I-10 WB Ramps
*Project Name:* Rubidoux Warehouse Noi
*Job Number:* 12722

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 51,803 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 3,626 vehicles |
| *Vehicle Speed:* | 40 mph |
| *Near/Far Lane Distance:* | 48 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 52.0 feet |
| *Centerline Dist. to Observer:* | 52.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 75.79% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 10.11% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 14.10% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 46.400 |
| *Medium Trucks:* | 46.209 |
| *Heavy Trucks:* | 46.228 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 66.51 | 3.06 | 0.38 | -1.20 | *-4.66* | 0.000 | 0.000 |
| *Medium Trucks:* | 77.72 | -5.68 | 0.41 | -1.20 | *-4.87* | 0.000 | 0.000 |
| *Heavy Trucks:* | 82.99 | -4.24 | 0.41 | -1.20 | *-5.41* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 68.8 | 68.0 | 65.5 | 63.5 | 70.8 | 71.2 |
| *Medium Trucks:* | 71.2 | 70.9 | 66.1 | 65.4 | 72.9 | 73.1 |
| *Heavy Trucks:* | 78.0 | 77.1 | 74.3 | 73.6 | 80.6 | 80.8 |
| *Vehicle Noise:* | 79.2 | 78.4 | 75.4 | 74.5 | 81.6 | 81.9 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 310 | 667 | 1,437 | 3,096 |
| *CNEL:* | 323 | 695 | 1,498 | 3,227 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* Existing + Project
*Road Name:* Cedar Ave.
*Road Segment:* n/o Santa Ana Av.
*Project Name:* Rubidoux Warehouse Noi
*Job Number:* 12722

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 26,360 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 1,845 vehicles |
| *Vehicle Speed:* | 45 mph |
| *Near/Far Lane Distance:* | 48 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 52.0 feet |
| *Centerline Dist. to Observer:* | 52.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 76.39% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 9.86% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 13.75% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 46.400 |
| *Medium Trucks:* | 46.209 |
| *Heavy Trucks:* | 46.228 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 68.46 | -0.35 | 0.38 | -1.20 | *-4.66* | 0.000 | 0.000 |
| *Medium Trucks:* | 79.45 | -9.24 | 0.41 | -1.20 | *-4.87* | 0.000 | 0.000 |
| *Heavy Trucks:* | 84.25 | -7.79 | 0.41 | -1.20 | *-5.41* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 67.3 | 66.6 | 64.0 | 62.1 | 69.4 | 69.7 |
| *Medium Trucks:* | 69.4 | 69.1 | 64.3 | 63.5 | 71.1 | 71.3 |
| *Heavy Trucks:* | 75.7 | 74.8 | 72.0 | 71.3 | 78.3 | 78.5 |
| *Vehicle Noise:* | 77.1 | 76.3 | 73.2 | 72.4 | 79.5 | 79.7 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 222 | 479 | 1,032 | 2,224 |
| *CNEL:* | 232 | 500 | 1,076 | 2,319 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* Existing + Project
*Road Name:* Cedar Ave.
*Road Segment:* s/o I-10 EB Ramps
*Project Name:* Rubidoux Warehouse Noi
*Job Number:* 12722

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 36,192 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 2,533 vehicles |
| *Vehicle Speed:* | 45 mph |
| *Near/Far Lane Distance:* | 48 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 52.0 feet |
| *Centerline Dist. to Observer:* | 52.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 76.14% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 9.97% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 13.90% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 46.400 |
| *Medium Trucks:* | 46.209 |
| *Heavy Trucks:* | 46.228 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 68.46 | 1.02 | 0.38 | -1.20 | *-4.66* | 0.000 | 0.000 |
| *Medium Trucks:* | 79.45 | -7.81 | 0.41 | -1.20 | *-4.87* | 0.000 | 0.000 |
| *Heavy Trucks:* | 84.25 | -6.37 | 0.41 | -1.20 | *-5.41* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 68.7 | 67.9 | 65.4 | 63.4 | 70.7 | 71.1 |
| *Medium Trucks:* | 70.8 | 70.5 | 65.8 | 65.0 | 72.5 | 72.7 |
| *Heavy Trucks:* | 77.1 | 76.2 | 73.4 | 72.7 | 79.7 | 80.0 |
| *Vehicle Noise:* | 78.5 | 77.7 | 74.6 | 73.8 | 80.9 | 81.2 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 276 | 596 | 1,283 | 2,765 |
| *CNEL:* | 288 | 621 | 1,338 | 2,882 |

Tuesday, October 6, 2020

## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* Existing + Project
*Road Name:* Cedar Ave.
*Road Segment:* s/o Santa Ana Av.
*Project Name:* Rubidoux Warehouse Noi
*Job Number:* 12722

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 25,648 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 1,795 vehicles |
| *Vehicle Speed:* | 45 mph |
| *Near/Far Lane Distance:* | 48 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 52.0 feet |
| *Centerline Dist. to Observer:* | 52.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 76.48% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 9.83% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 13.70% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 46.400 |
| *Medium Trucks:* | 46.209 |
| *Heavy Trucks:* | 46.228 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 68.46 | -0.46 | 0.38 | -1.20 | *-4.66* | 0.000 | 0.000 |
| *Medium Trucks:* | 79.45 | -9.37 | 0.41 | -1.20 | *-4.87* | 0.000 | 0.000 |
| *Heavy Trucks:* | 84.25 | -7.93 | 0.41 | -1.20 | *-5.41* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 67.2 | 66.5 | 63.9 | 62.0 | 69.2 | 69.6 |
| *Medium Trucks:* | 69.3 | 68.9 | 64.2 | 63.4 | 70.9 | 71.2 |
| *Heavy Trucks:* | 75.5 | 74.6 | 71.9 | 71.1 | 78.1 | 78.4 |
| *Vehicle Noise:* | 76.9 | 76.2 | 73.1 | 72.2 | 79.3 | 79.6 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 218 | 470 | 1,012 | 2,179 |
| *CNEL:* | 227 | 489 | 1,055 | 2,272 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Cedar Ave.
Road Segment: s/o Jurupa Av.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 25,508 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,786 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 76.55% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 9.80% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 13.66% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -0.48 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -9.41 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -7.97 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.2 | 66.5 | 63.9 | 61.9 | 69.2 | 69.6 |
| Medium Trucks: | 69.3 | 68.9 | 64.2 | 63.4 | 70.9 | 71.2 |
| Heavy Trucks: | 75.5 | 74.6 | 71.8 | 71.1 | 78.1 | 78.4 |
| Vehicle Noise: | 76.9 | 76.1 | 73.1 | 72.2 | 79.3 | 79.6 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 217 | 467 | 1,006 | 2,168 |
| CNEL: | 226 | 487 | 1,049 | 2,260 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Rubidoux Bl.
Road Segment: s/o El Rivino Rd
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 26,224 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,836 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 76.55% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 9.80% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 13.66% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -0.82 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -9.75 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -8.30 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.6 | 66.9 | 64.3 | 62.3 | 69.6 | 70.0 |
| Medium Trucks: | 69.5 | 69.1 | 64.4 | 63.6 | 71.1 | 71.4 |
| Heavy Trucks: | 75.3 | 74.4 | 71.6 | 70.9 | 77.9 | 78.1 |
| Vehicle Noise: | 76.8 | 76.1 | 73.0 | 72.1 | 79.2 | 79.5 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 242 | 522 | 1,125 | 2,424 |
| CNEL: | 253 | 545 | 1,173 | 2,528 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Cedar Ave.
Road Segment: s/o 7th Street
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 26,698 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,869 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 76.53% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 9.80% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 13.67% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -0.74 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -9.67 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -8.22 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 68.6 | 67.9 | 65.3 | 63.4 | 70.7 | 71.0 |
| Medium Trucks: | 70.5 | 70.2 | 65.5 | 64.7 | 72.2 | 72.4 |
| Heavy Trucks: | 76.4 | 75.5 | 72.7 | 72.0 | 79.0 | 79.2 |
| Vehicle Noise: | 77.9 | 77.1 | 74.1 | 73.2 | 80.3 | 80.6 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 253 | 544 | 1,172 | 2,526 |
| CNEL: | 263 | 567 | 1,222 | 2,633 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Rubidoux Bl.
Road Segment: s/o Market St.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 25,125 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,759 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.84% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.09% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.06% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -1.04 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -9.80 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -8.36 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.3 | 66.6 | 64.0 | 62.1 | 69.4 | 69.7 |
| Medium Trucks: | 69.4 | 69.0 | 64.3 | 63.5 | 71.1 | 71.3 |
| Heavy Trucks: | 75.2 | 74.3 | 71.5 | 70.8 | 77.8 | 78.1 |
| Vehicle Noise: | 76.8 | 76.0 | 72.9 | 72.0 | 79.1 | 79.4 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 240 | 516 | 1,112 | 2,396 |
| CNEL: | 250 | 538 | 1,159 | 2,498 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Rubidoux Bl.
Road Segment: s/o 24th St.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 25,322 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,773 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.84% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.09% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.06% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -1.01 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -9.77 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -8.33 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.4 | 66.7 | 64.1 | 62.1 | 69.4 | 69.8 |
| Medium Trucks: | 69.4 | 69.1 | 64.3 | 63.5 | 71.1 | 71.3 |
| Heavy Trucks: | 75.2 | 74.3 | 71.6 | 70.8 | 77.8 | 78.1 |
| Vehicle Noise: | 76.8 | 76.0 | 72.9 | 72.0 | 79.2 | 79.4 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 241 | 519 | 1,118 | 2,409 |
| CNEL: | 251 | 541 | 1,166 | 2,511 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Rubidoux Bl.
Road Segment: s/o 34th St.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 24,942 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,746 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.84% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.09% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.07% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -1.08 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -9.84 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -8.39 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.3 | 66.6 | 64.0 | 62.1 | 69.4 | 69.7 |
| Medium Trucks: | 69.4 | 69.0 | 64.3 | 63.5 | 71.0 | 71.3 |
| Heavy Trucks: | 75.2 | 74.3 | 71.5 | 70.8 | 77.8 | 78.0 |
| Vehicle Noise: | 76.7 | 75.9 | 72.9 | 72.0 | 79.1 | 79.4 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 239 | 514 | 1,107 | 2,385 |
| CNEL: | 249 | 536 | 1,154 | 2,486 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Rubidoux Bl.
Road Segment: s/o 26th St.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 24,937 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,746 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.57% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.21% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.22% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -1.09 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -9.79 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -8.35 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.3 | 66.6 | 64.0 | 62.1 | 69.4 | 69.7 |
| Medium Trucks: | 69.4 | 69.0 | 64.3 | 63.5 | 71.1 | 71.3 |
| Heavy Trucks: | 75.2 | 74.3 | 71.6 | 70.8 | 77.8 | 78.1 |
| Vehicle Noise: | 76.8 | 76.0 | 72.9 | 72.0 | 79.1 | 79.4 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 240 | 517 | 1,114 | 2,400 |
| CNEL: | 250 | 539 | 1,161 | 2,502 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Market St.
Road Segment: n/o Rivera St.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 24,690 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,728 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.74% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -0.67 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -9.40 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -7.96 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 66.0 | 65.3 | 62.7 | 60.7 | 68.0 | 68.4 |
| Medium Trucks: | 68.2 | 67.9 | 63.2 | 62.4 | 69.9 | 70.1 |
| Heavy Trucks: | 74.5 | 73.6 | 70.8 | 70.1 | 77.1 | 77.4 |
| Vehicle Noise: | 75.9 | 75.1 | 72.0 | 71.2 | 78.3 | 78.5 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 210 | 453 | 976 | 2,102 |
| CNEL: | 219 | 472 | 1,017 | 2,191 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Market St.
Road Segment: s/o SR-60 EB Ramps
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 33,145 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,320 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 65 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 50.0 feet |
| Centerline Dist. to Observer: | 50.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.82% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.10% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.08% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 38.324 |
| Medium Trucks: | 38.093 |
| Heavy Trucks: | 38.115 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | 0.62 | 1.63 | -1.20 | -4.65 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -8.14 | 1.67 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -6.69 | 1.66 | -1.20 | -5.43 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 69.5 | 68.8 | 66.2 | 64.3 | 71.6 | 71.9 |
| Medium Trucks: | 71.8 | 71.4 | 66.7 | 65.9 | 73.4 | 73.7 |
| Heavy Trucks: | 78.0 | 77.1 | 74.4 | 73.6 | 80.6 | 80.9 |
| Vehicle Noise: | 79.4 | 78.6 | 75.6 | 74.7 | 81.8 | 82.1 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 306 | 660 | 1,422 | 3,064 |
| CNEL: | 319 | 688 | 1,483 | 3,194 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Agua Mansa Rd.
Road Segment: n/o Market St.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 18,071 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,265 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 36 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 50.0 feet |
| Centerline Dist. to Observer: | 50.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.85% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.09% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.07% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.915 |
| Medium Trucks: | 46.726 |
| Heavy Trucks: | 46.744 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -2.02 | 0.31 | -1.20 | -4.65 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -10.78 | 0.34 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -9.34 | 0.34 | -1.20 | -5.43 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 65.6 | 64.8 | 62.3 | 60.3 | 67.6 | 67.9 |
| Medium Trucks: | 67.8 | 67.4 | 62.7 | 61.9 | 69.5 | 69.7 |
| Heavy Trucks: | 74.1 | 73.1 | 70.4 | 69.6 | 76.6 | 76.9 |
| Vehicle Noise: | 75.4 | 74.7 | 71.6 | 70.7 | 77.8 | 78.1 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 167 | 359 | 773 | 1,666 |
| CNEL: | 174 | 374 | 806 | 1,737 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Riverside Av.
Road Segment: n/o Agua Mansa Rd.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 27,938 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,956 vehicles |
| Vehicle Speed: | 55 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.78% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.12% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.11% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 71.78 | -1.00 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 82.40 | -9.75 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 86.40 | -8.30 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 70.0 | 69.3 | 66.7 | 64.7 | 72.0 | 72.4 |
| Medium Trucks: | 71.9 | 71.5 | 66.8 | 66.0 | 73.5 | 73.8 |
| Heavy Trucks: | 77.3 | 76.4 | 73.6 | 72.9 | 79.9 | 80.2 |
| Vehicle Noise: | 79.0 | 78.2 | 75.1 | 74.2 | 81.3 | 81.6 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 296 | 639 | 1,376 | 2,965 |
| CNEL: | 309 | 666 | 1,435 | 3,091 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Slover Av.
Road Segment: w/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 15,171 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,062 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.86% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.08% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.06% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -3.23 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -12.00 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -10.55 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 66.2 | 65.4 | 62.8 | 60.9 | 68.2 | 68.5 |
| Medium Trucks: | 68.2 | 67.8 | 63.1 | 62.3 | 69.9 | 70.1 |
| Heavy Trucks: | 74.0 | 73.1 | 70.4 | 69.6 | 76.6 | 76.9 |
| Vehicle Noise: | 75.6 | 74.8 | 71.7 | 70.8 | 77.9 | 78.2 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 176 | 379 | 817 | 1,761 |
| CNEL: | 184 | 396 | 852 | 1,836 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Slover Av.
Road Segment: e/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 11,480 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 804 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.85% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.09% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.07% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -4.45 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -13.21 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -11.76 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 64.9 | 64.2 | 61.6 | 59.7 | 67.0 | 67.3 |
| Medium Trucks: | 67.0 | 66.6 | 61.9 | 61.1 | 68.7 | 68.9 |
| Heavy Trucks: | 72.8 | 71.9 | 69.2 | 68.4 | 75.4 | 75.7 |
| Vehicle Noise: | 74.4 | 73.6 | 70.5 | 69.6 | 76.7 | 77.0 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 146 | 315 | 679 | 1,463 |
| CNEL: | 153 | 329 | 708 | 1,525 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Santa Ana Ave.
Road Segment: e/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 6,330 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 443 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 36 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 44.0 feet |
| Centerline Dist. to Observer: | 44.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.84% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.09% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.07% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 40.460 |
| Medium Trucks: | 40.241 |
| Heavy Trucks: | 40.262 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -6.06 | 1.28 | -1.20 | -4.61 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -14.82 | 1.31 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -13.38 | 1.31 | -1.20 | -5.50 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 60.5 | 59.8 | 57.2 | 55.3 | 62.6 | 62.9 |
| Medium Trucks: | 63.0 | 62.6 | 57.9 | 57.1 | 64.7 | 64.9 |
| Heavy Trucks: | 69.7 | 68.8 | 66.1 | 65.3 | 72.3 | 72.6 |
| Vehicle Noise: | 71.0 | 70.2 | 67.1 | 66.3 | 73.4 | 73.7 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 74 | 159 | 343 | 740 |
| CNEL: | 77 | 166 | 358 | 771 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Santa Ana Ave.
Road Segment: w/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 8,694 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 609 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 36 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 44.0 feet |
| Centerline Dist. to Observer: | 44.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.88% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.07% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.05% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 40.460 |
| Medium Trucks: | 40.241 |
| Heavy Trucks: | 40.262 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -4.68 | 1.28 | -1.20 | -4.61 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -13.45 | 1.31 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -12.01 | 1.31 | -1.20 | -5.50 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 61.9 | 61.2 | 58.6 | 56.7 | 64.0 | 64.3 |
| Medium Trucks: | 64.4 | 64.0 | 59.3 | 58.5 | 66.0 | 66.3 |
| Heavy Trucks: | 71.1 | 70.2 | 67.4 | 66.7 | 73.7 | 74.0 |
| Vehicle Noise: | 72.3 | 71.5 | 68.5 | 67.7 | 74.8 | 75.0 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 91 | 197 | 424 | 913 |
| CNEL: | 95 | 205 | 442 | 952 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Jurupa Ave.
Road Segment: w/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 5,740 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 402 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.85% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.09% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.07% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -6.49 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -15.25 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -13.80 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 59.2 | 58.5 | 55.9 | 54.0 | 61.3 | 61.6 |
| Medium Trucks: | 61.7 | 61.3 | 56.6 | 55.8 | 63.3 | 63.6 |
| Heavy Trucks: | 68.4 | 67.5 | 64.7 | 64.0 | 71.0 | 71.3 |
| Vehicle Noise: | 69.6 | 68.8 | 65.8 | 65.0 | 72.1 | 72.3 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 71 | 154 | 331 | 713 |
| CNEL: | 74 | 160 | 345 | 743 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Jurupa Ave.
Road Segment: e/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 6,033 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 422 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.94% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.05% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.01% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -6.27 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -15.05 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -13.60 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 59.4 | 58.7 | 56.1 | 54.2 | 61.5 | 61.8 |
| Medium Trucks: | 61.9 | 61.5 | 56.8 | 56.0 | 63.5 | 63.8 |
| Heavy Trucks: | 68.6 | 67.7 | 64.9 | 64.2 | 71.2 | 71.5 |
| Vehicle Noise: | 69.8 | 69.1 | 66.0 | 65.2 | 72.3 | 72.5 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 74 | 159 | 342 | 736 |
| CNEL: | 77 | 165 | 356 | 767 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Market St.
Road Segment: e/o Rubidoux Bl.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 27,327 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,913 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.59% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.20% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.21% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -0.24 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -8.94 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -7.49 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 66.4 | 65.7 | 63.1 | 61.2 | 68.5 | 68.8 |
| Medium Trucks: | 68.7 | 68.3 | 63.6 | 62.8 | 70.4 | 70.6 |
| Heavy Trucks: | 75.0 | 74.0 | 71.3 | 70.5 | 77.6 | 77.8 |
| Vehicle Noise: | 76.3 | 75.6 | 72.5 | 71.6 | 78.7 | 79.0 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 226 | 486 | 1,048 | 2,257 |
| CNEL: | 235 | 507 | 1,092 | 2,353 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: 7th St.
Road Segment: w/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 6,804 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 476 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 24 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 25.0 feet |
| Centerline Dist. to Observer: | 25.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.83% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.09% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.08% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 22.494 |
| Medium Trucks: | 22.098 |
| Heavy Trucks: | 22.136 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -6.26 | 5.10 | -1.20 | -4.41 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -15.02 | 5.22 | -1.20 | -4.85 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -13.57 | 5.20 | -1.20 | -5.94 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 66.1 | 65.4 | 62.8 | 60.9 | 68.2 | 68.5 |
| Medium Trucks: | 68.4 | 68.1 | 63.4 | 62.6 | 70.1 | 70.3 |
| Heavy Trucks: | 74.7 | 73.8 | 71.0 | 70.3 | 77.3 | 77.5 |
| Vehicle Noise: | 76.1 | 75.3 | 72.2 | 71.4 | 78.5 | 78.7 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 92 | 198 | 426 | 917 |
| CNEL: | 96 | 206 | 444 | 956 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Agua Mansa Rd.
Road Segment: e/o Riverside Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 13,494 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 945 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.81% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.10% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.09% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -3.29 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -12.04 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -10.60 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 64.4 | 63.6 | 61.1 | 59.1 | 66.4 | 66.7 |
| Medium Trucks: | 66.6 | 66.3 | 61.5 | 60.7 | 68.3 | 68.5 |
| Heavy Trucks: | 72.9 | 72.0 | 69.2 | 68.5 | 75.5 | 75.7 |
| Vehicle Noise: | 74.3 | 73.5 | 70.4 | 69.5 | 76.7 | 76.9 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 144 | 311 | 670 | 1,443 |
| CNEL: | 150 | 324 | 698 | 1,505 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Cedar Ave.
Road Segment: n/o I-10 WB Ramps
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 54,874 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 3,841 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | 3.31 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -5.43 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -3.98 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 69.0 | 68.3 | 65.7 | 63.8 | 71.1 | 71.4 |
| Medium Trucks: | 71.5 | 71.1 | 66.4 | 65.6 | 73.2 | 73.4 |
| Heavy Trucks: | 78.2 | 77.3 | 74.6 | 73.8 | 80.8 | 81.1 |
| Vehicle Noise: | 79.5 | 78.7 | 75.6 | 74.8 | 81.9 | 82.1 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 322 | 694 | 1,495 | 3,221 |
| CNEL: | 336 | 723 | 1,558 | 3,357 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Cedar Ave.
Road Segment: n/o Santa Ana Av.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 26,889 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,882 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -0.30 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -9.04 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -7.59 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.3 | 66.6 | 64.0 | 62.1 | 69.4 | 69.7 |
| Medium Trucks: | 69.6 | 69.3 | 64.5 | 63.7 | 71.3 | 71.5 |
| Heavy Trucks: | 75.9 | 75.0 | 72.2 | 71.5 | 78.5 | 78.7 |
| Vehicle Noise: | 77.3 | 76.5 | 73.4 | 72.5 | 79.7 | 79.9 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 229 | 493 | 1,063 | 2,290 |
| CNEL: | 239 | 514 | 1,108 | 2,387 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Cedar Ave.
Road Segment: s/o I-10 EB Ramps
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 37,449 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,621 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | 1.14 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -7.60 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -6.15 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 68.8 | 68.1 | 65.5 | 63.6 | 70.8 | 71.2 |
| Medium Trucks: | 71.1 | 70.7 | 66.0 | 65.2 | 72.7 | 73.0 |
| Heavy Trucks: | 77.3 | 76.4 | 73.6 | 72.9 | 79.9 | 80.2 |
| Vehicle Noise: | 78.7 | 77.9 | 74.9 | 74.0 | 81.1 | 81.4 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 286 | 615 | 1,325 | 2,855 |
| CNEL: | 298 | 641 | 1,382 | 2,976 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Cedar Ave.
Road Segment: s/o Santa Ana Av.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 26,060 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,824 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -0.43 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -9.17 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -7.73 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.2 | 66.5 | 63.9 | 62.0 | 69.3 | 69.6 |
| Medium Trucks: | 69.5 | 69.1 | 64.4 | 63.6 | 71.1 | 71.4 |
| Heavy Trucks: | 75.7 | 74.8 | 72.1 | 71.3 | 78.3 | 78.6 |
| Vehicle Noise: | 77.1 | 76.3 | 73.3 | 72.4 | 79.5 | 79.8 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 224 | 483 | 1,041 | 2,242 |
| CNEL: | 234 | 504 | 1,085 | 2,337 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Cedar Ave.
Road Segment: s/o Jurupa Av.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 25,835 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,808 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -0.47 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -9.21 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -7.76 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.2 | 66.5 | 63.9 | 61.9 | 69.2 | 69.6 |
| Medium Trucks: | 69.5 | 69.1 | 64.4 | 63.6 | 71.1 | 71.4 |
| Heavy Trucks: | 75.7 | 74.8 | 72.0 | 71.3 | 78.3 | 78.6 |
| Vehicle Noise: | 77.1 | 76.3 | 73.2 | 72.4 | 79.5 | 79.8 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 223 | 480 | 1,035 | 2,229 |
| CNEL: | 232 | 501 | 1,079 | 2,324 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Rubidoux Bl.
Road Segment: s/o El Rivino Rd
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 26,570 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,860 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -0.81 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -9.54 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -8.10 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.6 | 66.9 | 64.3 | 62.4 | 69.6 | 70.0 |
| Medium Trucks: | 69.7 | 69.3 | 64.6 | 63.8 | 71.3 | 71.6 |
| Heavy Trucks: | 75.5 | 74.6 | 71.8 | 71.1 | 78.1 | 78.3 |
| Vehicle Noise: | 77.0 | 76.2 | 73.2 | 72.3 | 79.4 | 79.7 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 249 | 537 | 1,157 | 2,493 |
| CNEL: | 260 | 560 | 1,206 | 2,599 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Cedar Ave.
Road Segment: s/o 7th Street
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 27,073 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,895 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -0.73 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -9.46 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -8.02 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 68.7 | 67.9 | 65.4 | 63.4 | 70.7 | 71.1 |
| Medium Trucks: | 70.7 | 70.4 | 65.7 | 64.9 | 72.4 | 72.6 |
| Heavy Trucks: | 76.6 | 75.7 | 72.9 | 72.2 | 79.2 | 79.4 |
| Vehicle Noise: | 78.1 | 77.3 | 74.2 | 73.4 | 80.5 | 80.8 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 260 | 560 | 1,206 | 2,598 |
| CNEL: | 271 | 584 | 1,257 | 2,708 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Rubidoux Bl.
Road Segment: s/o Market St.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 25,541 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,788 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -0.98 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -9.72 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -8.27 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.4 | 66.7 | 64.1 | 62.2 | 69.5 | 69.8 |
| Medium Trucks: | 69.5 | 69.1 | 64.4 | 63.6 | 71.1 | 71.4 |
| Heavy Trucks: | 75.3 | 74.4 | 71.6 | 70.9 | 77.9 | 78.2 |
| Vehicle Noise: | 76.8 | 76.1 | 73.0 | 72.1 | 79.2 | 79.5 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 243 | 523 | 1,127 | 2,428 |
| CNEL: | 253 | 545 | 1,175 | 2,532 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Rubidoux Bl.
Road Segment: s/o 24th St.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 25,750 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,803 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -0.94 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -9.68 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -8.24 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.4 | 66.7 | 64.1 | 62.2 | 69.5 | 69.8 |
| Medium Trucks: | 69.5 | 69.2 | 64.4 | 63.6 | 71.2 | 71.4 |
| Heavy Trucks: | 75.3 | 74.4 | 71.7 | 70.9 | 77.9 | 78.2 |
| Vehicle Noise: | 76.9 | 76.1 | 73.0 | 72.1 | 79.3 | 79.5 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 244 | 526 | 1,133 | 2,442 |
| CNEL: | 255 | 548 | 1,181 | 2,545 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Rubidoux Bl.
Road Segment: s/o 34th St.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 26,369 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,846 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -0.84 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -9.58 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -8.13 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.5 | 66.8 | 64.2 | 62.3 | 69.6 | 69.9 |
| Medium Trucks: | 69.6 | 69.3 | 64.5 | 63.7 | 71.3 | 71.5 |
| Heavy Trucks: | 75.4 | 74.5 | 71.8 | 71.0 | 78.0 | 78.3 |
| Vehicle Noise: | 77.0 | 76.2 | 73.1 | 72.2 | 79.4 | 79.6 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 248 | 534 | 1,151 | 2,481 |
| CNEL: | 259 | 557 | 1,200 | 2,586 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Rubidoux Bl.
Road Segment: s/o 26th St.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 25,642 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,795 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -0.96 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -9.70 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -8.25 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.4 | 66.7 | 64.1 | 62.2 | 69.5 | 69.8 |
| Medium Trucks: | 69.5 | 69.1 | 64.4 | 63.6 | 71.2 | 71.4 |
| Heavy Trucks: | 75.3 | 74.4 | 71.7 | 70.9 | 77.9 | 78.2 |
| Vehicle Noise: | 76.9 | 76.1 | 73.0 | 72.1 | 79.2 | 79.5 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 243 | 525 | 1,130 | 2,435 |
| CNEL: | 254 | 547 | 1,178 | 2,538 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Market St.
Road Segment: n/o Rivera St.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 25,538 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,788 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -0.52 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -9.26 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -7.81 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 66.1 | 65.4 | 62.8 | 60.9 | 68.2 | 68.5 |
| Medium Trucks: | 68.4 | 68.0 | 63.3 | 62.5 | 70.0 | 70.3 |
| Heavy Trucks: | 74.6 | 73.7 | 71.0 | 70.2 | 77.2 | 77.5 |
| Vehicle Noise: | 76.0 | 75.2 | 72.2 | 71.3 | 78.4 | 78.7 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 215 | 463 | 998 | 2,150 |
| CNEL: | 224 | 483 | 1,040 | 2,241 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Market St.
Road Segment: s/o SR-60 EB Ramps
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 35,074 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,455 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 65 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 50.0 feet |
| Centerline Dist. to Observer: | 50.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 38.324 |
| Medium Trucks: | 38.093 |
| Heavy Trucks: | 38.115 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | 0.86 | 1.63 | -1.20 | -4.65 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -7.88 | 1.67 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -6.44 | 1.66 | -1.20 | -5.43 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 69.7 | 69.0 | 66.4 | 64.5 | 71.8 | 72.1 |
| Medium Trucks: | 72.0 | 71.7 | 66.9 | 66.2 | 73.7 | 73.9 |
| Heavy Trucks: | 78.3 | 77.4 | 74.6 | 73.9 | 80.9 | 81.1 |
| Vehicle Noise: | 79.7 | 78.9 | 75.8 | 75.0 | 82.1 | 82.3 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 319 | 687 | 1,479 | 3,187 |
| CNEL: | 332 | 716 | 1,542 | 3,322 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Agua Mansa Rd.
Road Segment: n/o Market St.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 18,871 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,321 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 36 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 50.0 feet |
| Centerline Dist. to Observer: | 50.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.915 |
| Medium Trucks: | 46.726 |
| Heavy Trucks: | 46.744 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -1.83 | 0.31 | -1.20 | -4.65 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -10.57 | 0.34 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -9.13 | 0.34 | -1.20 | -5.43 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 65.7 | 65.0 | 62.4 | 60.5 | 67.8 | 68.1 |
| Medium Trucks: | 68.0 | 67.7 | 62.9 | 62.1 | 69.7 | 69.9 |
| Heavy Trucks: | 74.3 | 73.4 | 70.6 | 69.8 | 76.9 | 77.1 |
| Vehicle Noise: | 75.7 | 74.9 | 71.8 | 70.9 | 78.0 | 78.3 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 172 | 370 | 798 | 1,719 |
| CNEL: | 179 | 386 | 832 | 1,792 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Riverside Av.
Road Segment: n/o Agua Mansa Rd.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 29,495 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,065 vehicles |
| Vehicle Speed: | 55 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 71.78 | -0.77 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 82.40 | -9.51 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 86.40 | -8.06 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 70.2 | 69.5 | 66.9 | 65.0 | 72.3 | 72.6 |
| Medium Trucks: | 72.1 | 71.7 | 67.0 | 66.2 | 73.8 | 74.0 |
| Heavy Trucks: | 77.5 | 76.6 | 73.9 | 73.1 | 80.1 | 80.4 |
| Vehicle Noise: | 79.2 | 78.4 | 75.4 | 74.5 | 81.6 | 81.9 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 308 | 663 | 1,428 | 3,076 |
| CNEL: | 321 | 691 | 1,489 | 3,207 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Slover Av.
Road Segment: w/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 16,024 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,122 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -3.00 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -11.74 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -10.30 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 66.4 | 65.7 | 63.1 | 61.2 | 68.4 | 68.8 |
| Medium Trucks: | 68.5 | 68.1 | 63.4 | 62.6 | 70.1 | 70.4 |
| Heavy Trucks: | 74.3 | 73.4 | 70.6 | 69.9 | 76.9 | 77.2 |
| Vehicle Noise: | 75.8 | 75.0 | 72.0 | 71.1 | 78.2 | 78.5 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 183 | 395 | 850 | 1,831 |
| CNEL: | 191 | 411 | 886 | 1,909 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Slover Av.
Road Segment: e/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 12,132 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 849 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -4.21 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -12.95 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -11.50 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 65.2 | 64.5 | 61.9 | 59.9 | 67.2 | 67.6 |
| Medium Trucks: | 67.3 | 66.9 | 62.2 | 61.4 | 68.9 | 69.2 |
| Heavy Trucks: | 73.1 | 72.2 | 69.4 | 68.7 | 75.7 | 75.9 |
| Vehicle Noise: | 74.6 | 73.8 | 70.8 | 69.9 | 77.0 | 77.3 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 152 | 328 | 706 | 1,521 |
| CNEL: | 159 | 342 | 736 | 1,586 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Santa Ana Ave.
Road Segment: e/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 6,693 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 468 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 36 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 44.0 feet |
| Centerline Dist. to Observer: | 44.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 40.460 |
| Medium Trucks: | 40.241 |
| Heavy Trucks: | 40.262 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -5.83 | 1.28 | -1.20 | -4.61 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -14.56 | 1.31 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -13.12 | 1.31 | -1.20 | -5.50 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 60.8 | 60.0 | 57.5 | 55.5 | 62.8 | 63.2 |
| Medium Trucks: | 63.3 | 62.9 | 58.2 | 57.4 | 64.9 | 65.2 |
| Heavy Trucks: | 70.0 | 69.1 | 66.3 | 65.6 | 72.6 | 72.8 |
| Vehicle Noise: | 71.2 | 70.4 | 67.4 | 66.5 | 73.6 | 73.9 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 77 | 166 | 357 | 770 |
| CNEL: | 80 | 173 | 372 | 802 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Santa Ana Ave.
Road Segment: w/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 9,177 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 642 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 36 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 44.0 feet |
| Centerline Dist. to Observer: | 44.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 40.460 |
| Medium Trucks: | 40.241 |
| Heavy Trucks: | 40.262 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -4.45 | 1.28 | -1.20 | -4.61 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -13.19 | 1.31 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -11.75 | 1.31 | -1.20 | -5.50 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 62.1 | 61.4 | 58.8 | 56.9 | 64.2 | 64.5 |
| Medium Trucks: | 64.6 | 64.3 | 59.5 | 58.7 | 66.3 | 66.5 |
| Heavy Trucks: | 71.4 | 70.4 | 67.7 | 66.9 | 73.9 | 74.2 |
| Vehicle Noise: | 72.6 | 71.8 | 68.8 | 67.9 | 75.0 | 75.3 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 95 | 205 | 441 | 950 |
| CNEL: | 99 | 213 | 459 | 990 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Jurupa Ave.
Road Segment: w/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 6,066 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 425 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -6.25 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -14.99 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -13.55 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 59.4 | 58.7 | 56.1 | 54.2 | 61.5 | 61.8 |
| Medium Trucks: | 61.9 | 61.6 | 56.8 | 56.0 | 63.6 | 63.8 |
| Heavy Trucks: | 68.7 | 67.7 | 65.0 | 64.2 | 71.3 | 71.5 |
| Vehicle Noise: | 69.9 | 69.1 | 66.1 | 65.2 | 72.3 | 72.6 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 74 | 160 | 344 | 742 |
| CNEL: | 77 | 167 | 359 | 773 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Jurupa Ave.
Road Segment: e/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 6,352 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 445 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -6.05 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -14.79 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -13.35 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 59.6 | 58.9 | 56.3 | 54.4 | 61.7 | 62.0 |
| Medium Trucks: | 62.1 | 61.8 | 57.0 | 56.2 | 63.8 | 64.0 |
| Heavy Trucks: | 68.9 | 67.9 | 65.2 | 64.4 | 71.5 | 71.7 |
| Vehicle Noise: | 70.1 | 69.3 | 66.3 | 65.4 | 72.5 | 72.8 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 77 | 165 | 355 | 765 |
| CNEL: | 80 | 172 | 370 | 797 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Market St.
Road Segment: e/o Rubidoux Bl.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 28,280 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,980 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -0.08 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -8.82 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -7.37 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 66.6 | 65.8 | 63.3 | 61.3 | 68.6 | 69.0 |
| Medium Trucks: | 68.8 | 68.5 | 63.7 | 62.9 | 70.5 | 70.7 |
| Heavy Trucks: | 75.1 | 74.2 | 71.4 | 70.7 | 77.7 | 77.9 |
| Vehicle Noise: | 76.5 | 75.7 | 72.6 | 71.8 | 78.9 | 79.1 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 230 | 496 | 1,068 | 2,301 |
| CNEL: | 240 | 517 | 1,113 | 2,398 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: 7th St.
Road Segment: w/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 7,196 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 504 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 24 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 25.0 feet |
| Centerline Dist. to Observer: | 25.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 22.494 |
| Medium Trucks: | 22.098 |
| Heavy Trucks: | 22.136 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -6.02 | 5.10 | -1.20 | -4.41 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -14.76 | 5.22 | -1.20 | -4.85 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -13.32 | 5.20 | -1.20 | -5.94 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 66.3 | 65.6 | 63.0 | 61.1 | 68.4 | 68.7 |
| Medium Trucks: | 68.7 | 68.3 | 63.6 | 62.8 | 70.4 | 70.6 |
| Heavy Trucks: | 74.9 | 74.0 | 71.3 | 70.5 | 77.5 | 77.8 |
| Vehicle Noise: | 76.3 | 75.5 | 72.5 | 71.6 | 78.7 | 79.0 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 95 | 205 | 443 | 954 |
| CNEL: | 99 | 214 | 461 | 994 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EA
Road Name: Agua Mansa Rd.
Road Segment: e/o Riverside Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 14,167 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 992 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -3.08 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -11.82 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -10.37 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 64.6 | 63.9 | 61.3 | 59.3 | 66.6 | 67.0 |
| Medium Trucks: | 66.8 | 66.5 | 61.7 | 61.0 | 68.5 | 68.7 |
| Heavy Trucks: | 73.1 | 72.2 | 69.4 | 68.7 | 75.7 | 76.0 |
| Vehicle Noise: | 74.5 | 73.7 | 70.6 | 69.8 | 76.9 | 77.1 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 149 | 322 | 693 | 1,494 |
| CNEL: | 156 | 335 | 723 | 1,557 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Cedar Ave.
Road Segment: n/o I-10 WB Ramps
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 54,968 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 3,848 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.79% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.11% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.10% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | 3.32 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -5.43 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -3.98 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 69.0 | 68.3 | 65.7 | 63.8 | 71.1 | 71.4 |
| Medium Trucks: | 71.5 | 71.1 | 66.4 | 65.6 | 73.2 | 73.4 |
| Heavy Trucks: | 78.2 | 77.3 | 74.6 | 73.8 | 80.8 | 81.1 |
| Vehicle Noise: | 79.5 | 78.7 | 75.6 | 74.8 | 81.9 | 82.2 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 322 | 694 | 1,495 | 3,221 |
| CNEL: | 336 | 723 | 1,558 | 3,358 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Cedar Ave.
Road Segment: n/o Santa Ana Av.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 27,910 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,954 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 76.35% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 9.88% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 13.77% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -0.10 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -8.98 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -7.54 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.5 | 66.8 | 64.2 | 62.3 | 69.6 | 69.9 |
| Medium Trucks: | 69.7 | 69.3 | 64.6 | 63.8 | 71.3 | 71.6 |
| Heavy Trucks: | 75.9 | 75.0 | 72.3 | 71.5 | 78.5 | 78.8 |
| Vehicle Noise: | 77.3 | 76.5 | 73.5 | 72.6 | 79.7 | 80.0 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 231 | 498 | 1,073 | 2,313 |
| CNEL: | 241 | 519 | 1,119 | 2,411 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Cedar Ave.
Road Segment: s/o I-10 EB Ramps
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 38,352 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,685 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 76.11% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 9.98% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 13.91% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | 1.27 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -7.56 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -6.12 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 68.9 | 68.2 | 65.6 | 63.7 | 71.0 | 71.3 |
| Medium Trucks: | 71.1 | 70.7 | 66.0 | 65.2 | 72.8 | 73.0 |
| Heavy Trucks: | 77.3 | 76.4 | 73.7 | 72.9 | 79.9 | 80.2 |
| Vehicle Noise: | 78.7 | 78.0 | 74.9 | 74.0 | 81.1 | 81.4 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 288 | 619 | 1,335 | 2,875 |
| CNEL: | 300 | 646 | 1,391 | 2,997 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Cedar Ave.
Road Segment: s/o Santa Ana Av.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 27,151 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,901 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 76.44% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 9.84% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 13.72% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -0.22 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -9.12 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -7.67 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.4 | 66.7 | 64.1 | 62.2 | 69.5 | 69.8 |
| Medium Trucks: | 69.5 | 69.2 | 64.4 | 63.7 | 71.2 | 71.4 |
| Heavy Trucks: | 75.8 | 74.9 | 72.1 | 71.4 | 78.4 | 78.7 |
| Vehicle Noise: | 77.2 | 76.4 | 73.4 | 72.5 | 79.6 | 79.9 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 227 | 488 | 1,052 | 2,266 |
| CNEL: | 236 | 509 | 1,096 | 2,362 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Cedar Ave.
Road Segment: s/o Jurupa Av.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 26,998 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,890 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 76.50% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 9.81% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 13.68% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -0.24 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -9.15 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -7.71 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.4 | 66.7 | 64.1 | 62.2 | 69.5 | 69.8 |
| Medium Trucks: | 69.5 | 69.1 | 64.4 | 63.6 | 71.2 | 71.4 |
| Heavy Trucks: | 75.7 | 74.8 | 72.1 | 71.3 | 78.3 | 78.6 |
| Vehicle Noise: | 77.2 | 76.4 | 73.3 | 72.4 | 79.6 | 79.8 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 225 | 486 | 1,046 | 2,254 |
| CNEL: | 235 | 506 | 1,090 | 2,349 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Rubidoux Bl.
Road Segment: s/o El Rivino Rd
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 27,756 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,943 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 76.50% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 9.81% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 13.68% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -0.57 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -9.49 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -8.05 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.8 | 67.1 | 64.5 | 62.6 | 69.9 | 70.2 |
| Medium Trucks: | 69.7 | 69.3 | 64.6 | 63.8 | 71.4 | 71.6 |
| Heavy Trucks: | 75.5 | 74.6 | 71.9 | 71.1 | 78.1 | 78.4 |
| Vehicle Noise: | 77.1 | 76.3 | 73.2 | 72.3 | 79.5 | 79.7 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 252 | 543 | 1,170 | 2,521 |
| CNEL: | 263 | 566 | 1,220 | 2,628 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Cedar Ave.
Road Segment: s/o 7th Street
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 28,259 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,978 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 76.49% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 9.82% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 13.69% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -0.50 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -9.41 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -7.97 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 68.9 | 68.2 | 65.6 | 63.7 | 71.0 | 71.3 |
| Medium Trucks: | 70.8 | 70.4 | 65.7 | 64.9 | 72.5 | 72.7 |
| Heavy Trucks: | 76.6 | 75.7 | 72.9 | 72.2 | 79.2 | 79.5 |
| Vehicle Noise: | 78.2 | 77.4 | 74.3 | 73.4 | 80.5 | 80.8 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 263 | 566 | 1,219 | 2,626 |
| CNEL: | 274 | 590 | 1,271 | 2,738 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Rubidoux Bl.
Road Segment: s/o Market St.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 26,598 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,862 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.84% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.09% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.07% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -0.80 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -9.55 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -8.11 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.6 | 66.9 | 64.3 | 62.4 | 69.7 | 70.0 |
| Medium Trucks: | 69.6 | 69.3 | 64.6 | 63.8 | 71.3 | 71.5 |
| Heavy Trucks: | 75.5 | 74.6 | 71.8 | 71.1 | 78.1 | 78.3 |
| Vehicle Noise: | 77.0 | 76.2 | 73.1 | 72.3 | 79.4 | 79.6 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 249 | 536 | 1,155 | 2,489 |
| CNEL: | 260 | 559 | 1,205 | 2,595 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Rubidoux Bl.
Road Segment: s/o 24th St.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 26,807 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,877 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.84% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.09% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.07% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -0.76 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -9.52 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -8.08 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.6 | 66.9 | 64.3 | 62.4 | 69.7 | 70.0 |
| Medium Trucks: | 69.7 | 69.3 | 64.6 | 63.8 | 71.3 | 71.6 |
| Heavy Trucks: | 75.5 | 74.6 | 71.8 | 71.1 | 78.1 | 78.4 |
| Vehicle Noise: | 77.0 | 76.3 | 73.2 | 72.3 | 79.4 | 79.7 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 250 | 539 | 1,162 | 2,502 |
| CNEL: | 261 | 562 | 1,211 | 2,609 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Rubidoux Bl.
Road Segment: s/o 34th St.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 26,463 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,852 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.83% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.09% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.07% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -0.82 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -9.58 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -8.13 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.6 | 66.9 | 64.3 | 62.3 | 69.6 | 70.0 |
| Medium Trucks: | 69.6 | 69.3 | 64.5 | 63.7 | 71.3 | 71.5 |
| Heavy Trucks: | 75.4 | 74.5 | 71.8 | 71.0 | 78.0 | 78.3 |
| Vehicle Noise: | 77.0 | 76.2 | 73.1 | 72.2 | 79.4 | 79.6 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 248 | 535 | 1,152 | 2,481 |
| CNEL: | 259 | 557 | 1,201 | 2,587 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Rubidoux Bl.
Road Segment: s/o 26th St.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 26,416 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,849 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.58% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.20% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.22% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -0.84 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -9.54 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -8.10 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.5 | 66.8 | 64.2 | 62.3 | 69.6 | 69.9 |
| Medium Trucks: | 69.7 | 69.3 | 64.6 | 63.8 | 71.3 | 71.6 |
| Heavy Trucks: | 75.5 | 74.6 | 71.8 | 71.1 | 78.1 | 78.3 |
| Vehicle Noise: | 77.0 | 76.2 | 73.2 | 72.3 | 79.4 | 79.7 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 249 | 537 | 1,157 | 2,493 |
| CNEL: | 260 | 560 | 1,206 | 2,599 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Market St.
Road Segment: n/o Rivera St.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 26,163 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,831 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.74% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -0.42 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -9.15 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -7.71 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 66.2 | 65.5 | 62.9 | 61.0 | 68.3 | 68.6 |
| Medium Trucks: | 68.5 | 68.1 | 63.4 | 62.6 | 70.2 | 70.4 |
| Heavy Trucks: | 74.7 | 73.8 | 71.1 | 70.3 | 77.3 | 77.6 |
| Vehicle Noise: | 76.1 | 75.3 | 72.3 | 71.4 | 78.5 | 78.8 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 218 | 471 | 1,014 | 2,185 |
| CNEL: | 228 | 491 | 1,057 | 2,278 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP | Project Name: Rubidoux Warehouse Noi
Road Name: Market St. | Job Number: 12722
Road Segment: s/o SR-60 EB Ramps

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 35,168 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,462 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 65 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 50.0 feet |
| Centerline Dist. to Observer: | 50.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.81% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.10% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.09% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 38.324 |
| Medium Trucks: | 38.093 |
| Heavy Trucks: | 38.115 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | 0.87 | 1.63 | -1.20 | -4.65 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -7.88 | 1.67 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -6.44 | 1.66 | -1.20 | -5.43 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 69.8 | 69.0 | 66.5 | 64.5 | 71.8 | 72.2 |
| Medium Trucks: | 72.0 | 71.7 | 66.9 | 66.2 | 73.7 | 73.9 |
| Heavy Trucks: | 78.3 | 77.4 | 74.6 | 73.9 | 80.9 | 81.1 |
| Vehicle Noise: | 79.7 | 78.9 | 75.8 | 75.0 | 82.1 | 82.3 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 319 | 687 | 1,480 | 3,188 |
| CNEL: | 332 | 716 | 1,542 | 3,323 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP | Project Name: Rubidoux Warehouse Noi
Road Name: Agua Mansa Rd. | Job Number: 12722
Road Segment: n/o Market St.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 19,159 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,341 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 36 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 50.0 feet |
| Centerline Dist. to Observer: | 50.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.84% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.09% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.07% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.915 |
| Medium Trucks: | 46.726 |
| Heavy Trucks: | 46.744 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -1.76 | 0.31 | -1.20 | -4.65 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -10.52 | 0.34 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -9.08 | 0.34 | -1.20 | -5.43 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 65.8 | 65.1 | 62.5 | 60.6 | 67.9 | 68.2 |
| Medium Trucks: | 68.1 | 67.7 | 63.0 | 62.2 | 69.7 | 70.0 |
| Heavy Trucks: | 74.3 | 73.4 | 70.6 | 69.9 | 76.9 | 77.2 |
| Vehicle Noise: | 75.7 | 74.9 | 71.9 | 71.0 | 78.1 | 78.4 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 173 | 373 | 804 | 1,733 |
| CNEL: | 181 | 389 | 838 | 1,806 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP | Project Name: Rubidoux Warehouse Noi
Road Name: Riverside Av. | Job Number: 12722
Road Segment: n/o Agua Mansa Rd.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 29,639 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,075 vehicles |
| Vehicle Speed: | 55 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.78% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.12% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.11% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 71.78 | -0.74 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 82.40 | -9.49 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 86.40 | -8.05 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 70.2 | 69.5 | 66.9 | 65.0 | 72.3 | 72.6 |
| Medium Trucks: | 72.1 | 71.8 | 67.0 | 66.2 | 73.8 | 74.0 |
| Heavy Trucks: | 77.6 | 76.7 | 73.9 | 73.1 | 80.2 | 80.4 |
| Vehicle Noise: | 79.2 | 78.5 | 75.4 | 74.5 | 81.6 | 81.9 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 308 | 664 | 1,431 | 3,084 |
| CNEL: | 322 | 693 | 1,492 | 3,215 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP | Project Name: Rubidoux Warehouse Noi
Road Name: Slover Av. | Job Number: 12722
Road Segment: w/o Cedar Ave.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 16,095 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,127 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.85% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.08% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.06% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -2.98 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -11.74 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -10.30 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 66.4 | 65.7 | 63.1 | 61.2 | 68.5 | 68.8 |
| Medium Trucks: | 68.5 | 68.1 | 63.4 | 62.6 | 70.1 | 70.4 |
| Heavy Trucks: | 74.3 | 73.4 | 70.6 | 69.9 | 76.9 | 77.2 |
| Vehicle Noise: | 75.8 | 75.0 | 72.0 | 71.1 | 78.2 | 78.5 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 183 | 395 | 850 | 1,832 |
| CNEL: | 191 | 412 | 887 | 1,910 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Slover Av.
Road Segment: e/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 12,179 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 853 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.84% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.09% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.07% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -4.19 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -12.95 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -11.50 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 65.2 | 64.5 | 61.9 | 60.0 | 67.3 | 67.6 |
| Medium Trucks: | 67.3 | 66.9 | 62.2 | 61.4 | 68.9 | 69.2 |
| Heavy Trucks: | 73.1 | 72.2 | 69.4 | 68.7 | 75.7 | 75.9 |
| Vehicle Noise: | 74.6 | 73.8 | 70.8 | 69.9 | 77.0 | 77.3 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 152 | 328 | 706 | 1,522 |
| CNEL: | 159 | 342 | 736 | 1,587 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Santa Ana Ave.
Road Segment: e/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 6,716 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 470 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 36 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 44.0 feet |
| Centerline Dist. to Observer: | 44.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.83% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.09% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.08% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 40.460 |
| Medium Trucks: | 40.241 |
| Heavy Trucks: | 40.262 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -5.81 | 1.28 | -1.20 | -4.61 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -14.56 | 1.31 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -13.12 | 1.31 | -1.20 | -5.50 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 60.8 | 60.1 | 57.5 | 55.6 | 62.8 | 63.2 |
| Medium Trucks: | 63.3 | 62.9 | 58.2 | 57.4 | 64.9 | 65.2 |
| Heavy Trucks: | 70.0 | 69.1 | 66.3 | 65.6 | 72.6 | 72.8 |
| Vehicle Noise: | 71.2 | 70.4 | 67.4 | 66.5 | 73.6 | 73.9 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 77 | 166 | 357 | 770 |
| CNEL: | 80 | 173 | 372 | 802 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Santa Ana Ave.
Road Segment: w/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 9,224 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 646 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 36 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 44.0 feet |
| Centerline Dist. to Observer: | 44.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.87% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.08% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.05% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 40.460 |
| Medium Trucks: | 40.241 |
| Heavy Trucks: | 40.262 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -4.43 | 1.28 | -1.20 | -4.61 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -13.19 | 1.31 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -11.75 | 1.31 | -1.20 | -5.50 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 62.2 | 61.4 | 58.9 | 56.9 | 64.2 | 64.6 |
| Medium Trucks: | 64.6 | 64.3 | 59.5 | 58.7 | 66.3 | 66.5 |
| Heavy Trucks: | 71.4 | 70.4 | 67.7 | 66.9 | 73.9 | 74.2 |
| Vehicle Noise: | 72.6 | 71.8 | 68.8 | 67.9 | 75.0 | 75.3 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 95 | 205 | 441 | 950 |
| CNEL: | 99 | 213 | 460 | 990 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Jurupa Ave.
Road Segment: w/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 6,090 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 426 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.84% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.09% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.07% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -6.23 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -14.99 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -13.55 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 59.5 | 58.8 | 56.2 | 54.2 | 61.5 | 61.9 |
| Medium Trucks: | 61.9 | 61.6 | 56.8 | 56.0 | 63.6 | 63.8 |
| Heavy Trucks: | 68.7 | 67.7 | 65.0 | 64.2 | 71.3 | 71.5 |
| Vehicle Noise: | 69.9 | 69.1 | 66.1 | 65.2 | 72.3 | 72.6 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 74 | 160 | 344 | 742 |
| CNEL: | 77 | 167 | 359 | 774 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Jurupa Ave.
Road Segment: e/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 6,400 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 448 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.93% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.05% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.02% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -6.01 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -14.79 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -13.35 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 59.7 | 59.0 | 56.4 | 54.5 | 61.7 | 62.1 |
| Medium Trucks: | 62.1 | 61.8 | 57.0 | 56.2 | 63.8 | 64.0 |
| Heavy Trucks: | 68.9 | 67.9 | 65.2 | 64.4 | 71.5 | 71.7 |
| Vehicle Noise: | 70.1 | 69.3 | 66.3 | 65.4 | 72.5 | 72.8 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 77 | 165 | 355 | 765 |
| CNEL: | 80 | 172 | 370 | 798 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Market St.
Road Segment: e/o Rubidoux Bl.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 28,958 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,027 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.60% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.19% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.21% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | 0.02 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -8.69 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -7.24 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 66.7 | 65.9 | 63.4 | 61.4 | 68.7 | 69.0 |
| Medium Trucks: | 69.0 | 68.6 | 63.9 | 63.1 | 70.6 | 70.9 |
| Heavy Trucks: | 75.2 | 74.3 | 71.5 | 70.8 | 77.8 | 78.1 |
| Vehicle Noise: | 76.6 | 75.8 | 72.8 | 71.9 | 79.0 | 79.3 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 235 | 505 | 1,089 | 2,345 |
| CNEL: | 244 | 527 | 1,135 | 2,445 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: 7th St.
Road Segment: w/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 7,219 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 505 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 24 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 25.0 feet |
| Centerline Dist. to Observer: | 25.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.83% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.09% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.08% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 22.494 |
| Medium Trucks: | 22.098 |
| Heavy Trucks: | 22.136 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -6.00 | 5.10 | -1.20 | -4.41 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -14.76 | 5.22 | -1.20 | -4.85 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -13.32 | 5.20 | -1.20 | -5.94 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 66.4 | 65.6 | 63.1 | 61.1 | 68.4 | 68.7 |
| Medium Trucks: | 68.7 | 68.3 | 63.6 | 62.8 | 70.4 | 70.6 |
| Heavy Trucks: | 74.9 | 74.0 | 71.3 | 70.5 | 77.5 | 77.8 |
| Vehicle Noise: | 76.3 | 75.5 | 72.5 | 71.6 | 78.7 | 79.0 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 95 | 206 | 443 | 954 |
| CNEL: | 99 | 214 | 462 | 994 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAP
Road Name: Agua Mansa Rd.
Road Segment: e/o Riverside Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 14,311 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,002 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.81% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.10% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.09% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -3.03 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -11.79 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -10.34 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 64.6 | 63.9 | 61.3 | 59.4 | 66.7 | 67.0 |
| Medium Trucks: | 66.9 | 66.5 | 61.8 | 61.0 | 68.5 | 68.8 |
| Heavy Trucks: | 73.1 | 72.2 | 69.5 | 68.7 | 75.7 | 76.0 |
| Vehicle Noise: | 74.5 | 73.7 | 70.7 | 69.8 | 76.9 | 77.2 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 150 | 323 | 697 | 1,501 |
| CNEL: | 157 | 337 | 726 | 1,565 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Cedar Ave. | Job Number: 12722
Road Segment: n/o I-10 WB Ramps

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 60,400 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 4,228 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | 3.73 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -5.01 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -3.56 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 69.4 | 68.7 | 66.1 | 64.2 | 71.5 | 71.8 |
| Medium Trucks: | 71.9 | 71.6 | 66.8 | 66.0 | 73.6 | 73.8 |
| Heavy Trucks: | 78.6 | 77.7 | 75.0 | 74.2 | 81.2 | 81.5 |
| Vehicle Noise: | 79.9 | 79.1 | 76.1 | 75.2 | 82.3 | 82.6 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 343 | 740 | 1,594 | 3,434 |
| CNEL: | 358 | 771 | 1,661 | 3,579 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Cedar Ave. | Job Number: 12722
Road Segment: n/o Santa Ana Av.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 41,065 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,875 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | 1.54 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -7.20 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -5.75 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 69.2 | 68.5 | 65.9 | 64.0 | 71.2 | 71.6 |
| Medium Trucks: | 71.5 | 71.1 | 66.4 | 65.6 | 73.1 | 73.4 |
| Heavy Trucks: | 77.7 | 76.8 | 74.0 | 73.3 | 80.3 | 80.6 |
| Vehicle Noise: | 79.1 | 78.3 | 75.3 | 74.4 | 81.5 | 81.8 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 304 | 654 | 1,409 | 3,036 |
| CNEL: | 317 | 682 | 1,469 | 3,165 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Cedar Ave. | Job Number: 12722
Road Segment: s/o I-10 EB Ramps

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 53,300 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 3,731 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | 2.67 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -6.06 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -4.62 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 70.3 | 69.6 | 67.0 | 65.1 | 72.4 | 72.7 |
| Medium Trucks: | 72.6 | 72.2 | 67.5 | 66.7 | 74.3 | 74.5 |
| Heavy Trucks: | 78.8 | 77.9 | 75.2 | 74.4 | 81.4 | 81.7 |
| Vehicle Noise: | 80.2 | 79.4 | 76.4 | 75.5 | 82.6 | 82.9 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 361 | 778 | 1,677 | 3,613 |
| CNEL: | 377 | 811 | 1,748 | 3,766 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Cedar Ave. | Job Number: 12722
Road Segment: s/o Santa Ana Av.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 40,616 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,843 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | 1.49 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -7.24 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -5.80 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 69.1 | 68.4 | 65.8 | 63.9 | 71.2 | 71.5 |
| Medium Trucks: | 71.4 | 71.1 | 66.3 | 65.5 | 73.1 | 73.3 |
| Heavy Trucks: | 77.7 | 76.8 | 74.0 | 73.2 | 80.3 | 80.5 |
| Vehicle Noise: | 79.1 | 78.3 | 75.2 | 74.3 | 81.4 | 81.7 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 301 | 649 | 1,399 | 3,014 |
| CNEL: | 314 | 677 | 1,458 | 3,142 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Cedar Ave. | Job Number: 12722
Road Segment: s/o Jurupa Av.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 36,257 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,538 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | 1.00 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -7.74 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -6.29 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 68.6 | 67.9 | 65.3 | 63.4 | 70.7 | 71.0 |
| Medium Trucks: | 70.9 | 70.6 | 65.8 | 65.0 | 72.6 | 72.8 |
| Heavy Trucks: | 77.2 | 76.3 | 73.5 | 72.8 | 79.8 | 80.0 |
| Vehicle Noise: | 78.6 | 77.8 | 74.7 | 73.8 | 81.0 | 81.2 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 279 | 602 | 1,297 | 2,794 |
| CNEL: | 291 | 628 | 1,352 | 2,913 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Rubidoux Bl. | Job Number: 12722
Road Segment: s/o El Rivino Rd

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 34,894 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,443 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | 0.38 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -8.36 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -6.92 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 68.8 | 68.0 | 65.5 | 63.5 | 70.8 | 71.2 |
| Medium Trucks: | 70.8 | 70.5 | 65.7 | 65.0 | 72.5 | 72.7 |
| Heavy Trucks: | 76.7 | 75.8 | 73.0 | 72.2 | 79.3 | 79.5 |
| Vehicle Noise: | 78.2 | 77.4 | 74.3 | 73.5 | 80.6 | 80.8 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 299 | 644 | 1,388 | 2,990 |
| CNEL: | 312 | 672 | 1,447 | 3,117 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Cedar Ave. | Job Number: 12722
Road Segment: s/o 7th Street

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 36,386 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,547 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | 0.56 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -8.18 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -6.73 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 69.9 | 69.2 | 66.6 | 64.7 | 72.0 | 72.3 |
| Medium Trucks: | 72.0 | 71.7 | 66.9 | 66.1 | 73.7 | 73.9 |
| Heavy Trucks: | 77.9 | 76.9 | 74.2 | 73.4 | 80.4 | 80.7 |
| Vehicle Noise: | 79.4 | 78.6 | 75.5 | 74.6 | 81.8 | 82.0 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 316 | 682 | 1,469 | 3,164 |
| CNEL: | 330 | 711 | 1,531 | 3,298 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Rubidoux Bl. | Job Number: 12722
Road Segment: s/o Market St.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 36,129 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,529 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | 0.53 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -8.21 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -6.77 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 68.9 | 68.2 | 65.6 | 63.7 | 71.0 | 71.3 |
| Medium Trucks: | 71.0 | 70.6 | 65.9 | 65.1 | 72.6 | 72.9 |
| Heavy Trucks: | 76.8 | 75.9 | 73.1 | 72.4 | 79.4 | 79.7 |
| Vehicle Noise: | 78.3 | 77.6 | 74.5 | 73.6 | 80.7 | 81.0 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 306 | 659 | 1,420 | 3,060 |
| CNEL: | 319 | 687 | 1,481 | 3,190 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* EAC (2023)
*Road Name:* Rubidoux Bl.
*Road Segment:* s/o 24th St.
*Project Name:* Rubidoux Warehouse Noi
*Job Number:* 12722

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 36,019 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 2,521 vehicles |
| *Vehicle Speed:* | 50 mph |
| *Near/Far Lane Distance:* | 48 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 59.0 feet |
| *Centerline Dist. to Observer:* | 59.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 75.75% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 10.13% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 14.13% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 54.129 |
| *Medium Trucks:* | 53.966 |
| *Heavy Trucks:* | 53.982 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 70.20 | 0.51 | -0.62 | -1.20 | *-4.69* | 0.000 | 0.000 |
| *Medium Trucks:* | 81.00 | -8.22 | -0.60 | -1.20 | *-4.88* | 0.000 | 0.000 |
| *Heavy Trucks:* | 85.38 | -6.78 | -0.60 | -1.20 | *-5.35* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 68.9 | 68.2 | 65.6 | 63.7 | 71.0 | 71.3 |
| *Medium Trucks:* | 71.0 | 70.6 | 65.9 | 65.1 | 72.6 | 72.9 |
| *Heavy Trucks:* | 76.8 | 75.9 | 73.1 | 72.4 | 79.4 | 79.7 |
| *Vehicle Noise:* | 78.3 | 77.6 | 74.5 | 73.6 | 80.7 | 81.0 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 305 | 658 | 1,417 | 3,054 |
| *CNEL:* | 318 | 686 | 1,478 | 3,184 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* EAC (2023)
*Road Name:* Rubidoux Bl.
*Road Segment:* s/o 34th St.
*Project Name:* Rubidoux Warehouse Noi
*Job Number:* 12722

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 31,223 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 2,186 vehicles |
| *Vehicle Speed:* | 50 mph |
| *Near/Far Lane Distance:* | 48 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 59.0 feet |
| *Centerline Dist. to Observer:* | 59.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 75.75% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 10.13% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 14.13% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 54.129 |
| *Medium Trucks:* | 53.966 |
| *Heavy Trucks:* | 53.982 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 70.20 | -0.11 | -0.62 | -1.20 | *-4.69* | 0.000 | 0.000 |
| *Medium Trucks:* | 81.00 | -8.84 | -0.60 | -1.20 | *-4.88* | 0.000 | 0.000 |
| *Heavy Trucks:* | 85.38 | -7.40 | -0.60 | -1.20 | *-5.35* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 68.3 | 67.6 | 65.0 | 63.1 | 70.3 | 70.7 |
| *Medium Trucks:* | 70.4 | 70.0 | 65.3 | 64.5 | 72.0 | 72.3 |
| *Heavy Trucks:* | 76.2 | 75.3 | 72.5 | 71.8 | 78.8 | 79.0 |
| *Vehicle Noise:* | 77.7 | 76.9 | 73.9 | 73.0 | 80.1 | 80.4 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 278 | 598 | 1,289 | 2,776 |
| *CNEL:* | 289 | 624 | 1,343 | 2,894 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* EAC (2023)
*Road Name:* Rubidoux Bl.
*Road Segment:* s/o 26th St.
*Project Name:* Rubidoux Warehouse Noi
*Job Number:* 12722

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 35,948 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 2,516 vehicles |
| *Vehicle Speed:* | 50 mph |
| *Near/Far Lane Distance:* | 48 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 59.0 feet |
| *Centerline Dist. to Observer:* | 59.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 75.75% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 10.13% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 14.13% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 54.129 |
| *Medium Trucks:* | 53.966 |
| *Heavy Trucks:* | 53.982 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 70.20 | 0.51 | -0.62 | -1.20 | *-4.69* | 0.000 | 0.000 |
| *Medium Trucks:* | 81.00 | -8.23 | -0.60 | -1.20 | *-4.88* | 0.000 | 0.000 |
| *Heavy Trucks:* | 85.38 | -6.79 | -0.60 | -1.20 | *-5.35* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 68.9 | 68.2 | 65.6 | 63.7 | 71.0 | 71.3 |
| *Medium Trucks:* | 71.0 | 70.6 | 65.9 | 65.1 | 72.6 | 72.9 |
| *Heavy Trucks:* | 76.8 | 75.9 | 73.1 | 72.4 | 79.4 | 79.7 |
| *Vehicle Noise:* | 78.3 | 77.5 | 74.5 | 73.6 | 80.7 | 81.0 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 305 | 657 | 1,416 | 3,050 |
| *CNEL:* | 318 | 685 | 1,476 | 3,179 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* EAC (2023)
*Road Name:* Market St.
*Road Segment:* n/o Rivera St.
*Project Name:* Rubidoux Warehouse Noi
*Job Number:* 12722

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 32,894 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 2,303 vehicles |
| *Vehicle Speed:* | 45 mph |
| *Near/Far Lane Distance:* | 48 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 59.0 feet |
| *Centerline Dist. to Observer:* | 59.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 75.75% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 10.13% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 14.13% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 54.129 |
| *Medium Trucks:* | 53.966 |
| *Heavy Trucks:* | 53.982 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 68.46 | 0.58 | -0.62 | -1.20 | *-4.69* | 0.000 | 0.000 |
| *Medium Trucks:* | 79.45 | -8.16 | -0.60 | -1.20 | *-4.88* | 0.000 | 0.000 |
| *Heavy Trucks:* | 84.25 | -6.72 | -0.60 | -1.20 | *-5.35* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 67.2 | 66.5 | 63.9 | 62.0 | 69.3 | 69.6 |
| *Medium Trucks:* | 69.5 | 69.1 | 64.4 | 63.6 | 71.1 | 71.4 |
| *Heavy Trucks:* | 75.7 | 74.8 | 72.1 | 71.3 | 78.3 | 78.6 |
| *Vehicle Noise:* | 77.1 | 76.3 | 73.3 | 72.4 | 79.5 | 79.8 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 254 | 548 | 1,181 | 2,545 |
| *CNEL:* | 265 | 571 | 1,231 | 2,653 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Market St. | Job Number: 12722
Road Segment: s/o SR-60 EB Ramps

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 37,627 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,634 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 65 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 50.0 feet |
| Centerline Dist. to Observer: | 50.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 38.324 |
| Medium Trucks: | 38.093 |
| Heavy Trucks: | 38.115 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | 1.16 | 1.63 | -1.20 | -4.65 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -7.58 | 1.67 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -6.13 | 1.66 | -1.20 | -5.43 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 70.1 | 69.3 | 66.7 | 64.8 | 72.1 | 72.4 |
| Medium Trucks: | 72.3 | 72.0 | 67.2 | 66.5 | 74.0 | 74.2 |
| Heavy Trucks: | 78.6 | 77.7 | 74.9 | 74.2 | 81.2 | 81.4 |
| Vehicle Noise: | 80.0 | 79.2 | 76.1 | 75.3 | 82.4 | 82.6 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 334 | 720 | 1,550 | 3,340 |
| CNEL: | 348 | 750 | 1,616 | 3,482 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Agua Mansa Rd. | Job Number: 12722
Road Segment: n/o Market St.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 25,426 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,780 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 36 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 50.0 feet |
| Centerline Dist. to Observer: | 50.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.915 |
| Medium Trucks: | 46.726 |
| Heavy Trucks: | 46.744 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -0.54 | 0.31 | -1.20 | -4.65 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -9.28 | 0.34 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -7.83 | 0.34 | -1.20 | -5.43 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.0 | 66.3 | 63.7 | 61.8 | 69.1 | 69.4 |
| Medium Trucks: | 69.3 | 68.9 | 64.2 | 63.4 | 71.0 | 71.2 |
| Heavy Trucks: | 75.6 | 74.6 | 71.9 | 71.1 | 78.1 | 78.4 |
| Vehicle Noise: | 76.9 | 76.2 | 73.1 | 72.2 | 79.3 | 79.6 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 210 | 452 | 974 | 2,097 |
| CNEL: | 219 | 471 | 1,015 | 2,186 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Riverside Av. | Job Number: 12722
Road Segment: n/o Agua Mansa Rd.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 35,597 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,492 vehicles |
| Vehicle Speed: | 55 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 71.78 | 0.05 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 82.40 | -8.69 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 86.40 | -7.24 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 71.0 | 70.3 | 67.7 | 65.8 | 73.1 | 73.4 |
| Medium Trucks: | 72.9 | 72.6 | 67.8 | 67.0 | 74.6 | 74.8 |
| Heavy Trucks: | 78.4 | 77.5 | 74.7 | 73.9 | 81.0 | 81.2 |
| Vehicle Noise: | 80.0 | 79.3 | 76.2 | 75.3 | 82.4 | 82.7 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 349 | 751 | 1,619 | 3,487 |
| CNEL: | 364 | 783 | 1,687 | 3,635 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Slover Av. | Job Number: 12722
Road Segment: w/o Cedar Ave.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 22,117 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,548 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -1.60 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -10.34 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -8.90 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.8 | 67.1 | 64.5 | 62.6 | 69.8 | 70.2 |
| Medium Trucks: | 69.9 | 69.5 | 64.8 | 64.0 | 71.5 | 71.8 |
| Heavy Trucks: | 75.7 | 74.8 | 72.0 | 71.3 | 78.3 | 78.6 |
| Vehicle Noise: | 77.2 | 76.4 | 73.4 | 72.5 | 79.6 | 79.9 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 227 | 489 | 1,054 | 2,270 |
| CNEL: | 237 | 510 | 1,099 | 2,367 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Slover Av. | Job Number: 12722
Road Segment: e/o Cedar Ave.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 16,517 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,156 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -2.87 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -11.61 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -10.16 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 66.5 | 65.8 | 63.2 | 61.3 | 68.6 | 68.9 |
| Medium Trucks: | 68.6 | 68.2 | 63.5 | 62.7 | 70.3 | 70.5 |
| Heavy Trucks: | 74.4 | 73.5 | 70.8 | 70.0 | 77.0 | 77.3 |
| Vehicle Noise: | 76.0 | 75.2 | 72.1 | 71.2 | 78.3 | 78.6 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 187 | 403 | 867 | 1,869 |
| CNEL: | 195 | 420 | 904 | 1,948 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Santa Ana Ave. | Job Number: 12722
Road Segment: e/o Cedar Ave.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 8,253 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 578 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 36 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 44.0 feet |
| Centerline Dist. to Observer: | 44.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 40.460 |
| Medium Trucks: | 40.241 |
| Heavy Trucks: | 40.262 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -4.92 | 1.28 | -1.20 | -4.61 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -13.65 | 1.31 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -12.21 | 1.31 | -1.20 | -5.50 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 61.7 | 61.0 | 58.4 | 56.4 | 63.7 | 64.1 |
| Medium Trucks: | 64.2 | 63.8 | 59.1 | 58.3 | 65.8 | 66.1 |
| Heavy Trucks: | 70.9 | 70.0 | 67.2 | 66.5 | 73.5 | 73.8 |
| Vehicle Noise: | 72.1 | 71.3 | 68.3 | 67.5 | 74.6 | 74.8 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 88 | 191 | 411 | 885 |
| CNEL: | 92 | 199 | 428 | 922 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Santa Ana Ave. | Job Number: 12722
Road Segment: w/o Cedar Ave.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 10,175 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 712 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 36 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 44.0 feet |
| Centerline Dist. to Observer: | 44.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 40.460 |
| Medium Trucks: | 40.241 |
| Heavy Trucks: | 40.262 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -4.01 | 1.28 | -1.20 | -4.61 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -12.74 | 1.31 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -11.30 | 1.31 | -1.20 | -5.50 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 62.6 | 61.9 | 59.3 | 57.4 | 64.6 | 65.0 |
| Medium Trucks: | 65.1 | 64.7 | 60.0 | 59.2 | 66.7 | 67.0 |
| Heavy Trucks: | 71.8 | 70.9 | 68.1 | 67.4 | 74.4 | 74.7 |
| Vehicle Noise: | 73.0 | 72.2 | 69.2 | 68.4 | 75.5 | 75.7 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 102 | 219 | 472 | 1,017 |
| CNEL: | 106 | 228 | 492 | 1,060 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Jurupa Ave. | Job Number: 12722
Road Segment: w/o Cedar Ave.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 17,722 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,241 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -1.60 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -10.33 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -8.89 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 64.1 | 63.4 | 60.8 | 58.9 | 66.2 | 66.5 |
| Medium Trucks: | 66.6 | 66.2 | 61.5 | 60.7 | 68.3 | 68.5 |
| Heavy Trucks: | 73.3 | 72.4 | 69.6 | 68.9 | 75.9 | 76.2 |
| Vehicle Noise: | 74.6 | 73.8 | 70.7 | 69.9 | 77.0 | 77.2 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 152 | 327 | 704 | 1,516 |
| CNEL: | 158 | 340 | 734 | 1,580 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Jurupa Ave. | Job Number: 12722
Road Segment: e/o Cedar Ave.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 9,428 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 660 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -4.34 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -13.08 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -11.63 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 61.4 | 60.6 | 58.1 | 56.1 | 63.4 | 63.7 |
| Medium Trucks: | 63.9 | 63.5 | 58.8 | 58.0 | 65.5 | 65.8 |
| Heavy Trucks: | 70.6 | 69.7 | 66.9 | 66.2 | 73.2 | 73.4 |
| Vehicle Noise: | 71.8 | 71.0 | 68.0 | 67.1 | 74.2 | 74.5 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 100 | 214 | 462 | 995 |
| CNEL: | 104 | 224 | 482 | 1,038 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Market St. | Job Number: 12722
Road Segment: e/o Rubidoux Bl.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 36,262 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,538 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | 1.00 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -7.74 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -6.29 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.6 | 66.9 | 64.3 | 62.4 | 69.7 | 70.0 |
| Medium Trucks: | 69.9 | 69.5 | 64.8 | 64.0 | 71.6 | 71.8 |
| Heavy Trucks: | 76.2 | 75.3 | 72.5 | 71.7 | 78.8 | 79.0 |
| Vehicle Noise: | 77.6 | 76.8 | 73.7 | 72.8 | 79.9 | 80.2 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 272 | 585 | 1,260 | 2,716 |
| CNEL: | 283 | 610 | 1,314 | 2,831 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: 7th St. | Job Number: 12722
Road Segment: w/o Cedar Ave.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 10,298 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 721 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 24 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 25.0 feet |
| Centerline Dist. to Observer: | 25.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 22.494 |
| Medium Trucks: | 22.098 |
| Heavy Trucks: | 22.136 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -4.47 | 5.10 | -1.20 | -4.41 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -13.20 | 5.22 | -1.20 | -4.85 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -11.76 | 5.20 | -1.20 | -5.94 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.9 | 67.2 | 64.6 | 62.7 | 70.0 | 70.3 |
| Medium Trucks: | 70.3 | 69.9 | 65.2 | 64.4 | 71.9 | 72.2 |
| Heavy Trucks: | 76.5 | 75.6 | 72.8 | 72.1 | 79.1 | 79.4 |
| Vehicle Noise: | 77.9 | 77.1 | 74.0 | 73.2 | 80.3 | 80.5 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 121 | 261 | 562 | 1,211 |
| CNEL: | 126 | 272 | 586 | 1,262 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Agua Mansa Rd. | Job Number: 12722
Road Segment: e/o Riverside Ave.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 36,262 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,538 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | 1.00 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -7.74 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -6.29 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 68.6 | 67.9 | 65.3 | 63.4 | 70.7 | 71.0 |
| Medium Trucks: | 70.9 | 70.6 | 65.8 | 65.0 | 72.6 | 72.8 |
| Heavy Trucks: | 77.2 | 76.3 | 73.5 | 72.8 | 79.8 | 80.0 |
| Vehicle Noise: | 78.6 | 77.8 | 74.7 | 73.8 | 81.0 | 81.2 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 279 | 602 | 1,297 | 2,795 |
| CNEL: | 291 | 628 | 1,352 | 2,913 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* EAPC (2023) | *Project Name:* Rubidoux Warehouse Noi
*Road Name:* Cedar Ave. | *Job Number:* 12722
*Road Segment:* n/o I-10 WB Ramps

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 60,494 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 4,235 vehicles |
| *Vehicle Speed:* | 40 mph |
| *Near/Far Lane Distance:* | 48 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 52.0 feet |
| *Centerline Dist. to Observer:* | 52.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 75.78% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 10.11% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 14.10% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 46.400 |
| *Medium Trucks:* | 46.209 |
| *Heavy Trucks:* | 46.228 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 66.51 | 3.74 | 0.38 | -1.20 | *-4.66* | 0.000 | 0.000 |
| *Medium Trucks:* | 77.72 | -5.01 | 0.41 | -1.20 | *-4.87* | 0.000 | 0.000 |
| *Heavy Trucks:* | 82.99 | -3.56 | 0.41 | -1.20 | *-5.41* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 69.4 | 68.7 | 66.1 | 64.2 | 71.5 | 71.8 |
| *Medium Trucks:* | 71.9 | 71.6 | 66.8 | 66.0 | 73.6 | 73.8 |
| *Heavy Trucks:* | 78.6 | 77.7 | 75.0 | 74.2 | 81.2 | 81.5 |
| *Vehicle Noise:* | 79.9 | 79.1 | 76.1 | 75.2 | 82.3 | 82.6 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 343 | 740 | 1,594 | 3,434 |
| *CNEL:* | 358 | 771 | 1,661 | 3,579 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* EAPC (2023) | *Project Name:* Rubidoux Warehouse Noi
*Road Name:* Cedar Ave. | *Job Number:* 12722
*Road Segment:* n/o Santa Ana Av.

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 42,086 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 2,946 vehicles |
| *Vehicle Speed:* | 45 mph |
| *Near/Far Lane Distance:* | 48 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 52.0 feet |
| *Centerline Dist. to Observer:* | 52.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 76.15% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 9.96% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 13.89% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 46.400 |
| *Medium Trucks:* | 46.209 |
| *Heavy Trucks:* | 46.228 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 68.46 | 1.67 | 0.38 | -1.20 | *-4.66* | 0.000 | 0.000 |
| *Medium Trucks:* | 79.45 | -7.16 | 0.41 | -1.20 | *-4.87* | 0.000 | 0.000 |
| *Heavy Trucks:* | 84.25 | -5.72 | 0.41 | -1.20 | *-5.41* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 69.3 | 68.6 | 66.0 | 64.1 | 71.4 | 71.7 |
| *Medium Trucks:* | 71.5 | 71.1 | 66.4 | 65.6 | 73.2 | 73.4 |
| *Heavy Trucks:* | 77.7 | 76.8 | 74.1 | 73.3 | 80.3 | 80.6 |
| *Vehicle Noise:* | 79.1 | 78.4 | 75.3 | 74.4 | 81.5 | 81.8 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 306 | 658 | 1,419 | 3,056 |
| *CNEL:* | 319 | 686 | 1,479 | 3,186 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* EAPC (2023) | *Project Name:* Rubidoux Warehouse Noi
*Road Name:* Cedar Ave. | *Job Number:* 12722
*Road Segment:* s/o I-10 EB Ramps

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 54,203 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 3,794 vehicles |
| *Vehicle Speed:* | 45 mph |
| *Near/Far Lane Distance:* | 48 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 52.0 feet |
| *Centerline Dist. to Observer:* | 52.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 76.01% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 10.02% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 13.97% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 46.400 |
| *Medium Trucks:* | 46.209 |
| *Heavy Trucks:* | 46.228 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 68.46 | 2.76 | 0.38 | -1.20 | *-4.66* | 0.000 | 0.000 |
| *Medium Trucks:* | 79.45 | -6.04 | 0.41 | -1.20 | *-4.87* | 0.000 | 0.000 |
| *Heavy Trucks:* | 84.25 | -4.59 | 0.41 | -1.20 | *-5.41* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 70.4 | 69.7 | 67.1 | 65.2 | 72.5 | 72.8 |
| *Medium Trucks:* | 72.6 | 72.3 | 67.5 | 66.7 | 74.3 | 74.5 |
| *Heavy Trucks:* | 78.9 | 78.0 | 75.2 | 74.5 | 81.5 | 81.7 |
| *Vehicle Noise:* | 80.3 | 79.5 | 76.4 | 75.6 | 82.7 | 82.9 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 363 | 782 | 1,685 | 3,630 |
| *CNEL:* | 378 | 815 | 1,757 | 3,785 |

Tuesday, October 6, 2020

## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* EAPC (2023) | *Project Name:* Rubidoux Warehouse Noi
*Road Name:* Cedar Ave. | *Job Number:* 12722
*Road Segment:* s/o Santa Ana Av.

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 41,707 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 2,920 vehicles |
| *Vehicle Speed:* | 45 mph |
| *Near/Far Lane Distance:* | 48 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 52.0 feet |
| *Centerline Dist. to Observer:* | 52.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 76.19% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 9.94% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 13.86% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 46.400 |
| *Medium Trucks:* | 46.209 |
| *Heavy Trucks:* | 46.228 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 68.46 | 1.63 | 0.38 | -1.20 | *-4.66* | 0.000 | 0.000 |
| *Medium Trucks:* | 79.45 | -7.21 | 0.41 | -1.20 | *-4.87* | 0.000 | 0.000 |
| *Heavy Trucks:* | 84.25 | -5.77 | 0.41 | -1.20 | *-5.41* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 69.3 | 68.6 | 66.0 | 64.1 | 71.3 | 71.7 |
| *Medium Trucks:* | 71.4 | 71.1 | 66.4 | 65.6 | 73.1 | 73.4 |
| *Heavy Trucks:* | 77.7 | 76.8 | 74.0 | 73.3 | 80.3 | 80.6 |
| *Vehicle Noise:* | 79.1 | 78.3 | 75.3 | 74.4 | 81.5 | 81.8 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 303 | 654 | 1,409 | 3,035 |
| *CNEL:* | 316 | 682 | 1,468 | 3,163 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Cedar Ave. | Job Number: 12722
Road Segment: s/o Jurupa Av.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 37,420 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,619 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 76.29% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 9.90% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 13.81% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | 1.17 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -7.70 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -6.25 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 68.8 | 68.1 | 65.5 | 63.6 | 70.9 | 71.2 |
| Medium Trucks: | 71.0 | 70.6 | 65.9 | 65.1 | 72.6 | 72.9 |
| Heavy Trucks: | 77.2 | 76.3 | 73.5 | 72.8 | 79.8 | 80.1 |
| Vehicle Noise: | 78.6 | 77.8 | 74.8 | 73.9 | 81.0 | 81.3 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 282 | 607 | 1,307 | 2,816 |
| CNEL: | 294 | 632 | 1,363 | 2,936 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Rubidoux Bl. | Job Number: 12722
Road Segment: s/o El Rivino Rd

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 36,080 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,526 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 76.33% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 9.89% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 13.79% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | 0.56 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -8.32 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -6.88 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 68.9 | 68.2 | 65.6 | 63.7 | 71.0 | 71.3 |
| Medium Trucks: | 70.9 | 70.5 | 65.8 | 65.0 | 72.5 | 72.8 |
| Heavy Trucks: | 76.7 | 75.8 | 73.0 | 72.3 | 79.3 | 79.6 |
| Vehicle Noise: | 78.2 | 77.5 | 74.4 | 73.5 | 80.6 | 80.9 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 302 | 650 | 1,400 | 3,015 |
| CNEL: | 314 | 677 | 1,459 | 3,143 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Cedar Ave. | Job Number: 12722
Road Segment: s/o 7th Street

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 37,572 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,630 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 76.31% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 9.90% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 13.80% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | 0.73 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -8.14 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -6.70 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 70.1 | 69.4 | 66.8 | 64.9 | 72.2 | 72.5 |
| Medium Trucks: | 72.1 | 71.7 | 67.0 | 66.2 | 73.7 | 74.0 |
| Heavy Trucks: | 77.9 | 77.0 | 74.2 | 73.5 | 80.5 | 80.8 |
| Vehicle Noise: | 79.4 | 78.7 | 75.6 | 74.7 | 81.8 | 82.1 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 319 | 687 | 1,480 | 3,190 |
| CNEL: | 333 | 716 | 1,543 | 3,325 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Rubidoux Bl. | Job Number: 12722
Road Segment: s/o Market St.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 37,186 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,603 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.81% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.10% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.08% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | 0.66 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -8.10 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -6.65 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 69.0 | 68.3 | 65.7 | 63.8 | 71.1 | 71.4 |
| Medium Trucks: | 71.1 | 70.7 | 66.0 | 65.2 | 72.8 | 73.0 |
| Heavy Trucks: | 76.9 | 76.0 | 73.3 | 72.5 | 79.5 | 79.8 |
| Vehicle Noise: | 78.5 | 77.7 | 74.6 | 73.7 | 80.8 | 81.1 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 311 | 671 | 1,446 | 3,114 |
| CNEL: | 325 | 699 | 1,507 | 3,247 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Rubidoux Bl. | Job Number: 12722
Road Segment: s/o 24th St.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 37,076 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,595 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.81% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.10% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.08% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | 0.64 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -8.11 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -6.67 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 69.0 | 68.3 | 65.7 | 63.8 | 71.1 | 71.4 |
| Medium Trucks: | 71.1 | 70.7 | 66.0 | 65.2 | 72.8 | 73.0 |
| Heavy Trucks: | 76.9 | 76.0 | 73.2 | 72.5 | 79.5 | 79.8 |
| Vehicle Noise: | 78.4 | 77.7 | 74.6 | 73.7 | 80.8 | 81.1 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 311 | 670 | 1,443 | 3,108 |
| CNEL: | 324 | 698 | 1,504 | 3,240 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Rubidoux Bl. | Job Number: 12722
Road Segment: s/o 34th St.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 31,317 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,192 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.82% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.10% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.08% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -0.09 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -8.84 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -7.40 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 68.3 | 67.6 | 65.0 | 63.1 | 70.4 | 70.7 |
| Medium Trucks: | 70.4 | 70.0 | 65.3 | 64.5 | 72.0 | 72.3 |
| Heavy Trucks: | 76.2 | 75.3 | 72.5 | 71.8 | 78.8 | 79.0 |
| Vehicle Noise: | 77.7 | 76.9 | 73.9 | 73.0 | 80.1 | 80.4 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 278 | 598 | 1,289 | 2,777 |
| CNEL: | 290 | 624 | 1,344 | 2,895 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Rubidoux Bl. | Job Number: 12722
Road Segment: s/o 26th St.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 36,722 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,571 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.63% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.18% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.19% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | 0.59 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -8.12 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -6.67 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 69.0 | 68.3 | 65.7 | 63.7 | 71.0 | 71.4 |
| Medium Trucks: | 71.1 | 70.7 | 66.0 | 65.2 | 72.7 | 73.0 |
| Heavy Trucks: | 76.9 | 76.0 | 73.2 | 72.5 | 79.5 | 79.8 |
| Vehicle Noise: | 78.4 | 77.7 | 74.6 | 73.7 | 80.8 | 81.1 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 310 | 668 | 1,440 | 3,102 |
| CNEL: | 323 | 697 | 1,501 | 3,234 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Market St. | Job Number: 12722
Road Segment: n/o Rivera St.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 33,519 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,346 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.74% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | 0.66 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -8.08 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -6.63 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.3 | 66.6 | 64.0 | 62.1 | 69.4 | 69.7 |
| Medium Trucks: | 69.6 | 69.2 | 64.5 | 63.7 | 71.2 | 71.5 |
| Heavy Trucks: | 75.8 | 74.9 | 72.1 | 71.4 | 78.4 | 78.7 |
| Vehicle Noise: | 77.2 | 76.4 | 73.4 | 72.5 | 79.6 | 79.9 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 258 | 555 | 1,196 | 2,577 |
| CNEL: | 269 | 579 | 1,247 | 2,686 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Market St. | Job Number: 12722
Road Segment: s/o SR-60 EB Ramps

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 37,721 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,640 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 65 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 50.0 feet |
| Centerline Dist. to Observer: | 50.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.81% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.10% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.09% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 38.324 |
| Medium Trucks: | 38.093 |
| Heavy Trucks: | 38.115 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | 1.18 | 1.63 | -1.20 | -4.65 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -7.58 | 1.67 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -6.13 | 1.66 | -1.20 | -5.43 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 70.1 | 69.4 | 66.8 | 64.8 | 72.1 | 72.5 |
| Medium Trucks: | 72.3 | 72.0 | 67.2 | 66.5 | 74.0 | 74.2 |
| Heavy Trucks: | 78.6 | 77.7 | 74.9 | 74.2 | 81.2 | 81.4 |
| Vehicle Noise: | 80.0 | 79.2 | 76.1 | 75.3 | 82.4 | 82.6 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 334 | 720 | 1,551 | 3,341 |
| CNEL: | 348 | 750 | 1,616 | 3,482 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Agua Mansa Rd. | Job Number: 12722
Road Segment: n/o Market St.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 25,714 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,800 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 36 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 50.0 feet |
| Centerline Dist. to Observer: | 50.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.82% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.10% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.08% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.915 |
| Medium Trucks: | 46.726 |
| Heavy Trucks: | 46.744 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -0.49 | 0.31 | -1.20 | -4.65 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -9.24 | 0.34 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -7.80 | 0.34 | -1.20 | -5.43 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.1 | 66.4 | 63.8 | 61.9 | 69.1 | 69.5 |
| Medium Trucks: | 69.3 | 69.0 | 64.3 | 63.5 | 71.0 | 71.2 |
| Heavy Trucks: | 75.6 | 74.7 | 71.9 | 71.2 | 78.2 | 78.5 |
| Vehicle Noise: | 77.0 | 76.2 | 73.1 | 72.3 | 79.4 | 79.6 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 211 | 455 | 979 | 2,110 |
| CNEL: | 220 | 474 | 1,021 | 2,199 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Riverside Av. | Job Number: 12722
Road Segment: n/o Agua Mansa Rd.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 35,741 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,502 vehicles |
| Vehicle Speed: | 55 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.77% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.12% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.11% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 71.78 | 0.07 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 82.40 | -8.68 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 86.40 | -7.23 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 71.0 | 70.3 | 67.7 | 65.8 | 73.1 | 73.4 |
| Medium Trucks: | 72.9 | 72.6 | 67.8 | 67.1 | 74.6 | 74.8 |
| Heavy Trucks: | 78.4 | 77.5 | 74.7 | 74.0 | 81.0 | 81.2 |
| Vehicle Noise: | 80.0 | 79.3 | 76.2 | 75.3 | 82.4 | 82.7 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 349 | 753 | 1,622 | 3,494 |
| CNEL: | 364 | 785 | 1,691 | 3,643 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Slover Av. | Job Number: 12722
Road Segment: w/o Cedar Ave.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 22,188 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,553 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.82% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.10% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.08% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -1.58 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -10.34 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -8.90 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.8 | 67.1 | 64.5 | 62.6 | 69.9 | 70.2 |
| Medium Trucks: | 69.9 | 69.5 | 64.8 | 64.0 | 71.5 | 71.8 |
| Heavy Trucks: | 75.7 | 74.8 | 72.0 | 71.3 | 78.3 | 78.6 |
| Vehicle Noise: | 77.2 | 76.4 | 73.4 | 72.5 | 79.6 | 79.9 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 227 | 489 | 1,054 | 2,271 |
| CNEL: | 237 | 510 | 1,099 | 2,368 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Slover Av. | Job Number: 12722
Road Segment: e/o Cedar Ave.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 16,564 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,160 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.82% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.10% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.08% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -2.85 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -11.61 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -10.16 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 66.5 | 65.8 | 63.2 | 61.3 | 68.6 | 68.9 |
| Medium Trucks: | 68.6 | 68.2 | 63.5 | 62.7 | 70.3 | 70.5 |
| Heavy Trucks: | 74.4 | 73.5 | 70.8 | 70.0 | 77.0 | 77.3 |
| Vehicle Noise: | 76.0 | 75.2 | 72.1 | 71.2 | 78.3 | 78.6 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 187 | 403 | 868 | 1,869 |
| CNEL: | 195 | 420 | 905 | 1,949 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Santa Ana Ave. | Job Number: 12722
Road Segment: e/o Cedar Ave.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 8,276 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 579 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 36 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 44.0 feet |
| Centerline Dist. to Observer: | 44.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.82% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.10% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.08% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 40.460 |
| Medium Trucks: | 40.241 |
| Heavy Trucks: | 40.262 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -4.90 | 1.28 | -1.20 | -4.61 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -13.65 | 1.31 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -12.21 | 1.31 | -1.20 | -5.50 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 61.7 | 61.0 | 58.4 | 56.5 | 63.8 | 64.1 |
| Medium Trucks: | 64.2 | 63.8 | 59.1 | 58.3 | 65.8 | 66.1 |
| Heavy Trucks: | 70.9 | 70.0 | 67.2 | 66.5 | 73.5 | 73.8 |
| Vehicle Noise: | 72.1 | 71.3 | 68.3 | 67.5 | 74.6 | 74.8 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 89 | 191 | 411 | 885 |
| CNEL: | 92 | 199 | 428 | 923 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Santa Ana Ave. | Job Number: 12722
Road Segment: w/o Cedar Ave.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 10,222 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 716 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 36 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 44.0 feet |
| Centerline Dist. to Observer: | 44.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.86% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.08% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.06% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 40.460 |
| Medium Trucks: | 40.241 |
| Heavy Trucks: | 40.262 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -3.98 | 1.28 | -1.20 | -4.61 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -12.74 | 1.31 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -11.30 | 1.31 | -1.20 | -5.50 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 62.6 | 61.9 | 59.3 | 57.4 | 64.7 | 65.0 |
| Medium Trucks: | 65.1 | 64.7 | 60.0 | 59.2 | 66.7 | 67.0 |
| Heavy Trucks: | 71.8 | 70.9 | 68.1 | 67.4 | 74.4 | 74.7 |
| Vehicle Noise: | 73.1 | 72.3 | 69.2 | 68.4 | 75.5 | 75.7 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 102 | 219 | 472 | 1,018 |
| CNEL: | 106 | 229 | 492 | 1,061 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Jurupa Ave. | Job Number: 12722
Road Segment: w/o Cedar Ave.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 17,746 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,242 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.78% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.11% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.11% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -1.59 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -10.33 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -8.89 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 64.1 | 63.4 | 60.8 | 58.9 | 66.2 | 66.5 |
| Medium Trucks: | 66.6 | 66.2 | 61.5 | 60.7 | 68.3 | 68.5 |
| Heavy Trucks: | 73.3 | 72.4 | 69.6 | 68.9 | 75.9 | 76.2 |
| Vehicle Noise: | 74.6 | 73.8 | 70.7 | 69.9 | 77.0 | 77.2 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 152 | 327 | 704 | 1,516 |
| CNEL: | 158 | 341 | 734 | 1,580 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Jurupa Ave. | Job Number: 12722
Road Segment: e/o Cedar Ave.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 9,476 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 663 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.87% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.08% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.05% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -4.31 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -13.08 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -11.63 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 61.4 | 60.7 | 58.1 | 56.2 | 63.5 | 63.8 |
| Medium Trucks: | 63.9 | 63.5 | 58.8 | 58.0 | 65.5 | 65.8 |
| Heavy Trucks: | 70.6 | 69.7 | 66.9 | 66.2 | 73.2 | 73.4 |
| Vehicle Noise: | 71.8 | 71.0 | 68.0 | 67.1 | 74.2 | 74.5 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 100 | 215 | 462 | 996 |
| CNEL: | 104 | 224 | 482 | 1,038 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Market St. | Job Number: 12722
Road Segment: e/o Rubidoux Bl.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 36,940 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,586 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.63% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.18% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.19% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | 1.08 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -7.64 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -6.19 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.7 | 67.0 | 64.4 | 62.5 | 69.8 | 70.1 |
| Medium Trucks: | 70.0 | 69.7 | 64.9 | 64.1 | 71.7 | 71.9 |
| Heavy Trucks: | 76.3 | 75.4 | 72.6 | 71.8 | 78.9 | 79.1 |
| Vehicle Noise: | 77.6 | 76.9 | 73.8 | 72.9 | 80.0 | 80.3 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 276 | 594 | 1,279 | 2,757 |
| CNEL: | 287 | 619 | 1,334 | 2,873 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: 7th St. | Job Number: 12722
Road Segment: w/o Cedar Ave.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 10,321 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 722 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 24 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 25.0 feet |
| Centerline Dist. to Observer: | 25.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.80% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.10% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.09% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 22.494 |
| Medium Trucks: | 22.098 |
| Heavy Trucks: | 22.136 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -4.45 | 5.10 | -1.20 | -4.41 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -13.20 | 5.22 | -1.20 | -4.85 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -11.76 | 5.20 | -1.20 | -5.94 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.9 | 67.2 | 64.6 | 62.7 | 70.0 | 70.3 |
| Medium Trucks: | 70.3 | 69.9 | 65.2 | 64.4 | 71.9 | 72.2 |
| Heavy Trucks: | 76.5 | 75.6 | 72.8 | 72.1 | 79.1 | 79.4 |
| Vehicle Noise: | 77.9 | 77.1 | 74.0 | 73.2 | 80.3 | 80.6 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 121 | 261 | 562 | 1,211 |
| CNEL: | 126 | 272 | 586 | 1,263 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: EAPC (2023) | Project Name: Rubidoux Warehouse Noi
Road Name: Agua Mansa Rd. | Job Number: 12722
Road Segment: e/o Riverside Ave.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 36,406 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,548 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.77% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.12% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.11% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | 1.02 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -7.72 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -6.28 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 68.7 | 68.0 | 65.4 | 63.4 | 70.7 | 71.1 |
| Medium Trucks: | 70.9 | 70.6 | 65.8 | 65.0 | 72.6 | 72.8 |
| Heavy Trucks: | 77.2 | 76.3 | 73.5 | 72.8 | 79.8 | 80.0 |
| Vehicle Noise: | 78.6 | 77.8 | 74.7 | 73.9 | 81.0 | 81.2 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 280 | 603 | 1,300 | 2,800 |
| CNEL: | 292 | 629 | 1,355 | 2,919 |

Tuesday, October 6, 2020

## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* HY (2040)
*Road Name:* Cedar Ave.
*Road Segment:* n/o I-10 WB Ramps
*Project Name:* Rubidoux Warehouse Noi
*Job Number:* 12722

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 65,849 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 4,609 vehicles |
| *Vehicle Speed:* | 40 mph |
| *Near/Far Lane Distance:* | 48 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 52.0 feet |
| *Centerline Dist. to Observer:* | 52.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 75.75% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 10.13% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 14.13% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 46.400 |
| *Medium Trucks:* | 46.209 |
| *Heavy Trucks:* | 46.228 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 66.51 | 4.10 | 0.38 | -1.20 | *-4.66* | 0.000 | 0.000 |
| *Medium Trucks:* | 77.72 | -4.63 | 0.41 | -1.20 | *-4.87* | 0.000 | 0.000 |
| *Heavy Trucks:* | 82.99 | -3.19 | 0.41 | -1.20 | *-5.41* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 69.8 | 69.1 | 66.5 | 64.6 | 71.9 | 72.2 |
| *Medium Trucks:* | 72.3 | 71.9 | 67.2 | 66.4 | 74.0 | 74.2 |
| *Heavy Trucks:* | 79.0 | 78.1 | 75.3 | 74.6 | 81.6 | 81.9 |
| *Vehicle Noise:* | 80.3 | 79.5 | 76.4 | 75.6 | 82.7 | 82.9 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 364 | 784 | 1,688 | 3,637 |
| *CNEL:* | 379 | 817 | 1,760 | 3,791 |

Tuesday, October 6, 2020

## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* HY (2040)
*Road Name:* Cedar Ave.
*Road Segment:* n/o Santa Ana Av.
*Project Name:* Rubidoux Warehouse Noi
*Job Number:* 12722

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 43,736 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 3,062 vehicles |
| *Vehicle Speed:* | 45 mph |
| *Near/Far Lane Distance:* | 48 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 52.0 feet |
| *Centerline Dist. to Observer:* | 52.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 75.75% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 10.13% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 14.13% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 46.400 |
| *Medium Trucks:* | 46.209 |
| *Heavy Trucks:* | 46.228 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 68.46 | 1.82 | 0.38 | -1.20 | *-4.66* | 0.000 | 0.000 |
| *Medium Trucks:* | 79.45 | -6.92 | 0.41 | -1.20 | *-4.87* | 0.000 | 0.000 |
| *Heavy Trucks:* | 84.25 | -5.48 | 0.41 | -1.20 | *-5.41* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 69.5 | 68.7 | 66.2 | 64.2 | 71.5 | 71.9 |
| *Medium Trucks:* | 71.7 | 71.4 | 66.6 | 65.9 | 73.4 | 73.6 |
| *Heavy Trucks:* | 78.0 | 77.1 | 74.3 | 73.6 | 80.6 | 80.8 |
| *Vehicle Noise:* | 79.4 | 78.6 | 75.5 | 74.7 | 81.8 | 82.0 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 317 | 682 | 1,470 | 3,167 |
| *CNEL:* | 330 | 711 | 1,532 | 3,301 |

Tuesday, October 6, 2020

## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* HY (2040)
*Road Name:* Cedar Ave.
*Road Segment:* s/o I-10 EB Ramps
*Project Name:* Rubidoux Warehouse Noi
*Job Number:* 12722

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 57,019 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 3,991 vehicles |
| *Vehicle Speed:* | 45 mph |
| *Near/Far Lane Distance:* | 48 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 52.0 feet |
| *Centerline Dist. to Observer:* | 52.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 75.75% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 10.13% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 14.13% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 46.400 |
| *Medium Trucks:* | 46.209 |
| *Heavy Trucks:* | 46.228 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 68.46 | 2.97 | 0.38 | -1.20 | *-4.66* | 0.000 | 0.000 |
| *Medium Trucks:* | 79.45 | -5.77 | 0.41 | -1.20 | *-4.87* | 0.000 | 0.000 |
| *Heavy Trucks:* | 84.25 | -4.33 | 0.41 | -1.20 | *-5.41* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 70.6 | 69.9 | 67.3 | 65.4 | 72.7 | 73.0 |
| *Medium Trucks:* | 72.9 | 72.5 | 67.8 | 67.0 | 74.5 | 74.8 |
| *Heavy Trucks:* | 79.1 | 78.2 | 75.5 | 74.7 | 81.7 | 82.0 |
| *Vehicle Noise:* | 80.5 | 79.7 | 76.7 | 75.8 | 82.9 | 83.2 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 378 | 814 | 1,754 | 3,779 |
| *CNEL:* | 394 | 849 | 1,828 | 3,939 |

Tuesday, October 6, 2020

## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* HY (2040)
*Road Name:* Cedar Ave.
*Road Segment:* s/o Santa Ana Av.
*Project Name:* Rubidoux Warehouse Noi
*Job Number:* 12722

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 43,204 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 3,024 vehicles |
| *Vehicle Speed:* | 45 mph |
| *Near/Far Lane Distance:* | 48 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 52.0 feet |
| *Centerline Dist. to Observer:* | 52.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 75.75% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 10.13% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 14.13% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 46.400 |
| *Medium Trucks:* | 46.209 |
| *Heavy Trucks:* | 46.228 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 68.46 | 1.76 | 0.38 | -1.20 | *-4.66* | 0.000 | 0.000 |
| *Medium Trucks:* | 79.45 | -6.98 | 0.41 | -1.20 | *-4.87* | 0.000 | 0.000 |
| *Heavy Trucks:* | 84.25 | -5.53 | 0.41 | -1.20 | *-5.41* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 69.4 | 68.7 | 66.1 | 64.2 | 71.5 | 71.8 |
| *Medium Trucks:* | 71.7 | 71.3 | 66.6 | 65.8 | 73.3 | 73.6 |
| *Heavy Trucks:* | 77.9 | 77.0 | 74.3 | 73.5 | 80.5 | 80.8 |
| *Vehicle Noise:* | 79.3 | 78.5 | 75.5 | 74.6 | 81.7 | 82.0 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 314 | 677 | 1,458 | 3,141 |
| *CNEL:* | 327 | 705 | 1,520 | 3,274 |

Tuesday, October 6, 2020

## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY (2040)
Road Name: Cedar Ave.
Road Segment: s/o Jurupa Av.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 38,823 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,718 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | 1.30 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -7.44 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -6.00 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 68.9 | 68.2 | 65.6 | 63.7 | 71.0 | 71.3 |
| Medium Trucks: | 71.2 | 70.9 | 66.1 | 65.3 | 72.9 | 73.1 |
| Heavy Trucks: | 77.5 | 76.6 | 73.8 | 73.1 | 80.1 | 80.3 |
| Vehicle Noise: | 78.9 | 78.1 | 75.0 | 74.1 | 81.3 | 81.5 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 292 | 630 | 1,358 | 2,925 |
| CNEL: | 305 | 657 | 1,415 | 3,049 |

Tuesday, October 6, 2020

## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY (2040)
Road Name: Rubidoux Bl.
Road Segment: s/o El Rivino Rd
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 37,533 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,627 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | 0.69 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -8.04 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -6.60 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 69.1 | 68.4 | 65.8 | 63.9 | 71.1 | 71.5 |
| Medium Trucks: | 71.2 | 70.8 | 66.1 | 65.3 | 72.8 | 73.1 |
| Heavy Trucks: | 77.0 | 76.1 | 73.3 | 72.6 | 79.6 | 79.8 |
| Vehicle Noise: | 78.5 | 77.7 | 74.7 | 73.8 | 80.9 | 81.2 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 314 | 676 | 1,457 | 3,139 |
| CNEL: | 327 | 705 | 1,519 | 3,272 |

Tuesday, October 6, 2020

## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY (2040)
Road Name: Cedar Ave.
Road Segment: s/o 7th Street
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 39,075 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,735 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | 0.87 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -7.87 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -6.43 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 70.3 | 69.5 | 67.0 | 65.0 | 72.3 | 72.6 |
| Medium Trucks: | 72.3 | 72.0 | 67.2 | 66.5 | 74.0 | 74.2 |
| Heavy Trucks: | 78.2 | 77.3 | 74.5 | 73.7 | 80.8 | 81.0 |
| Vehicle Noise: | 79.7 | 78.9 | 75.8 | 75.0 | 82.1 | 82.3 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 332 | 715 | 1,540 | 3,318 |
| CNEL: | 346 | 745 | 1,606 | 3,459 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY (2040)
Road Name: Rubidoux Bl.
Road Segment: s/o Market St.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 38,666 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,707 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | 0.82 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -7.92 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -6.47 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 69.2 | 68.5 | 65.9 | 64.0 | 71.3 | 71.6 |
| Medium Trucks: | 71.3 | 70.9 | 66.2 | 65.4 | 72.9 | 73.2 |
| Heavy Trucks: | 77.1 | 76.2 | 73.4 | 72.7 | 79.7 | 80.0 |
| Vehicle Noise: | 78.6 | 77.9 | 74.8 | 73.9 | 81.0 | 81.3 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 320 | 690 | 1,486 | 3,202 |
| CNEL: | 334 | 719 | 1,549 | 3,338 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY (2040)
Road Name: Rubidoux Bl.
Road Segment: s/o 24th St.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 38,576 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,700 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | 0.81 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -7.93 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -6.48 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 69.2 | 68.5 | 65.9 | 64.0 | 71.3 | 71.6 |
| Medium Trucks: | 71.3 | 70.9 | 66.2 | 65.4 | 72.9 | 73.2 |
| Heavy Trucks: | 77.1 | 76.2 | 73.4 | 72.7 | 79.7 | 80.0 |
| Vehicle Noise: | 78.6 | 77.8 | 74.8 | 73.9 | 81.0 | 81.3 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 320 | 689 | 1,484 | 3,197 |
| CNEL: | 333 | 718 | 1,547 | 3,333 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY (2040)
Road Name: Rubidoux Bl.
Road Segment: s/o 34th St.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 33,842 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,369 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | 0.24 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -8.49 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -7.05 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 68.6 | 67.9 | 65.3 | 63.4 | 70.7 | 71.0 |
| Medium Trucks: | 70.7 | 70.3 | 65.6 | 64.8 | 72.4 | 72.6 |
| Heavy Trucks: | 76.5 | 75.6 | 72.9 | 72.1 | 79.1 | 79.4 |
| Vehicle Noise: | 78.1 | 77.3 | 74.2 | 73.3 | 80.4 | 80.7 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 293 | 631 | 1,360 | 2,930 |
| CNEL: | 305 | 658 | 1,418 | 3,054 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY (2040)
Road Name: Rubidoux Bl.
Road Segment: s/o 26th St.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 38,494 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,695 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | 0.80 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -7.93 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -6.49 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 69.2 | 68.5 | 65.9 | 64.0 | 71.3 | 71.6 |
| Medium Trucks: | 71.3 | 70.9 | 66.2 | 65.4 | 72.9 | 73.2 |
| Heavy Trucks: | 77.1 | 76.2 | 73.4 | 72.7 | 79.7 | 79.9 |
| Vehicle Noise: | 78.6 | 77.8 | 74.8 | 73.9 | 81.0 | 81.3 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 319 | 688 | 1,482 | 3,192 |
| CNEL: | 333 | 717 | 1,545 | 3,328 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY (2040)
Road Name: Market St.
Road Segment: n/o Rivera St.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 35,430 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,480 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | 0.90 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -7.84 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -6.39 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.5 | 66.8 | 64.2 | 62.3 | 69.6 | 69.9 |
| Medium Trucks: | 69.8 | 69.4 | 64.7 | 63.9 | 71.5 | 71.7 |
| Heavy Trucks: | 76.1 | 75.1 | 72.4 | 71.6 | 78.7 | 78.9 |
| Vehicle Noise: | 77.4 | 76.7 | 73.6 | 72.7 | 79.8 | 80.1 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 267 | 576 | 1,241 | 2,674 |
| CNEL: | 279 | 601 | 1,294 | 2,787 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY (2040) | Project Name: Rubidoux Warehouse Noi
Road Name: Market St. | Job Number: 12722
Road Segment: s/o SR-60 EB Ramps

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 41,110 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,878 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 65 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 50.0 feet |
| Centerline Dist. to Observer: | 50.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 38.324 |
| Medium Trucks: | 38.093 |
| Heavy Trucks: | 38.115 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | 1.55 | 1.63 | -1.20 | -4.65 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -7.19 | 1.67 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -5.75 | 1.66 | -1.20 | -5.43 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 70.4 | 69.7 | 67.1 | 65.2 | 72.5 | 72.8 |
| Medium Trucks: | 72.7 | 72.4 | 67.6 | 66.8 | 74.4 | 74.6 |
| Heavy Trucks: | 79.0 | 78.1 | 75.3 | 74.6 | 81.6 | 81.8 |
| Vehicle Noise: | 80.4 | 79.6 | 76.5 | 75.6 | 82.8 | 83.0 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 354 | 763 | 1,645 | 3,543 |
| CNEL: | 369 | 796 | 1,714 | 3,693 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY (2040) | Project Name: Rubidoux Warehouse Noi
Road Name: Agua Mansa Rd. | Job Number: 12722
Road Segment: n/o Market St.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 27,301 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,911 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 36 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 50.0 feet |
| Centerline Dist. to Observer: | 50.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.915 |
| Medium Trucks: | 46.726 |
| Heavy Trucks: | 46.744 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -0.23 | 0.31 | -1.20 | -4.65 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -8.97 | 0.34 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -7.52 | 0.34 | -1.20 | -5.43 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.3 | 66.6 | 64.0 | 62.1 | 69.4 | 69.7 |
| Medium Trucks: | 69.6 | 69.3 | 64.5 | 63.7 | 71.3 | 71.5 |
| Heavy Trucks: | 75.9 | 75.0 | 72.2 | 71.5 | 78.5 | 78.7 |
| Vehicle Noise: | 77.3 | 76.5 | 73.4 | 72.5 | 79.6 | 79.9 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 220 | 474 | 1,021 | 2,199 |
| CNEL: | 229 | 494 | 1,064 | 2,293 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY (2040) | Project Name: Rubidoux Warehouse Noi
Road Name: Riverside Av. | Job Number: 12722
Road Segment: n/o Agua Mansa Rd.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 53,994 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 3,780 vehicles |
| Vehicle Speed: | 55 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 71.78 | 1.86 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 82.40 | -6.88 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 86.40 | -5.43 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 72.8 | 72.1 | 69.5 | 67.6 | 74.9 | 75.2 |
| Medium Trucks: | 74.7 | 74.4 | 69.6 | 68.8 | 76.4 | 76.6 |
| Heavy Trucks: | 80.2 | 79.3 | 76.5 | 75.8 | 82.8 | 83.0 |
| Vehicle Noise: | 81.8 | 81.1 | 78.0 | 77.1 | 84.2 | 84.5 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 460 | 992 | 2,137 | 4,603 |
| CNEL: | 480 | 1,034 | 2,228 | 4,799 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY (2040) | Project Name: Rubidoux Warehouse Noi
Road Name: Slover Av. | Job Number: 12722
Road Segment: w/o Cedar Ave.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 23,709 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,660 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -1.30 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -10.04 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -8.60 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 68.1 | 67.4 | 64.8 | 62.9 | 70.1 | 70.5 |
| Medium Trucks: | 70.2 | 69.8 | 65.1 | 64.3 | 71.8 | 72.1 |
| Heavy Trucks: | 76.0 | 75.1 | 72.3 | 71.6 | 78.6 | 78.9 |
| Vehicle Noise: | 77.5 | 76.7 | 73.7 | 72.8 | 79.9 | 80.2 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 238 | 512 | 1,104 | 2,378 |
| CNEL: | 248 | 534 | 1,151 | 2,479 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY (2040)
Road Name: Slover Av.
Road Segment: e/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 17,722 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,241 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -2.57 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -11.30 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -9.86 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 66.8 | 66.1 | 63.5 | 61.6 | 68.9 | 69.2 |
| Medium Trucks: | 68.9 | 68.5 | 63.8 | 63.0 | 70.6 | 70.8 |
| Heavy Trucks: | 74.7 | 73.8 | 71.1 | 70.3 | 77.3 | 77.6 |
| Vehicle Noise: | 76.3 | 75.5 | 72.4 | 71.5 | 78.6 | 78.9 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 196 | 422 | 909 | 1,959 |
| CNEL: | 204 | 440 | 948 | 2,042 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY (2040)
Road Name: Santa Ana Ave.
Road Segment: e/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 8,918 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 624 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 36 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 44.0 feet |
| Centerline Dist. to Observer: | 44.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 40.460 |
| Medium Trucks: | 40.241 |
| Heavy Trucks: | 40.262 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -4.58 | 1.28 | -1.20 | -4.61 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -13.32 | 1.31 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -11.87 | 1.31 | -1.20 | -5.50 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 62.0 | 61.3 | 58.7 | 56.8 | 64.1 | 64.4 |
| Medium Trucks: | 64.5 | 64.1 | 59.4 | 58.6 | 66.2 | 66.4 |
| Heavy Trucks: | 71.2 | 70.3 | 67.6 | 66.8 | 73.8 | 74.1 |
| Vehicle Noise: | 72.5 | 71.7 | 68.6 | 67.8 | 74.9 | 75.2 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 93 | 201 | 432 | 932 |
| CNEL: | 97 | 209 | 451 | 971 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY (2040)
Road Name: Santa Ana Ave.
Road Segment: w/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 11,086 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 776 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 36 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 44.0 feet |
| Centerline Dist. to Observer: | 44.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 40.460 |
| Medium Trucks: | 40.241 |
| Heavy Trucks: | 40.262 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -3.63 | 1.28 | -1.20 | -4.61 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -12.37 | 1.31 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -10.93 | 1.31 | -1.20 | -5.50 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 63.0 | 62.2 | 59.6 | 57.7 | 65.0 | 65.3 |
| Medium Trucks: | 65.5 | 65.1 | 60.4 | 59.6 | 67.1 | 67.4 |
| Heavy Trucks: | 72.2 | 71.3 | 68.5 | 67.8 | 74.8 | 75.0 |
| Vehicle Noise: | 73.4 | 72.6 | 69.6 | 68.7 | 75.8 | 76.1 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 108 | 232 | 500 | 1,077 |
| CNEL: | 112 | 242 | 521 | 1,123 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY (2040)
Road Name: Jurupa Ave.
Road Segment: w/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 18,325 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,283 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.75% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -1.45 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -10.19 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -8.74 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 64.2 | 63.5 | 60.9 | 59.0 | 66.3 | 66.6 |
| Medium Trucks: | 66.7 | 66.4 | 61.6 | 60.8 | 68.4 | 68.6 |
| Heavy Trucks: | 73.5 | 72.5 | 69.8 | 69.0 | 76.1 | 76.3 |
| Vehicle Noise: | 74.7 | 73.9 | 70.9 | 70.0 | 77.1 | 77.4 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 155 | 334 | 720 | 1,550 |
| CNEL: | 162 | 348 | 750 | 1,616 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* HY (2040) | *Project Name:* Rubidoux Warehouse Noi
*Road Name:* Jurupa Ave. | *Job Number:* 12722
*Road Segment:* e/o Cedar Ave.

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 10,059 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 704 vehicles |
| *Vehicle Speed:* | 40 mph |
| *Near/Far Lane Distance:* | 48 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 52.0 feet |
| *Centerline Dist. to Observer:* | 52.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 75.75% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 10.13% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 14.13% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 46.400 |
| *Medium Trucks:* | 46.209 |
| *Heavy Trucks:* | 46.228 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 66.51 | -4.06 | 0.38 | -1.20 | *-4.66* | 0.000 | 0.000 |
| *Medium Trucks:* | 77.72 | -12.79 | 0.41 | -1.20 | *-4.87* | 0.000 | 0.000 |
| *Heavy Trucks:* | 82.99 | -11.35 | 0.41 | -1.20 | *-5.41* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 61.6 | 60.9 | 58.3 | 56.4 | 63.7 | 64.0 |
| *Medium Trucks:* | 64.1 | 63.8 | 59.0 | 58.2 | 65.8 | 66.0 |
| *Heavy Trucks:* | 70.9 | 69.9 | 67.2 | 66.4 | 73.4 | 73.7 |
| *Vehicle Noise:* | 72.1 | 71.3 | 68.3 | 67.4 | 74.5 | 74.8 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 104 | 224 | 482 | 1,039 |
| *CNEL:* | 108 | 233 | 503 | 1,083 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* HY (2040) | *Project Name:* Rubidoux Warehouse Noi
*Road Name:* Market St. | *Job Number:* 12722
*Road Segment:* e/o Rubidoux Bl.

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 39,071 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 2,735 vehicles |
| *Vehicle Speed:* | 45 mph |
| *Near/Far Lane Distance:* | 48 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 59.0 feet |
| *Centerline Dist. to Observer:* | 59.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 75.75% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 10.13% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 14.13% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 54.129 |
| *Medium Trucks:* | 53.966 |
| *Heavy Trucks:* | 53.982 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 68.46 | 1.33 | -0.62 | -1.20 | *-4.69* | 0.000 | 0.000 |
| *Medium Trucks:* | 79.45 | -7.41 | -0.60 | -1.20 | *-4.88* | 0.000 | 0.000 |
| *Heavy Trucks:* | 84.25 | -5.97 | -0.60 | -1.20 | *-5.35* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 68.0 | 67.3 | 64.7 | 62.7 | 70.0 | 70.4 |
| *Medium Trucks:* | 70.2 | 69.9 | 65.1 | 64.3 | 71.9 | 72.1 |
| *Heavy Trucks:* | 76.5 | 75.6 | 72.8 | 72.1 | 79.1 | 79.3 |
| *Vehicle Noise:* | 77.9 | 77.1 | 74.0 | 73.2 | 80.3 | 80.5 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 285 | 615 | 1,325 | 2,854 |
| *CNEL:* | 298 | 641 | 1,381 | 2,975 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* HY (2040) | *Project Name:* Rubidoux Warehouse Noi
*Road Name:* 7th St. | *Job Number:* 12722
*Road Segment:* w/o Cedar Ave.

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 11,012 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 771 vehicles |
| *Vehicle Speed:* | 45 mph |
| *Near/Far Lane Distance:* | 24 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 25.0 feet |
| *Centerline Dist. to Observer:* | 25.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 75.75% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 10.13% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 14.13% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 22.494 |
| *Medium Trucks:* | 22.098 |
| *Heavy Trucks:* | 22.136 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 68.46 | -4.17 | 5.10 | -1.20 | *-4.41* | 0.000 | 0.000 |
| *Medium Trucks:* | 79.45 | -12.91 | 5.22 | -1.20 | *-4.85* | 0.000 | 0.000 |
| *Heavy Trucks:* | 84.25 | -11.47 | 5.20 | -1.20 | *-5.94* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 68.2 | 67.5 | 64.9 | 63.0 | 70.3 | 70.6 |
| *Medium Trucks:* | 70.6 | 70.2 | 65.5 | 64.7 | 72.2 | 72.5 |
| *Heavy Trucks:* | 76.8 | 75.9 | 73.1 | 72.4 | 79.4 | 79.7 |
| *Vehicle Noise:* | 78.2 | 77.4 | 74.3 | 73.5 | 80.6 | 80.8 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 127 | 273 | 588 | 1,266 |
| *CNEL:* | 132 | 284 | 613 | 1,320 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* HY (2040) | *Project Name:* Rubidoux Warehouse Noi
*Road Name:* Agua Mansa Rd. | *Job Number:* 12722
*Road Segment:* e/o Riverside Ave.

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 17,862 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 1,250 vehicles |
| *Vehicle Speed:* | 45 mph |
| *Near/Far Lane Distance:* | 48 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 52.0 feet |
| *Centerline Dist. to Observer:* | 52.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 75.75% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 10.13% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 14.13% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 46.400 |
| *Medium Trucks:* | 46.209 |
| *Heavy Trucks:* | 46.228 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 68.46 | -2.07 | 0.38 | -1.20 | *-4.66* | 0.000 | 0.000 |
| *Medium Trucks:* | 79.45 | -10.81 | 0.41 | -1.20 | *-4.87* | 0.000 | 0.000 |
| *Heavy Trucks:* | 84.25 | -9.37 | 0.41 | -1.20 | *-5.41* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 65.6 | 64.9 | 62.3 | 60.3 | 67.6 | 68.0 |
| *Medium Trucks:* | 67.8 | 67.5 | 62.8 | 62.0 | 69.5 | 69.7 |
| *Heavy Trucks:* | 74.1 | 73.2 | 70.4 | 69.7 | 76.7 | 77.0 |
| *Vehicle Noise:* | 75.5 | 74.7 | 71.6 | 70.8 | 77.9 | 78.2 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 174 | 376 | 809 | 1,743 |
| *CNEL:* | 182 | 391 | 843 | 1,817 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HYP (2040) | Project Name: Rubidoux Warehouse Noi
Road Name: Cedar Ave. | Job Number: 12722
Road Segment: n/o I-10 WB Ramps

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 65,944 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 4,616 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.78% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.11% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.10% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | 4.11 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -4.63 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -3.19 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 69.8 | 69.1 | 66.5 | 64.6 | 71.9 | 72.2 |
| Medium Trucks: | 72.3 | 71.9 | 67.2 | 66.4 | 74.0 | 74.2 |
| Heavy Trucks: | 79.0 | 78.1 | 75.3 | 74.6 | 81.6 | 81.9 |
| Vehicle Noise: | 80.3 | 79.5 | 76.4 | 75.6 | 82.7 | 82.9 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 364 | 784 | 1,688 | 3,637 |
| CNEL: | 379 | 817 | 1,760 | 3,792 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HYP (2040) | Project Name: Rubidoux Warehouse Noi
Road Name: Cedar Ave. | Job Number: 12722
Road Segment: n/o Santa Ana Av.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 44,757 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 3,133 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 76.13% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 9.97% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 13.90% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | 1.94 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -6.89 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -5.45 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 69.6 | 68.9 | 66.3 | 64.4 | 71.6 | 72.0 |
| Medium Trucks: | 71.8 | 71.4 | 66.7 | 65.9 | 73.4 | 73.7 |
| Heavy Trucks: | 78.0 | 77.1 | 74.3 | 73.6 | 80.6 | 80.9 |
| Vehicle Noise: | 79.4 | 78.6 | 75.6 | 74.7 | 81.8 | 82.1 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 319 | 686 | 1,479 | 3,186 |
| CNEL: | 332 | 716 | 1,542 | 3,321 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HYP (2040) | Project Name: Rubidoux Warehouse Noi
Road Name: Cedar Ave. | Job Number: 12722
Road Segment: s/o I-10 EB Ramps

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 57,923 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 4,055 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.99% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.03% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 13.98% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | 3.05 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -5.75 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -4.30 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 70.7 | 70.0 | 67.4 | 65.5 | 72.8 | 73.1 |
| Medium Trucks: | 72.9 | 72.5 | 67.8 | 67.0 | 74.6 | 74.8 |
| Heavy Trucks: | 79.2 | 78.3 | 75.5 | 74.7 | 81.8 | 82.0 |
| Vehicle Noise: | 80.6 | 79.8 | 76.7 | 75.8 | 83.0 | 83.2 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 380 | 818 | 1,762 | 3,796 |
| CNEL: | 396 | 853 | 1,837 | 3,957 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HYP (2040) | Project Name: Rubidoux Warehouse Noi
Road Name: Cedar Ave. | Job Number: 12722
Road Segment: s/o Santa Ana Av.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 44,296 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 3,101 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 76.17% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 9.95% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 13.88% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | 1.89 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -6.94 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -5.50 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 69.5 | 68.8 | 66.2 | 64.3 | 71.6 | 71.9 |
| Medium Trucks: | 71.7 | 71.4 | 66.6 | 65.8 | 73.4 | 73.6 |
| Heavy Trucks: | 78.0 | 77.1 | 74.3 | 73.6 | 80.6 | 80.8 |
| Vehicle Noise: | 79.4 | 78.6 | 75.5 | 74.6 | 81.8 | 82.0 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 316 | 681 | 1,467 | 3,161 |
| CNEL: | 330 | 710 | 1,529 | 3,295 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HYP (2040) | Project Name: Rubidoux Warehouse Noi
Road Name: Cedar Ave. | Job Number: 12722
Road Segment: s/o Jurupa Av.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 39,986 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,799 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 76.26% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 9.92% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 13.83% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | 1.46 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -7.40 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -5.96 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 69.1 | 68.4 | 65.8 | 63.9 | 71.2 | 71.5 |
| Medium Trucks: | 71.3 | 70.9 | 66.2 | 65.4 | 72.9 | 73.2 |
| Heavy Trucks: | 77.5 | 76.6 | 73.8 | 73.1 | 80.1 | 80.4 |
| Vehicle Noise: | 78.9 | 78.1 | 75.1 | 74.2 | 81.3 | 81.6 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 295 | 635 | 1,367 | 2,946 |
| CNEL: | 307 | 662 | 1,425 | 3,071 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HYP (2040) | Project Name: Rubidoux Warehouse Noi
Road Name: Rubidoux Bl. | Job Number: 12722
Road Segment: s/o El Rivino Rd

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 38,719 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,710 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 76.29% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 9.90% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 13.81% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | 0.86 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -8.01 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -6.56 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 69.2 | 68.5 | 65.9 | 64.0 | 71.3 | 71.6 |
| Medium Trucks: | 71.2 | 70.8 | 66.1 | 65.3 | 72.9 | 73.1 |
| Heavy Trucks: | 77.0 | 76.1 | 73.3 | 72.6 | 79.6 | 79.9 |
| Vehicle Noise: | 78.6 | 77.8 | 74.7 | 73.8 | 80.9 | 81.2 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 316 | 682 | 1,468 | 3,163 |
| CNEL: | 330 | 711 | 1,531 | 3,298 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HYP (2040) | Project Name: Rubidoux Warehouse Noi
Road Name: Cedar Ave. | Job Number: 12722
Road Segment: s/o 7th Street

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 40,261 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,818 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 76.27% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 9.91% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 13.82% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | 1.03 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -7.83 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -6.39 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 70.4 | 69.7 | 67.1 | 65.2 | 72.5 | 72.8 |
| Medium Trucks: | 72.4 | 72.0 | 67.3 | 66.5 | 74.0 | 74.3 |
| Heavy Trucks: | 78.2 | 77.3 | 74.5 | 73.8 | 80.8 | 81.1 |
| Vehicle Noise: | 79.7 | 79.0 | 75.9 | 75.0 | 82.1 | 82.4 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 334 | 720 | 1,552 | 3,343 |
| CNEL: | 349 | 751 | 1,618 | 3,485 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HYP (2040) | Project Name: Rubidoux Warehouse Noi
Road Name: Rubidoux Bl. | Job Number: 12722
Road Segment: s/o Market St.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 39,723 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,781 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.81% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.11% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.09% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | 0.94 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -7.81 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -6.37 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 69.3 | 68.6 | 66.0 | 64.1 | 71.4 | 71.7 |
| Medium Trucks: | 71.4 | 71.0 | 66.3 | 65.5 | 73.1 | 73.3 |
| Heavy Trucks: | 77.2 | 76.3 | 73.5 | 72.8 | 79.8 | 80.1 |
| Vehicle Noise: | 78.7 | 78.0 | 74.9 | 74.0 | 81.1 | 81.4 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 325 | 701 | 1,511 | 3,255 |
| CNEL: | 339 | 731 | 1,575 | 3,393 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HYP (2040) | Project Name: Rubidoux Warehouse Noi
Road Name: Rubidoux Bl. | Job Number: 12722
Road Segment: s/o 24th St.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 39,634 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,774 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.81% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.11% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.09% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | 0.93 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -7.82 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -6.38 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 69.3 | 68.6 | 66.0 | 64.1 | 71.4 | 71.7 |
| Medium Trucks: | 71.4 | 71.0 | 66.3 | 65.5 | 73.0 | 73.3 |
| Heavy Trucks: | 77.2 | 76.3 | 73.5 | 72.8 | 79.8 | 80.1 |
| Vehicle Noise: | 78.7 | 78.0 | 74.9 | 74.0 | 81.1 | 81.4 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 325 | 700 | 1,509 | 3,250 |
| CNEL: | 339 | 730 | 1,573 | 3,388 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HYP (2040) | Project Name: Rubidoux Warehouse Noi
Road Name: Rubidoux Bl. | Job Number: 12722
Road Segment: s/o 34th St.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 33,936 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,376 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.81% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.10% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.09% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | 0.26 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -8.49 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -7.05 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 68.6 | 67.9 | 65.3 | 63.4 | 70.7 | 71.0 |
| Medium Trucks: | 70.7 | 70.3 | 65.6 | 64.8 | 72.4 | 72.6 |
| Heavy Trucks: | 76.5 | 75.6 | 72.9 | 72.1 | 79.1 | 79.4 |
| Vehicle Noise: | 78.1 | 77.3 | 74.2 | 73.3 | 80.4 | 80.7 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 293 | 631 | 1,360 | 2,930 |
| CNEL: | 305 | 658 | 1,418 | 3,055 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HYP (2040) | Project Name: Rubidoux Warehouse Noi
Road Name: Rubidoux Bl. | Job Number: 12722
Road Segment: s/o 26th St.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 39,269 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,749 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.63% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.18% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.19% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | 0.88 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -7.83 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -6.38 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 69.3 | 68.6 | 66.0 | 64.0 | 71.3 | 71.7 |
| Medium Trucks: | 71.4 | 71.0 | 66.3 | 65.5 | 73.0 | 73.3 |
| Heavy Trucks: | 77.2 | 76.3 | 73.5 | 72.8 | 79.8 | 80.1 |
| Vehicle Noise: | 78.7 | 77.9 | 74.9 | 74.0 | 81.1 | 81.4 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 324 | 699 | 1,505 | 3,243 |
| CNEL: | 338 | 728 | 1,569 | 3,381 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HYP (2040) | Project Name: Rubidoux Warehouse Noi
Road Name: Market St. | Job Number: 12722
Road Segment: n/o Rivera St.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 36,056 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,524 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 59.0 feet |
| Centerline Dist. to Observer: | 59.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.74% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.13% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.13% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 54.129 |
| Medium Trucks: | 53.966 |
| Heavy Trucks: | 53.982 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | 0.98 | -0.62 | -1.20 | -4.69 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -7.76 | -0.60 | -1.20 | -4.88 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -6.32 | -0.60 | -1.20 | -5.35 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.6 | 66.9 | 64.3 | 62.4 | 69.7 | 70.0 |
| Medium Trucks: | 69.9 | 69.5 | 64.8 | 64.0 | 71.5 | 71.8 |
| Heavy Trucks: | 76.1 | 75.2 | 72.5 | 71.7 | 78.7 | 79.0 |
| Vehicle Noise: | 77.5 | 76.7 | 73.7 | 72.8 | 79.9 | 80.2 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 271 | 583 | 1,256 | 2,706 |
| CNEL: | 282 | 608 | 1,309 | 2,820 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HYP (2040) | Project Name: Rubidoux Warehouse Noi
Road Name: Market St. | Job Number: 12722
Road Segment: s/o SR-60 EB Ramps

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 41,204 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 2,884 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 65 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 50.0 feet |
| Centerline Dist. to Observer: | 50.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.80% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.10% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.09% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 38.324 |
| Medium Trucks: | 38.093 |
| Heavy Trucks: | 38.115 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | 1.56 | 1.63 | -1.20 | -4.65 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -7.19 | 1.67 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -5.75 | 1.66 | -1.20 | -5.43 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 70.4 | 69.7 | 67.1 | 65.2 | 72.5 | 72.8 |
| Medium Trucks: | 72.7 | 72.4 | 67.6 | 66.8 | 74.4 | 74.6 |
| Heavy Trucks: | 79.0 | 78.1 | 75.3 | 74.6 | 81.6 | 81.8 |
| Vehicle Noise: | 80.4 | 79.6 | 76.5 | 75.7 | 82.8 | 83.0 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 354 | 763 | 1,645 | 3,544 |
| CNEL: | 369 | 796 | 1,715 | 3,694 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HYP (2040) | Project Name: Rubidoux Warehouse Noi
Road Name: Agua Mansa Rd. | Job Number: 12722
Road Segment: n/o Market St.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 27,589 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,931 vehicles |
| Vehicle Speed: | 45 mph |
| Near/Far Lane Distance: | 36 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 50.0 feet |
| Centerline Dist. to Observer: | 50.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.81% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.10% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.09% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.915 |
| Medium Trucks: | 46.726 |
| Heavy Trucks: | 46.744 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 68.46 | -0.18 | 0.31 | -1.20 | -4.65 | 0.000 | 0.000 |
| Medium Trucks: | 79.45 | -8.94 | 0.34 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 84.25 | -7.49 | 0.34 | -1.20 | -5.43 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 67.4 | 66.7 | 64.1 | 62.2 | 69.5 | 69.8 |
| Medium Trucks: | 69.7 | 69.3 | 64.6 | 63.8 | 71.3 | 71.6 |
| Heavy Trucks: | 75.9 | 75.0 | 72.2 | 71.5 | 78.5 | 78.8 |
| Vehicle Noise: | 77.3 | 76.5 | 73.4 | 72.6 | 79.7 | 80.0 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 221 | 476 | 1,026 | 2,211 |
| CNEL: | 231 | 497 | 1,070 | 2,305 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HYP (2040) | Project Name: Rubidoux Warehouse Noi
Road Name: Riverside Av. | Job Number: 12722
Road Segment: n/o Agua Mansa Rd.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 54,138 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 3,790 vehicles |
| Vehicle Speed: | 55 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.76% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.12% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.12% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 71.78 | 1.87 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 82.40 | -6.87 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 86.40 | -5.43 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 72.8 | 72.1 | 69.5 | 67.6 | 74.9 | 75.2 |
| Medium Trucks: | 74.7 | 74.4 | 69.6 | 68.9 | 76.4 | 76.6 |
| Heavy Trucks: | 80.2 | 79.3 | 76.5 | 75.8 | 82.8 | 83.0 |
| Vehicle Noise: | 81.9 | 81.1 | 78.0 | 77.1 | 84.2 | 84.5 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 461 | 993 | 2,140 | 4,610 |
| CNEL: | 481 | 1,035 | 2,231 | 4,806 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HYP (2040) | Project Name: Rubidoux Warehouse Noi
Road Name: Slover Av. | Job Number: 12722
Road Segment: w/o Cedar Ave.

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 23,779 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,665 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.82% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.10% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.08% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -1.28 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -10.04 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -8.60 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 68.1 | 67.4 | 64.8 | 62.9 | 70.2 | 70.5 |
| Medium Trucks: | 70.2 | 69.8 | 65.1 | 64.3 | 71.8 | 72.1 |
| Heavy Trucks: | 76.0 | 75.1 | 72.3 | 71.6 | 78.6 | 78.9 |
| Vehicle Noise: | 77.5 | 76.7 | 73.7 | 72.8 | 79.9 | 80.2 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 238 | 512 | 1,104 | 2,379 |
| CNEL: | 248 | 534 | 1,151 | 2,480 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HYP (2040)
Road Name: Slover Av.
Road Segment: e/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 17,769 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,244 vehicles |
| Vehicle Speed: | 50 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.81% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.10% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.09% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 70.20 | -2.55 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 81.00 | -11.30 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 85.38 | -9.86 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 66.8 | 66.1 | 63.5 | 61.6 | 68.9 | 69.2 |
| Medium Trucks: | 68.9 | 68.5 | 63.8 | 63.0 | 70.6 | 70.8 |
| Heavy Trucks: | 74.7 | 73.8 | 71.1 | 70.3 | 77.3 | 77.6 |
| Vehicle Noise: | 76.3 | 75.5 | 72.4 | 71.5 | 78.6 | 78.9 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 196 | 422 | 909 | 1,959 |
| CNEL: | 204 | 440 | 948 | 2,042 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HYP (2040)
Road Name: Santa Ana Ave.
Road Segment: e/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 8,941 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 626 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 36 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 44.0 feet |
| Centerline Dist. to Observer: | 44.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.81% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.10% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.09% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 40.460 |
| Medium Trucks: | 40.241 |
| Heavy Trucks: | 40.262 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -4.56 | 1.28 | -1.20 | -4.61 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -13.32 | 1.31 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -11.87 | 1.31 | -1.20 | -5.50 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 62.0 | 61.3 | 58.7 | 56.8 | 64.1 | 64.4 |
| Medium Trucks: | 64.5 | 64.1 | 59.4 | 58.6 | 66.2 | 66.4 |
| Heavy Trucks: | 71.2 | 70.3 | 67.6 | 66.8 | 73.8 | 74.1 |
| Vehicle Noise: | 72.5 | 71.7 | 68.6 | 67.8 | 74.9 | 75.2 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 93 | 201 | 433 | 932 |
| CNEL: | 97 | 209 | 451 | 971 |

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## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HYP (2040)
Road Name: Santa Ana Ave.
Road Segment: w/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 11,133 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 779 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 36 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 44.0 feet |
| Centerline Dist. to Observer: | 44.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.85% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.09% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.07% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 40.460 |
| Medium Trucks: | 40.241 |
| Heavy Trucks: | 40.262 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -3.61 | 1.28 | -1.20 | -4.61 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -12.37 | 1.31 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -10.93 | 1.31 | -1.20 | -5.50 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 63.0 | 62.3 | 59.7 | 57.8 | 65.0 | 65.4 |
| Medium Trucks: | 65.5 | 65.1 | 60.4 | 59.6 | 67.1 | 67.4 |
| Heavy Trucks: | 72.2 | 71.3 | 68.5 | 67.8 | 74.8 | 75.0 |
| Vehicle Noise: | 73.4 | 72.6 | 69.6 | 68.7 | 75.8 | 76.1 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 108 | 232 | 500 | 1,078 |
| CNEL: | 112 | 242 | 521 | 1,123 |

Tuesday, October 6, 2020

## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HYP (2040)
Road Name: Jurupa Ave.
Road Segment: w/o Cedar Ave.
Project Name: Rubidoux Warehouse Noi
Job Number: 12722

### SITE SPECIFIC INPUT DATA

**Highway Data**

| | |
|---|---|
| Average Daily Traffic (Adt): | 18,348 vehicles |
| Peak Hour Percentage: | 7.00% |
| Peak Hour Volume: | 1,284 vehicles |
| Vehicle Speed: | 40 mph |
| Near/Far Lane Distance: | 48 feet |

**Site Data**

| | |
|---|---|
| **Barrier Height:** | **0.0 feet** |
| Barrier Type (0-Wall, 1-Berm): | 0.0 |
| Centerline Dist. to Barrier: | 52.0 feet |
| Centerline Dist. to Observer: | 52.0 feet |
| Barrier Distance to Observer: | 0.0 feet |
| Observer Height (Above Pad): | 5.0 feet |
| Pad Elevation: | 0.0 feet |
| Road Elevation: | 0.0 feet |
| Road Grade: | 0.0% |
| Left View: | -90.0 degrees |
| Right View: | 90.0 degrees |

### 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: | 71.3% | 9.8% | 18.9% | 75.78% |
| Medium Trucks: | 77.3% | 6.5% | 16.2% | 10.11% |
| Heavy Trucks: | 68.2% | 9.0% | 22.8% | 14.11% |

**Noise Source Elevations (in feet)**

| | | | |
|---|---|---|---|
| Autos: | 0.000 | | |
| Medium Trucks: | 2.297 | | |
| Heavy Trucks: | 8.004 | Grade Adjustment: | 0.0 |

**Lane Equivalent Distance (in feet)**

| | |
|---|---|
| Autos: | 46.400 |
| Medium Trucks: | 46.209 |
| Heavy Trucks: | 46.228 |

**FHWA Noise Model Calculations**

| VehicleType | REMEL | Traffic Flow | Distance | Finite Road | Fresnel | Barrier Atten | Berm Atten |
|---|---|---|---|---|---|---|---|
| Autos: | 66.51 | -1.44 | 0.38 | -1.20 | -4.66 | 0.000 | 0.000 |
| Medium Trucks: | 77.72 | -10.19 | 0.41 | -1.20 | -4.87 | 0.000 | 0.000 |
| Heavy Trucks: | 82.99 | -8.74 | 0.41 | -1.20 | -5.41 | 0.000 | 0.000 |

**Unmitigated Noise Levels (without Topo and barrier attenuation)**

| VehicleType | Leq Peak Hour | Leq Day | Leq Evening | Leq Night | Ldn | CNEL |
|---|---|---|---|---|---|---|
| Autos: | 64.3 | 63.5 | 60.9 | 59.0 | 66.3 | 66.6 |
| Medium Trucks: | 66.7 | 66.4 | 61.6 | 60.8 | 68.4 | 68.6 |
| Heavy Trucks: | 73.5 | 72.5 | 69.8 | 69.0 | 76.1 | 76.3 |
| Vehicle Noise: | 74.7 | 73.9 | 70.9 | 70.0 | 77.1 | 77.4 |

**Centerline Distance to Noise Contour (in feet)**

| | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
|---|---|---|---|---|
| Ldn: | 155 | 334 | 720 | 1,550 |
| CNEL: | 162 | 348 | 750 | 1,616 |

Tuesday, October 6, 2020

## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* HYP (2040) | *Project Name:* Rubidoux Warehouse Noi
*Road Name:* Jurupa Ave. | *Job Number:* 12722
*Road Segment:* e/o Cedar Ave.

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 10,106 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 707 vehicles |
| *Vehicle Speed:* | 40 mph |
| *Near/Far Lane Distance:* | 48 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 52.0 feet |
| *Centerline Dist. to Observer:* | 52.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 75.86% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 10.08% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 14.06% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 46.400 |
| *Medium Trucks:* | 46.209 |
| *Heavy Trucks:* | 46.228 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 66.51 | -4.03 | 0.38 | -1.20 | *-4.66* | 0.000 | 0.000 |
| *Medium Trucks:* | 77.72 | -12.79 | 0.41 | -1.20 | *-4.87* | 0.000 | 0.000 |
| *Heavy Trucks:* | 82.99 | -11.35 | 0.41 | -1.20 | *-5.41* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 61.7 | 61.0 | 58.4 | 56.4 | 63.7 | 64.1 |
| *Medium Trucks:* | 64.1 | 63.8 | 59.0 | 58.2 | 65.8 | 66.0 |
| *Heavy Trucks:* | 70.9 | 69.9 | 67.2 | 66.4 | 73.4 | 73.7 |
| *Vehicle Noise:* | 72.1 | 71.3 | 68.3 | 67.4 | 74.5 | 74.8 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 104 | 224 | 483 | 1,040 |
| *CNEL:* | 108 | 233 | 503 | 1,084 |



## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* HYP (2040) | *Project Name:* Rubidoux Warehouse Noi
*Road Name:* Market St. | *Job Number:* 12722
*Road Segment:* e/o Rubidoux Bl.

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 39,748 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 2,782 vehicles |
| *Vehicle Speed:* | 45 mph |
| *Near/Far Lane Distance:* | 48 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 59.0 feet |
| *Centerline Dist. to Observer:* | 59.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 75.64% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 10.17% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 14.18% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 54.129 |
| *Medium Trucks:* | 53.966 |
| *Heavy Trucks:* | 53.982 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 68.46 | 1.39 | -0.62 | -1.20 | *-4.69* | 0.000 | 0.000 |
| *Medium Trucks:* | 79.45 | -7.32 | -0.60 | -1.20 | *-4.88* | 0.000 | 0.000 |
| *Heavy Trucks:* | 84.25 | -5.88 | -0.60 | -1.20 | *-5.35* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 68.0 | 67.3 | 64.7 | 62.8 | 70.1 | 70.4 |
| *Medium Trucks:* | 70.3 | 70.0 | 65.2 | 64.4 | 72.0 | 72.2 |
| *Heavy Trucks:* | 76.6 | 75.7 | 72.9 | 72.2 | 79.2 | 79.4 |
| *Vehicle Noise:* | 78.0 | 77.2 | 74.1 | 73.3 | 80.4 | 80.6 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 289 | 624 | 1,343 | 2,894 |
| *CNEL:* | 302 | 650 | 1,400 | 3,017 |



## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* HYP (2040) | *Project Name:* Rubidoux Warehouse Noi
*Road Name:* 7th St. | *Job Number:* 12722
*Road Segment:* w/o Cedar Ave.

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 11,036 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 773 vehicles |
| *Vehicle Speed:* | 45 mph |
| *Near/Far Lane Distance:* | 24 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 25.0 feet |
| *Centerline Dist. to Observer:* | 25.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 75.80% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 10.11% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 14.09% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 22.494 |
| *Medium Trucks:* | 22.098 |
| *Heavy Trucks:* | 22.136 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 68.46 | -4.16 | 5.10 | -1.20 | *-4.41* | 0.000 | 0.000 |
| *Medium Trucks:* | 79.45 | -12.91 | 5.22 | -1.20 | *-4.85* | 0.000 | 0.000 |
| *Heavy Trucks:* | 84.25 | -11.47 | 5.20 | -1.20 | *-5.94* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 68.2 | 67.5 | 64.9 | 63.0 | 70.3 | 70.6 |
| *Medium Trucks:* | 70.6 | 70.2 | 65.5 | 64.7 | 72.2 | 72.5 |
| *Heavy Trucks:* | 76.8 | 75.9 | 73.1 | 72.4 | 79.4 | 79.7 |
| *Vehicle Noise:* | 78.2 | 77.4 | 74.3 | 73.5 | 80.6 | 80.8 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 127 | 273 | 588 | 1,267 |
| *CNEL:* | 132 | 284 | 613 | 1,320 |



## FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

*Scenario:* HYP (2040) | *Project Name:* Rubidoux Warehouse Noi
*Road Name:* Agua Mansa Rd. | *Job Number:* 12722
*Road Segment:* e/o Riverside Ave.

### SITE SPECIFIC INPUT DATA

***Highway Data***

| | |
|---|---|
| *Average Daily Traffic (Adt):* | 18,006 vehicles |
| *Peak Hour Percentage:* | 7.00% |
| *Peak Hour Volume:* | 1,260 vehicles |
| *Vehicle Speed:* | 45 mph |
| *Near/Far Lane Distance:* | 48 feet |

***Site Data***

| | |
|---|---|
| ***Barrier Height:*** | **0.0 feet** |
| *Barrier Type (0-Wall, 1-Berm):* | 0.0 |
| *Centerline Dist. to Barrier:* | 52.0 feet |
| *Centerline Dist. to Observer:* | 52.0 feet |
| *Barrier Distance to Observer:* | 0.0 feet |
| *Observer Height (Above Pad):* | 5.0 feet |
| *Pad Elevation:* | 0.0 feet |
| *Road Elevation:* | 0.0 feet |
| *Road Grade:* | 0.0% |
| *Left View:* | -90.0 degrees |
| *Right View:* | 90.0 degrees |

### 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:* | 71.3% | 9.8% | 18.9% | 75.80% |
| *Medium Trucks:* | 77.3% | 6.5% | 16.2% | 10.11% |
| *Heavy Trucks:* | 68.2% | 9.0% | 22.8% | 14.10% |

***Noise Source Elevations (in feet)***

| | | | |
|---|---|---|---|
| *Autos:* | 0.000 | | |
| *Medium Trucks:* | 2.297 | | |
| *Heavy Trucks:* | 8.004 | *Grade Adjustment:* | 0.0 |

***Lane Equivalent Distance (in feet)***

| | |
|---|---|
| *Autos:* | 46.400 |
| *Medium Trucks:* | 46.209 |
| *Heavy Trucks:* | 46.228 |

***FHWA Noise Model Calculations***

| *VehicleType* | *REMEL* | *Traffic Flow* | *Distance* | *Finite Road* | *Fresnel* | *Barrier Atten* | *Berm Atten* |
|---|---|---|---|---|---|---|---|
| *Autos:* | 68.46 | -2.04 | 0.38 | -1.20 | *-4.66* | 0.000 | 0.000 |
| *Medium Trucks:* | 79.45 | -10.79 | 0.41 | -1.20 | *-4.87* | 0.000 | 0.000 |
| *Heavy Trucks:* | 84.25 | -9.34 | 0.41 | -1.20 | *-5.41* | 0.000 | 0.000 |

***Unmitigated Noise Levels (without Topo and barrier attenuation)***

| *VehicleType* | *Leq Peak Hour* | *Leq Day* | *Leq Evening* | *Leq Night* | *Ldn* | *CNEL* |
|---|---|---|---|---|---|---|
| *Autos:* | 65.6 | 64.9 | 62.3 | 60.4 | 67.7 | 68.0 |
| *Medium Trucks:* | 67.9 | 67.5 | 62.8 | 62.0 | 69.5 | 69.8 |
| *Heavy Trucks:* | 74.1 | 73.2 | 70.5 | 69.7 | 76.7 | 77.0 |
| *Vehicle Noise:* | 75.5 | 74.7 | 71.7 | 70.8 | 77.9 | 78.2 |

***Centerline Distance to Noise Contour (in feet)***

| | *70 dBA* | *65 dBA* | *60 dBA* | *55 dBA* |
|---|---|---|---|---|
| *Ldn:* | 175 | 377 | 812 | 1,750 |
| *CNEL:* | 182 | 393 | 847 | 1,825 |

# APPENDIX 9.1:

# CADNAA OPERATIONAL NOISE MODEL INPUTS

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# 12722

**CadnaA Noise Prediction Model**
12722_07_Unmitigated.cna
**Date:**
28.10.20
**Analyst:**
B. Lawson

## Receiver Noise Levels

| Name | M. | ID | Level Lr | | | Limit. Value | | | Land Use | | | Height | | Coordinates | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | Night | CNEL | Day | Night | CNEL | Type | Auto | Noise Type | | | X | Y | Z |
| | | | (dBA) | (dBA) | (dBA) | (dBA) | (dBA) | (dBA) | | | | (ft) | | (ft) | (ft) | (ft) |
| R1 | | R1 | 40.4 | 38.1 | 45.0 | 55.0 | 45.0 | 0.0 | | | | 5.00 | a | 6213508.39 | 2316427.43 | 5.00 |
| R2 | | R2 | 39.7 | 38.3 | 45.1 | 55.0 | 45.0 | 0.0 | | | | 5.00 | a | 6215117.34 | 2315176.99 | 5.00 |
| R3 | | R3 | 40.0 | 38.6 | 45.4 | 55.0 | 45.0 | 0.0 | | | | 5.00 | a | 6214863.86 | 2314715.19 | 5.00 |
| R4 | | R4 | 47.9 | 47.4 | 54.1 | 55.0 | 45.0 | 0.0 | | | | 5.00 | a | 6214230.53 | 2314127.51 | 5.00 |
| R5 | | R5 | 43.0 | 42.9 | 49.6 | 55.0 | 45.0 | 0.0 | | | | 5.00 | a | 6213289.56 | 2313662.24 | 5.00 |
| R6 | | R6 | 41.5 | 41.4 | 48.1 | 55.0 | 45.0 | 0.0 | | | | 5.00 | a | 6213110.04 | 2313371.13 | 5.00 |

## Point Source(s)

| Name | M. | ID | Result. PWL | | | Lw / Li | | | Correction | | | Sound Reduction | | Attenuation | Operating Time | | | K0 | Freq. | Direct. | Height | | Coord |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | Evening | Night | Type | Value | norm. | Day | Evening | Night | R | Area | | Day | Special | Night | | | | | | X |
| | | | (dBA) | (dBA) | (dBA) | | | dB(A) | dB(A) | dB(A) | dB(A) | | (ft²) | | (min) | (min) | (min) | (dB) | (Hz) | | (ft) | | (ft) |
| POINTSOURCE | | AC01 | 88.9 | 88.9 | 88.9 | Lw | 88.9 | | 0.0 | 0.0 | 0.0 | | | | 585.00 | 0.00 | 252.00 | 0.0 | 500 | (none) | 5.00 | g | 6214072.62 |
| POINTSOURCE | | AC02 | 88.9 | 88.9 | 88.9 | Lw | 88.9 | | 0.0 | 0.0 | 0.0 | | | | 585.00 | 0.00 | 252.00 | 0.0 | 500 | (none) | 5.00 | g | 6214008.72 |
| POINTSOURCE | | AC03 | 88.9 | 88.9 | 88.9 | Lw | 88.9 | | 0.0 | 0.0 | 0.0 | | | | 585.00 | 0.00 | 252.00 | 0.0 | 500 | (none) | 5.00 | g | 6214306.46 |
| POINTSOURCE | | TRASH01 | 94.0 | 94.0 | 94.0 | Lw | 94 | | 0.0 | 0.0 | 0.0 | | | | 300.00 | 0.00 | 180.00 | 0.0 | 500 | (none) | 5.00 | a | 6212463.12 |
| POINTSOURCE | | TRASH02 | 94.0 | 94.0 | 94.0 | Lw | 94 | | 0.0 | 0.0 | 0.0 | | | | 300.00 | 0.00 | 180.00 | 0.0 | 500 | (none) | 5.00 | a | 6213183.61 |
| POINTSOURCE | | TRASH03 | 94.0 | 94.0 | 94.0 | Lw | 94 | | 0.0 | 0.0 | 0.0 | | | | 300.00 | 0.00 | 180.00 | 0.0 | 500 | (none) | 5.00 | a | 6214079.87 |
| POINTSOURCE | | TRASH04 | 94.0 | 94.0 | 94.0 | Lw | 94 | | 0.0 | 0.0 | 0.0 | | | | 300.00 | 0.00 | 180.00 | 0.0 | 500 | (none) | 5.00 | a | 6213533.00 |
| POINTSOURCE | | TRASH05 | 94.0 | 94.0 | 94.0 | Lw | 94 | | 0.0 | 0.0 | 0.0 | | | | 300.00 | 0.00 | 180.00 | 0.0 | 500 | (none) | 5.00 | a | 6214199.23 |

## Line Source(s)

| Name | M. | ID | Result. PWL | | | Result. PWL' | | | Lw / Li | | | Correction | | | Sound Reduction | | Attenuation | Operating Time | | | K0 | Freq. | Direct. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | Evening | Night | Day | Evening | Night | Type | Value | norm. | Day | Evening | Night | R | Area | | Day | Special | Night | | | | |
| | | | (dBA) | (dBA) | (dBA) | (dBA) | (dBA) | (dBA) | | | dB(A) | dB(A) | dB(A) | dB(A) | | (ft²) | | (min) | (min) | (min) | (dB) | (Hz) | | D |
| LINESOURCE | | DWY_2 | 96.6 | 87.8 | 91.8 | 71.9 | 63.1 | 67.1 | PWL-Pt | 89.7 | | 0.0 | 0.0 | 0.0 | | | | | | | 0.0 | 500 | (none) | 16 |
| LINESOURCE | | DWY_1 | 93.5 | 84.7 | 88.7 | 72.4 | 63.7 | 67.6 | PWL-Pt | 89.7 | | 0.0 | 0.0 | 0.0 | | | | | | | 0.0 | 500 | (none) | 18 |
| LINESOURCE | | DWY_1&2 | 91.5 | 82.8 | 86.7 | 75.2 | 66.4 | 70.4 | PWL-Pt | 89.7 | | 0.0 | 0.0 | 0.0 | | | | | | | 0.0 | 500 | (none) | 35 |
| LINESOURCE | | DWY_4 | 82.4 | 73.0 | 77.8 | 63.9 | 54.5 | 59.3 | PWL-Pt | 89.7 | | 0.0 | 0.0 | 0.0 | | | | | | | 0.0 | 500 | (none) | 26 |

## Area Source(s)

| Name | M. | ID | Result. PWL | | | Result. PWL'' | | | Lw / Li | | | Correction | | | Sound Reduction | | Attenuation | Operating Time | | | K0 | Freq. | Direct. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | Evening | Night | Day | Evening | Night | Type | Value | norm. | Day | Evening | Night | R | Area | | Day | Special | Night | | | | |
| | | | (dBA) | (dBA) | (dBA) | (dBA) | (dBA) | (dBA) | | | dB(A) | dB(A) | dB(A) | dB(A) | | (ft²) | | (min) | (min) | (min) | (dB) | (Hz) | | Da |
| AREASOURCE | | DOCK01 | 103.4 | 103.4 | 103.4 | 59.4 | 59.4 | 59.4 | Lw | 103.4 | | 0.0 | 0.0 | 0.0 | | | | | | | 0.0 | 500 | (none) | |
| AREASOURCE | | DOCK02 | 103.4 | 103.4 | 103.4 | 60.6 | 60.6 | 60.6 | Lw | 103.4 | | 0.0 | 0.0 | 0.0 | | | | | | | 0.0 | 500 | (none) | |
| AREASOURCE | | DOCK03 | 103.4 | 103.4 | 103.4 | 79.3 | 79.3 | 79.3 | Lw | 103.4 | | 0.0 | 0.0 | 0.0 | | | | | | | 0.0 | 500 | (none) | |
| AREASOURCE | | PARKING01 | 79.0 | 79.0 | 79.0 | 41.4 | 41.4 | 41.4 | Lw | 79 | | 0.0 | 0.0 | 0.0 | | | | | | | 0.0 | 500 | (none) | |
| AREASOURCE | | PARKING02 | 79.0 | 79.0 | 79.0 | 39.8 | 39.8 | 39.8 | Lw | 79 | | 0.0 | 0.0 | 0.0 | | | | | | | 0.0 | 500 | (none) | |
| AREASOURCE | | PARKING03 | 79.0 | 79.0 | 79.0 | 35.5 | 35.5 | 35.5 | Lw | 79 | | 0.0 | 0.0 | 0.0 | | | | | | | 0.0 | 500 | (none) | |
| AREASOURCE | | PARKING04 | 79.0 | 79.0 | 79.0 | 42.2 | 42.2 | 42.2 | Lw | 79 | | 0.0 | 0.0 | 0.0 | | | | | | | 0.0 | 500 | (none) | |
| AREASOURCE | | PARKING05 | 79.0 | 79.0 | 79.0 | 51.1 | 51.1 | 51.1 | Lw | 79 | | 0.0 | 0.0 | 0.0 | | | | | | | 0.0 | 500 | (none) | |
| AREASOURCE | | PARKING06 | 79.0 | 79.0 | 79.0 | 43.2 | 43.2 | 43.2 | Lw | 79 | | 0.0 | 0.0 | 0.0 | | | | | | | 0.0 | 500 | (none) | |
| AREASOURCE | | PARKING07 | 79.0 | 79.0 | 79.0 | 45.7 | 45.7 | 45.7 | Lw | 79 | | 0.0 | 0.0 | 0.0 | | | | | | | 0.0 | 500 | (none) | |
| AREASOURCE | | PARKING08 | 79.0 | 79.0 | 79.0 | 43.1 | 43.1 | 43.1 | Lw | 79 | | 0.0 | 0.0 | 0.0 | | | | | | | 0.0 | 500 | (none) | |

## Barrier(s)

| Name | M. | ID | Absorption | | Z-Ext. | Cantilever | | Height | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | left | right | | horz. | vert. | Begin | | End | |
| | | | | | (ft) | (ft) | (ft) | (ft) | | (ft) | |
| BARRIERS | | PLANNED | | | | | | 14.00 | a | | |
| BARRIERS | | PLANNED | | | | | | 14.00 | a | | |
| BARRIERS | | PLANNED | | | | | | 14.00 | a | | |
| BARRIERS | | PLANNED | | | | | | 14.00 | a | | |
| BARRIERS | | PLANNED | | | | | | 14.00 | a | | |
| BARRIERS | | PLANNED | | | | | | 14.00 | a | | |
| E_BARRIERS | | EXISTING | | | | | | 6.00 | a | | |

## Building(s)

| Name | M. | ID | RB | Residents | Absorption | Height | |
|---|---|---|---|---|---|---|---|
| | | | | | | Begin | |
| | | | | | | (ft) | |
| BUILDING | | BLDG_1 | x | 0 | | 44.00 | a |
| BUILDING | | BLDG_2 | x | 0 | | 38.00 | a |

# APPENDIX 10.1:

# CADNAA CONSTRUCTION NOISE MODEL INPUTS

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# 12722

**CadnaA Noise Prediction Model**
12722_Construction.cna
**Date:**
06.03.20
**Analyst:**
B. Lawson

## Receiver Noise Levels

| Name | M. | ID | Level Lr | | | Limit. Value | | | Land Use | | | Height | | Coordinates | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | Night | CNEL | Day | Night | CNEL | Type | Auto | Noise Type | | | X | Y | Z |
| | | | (dBA) | (dBA) | (dBA) | (dBA) | (dBA) | (dBA) | | | | (ft) | | (ft) | (ft) | (ft) |
| R1 | | R1 | 61.2 | 61.2 | 67.8 | 80.0 | 70.0 | 0.0 | | | | 5.00 | a | 6213508.39 | 2316427.43 | 5.00 |
| R2 | | R2 | 61.2 | 61.2 | 67.8 | 80.0 | 70.0 | 0.0 | | | | 5.00 | a | 6215117.34 | 2315176.99 | 5.00 |
| R3 | | R3 | 64.5 | 64.5 | 71.2 | 80.0 | 70.0 | 0.0 | | | | 5.00 | a | 6214863.86 | 2314715.19 | 5.00 |
| R4 | | R4 | 69.1 | 69.1 | 75.8 | 80.0 | 70.0 | 0.0 | | | | 5.00 | a | 6214230.53 | 2314127.51 | 5.00 |
| R5 | | R5 | 65.3 | 65.3 | 71.9 | 80.0 | 70.0 | 0.0 | | | | 5.00 | a | 6213289.56 | 2313662.24 | 5.00 |
| R6 | | R6 | 61.7 | 61.7 | 68.4 | 80.0 | 70.0 | 0.0 | | | | 5.00 | a | 6213110.04 | 2313371.13 | 5.00 |

## Area Source(s)

| Name | M. | ID | Result. PWL | | | Result. PWL'' | | | Lw / Li | | | Correction | | | Sound Reduction | | Attenuation | Operating Time | | | K0 | Freq. | Direct. | Moving Pt. Src | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | Evening | Night | Day | Evening | Night | Type | Value | norm. | Day | Evening | Night | R | Area | | Day | Special | Night | | | | Number | | |
| | | | (dBA) | (dBA) | (dBA) | (dBA) | (dBA) | (dBA) | | | dB(A) | dB(A) | dB(A) | dB(A) | | ($ft^2$) | | (min) | (min) | (min) | (dB) | (Hz) | | Day | Evening | Night |
| SITEBOUNDARY | | BLDG_1 | 130.2 | 130.2 | 130.2 | 75.3 | 75.3 | 75.3 | Lw" | 75.3 | | 0.0 | 0.0 | 0.0 | | | | | | | 0.0 | 500 | (none) | | | |
| SITEBOUNDARY | | BLDG_2 | 116.0 | 116.0 | 116.0 | 75.3 | 75.3 | 75.3 | Lw" | 75.3 | | 0.0 | 0.0 | 0.0 | | | | | | | 0.0 | 500 | (none) | | | |
| SITEBOUNDARY | | PARK | 112.9 | 112.9 | 112.9 | 75.3 | 75.3 | 75.3 | Lw" | 75.3 | | 0.0 | 0.0 | 0.0 | | | | | | | 0.0 | 500 | (none) | | | |

## Barrier(s)

| Name | M. | ID | Absorption | | Z-Ext. | Cantilever | | Height | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | left | right | | horz. | vert. | Begin | | End | |
| | | | | | (ft) | (ft) | (ft) | (ft) | | (ft) | |
| E_BARRIERS | | EXISTING | | | | | | 6.00 | a | | |

# 12722

**CadnaA Noise Prediction Model**
12722_07_Construction_Lmax.cna
**Date:**
28.10.20
**Analyst:**
B. Lawson

## Receiver Noise Levels

| Name | M. | ID | Level Lr | | | Limit. Value | | | Land Use | | | Height | | Coordinates | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | Night | CNEL | Day | Night | CNEL | Type | Auto | Noise Type | | | X | Y | Z |
| | | | (dBA) | (dBA) | (dBA) | (dBA) | (dBA) | (dBA) | | | | (ft) | | (ft) | (ft) | (ft) |
| R1 | | R1 | 52.9 | 52.9 | 59.5 | 80.0 | 70.0 | 0.0 | | | | 5.00 | a | 6213508.39 | 2316427.43 | 5.00 |
| R2 | | R2 | 52.9 | 52.9 | 59.5 | 80.0 | 70.0 | 0.0 | | | | 5.00 | a | 6215117.34 | 2315176.99 | 5.00 |
| R3 | | R3 | 56.2 | 56.2 | 62.9 | 80.0 | 70.0 | 0.0 | | | | 5.00 | a | 6214863.86 | 2314715.19 | 5.00 |
| R4 | | R4 | 60.8 | 60.8 | 67.5 | 80.0 | 70.0 | 0.0 | | | | 5.00 | a | 6214230.53 | 2314127.51 | 5.00 |
| R5 | | R5 | 57.0 | 57.0 | 63.6 | 80.0 | 70.0 | 0.0 | | | | 5.00 | a | 6213289.56 | 2313662.24 | 5.00 |
| R6 | | R6 | 53.4 | 53.4 | 60.1 | 80.0 | 70.0 | 0.0 | | | | 5.00 | a | 6213110.04 | 2313371.13 | 5.00 |

## Area Source(s)

| Name | M. | ID | Result. PWL | | | Result. PWL'' | | | Lw / Li | | | Correction | | | Sound Reduction | | Attenuation | Operating Time | | | K0 | Freq. | Direct. | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | Evening | Night | Day | Evening | Night | Type | Value | norm. | Day | Evening | Night | R | Area | | Day | Special | Night | | | | |
| | | | (dBA) | (dBA) | (dBA) | (dBA) | (dBA) | (dBA) | | | dB(A) | dB(A) | dB(A) | dB(A) | | ($ft^2$) | | (min) | (min) | (min) | (dB) | (Hz) | | Day |
| SITEBOUNDARY | | BLDG_1 | 121.9 | 121.9 | 121.9 | 67.0 | 67.0 | 67.0 | Lw" | 67.0 | | 0.0 | 0.0 | 0.0 | | | | | | | 0.0 | 500 | (none) | |
| SITEBOUNDARY | | BLDG_2 | 107.7 | 107.7 | 107.7 | 67.0 | 67.0 | 67.0 | Lw" | 67.0 | | 0.0 | 0.0 | 0.0 | | | | | | | 0.0 | 500 | (none) | |
| SITEBOUNDARY | | PARK | 104.6 | 104.6 | 104.6 | 67.0 | 67.0 | 67.0 | Lw" | 67.0 | | 0.0 | 0.0 | 0.0 | | | | | | | 0.0 | 500 | (none) | |

## Barrier(s)

| Name | M. | ID | Absorption | | Z-Ext. | Cantilever | | Height | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | left | right | | horz. | vert. | Begin | | End | |
| | | | | | (ft) | (ft) | (ft) | (ft) | | (ft) | |
| E_BARRIERS | | EXISTING | | | | | | 6.00 | a | | |