Subarea 29 Specific Plan Amendment

NOISE IMPACT ANALYSIS

CITY OF ONTARIO

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LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
ANSI	American National Standards Institute
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
Hz	Hertz
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
OPR	Office of Planning and Research
PPV	Peak particle velocity
Project	Subarea 29 Specific Plan Amendment
REMEL	Reference Energy Mean Emission Level
RMS	Root-mean-square
VdB	Vibration Decibels

EXECUTIVE SUMMARY

Urban Crossroads, Inc. has prepared this noise study to determine the noise exposure and the necessary noise mitigation measures for the proposed Subarea 29 Specific Plan Amendment development ("Project"). The proposed Subarea 29 Specific Plan expansion area, consisting of Planning Areas (PAs) 32 through 34, is bound by Eucalyptus Avenue to the north, Haven Avenue to the west, Mill Creek Avenue to the east, and Bellegrave Avenue to the south. Existing PAs 30 and 31 are bound by Eucalyptus Avenue to the north, Haven Avenue to the east, Parkview Street to the south, and existing development in the Subarea 29 Specific Plan area to the west. This noise study has been prepared to satisfy applicable City of Ontario noise standards and significance criteria based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1)

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

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings		
		Unmitigated	Mitigated	Mitigation Measure
Off-Site Traffic Noise	7	*Significant*	*Significant*	-
On-Site Traffic Noise	8	*Less Than Significant*	-	-
Operational Noise	10	*Potentially Significant*	*Less Than Significant*	*NOI-1*
Construction Noise	11	*Less Than Significant*	-	-
Construction Vibration		*Less Than Significant*	-	-

OFF-SITE TRAFFIC NOISE ANALYSIS

Traffic generated by the operation of the proposed Project will influence the traffic noise levels in surrounding off-site areas. To quantify the traffic noise increases on the surrounding off-site areas, the changes in traffic noise levels on 77 roadway segments surrounding the Project site were calculated based on the change in the average daily traffic (ADT) volumes. The traffic noise levels provided in this analysis are based on the traffic forecasts found in *Subarea 29 Specific Plan Amendment Traffic Impact Analysis* prepared by Fehr and Peers, Inc. (2)

The results of this analysis show that one of the 77 study area roadway segments will experience a *significant* off-site traffic noise level increase on Eucalyptus Avenue west of Hamner Avenue (Segment 46). Due to the nature of the noise source, mitigation measures are limited to shielding receivers and roadway modifications, such as speed limit reductions or using different paving surfaces. However, due to the level of increase a speed reduction would not reduce the impacts to less than significant levels and the City has specific pavement requirements, which does not

allow for the use of alternate paving surfaces. Therefore, offsite noise level increases along Eucalyptus Avenue west of Hamner Avenue (Segment 46) would be *significant and unavoidable*.

ON-SITE TRAFFIC NOISE ANALYSIS

An on-site exterior noise impact analysis has been completed to determine the traffic noise exposure and to identify potential necessary noise mitigation measures for the proposed Subarea 29 Specific Plan Amendment Project. It is expected that the primary source of noise impacts to the Project site will be traffic noise from Haven Ave., Eucalyptus Ave., Bellegrave Ave., Parkview St., and Scholar Way. The on-site exterior noise analysis shows that unmitigated traffic noise levels at 100 feet from surrounding roadways will not exceed City of Ontario 65 dBA CNEL exterior noise level standards for the noise sensitive residential land uses or schools and represent a *less than significant* impact.

OPERATIONAL NOISE ANALYSIS

The Project has not been fully designed at this stage of project development. The Project residential development is not expected to include any specific type of operational noise levels beyond the typical noise sources associated with similar residential land uses in the Project study area, such as people and children, parking lot activity, garage doors, small air conditioners, and trash collection, and is considered a noise-sensitive receiving land use.

To allow the City to verify the proposed mechanical ventilation complies with the City noise ordinance, measure NOI-1 would require best engineering practices to be used in the placement of noise generating equipment when developing site plans for Project land uses containing HVAC units such that noise levels at the property line comply with City standards. Development plans shall be accompanied by an acoustical analysis demonstrating compliance with City standards for approval prior to issuance of building permits.

NOI-1: OPERATIONAL NOISE MITIGATION

Prior to the issuance of a building permit for residential development, the Property Owner/Developer shall prepare an acoustical study(ies) of proposed plans, which shall identify all noise-generating areas and associated equipment, predict noise levels at property lines from all identified areas, and recommended noise attenuation features to be implemented (e.g., enclosures, barriers, site orientation, reduction of parking stalls), as necessary, to comply with the City Municipal Code Section 5-29.04.

CONSTRUCTION NOISE ANALYSIS

Construction noise levels are expected to create temporary and intermittent high-level noise conditions at receivers surrounding the Project site when certain activities occur at the closest point to the nearby receiver locations from the edge of primary Project construction activity. Using sample reference noise levels to represent the construction activities at the Project site, this analysis estimates the Project-related construction noise levels at nearby sensitive receiver

locations. The results of the analysis show the highest construction noise levels at the potentially impacted receiver locations are expected to approach 58.1 dBA.

The Project related construction equipment noise levels are anticipated to satisfy the FTA construction noise level standards of 80 dBA L_{eq} for mobile equipment during typical Project construction activities at all receiver locations. Therefore, the short-term Project construction impacts are considered *less than significant.*

CONSTRUCTION VIBRATION ANALYSIS

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. Project construction vibration velocity levels are expected to approach 0.11 in/sec PPV at the nearby receiver locations, and will therefore, not exceed the Caltrans vibration threshold of 0.30 in/sec PPV. Therefore, construction related vibration impacts would be *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 Subarea 29 Specific Plan Amendment ("Project"). This noise study briefly describes the proposed Project, provides information regarding noise fundamentals, sets out the local regulatory setting, presents the study methods and procedures for noise analysis, and evaluates the future exterior noise environment. In addition, this study includes an analysis of the potential Project-related long-term stationary-source operational noise and short-term construction noise and vibration impacts.

1.1 SITE LOCATION

The Subarea 29 Specific Plan area is located in the City of Ontario, in San Bernardino County. The proposed expansion area, consisting of Planning Areas (PAs) 32 through 34, is bound by Eucalyptus Avenue to the north, Haven Avenue to the west, Mill Creek Avenue to the east, and Bellegrave Avenue to the south. PAs 30 and 31 are bound by Eucalyptus Avenue to the north, Haven Avenue to the east, Parkview Street to the south, and existing development in the Subarea 29 Specific Plan area to the west. The location of the proposed Subarea 29 Specific Plan Amendment Area is shown on Exhibit 1-A. The Ontario International Airport (ONT) is located approximately 4 miles north of the Project site and Chino Airport is located approximately 2.5 miles east of the Project site.

1.2 PROJECT DESCRIPTION

The proposed Project would expand the Subarea 29 Specific Plan area with three new PAs (32, 33 and 34) east of the existing Specific Area to be developed with residential and school uses and would increase the residential development capacity in existing PAs 30 and 31. Collectively, the proposed Project would allow for the development of up to 1,470 additional single-family detached and attached residential dwelling units in PAs 30 through 33, and a middle school in PA 34, as shown on Exhibit 1-B. For purposes of this noise analysis, it is anticipated that Project Buildout anticipated would occur in 2025.

Additionally, the proposed Project would include offsite improvements to surrounding roadways, including street and underground improvements to Haven Avenue, Bellegrave Avenue, Eucalyptus Avenue, and Mill Creek Avenue.

EXHIBIT 1-A: LOCATION MAP

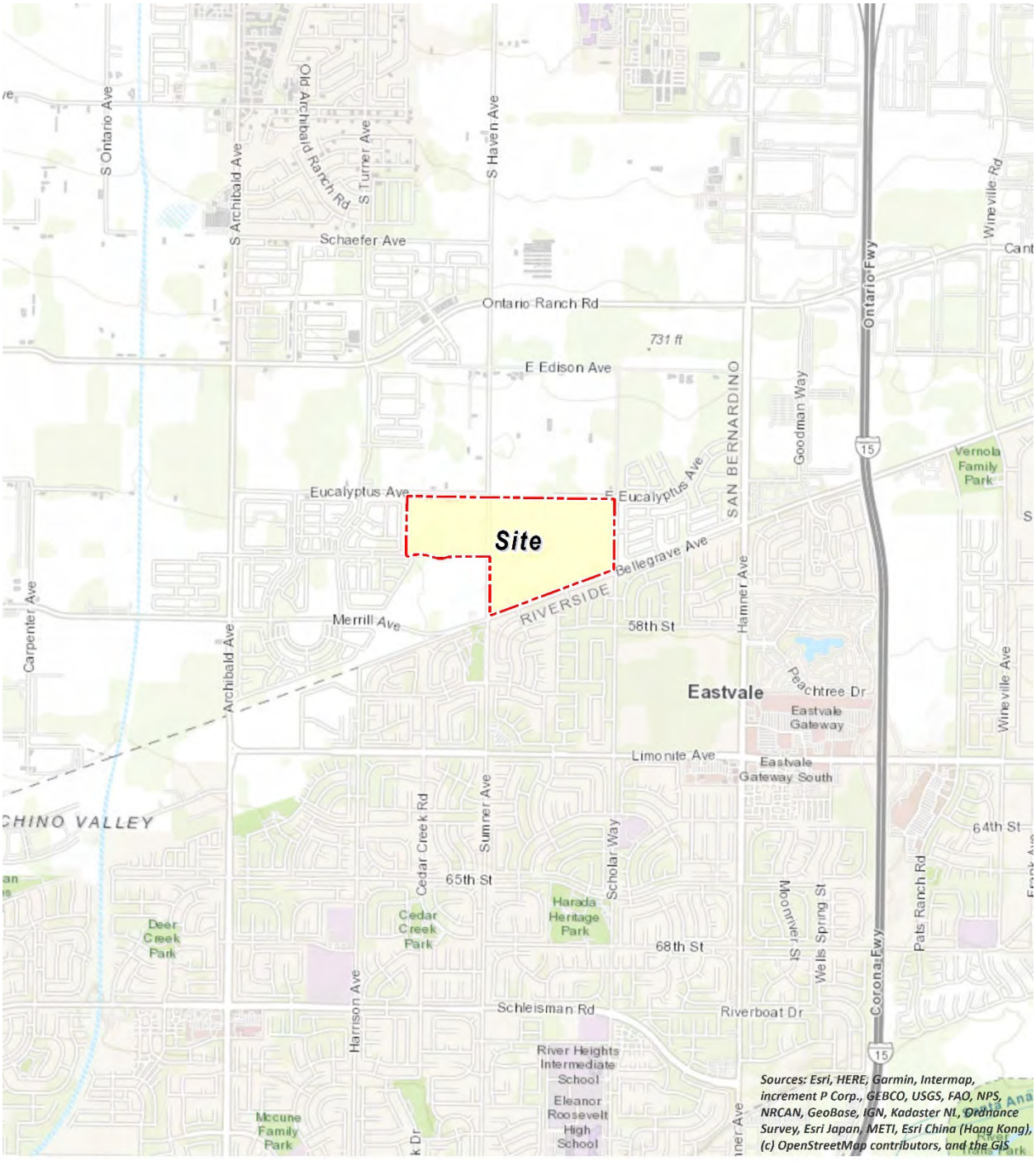
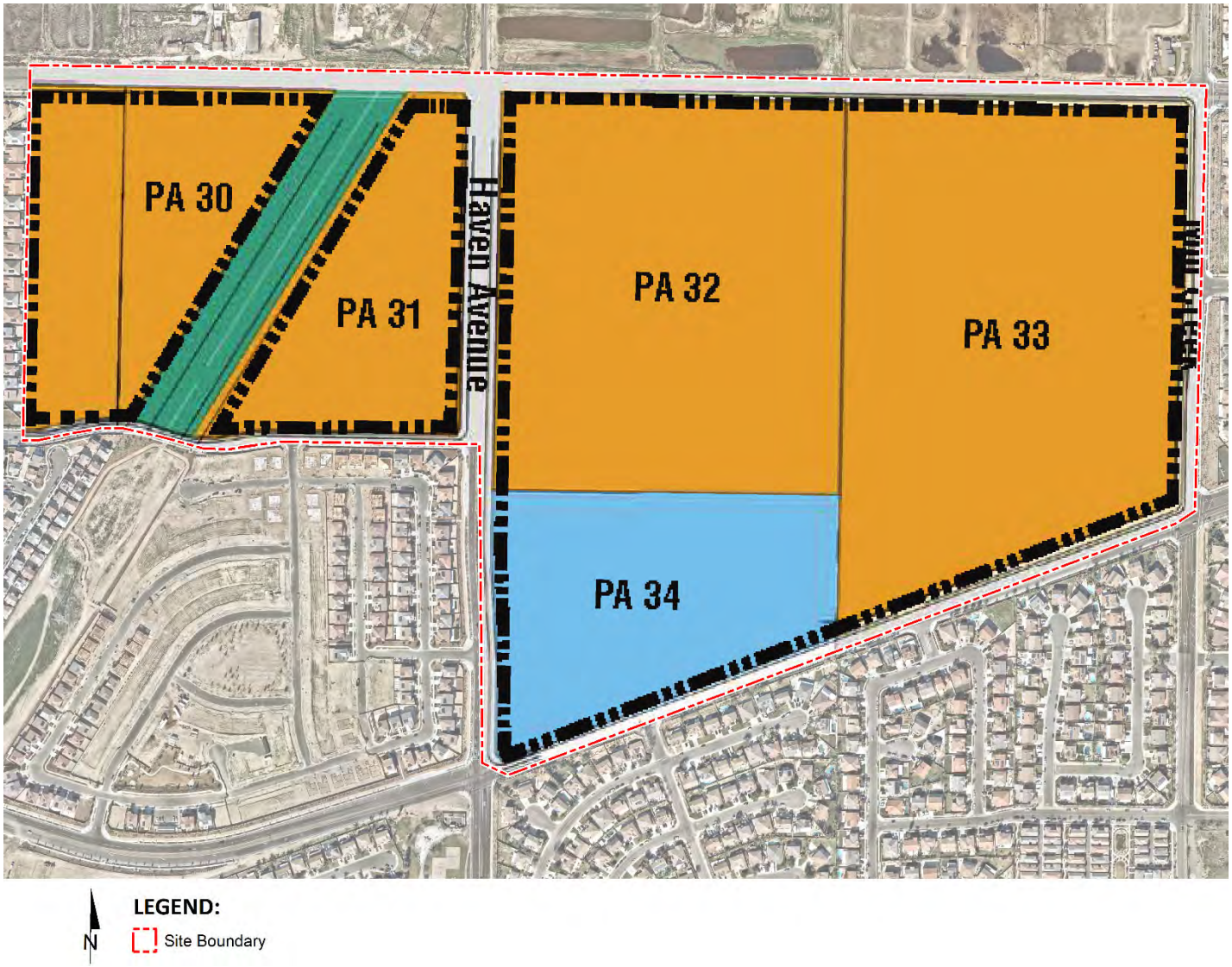


EXHIBIT 1-B: LAND USE PLAN



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2 FUNDAMENTALS

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

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 1,000 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 metric is the equivalent level (L_{eq}). Equivalent sound levels are not measured directly but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period and is commonly used to describe the "average" noise levels within the environment.

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. To account for this, the Community Noise Equivalent Level (CNEL), representing a composite 24-hour noise level is utilized. The CNEL is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time-of-day corrections require the addition of 5 decibels to dBA L_{eq} sound levels in the evening from 7:00 p.m. to 10:00 p.m., and the addition of 10 decibels to dBA L_{eq} sound levels at night between 10:00 p.m. and 7:00 a.m. These additions are made to account for the noise sensitive time periods during the evening and night hours when noise can become more intrusive. CNEL does not represent the actual sound level heard at any time, but rather represents the total sound exposure. The City of Ontario 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. (6)

2.4 NOISE CONTROL

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

2.5 NOISE BARRIER ATTENUATION

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

2.6 LAND USE COMPATIBILITY WITH NOISE

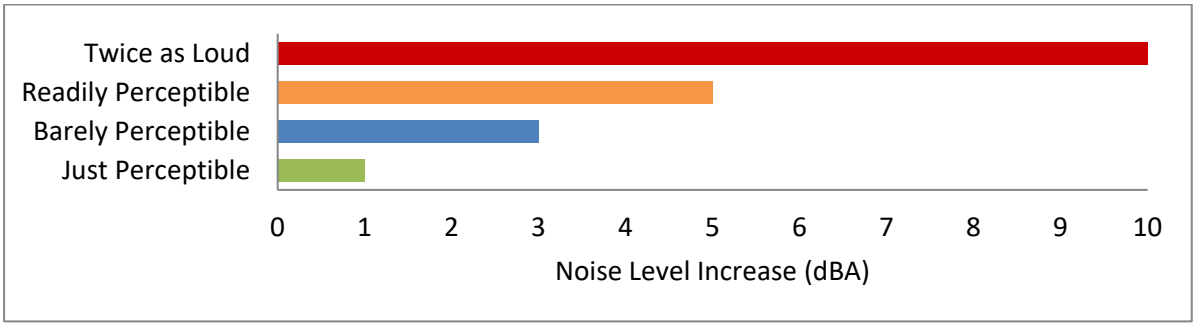
Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are more sensitive to noise intrusion than are commercial or industrial developments and related activities. As ambient noise levels affect the perceived amenity or livability of a development, so too can the mismanagement of noise impacts impair the economic health and growth potential of a community by reducing the area's desirability as a place to live, shop and work. For this reason, land use compatibility with the noise environment is an important consideration in the planning and design process. The FHWA encourages State and Local government to regulate land development in such a way that noise-sensitive land uses are either prohibited from being located adjacent to a highway, or that the developments are planned, designed, and constructed in such a way that noise impacts are minimized. (7)

2.7 COMMUNITY RESPONSE TO NOISE

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

Surveys have shown that community response to noise varies from no reaction to vigorous action for newly introduced noises averaging from 10 dB below existing to 25 dB above existing. (9) According to research originally published in the Noise Effects Handbook (8), the percentage of high annoyance ranges from approximately 0 percent at 45 dB or less, 10 percent are highly annoyed around 60 dB, and increases rapidly to approximately 70 percent being highly annoyed at approximately 85 dB or greater. Despite this variability in behavior on an individual level, the population can be expected to exhibit the following responses to changes in noise levels as shown on Exhibit 2-B. A change of 3 dBA is considered barely perceptible, and changes of 5 dBA are considered readily perceptible. (5)

EXHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION



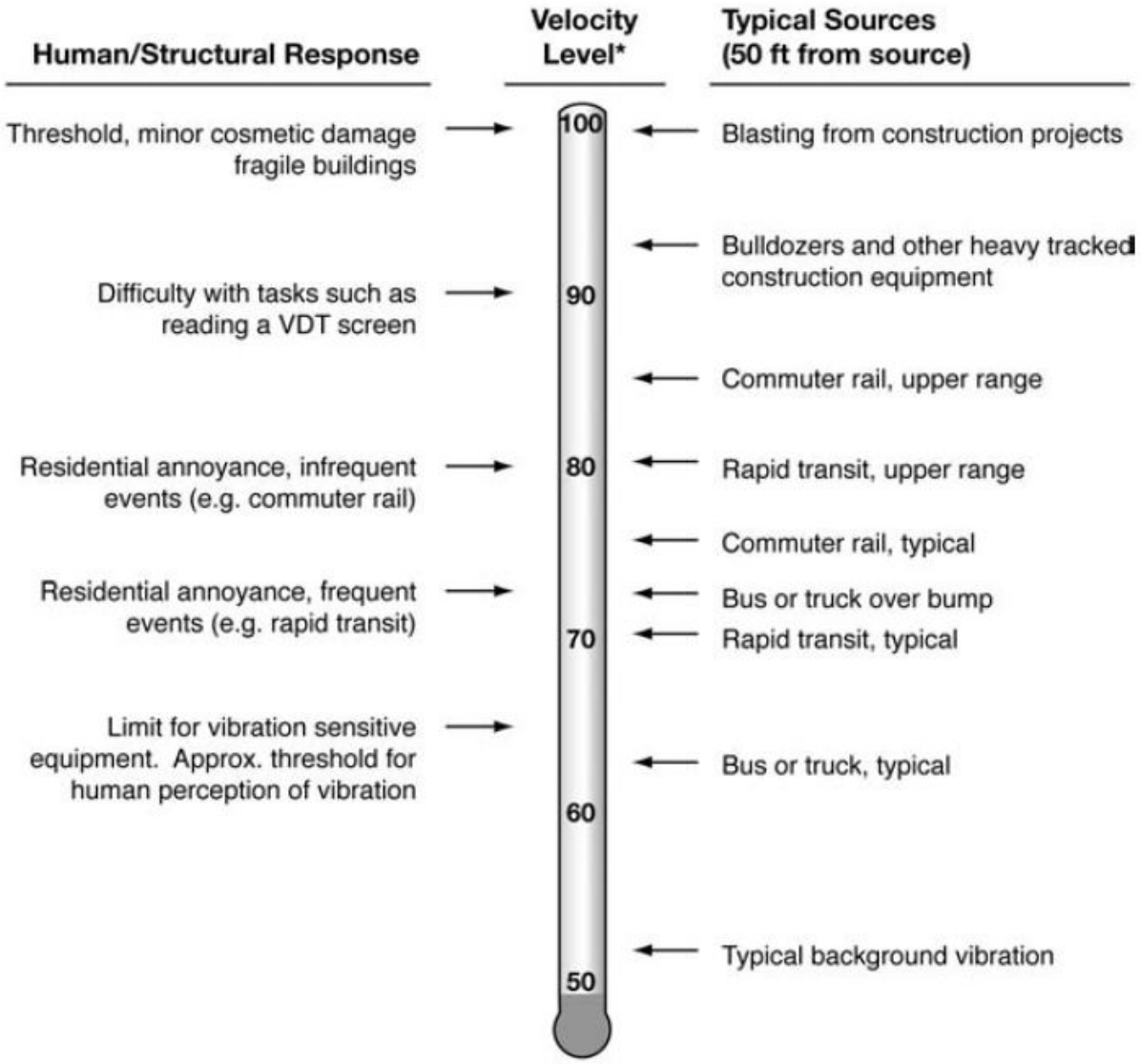
2.8 VIBRATION

Per the Federal Transit Administration (FTA) *Transit Noise Impact 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.

3 REGULATORY SETTING

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 ONTARIO GENERAL PLAN

The City of Ontario General Plan (Policy Plan) identifies several policies to minimize the impacts of excessive noise levels throughout the community. Policy Plan Section S4, Noise Hazards, establishes a goal of maintaining *an environment where noise does not adversely affect the public's health, safety, and welfare.* (11) To satisfy this goal, the Policy Plan identifies six policies related to: noise mitigation; coordination with transportation authorities; noise mitigation; truck traffic; roadway design; airport noise compatibility, and rail noise mitigation. Noise criteria identified in the General Plan Environmental Impact Report (EIR) in Table 5.13-3 are the guidelines used in the 2010 General Plan to evaluate land use compatibility within various noise environments. Table 5.13-3 is reproduced here in Exhibit 3-A *Noise Level Exposure and Land Use Compatibility Guidelines*. The Project residential land uses are considered *clearly acceptable* within exterior noise level environments approaching 60 dBA CNEL and *normally acceptable* within noise level environments up to 65 dBA CNEL. For noise level environments greater than 70 dBA CNEL, the Project land uses would be considered *clearly unacceptable* and no new construction should be permitted.

EXHIBIT 3-A: NOISE LEVEL EXPOSURE AND LAND USE COMPATIBILITY GUIDELINES

LAND USE CATEGORIES		COMMUNITY NOISE EQUIVALENT LEVEL (CNEL)						
Category	Land Use	55	60	65	70	75	80	
Residential/ Lodging	Single Family / Duplex							
	Multi-Family							
	Mobile Homes							
	Hotel/Motels							
Public/Institutional	Schools/Hospitals							
	Churches/ Libraries							
	Auditoriums/Concert Halls							
Commercial	Offices							
	Retail							
Industrial	Manufacturing							
	Warehousing							
Recreational/ Open Space	Parks/Playgrounds							
	Golf Courses/ Riding Stables							
	Outdoor Spectator Sports							
	Outdoor Music Shells/ Amphitheaters							
	Livestock/Wildlife Preserves							
	Crop Agriculture							

LEGEND

Clearly Acceptable:	No special noise insulation required, assuming buildings of normal conventional construction.
Normally Acceptable:	Acoustical reports will be required for major new residential construction. Conventional construction with closed windows and fresh air supply systems of air conditioning will normally suffice.
Normally Unacceptable:	New construction should be discouraged. Noise/aviation easements required for all new construction. If new construction does proceed, a detailed analysis of noise reduction requirements must be made and necessary noise insulation features included.
Clearly Unacceptable:	No new construction should be permitted.

Source: The Ontario Plan 2050 Environmental Impact Report (Table 5.13-3).

3.3 OPERATIONAL NOISE STANDARDS

To analyze noise impacts originating from a designated fixed location or private property such as the Project, stationary-source (operational) noise levels are evaluated against standards established under a City's Municipal Code. The City of Ontario requires that noise from new stationary sources in the City comply with the City's Noise Ordinance, which limits the acceptable noise at the property line of the impacted property, to reduce nuisances to sensitive land uses. Compliance with the City's Noise Ordinance would result in noise levels that are acceptable to the City and would result in less than significant noise impacts from stationary sources (12).

Section 5-29.04(a) identifies the allowable daytime and nighttime ambient exterior noise standards for each land use type. For residential land uses (Noise Zone I), ambient exterior noise levels may not exceed 65 dBA L_{eq} during the daytime hours (7:00 a.m. to 10:00 p.m.), and may not exceed 45 dBA L_{eq} during the nighttime hours (10:00 p.m. to 7:00 a.m.). (13) The lower noise level standard shall apply on the boundary between two (2) different noise zones. If the ambient noise level exceeds the resulting standard, the ambient noise level shall be the standard. The maximum acceptable Project-related operational noise levels received at off-site land uses in the City of Ontario are identified on Table 3-1.

TABLE 3-1: OPERATIONAL NOISE STANDARDS

Noise Zone	Land Use	Exterior Noise Levels (dBA Leq)[2]	
		Daytime (7am-10pm)	Nighttime (10pm-7am)
I	Single-Family Residential	65	45
II	Multi-Family Residential	65	50
III	Commercial	65	60
IV	Residential Mixed-Use	70	70
V	Manufacturing and Industrial	70	70

[1] Source: Section 5-29.04 of the City of Ontario Municipal Code (Appendix 3.1).

[2] L_{eq} represents a steady state sound level containing the same total energy as a time varying signal over a given period.

3.4 CONSTRUCTION NOISE STANDARDS

The City of Ontario has set restrictions to control noise impacts associated with construction. Section 5-29.09 of the Municipal Code states: No person, while engaged in construction, remodeling, digging, grading, demolition or any other related building activity, shall operate any tool, equipment or machine in a manner that produces loud noise that disturbs a person of normal sensitivity who works or resides in the vicinity, or a Police or Code Enforcement Officer, on any weekday except between the hours of 7:00 a.m. and 6:00 p.m. or on Saturday or Sunday between the hours of 9:00 a.m. and 6:00 p.m. (13) While the City establishes limits to the hours during which construction activity may take place, it does not identify specific noise level limits for construction noise levels at potentially affected receiver locations for CEQA analysis purposes. Therefore, a numerical construction threshold based on Federal Transit Administration (FTA)

Transit Noise and Vibration Impact Assessment Manual is used for analysis of daytime construction impacts, as discussed below.

According to the FTA, local noise ordinances are typically not very useful in evaluating construction noise. They usually relate to nuisance and hours of allowed activity, and sometimes specify limits in terms of maximum levels, but are generally not practical for assessing the impact of a construction project. Project construction noise criteria should account for the existing noise environment, the absolute noise levels during construction activities, the duration of the construction, and the adjacent land use. Due to the lack of standardized construction noise thresholds, the FTA provides guidelines that can be considered reasonable criteria for construction noise assessment. The FTA considers a daytime exterior construction noise level of 80 dBA L_{eq} as a reasonable threshold for noise sensitive residential land use. (9 p. 179)

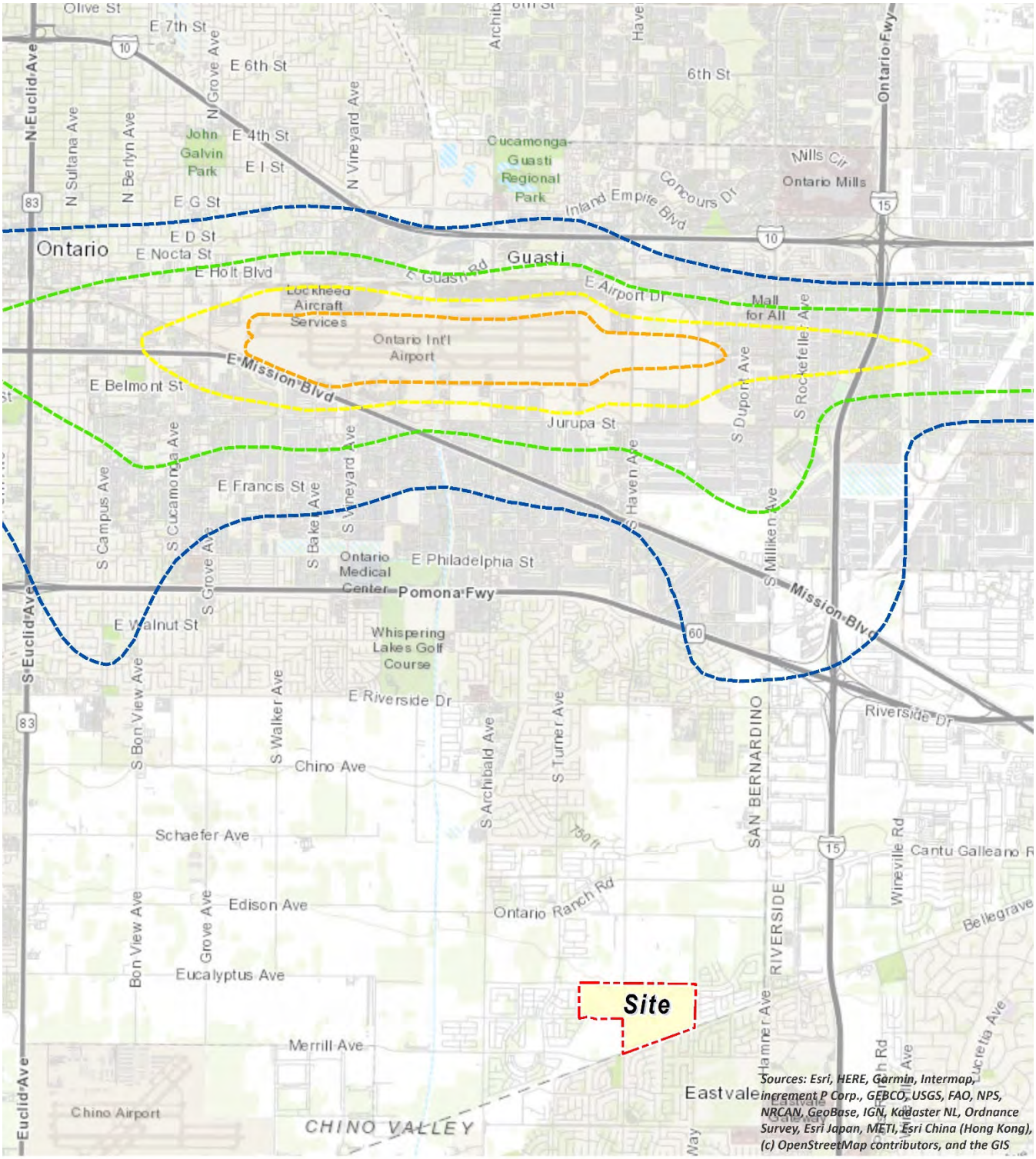
3.5 VIBRATION STANDARDS

Construction activity can result in varying degrees of ground-borne vibration, depending on the equipment and methods used, distance to the affected structures and soil type. Construction vibration is generally associated with pile driving and rock blasting. Other construction equipment such as air compressors, light trucks, hydraulic loaders, etc., generates little or no ground vibration. (9) To analyze vibration impacts originating from the operation and construction of a project, vibration-generating activities are appropriately evaluated against standards established under a City's Municipal Code, if such standards exist. However, the City of Ontario does not identify specific vibration level limits. Therefore, for analysis purposes, the Caltrans *Transportation and Construction Vibration Guidance Manual*, (14 p. 38) Table 19, vibration damage are used in this noise study to assess potential temporary construction-related impacts at adjacent building locations. The nearest noise sensitive buildings adjacent to the Project site can best be described as "older residential structures" with a maximum acceptable continuous vibration threshold of 0.3 PPV (in/sec).

3.6 AIRPORT LAND USE COMPATIBILITY

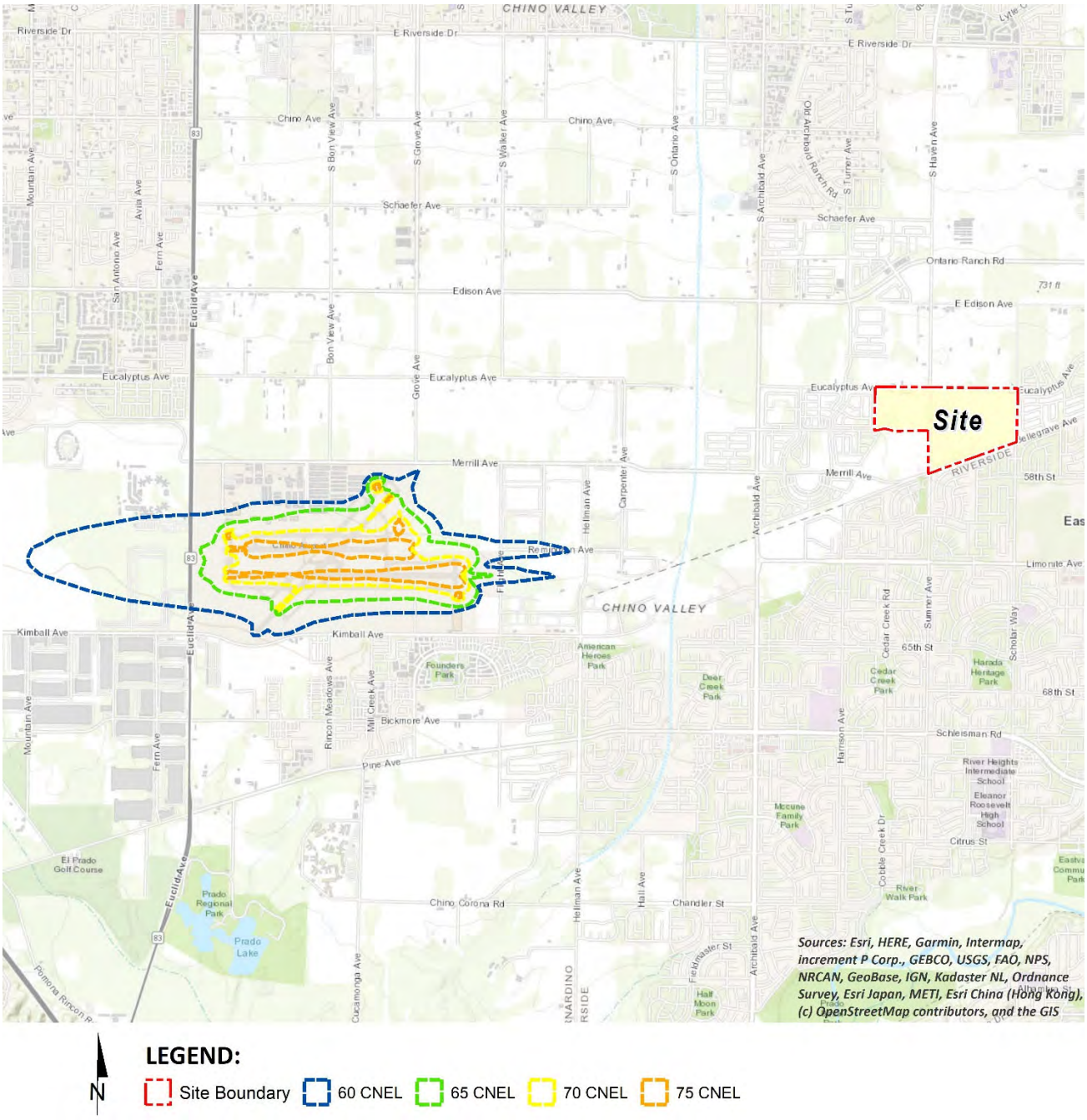
The Project site is located approximately 4 miles south of the Ontario International Airport (ONT). This places the Project site within the ONT Airport Influence Area according to Policy Map 2-1 of the *Ontario International Airport Land Use Compatibility Plan (ONT ALUCP).* The ONT ALUCP was amended July 2018 to promote compatibility between airport and the land uses that surround it (15). Since the Project site is located within the ONT Airport Influence Area, the Project is subject to the Noise Criteria established on Table 2-3 in the ONT ALUCP. As shown on Exhibit 3-B, the Project site is located within the ONT Airport Influence Area but outside the 60 dBA CNEL airport noise impact zone consistent with Policy Map 2-3. According to Table 2-3 of the ONT ALUCP, residential land uses and schools located outside the 60 dBA CNEL noise level contours of ONT, such as the Project, are considered *normally compatible land use.* For *normally compatible land use,* either the activities associated with the land use are inherently noisy or standard construction methods will sufficiently attenuate exterior noise to an acceptable indoor community noise equivalent level (CNEL).

EXHIBIT 3-B: ONT AIRPORT NOISE LEVEL CONTOURS



The Project site is located approximately 2.5 miles east of the Chino Airport (CNO). This places the Project site within the Chino Airport Influence Area according to Figure 1-4 Airport Referral Areas of the *Comprehensive Land Use Plan for the Chino Airport.* As shown on Exhibit 3-C, the Project site is outside the 60 dBA CNEL airport noise level contour and impacts would be less than significant.

EXHIBIT 3-C: CHINO AIRPORT NOISE LEVEL CONTOURS



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

A. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

B. Generation of excessive ground-borne vibration or ground-borne noise levels?

C. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

4.1 NOISE LEVEL INCREASES (THRESHOLD A)

Noise level increases resulting from the Project are evaluated based on the Appendix G CEQA Guidelines. Under CEQA, consideration must be given to the magnitude of the increase, the existing baseline ambient noise levels, and the location of receivers to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes *that there is no single noise increase that renders the noise impact significant.* (17) This is primarily because of the wide variation in individual thresholds of annoyance and differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted—the so-called *ambient* environment. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will typically be judged.

The Federal Interagency Committee on Noise (FICON) (18) developed guidance to be used for the assessment of project-generated increases in noise levels that consider the ambient noise level. The FICON recommendations are based on studies that relate aircraft noise levels to the percentage of persons highly annoyed by aircraft noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these recommendations are often used in environmental noise impact assessments involving the use of cumulative noise exposure metrics, such as the average-daily noise level (CNEL) and equivalent continuous noise level (L_{eq}).

As previously stated, the approach used in this noise study recognizes *that there is no single noise increase that renders the noise impact significant*, based on a 2008 California Court of Appeal ruling on Gray v. County of Madera. (17) For example, if the ambient noise environment is quiet (<60 dBA) and the new noise source greatly increases the noise levels, an impact may occur if the noise criteria may be exceeded. Therefore, for this analysis, a *readily perceptible* 5 dBA or greater project-related noise level increase is considered a significant impact when the without project noise levels are below 60 dBA. Per the FICON, in areas where the without project noise levels range from 60 to 64 dBA, a 3 dBA *barely perceptible* noise level increase appears to be appropriate for most people. When the without project noise levels are 65 dBA and higher, any increase in community noise louder than 1.5 dBA or greater is considered a significant impact if

the noise criteria for a given land use is exceeded, since it likely contributes to an existing noise exposure exceedance. The FICON guidance provides an established source of criteria to assess the impacts of substantial temporary or permanent increase in baseline ambient noise levels. Based on the FICON criteria, the amount to which a given noise level increase is considered acceptable is reduced when the without Project (baseline) noise levels are already shown to exceed certain land-use specific exterior noise level criteria. The specific levels are based on typical responses to noise level increases of 5 dBA or *readily perceptible*, 3 dBA or *barely perceptible*, and 1.5 dBA depending on the underlying without Project noise levels for noise-sensitive uses. These levels of increases and their perceived acceptance are consistent with guidance provided by the Federal Aviation Administration, the Federal Highway Administration (5 p. 9), and Caltrans (19 p. 2_48).

4.2 VIBRATION (THRESHOLD B)

As described in Section 3.5, the vibration impacts originating from the construction of the Subarea 29 Specific Plan Amendment, vibration-generating activities are appropriately evaluated using the Caltrans vibration damage thresholds to assess potential temporary construction-related impacts at adjacent building locations. The nearest noise sensitive buildings adjacent to the Project site can best be described as "older residential structures" with a maximum acceptable continuous vibration threshold of 0.3 PPV (in/sec).

4.3 CEQA GUIDELINES NOT FURTHER ANALYZED (THRESHOLD C)

CEQA Noise Threshold C applies when there are nearby public and private airports and/or air strips and focuses on land use compatibility of the Project to nearby airports and airstrips. The closest airport which would require additional noise analysis under CEQA Guideline threshold C is the Ontario International Airport, which is located approximately 4 miles north of the Project site. As previously indicated in Section 3.6, the Project site is located within the ONT Airport Influence Area but is located outside the 60 dBA CNEL airport noise impact zone. Similarly, as indicated in Section 3.6, the Project site is not located within the CNO Airport Influence Area and is outside the 60 dBA CNEL airport noise impact zone. Therefore, airport noise 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 Project. Table 4-1 shows the significance criteria summary matrix that includes the allowable criteria used to identify potentially significant incremental noise level increases.

TABLE 4-1: SIGNIFICANCE CRITERIA SUMMARY

Analysis	Receiving Land Use	Condition(s)	Significance Criteria	
			Daytime	Nighttime
Off-Site Traffic	All	If ambient is < 60 dBA CNEL[2]	≥ 5 dBA CNEL Project increase	
		If ambient is 60 - 64 dBA CNEL[2]	≥ 3 dBA CNEL Project increase	
		If ambient is >= 65 dBA CNEL[2]	≥ 1.5 dBA CNEL Project increase	
On-Site Traffic	All	See Exhibit 3-A		
Operational	Noise-Sensitive	Exterior Noise Level Standards[1]	65 dBA L_{eq}	45 dBA L_{eq}
		If ambient is < 60 dBA Leq[2]	≥ 5 dBA L_{eq} Project increase	
		If ambient is 60 - 65 dBA Leq[2]	≥ 3 dBA L_{eq} Project increase	
		If ambient is > 65 dBA Leq[2]	≥ 1.5 dBA L_{eq} Project increase	
Construction		Permitted hours of 7:00 a.m. and 6:00 p.m. on weekdays[3]		
		Noise Level Threshold[4]	80 dBA L_{eq}	
		Vibration Level Threshold[5]	0.3 PPV (in/sec)	

[1] City of Ontario Municipal Code, 5-29.04(a) exterior noise standards for residential land uses (Noise Zone I).
[2] FICON, 1992.
[3] City of Ontario Municipal Code Section 5-29.09(a).
[4] Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual.
[5] Caltrans Transportation and Construction Vibration Manual, April 2020 Table 19.
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

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5 METHODS AND PROCEDURES

The following section outlines the methods and procedures used to model and analyze the future traffic noise environment.

5.1 FHWA TRAFFIC NOISE PREDICTION MODEL

The estimated roadway noise impacts from vehicular traffic were calculated using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108. (20) 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. (21) 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.

5.2 TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 5-1 identifies the 62 off-site study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per the City of Ontario General Plan Mobility Element; the Eastvale General Plan, Circulation and Infrastructure Element; and the City of Chino General Plan Transportation Element; and the posted vehicle speeds. Consistent with the Traffic Analysis prepared by Fehr and Peers, Inc. (2) the off-site traffic noise analysis includes the following traffic scenarios.

- Existing
- Existing Plus Project (E+P)
- Opening Year 2025 (OY)
- Opening Year 2025 Plus Project (OY+P)
- Future Year 2040 (FY)
- Future Year 2040 Plus Project (FY+P)

The average daily traffic (ADT) volumes used for this study are presented on Table 5-2. The Existing Plus Project ADT were derived based on the differences in Opening Year ADT volumes added to the Existing ADT volumes. Table 5-3 and Table 5-4 provides the time of day (daytime, evening, and nighttime) vehicle splits used for calculating CNEL values.

TABLE 5-1: OFF-SITE ROADWAY PARAMETERS

ID	Roadway	Segment	Sensitive Receiving Land Use	Classification[2]	Centerline Distance to Receiving Land Use (Feet)[3]	Vehicle Speed (mph)
1	Monterey Ave	n/o Varner Rd	Yes	Collector	19	25
2	Haven Ave	n/o SR-60 WB Ramps	No	Principal Arterial	55	45
3	Archibald Ave	n/o SR-60 EB Ramps	No	Principal Arterial	43	50
4	Haven Ave	n/o SR-60 EB Ramps	No	Principal Arterial	43	45
5	Archibald Ave	n/o East Riverside Dr	Yes	Principal Arterial	43	50
6	Haven Ave	n/o East Riverside Dr	Yes	Principal Arterial	31	45
7	Riverside Dr	w/o Archibald Ave	Yes	Minor Arterial	43	50
8	Riverside Dr	w/o Haven Ave	Yes	Minor Arterial	43	50
9	Archibald Ave	n/o Chino Ave.	Yes	Principal Arterial	43	50
10	Haven Ave	n/o Chino Ave.	Yes	Principal Arterial	31	45
11	Chino Ave.	w/o Archibald Ave	Yes	Collector	31	40
12	Chino Ave.	w/o Haven Ave	Yes	Collector	31	40
13	Ramona Ave.	n/o Edison Ave.	No	Major	31	45
14	Central Ave.	n/o Edison Ave.	No	Major	31	45
15	Mountain Ave.	n/o Edison Ave.	Yes	Major	31	45
16	Euclid Ave.	n/o Edison Ave.	Yes	Principal Arterial	55	45
17	Grove Ave	n/o Edison Ave.	No	Principal Arterial	31	50
18	Archibald Ave	n/o Schaefer	Yes	Principal Arterial	43	50
19	Archibald Ave	n/o Ontario Ranch Rd	Yes	Principal Arterial	43	50
20	Haven Ave	n/o Ontario Ranch Rd	Yes	Principal Arterial	31	45
21	Hamner Ave	n/o Ontario Ranch Rd	No	Principal Arterial	55	45
22	Grand Ave	w/o SR-71 NB	No	Major	31	45
23	Grand Ave	w/o SR-71 NB	No	Major	31	45
24	Grand Ave	w/o Ramona Ave.	No	Major	31	45
25	Edison Ave.	w/o Central Ave.	No	Major	31	45
26	Edison Ave.	w/o Mountain Ave.	Yes	Major	31	45
27	Edison Ave.	w/o Euclid Ave.	Yes	Major	31	45
28	Edison Ave.	w/o Archibald Ave	Yes	Principal Arterial	31	45
29	Ontario Ranch Rd	w/o Haven Ave	Yes	Principal Arterial	55	50
30	Ontario Ranch Rd	w/o I-15 SB Ramps	No	Principal Arterial	55	50
31	Ontario Ranch Rd	w/o I-15 NB Ramps	No	Principal Arterial	55	50
32	Ontario Ranch Rd	w/o I-15 NB Ramps	No	Principal Arterial	55	50
33	Ramona Ave.	s/o Edison Ave.	No	Major	31	45
34	Central Ave.	s/o Edison Ave.	Yes	Major	31	45
35	Mountain Ave.	s/o Edison Ave.	Yes	Major	31	45

TABLE 5-1: OFF-SITE ROADWAY PARAMETERS

ID	Roadway	Segment	Sensitive Receiving Land Use	Classification[2]	Centerline Distance to Receiving Land Use (Feet)[3]	Vehicle Speed (mph)
36	Euclid Ave.	n/o Merrill	Yes	Expressway	31	45
37	Grove Ave	n/o Merrill	Yes	Principal Arterial	31	50
38	Archibald Ave	n/o Merrill	Yes	Principal Arterial	43	50
39	Haven Ave	n/o Eucalyptus Ave	Yes	Principal Arterial	31	45
40	Sumner Ave	s/o Bellegrave	Yes	Major	31	45
41	Mill Creek Ave	n/o Eucalyptus Ave	Yes	Collector	31	45
42	Mill Creek Ave	n/o Bellegrave	Yes	Collector	31	45
43	Hamner Ave	n/o Eucalyptus Ave	Yes	Principal Arterial	55	45
44	Eucalyptus Ave	w/o Archibald Ave	Yes	Collector	31	45
45	Eucalyptus Ave	w/o Sumner	Yes	Collector	31	45
46	Eucalyptus Ave	w/o Hamner Ave	Yes	Collector	31	45
47	Parkview St	s/o Sumner Ave	Yes	Local	19	25
48	Merrill Ave	w/o Grove Ave	Yes	Collector	31	45
49	Merrill Ave	w/o Charlotte	Yes	Collector	31	45
50	Merrill Ave	w/o Sumner Ave	Yes	Collector	31	45
51	Bellegrave	w/o Scholar	Yes	Minor Arterial	31	50
52	Bellegrave	w/o Hamner Ave	Yes	Minor Arterial	31	50
53	Bellegrave	e/o Hamner Ave	Yes	Minor Arterial	31	50
54	Euclid Ave.	n/o Kimball	No	Expressway	31	45
55	Euclid Ave.	n/o Pine Ave	No	Expressway	31	45
56	Archibald Ave	n/o Schlesiman Rd	Yes	Principal Arterial	43	50
57	Sumner Ave	s/o Limonite Ave	Yes	Major	31	45
58	Sumner Ave	s/o Limonite Ave	Yes	Major	31	45
59	Scholar Way	s/o Limonite Ave	Yes	Local	19	25
60	Scholar Way	n/o Limonite Ave	Yes	Local	19	25
61	Hamner Ave	n/o Limonite Ave	Yes	Urban Arterial	43	45
62	Hamner Ave	n/o 68th	Yes	Urban Arterial	43	45
63	Kimball	w/o Euclid Ave.	No	Secondary	31	50
64	Limonite Ave	w/o Sumner Ave	Yes	Urban Arterial	43	50
65	Limonite Ave	w/o Hamner Ave	Yes	Urban Arterial	43	50
66	Limonite Ave	w/o I-15 SB Ramps	No	Urban Arterial	43	50
67	Limonite Ave	w/o I-15 NB Ramps	Yes	Urban Arterial	43	50
68	Limonite Ave	e/o I-15 NB Ramps	No	Urban Arterial	43	50
69	Hamner Ave	n/o Schlesiman Rd	Yes	Urban Arterial	43	45
70	Pine Ave	w/o Archibald Ave	Yes	Urban Arterial	43	45

TABLE 5-1: OFF-SITE ROADWAY PARAMETERS

ID	Roadway	Segment	Sensitive Receiving Land Use	Classification[2]	Centerline Distance to Receiving Land Use (Feet)[3]	Vehicle Speed (mph)
71	Schlesiman Rd	w/o Hamner Ave	Yes	Urban Arterial	43	45
72	Euclid Ave.	n/o SR-71 NB Ramps	No	Expressway	31	45
73	Archibald Ave	n/o Chandler	Yes	Principal Arterial	43	50
74	Archibald Ave	n/o Corydon	Yes	Principal Arterial	43	50
75	River	n/o Corydon	Yes	Local	19	25
76	Hamner Ave	n/o Norco	Yes	Urban Arterial	43	45
77	Hamner Ave	s/o Norco	No	Urban Arterial	43	45

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] City of Ontario, Eastlak, and Chino General Plans.
[3] Based upon the right-of-way distances for each roadway classification provided in the General Plans.

TABLE 5-2: AVERAGE DAILY TRAFFIC VOLUMES

ID	Roadway	Segment	Average Daily Traffic Volumes[1]					
			Existing		Open Year (2025)		Future Year (2040)	
			Without Project	With Project	Without Project	With Project	Without Project	With Project
1	Monterey Ave	n/o Varner Rd	12,700	12,900	16,400	16,600	20,000	20,100
2	Haven Ave	n/o SR-60 WB Ramps	35,000	35,300	40,200	40,500	50,900	51,100
3	Archibald Ave	n/o SR-60 EB Ramps	20,900	21,100	28,800	29,000	26,700	27,000
4	Haven Ave	n/o SR-60 EB Ramps	24,500	29,000	37,300	41,800	38,900	40,100
5	Archibald Ave	n/o East Riverside Dr	27,100	27,300	45,700	45,900	30,100	30,500
6	Haven Ave	n/o East Riverside Dr	19,500	24,200	33,900	38,600	34,300	35,600
7	Riverside Dr	w/o Archibald Ave	22,500	22,500	34,900	34,900	38,700	38,700
8	Riverside Dr	w/o Haven Ave	18,400	18,600	26,500	26,700	33,500	33,500
9	Archibald Ave	n/o Chino Ave.	26,000	26,500	42,400	42,900	33,200	33,600
10	Haven Ave	n/o Chino Ave.	8,100	12,900	28,600	33,400	17,700	19,000
11	Chino Ave.	w/o Archibald Ave	4,800	4,800	13,000	13,000	16,000	16,000
12	Chino Ave.	w/o Haven Ave	3,000	3,100	8,400	8,500	8,800	8,800
13	Ramona Ave.	n/o Edison Ave.	13,100	13,100	13,700	13,700	14,700	14,700
14	Central Ave.	n/o Edison Ave.	28,600	28,600	32,500	32,500	33,300	33,300
15	Mountain Ave.	n/o Edison Ave.	11,400	11,400	10,800	10,800	11,700	11,700
16	Euclid Ave.	n/o Edison Ave.	27,200	27,400	56,600	56,800	50,900	51,100
17	Grove Ave	n/o Edison Ave.	9,300	9,500	18,700	18,900	20,000	20,000

TABLE 5-2: AVERAGE DAILY TRAFFIC VOLUMES

ID	Roadway	Segment	Average Daily Traffic Volumes[1]					
			Existing		Open Year (2025)		Future Year (2040)	
			Without Project	With Project	Without Project	With Project	Without Project	With Project
18	Archibald Ave	n/o Schaefer	20,900	21,600	36,500	37,200	30,500	30,900
19	Archibald Ave	n/o Ontario Ranch Rd	20,400	21,100	36,100	36,800	20,800	21,200
20	Haven Ave	n/o Ontario Ranch Rd	10,200	15,000	33,600	38,400	25,300	26,600
21	Hamner Ave	n/o Ontario Ranch Rd	17,800	19,500	31,600	33,300	37,600	38,500
22	Grand Ave	w/o SR-71 NB	63,200	63,200	64,400	64,400	72,300	74,400
23	Grand Ave	w/o SR-71 NB	51,300	51,300	52,400	52,400	59,500	60,600
24	Grand Ave	w/o Ramona Ave.	32,100	32,100	32,800	32,800	40,800	43,000
25	Edison Ave.	w/o Central Ave.	19,600	19,600	21,100	21,100	31,100	33,200
26	Edison Ave.	w/o Mountain Ave.	18,500	18,500	23,000	23,000	35,200	37,000
27	Edison Ave.	w/o Euclid Ave.	12,500	12,500	20,500	20,500	30,700	32,000
28	Edison Ave.	w/o Archibald Ave	7,200	7,400	22,600	22,800	40,500	42,000
29	Ontario Ranch Rd	w/o Haven Ave	15,600	15,700	44,100	44,200	38,700	41,200
30	Ontario Ranch Rd	w/o I-15 SB Ramps	35,300	40,100	64,800	69,600	59,700	64,900
31	Ontario Ranch Rd	w/o I-15 NB Ramps	16,700	17,500	38,400	39,200	36,800	37,300
32	Ontario Ranch Rd	w/o I-15 NB Ramps	12,600	12,800	18,000	18,200	20,300	20,300
33	Ramona Ave.	s/o Edison Ave.	12,700	12,700	13,200	13,200	14,100	14,100
34	Central Ave.	s/o Edison Ave.	37,400	37,400	39,800	39,800	45,900	45,900
35	Mountain Ave.	s/o Edison Ave.	3,600	3,600	3,600	3,600	4,000	4,000
36	Euclid Ave.	n/o Merrill	27,900	28,000	55,700	55,800	45,100	45,300
37	Grove Ave	n/o Merrill	8,900	8,900	16,700	16,700	17,100	17,100
38	Archibald Ave	n/o Merrill	24,900	27,500	44,900	47,500	38,000	38,900
39	Haven Ave	n/o Eucalyptus Ave	6,500	13,200	15,400	22,100	12,700	16,100
40	Sumner Ave	s/o Bellegrave	6,200	10,200	12,200	16,200	8,500	11,400
41	Mill Creek Ave	n/o Eucalyptus Ave	0	0	0	0	6,700	7,600
42	Mill Creek Ave	n/o Bellegrave	900	1,900	1,000	2,000	5,300	6,600
43	Hamner Ave	n/o Eucalyptus Ave	29,900	33,700	40,300	44,100	37,900	40,000
44	Eucalyptus Ave	w/o Archibald Ave	0	4,200	2,100	6,300	8,300	9,600
45	Eucalyptus Ave	w/o Sumner	2,600	5,500	2,900	5,800	8,100	9,200
46	Eucalyptus Ave	w/o Hamner Ave	1,300	8,500	1,400	8,600	6,900	10,200
47	Parkview St	s/o Sumner Ave	1,100	2,100	2,000	3,000	2,900	3,300
48	Merrill Ave	w/o Grove Ave	11,700	11,700	24,200	24,200	23,900	23,900
49	Merrill Ave	w/o Charlotte	14,400	14,400	26,800	26,800	22,900	23,000
50	Merrill Ave	w/o Sumner Ave	8,000	9,500	14,200	15,700	12,400	13,200
51	Bellegrave	w/o Scholar	15,400	19,900	22,500	27,000	27,300	30,600
52	Bellegrave	w/o Hamner Ave	18,000	23,200	25,100	30,300	31,600	34,600

TABLE 5-2: AVERAGE DAILY TRAFFIC VOLUMES

ID	Roadway	Segment	Average Daily Traffic Volumes[1]					
			Existing		Open Year (2025)		Future Year (2040)	
			Without Project	With Project	Without Project	With Project	Without Project	With Project
53	Bellegrave	e/o Hamner Ave	15,200	16,900	18,200	19,900	23,700	24,900
54	Euclid Ave.	n/o Kimball	27,400	27,400	48,900	48,900	51,100	51,300
55	Euclid Ave.	n/o Pine Ave	31,100	31,100	44,200	44,200	52,500	52,800
56	Archibald Ave	n/o Schlesiman Rd	22,400	23,500	34,300	35,400	33,200	33,800
57	Sumner Ave	s/o Limonite Ave	13,000	15,000	18,300	20,300	16,400	17,400
58	Sumner Ave	s/o Limonite Ave	11,500	11,900	16,800	17,200	13,300	13,400
59	Scholar Way	s/o Limonite Ave	3,900	4,700	4,700	5,500	6,700	7,000
60	Scholar Way	n/o Limonite Ave	6,700	6,900	7,400	7,600	9,300	9,400
61	Hamner Ave	n/o Limonite Ave	20,300	21,200	22,600	23,500	22,700	23,500
62	Hamner Ave	n/o 68th	23,200	24,800	26,000	27,600	26,400	28,000
63	Kimball	w/o Euclid Ave.	11,500	11,500	12,600	12,600	20,000	20,000
64	Limonite Ave	w/o Sumner Ave	22,800	23,700	30,700	31,600	37,600	37,800
65	Limonite Ave	w/o Hamner Ave	30,200	32,400	38,300	40,500	41,700	42,600
66	Limonite Ave	w/o I-15 SB Ramps	46,300	48,500	55,400	57,600	61,100	62,100
67	Limonite Ave	w/o I-15 NB Ramps	48,100	50,400	52,700	55,000	57,500	58,500
68	Limonite Ave	e/o I-15 NB Ramps	45,000	45,100	45,300	45,400	45,300	45,400
69	Hamner Ave	n/o Schlesiman Rd	23,800	25,400	24,500	26,100	26,400	28,000
70	Pine Ave	w/o Archibald Ave	25,800	25,800	36,100	36,100	41,500	41,500
71	Schlesiman Rd	w/o Hamner Ave	12,400	12,400	15,200	15,200	19,700	19,700
72	Euclid Ave.	n/o SR-71 NB Ramps	37,800	37,800	46,300	46,300	47,500	47,800
73	Archibald Ave	n/o Chandler	20,200	21,000	24,500	25,300	25,200	25,700
74	Archibald Ave	n/o Corydon	24,600	25,400	26,700	27,500	30,500	31,100
75	River	n/o Corydon	24,900	25,300	27,400	27,800	32,300	32,600
76	Hamner Ave	n/o Norco	27,300	28,800	30,600	32,100	31,300	32,900
77	Hamner Ave	s/o Norco	32,000	32,100	33,300	33,400	38,700	38,900

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TABLE 5-3: TIME OF DAY VEHICLE SPLITS

Time Period	Vehicle Type		
	Autos	Medium Trucks	Heavy Trucks
Daytime (7:00 a.m. - 7:00 p.m.)	77.50%	84.80%	86.50%
Evening (7:00 p.m. - 10:00 p.m.)	12.90%	4.90%	2.70%
Nighttime (10:00 p.m. - 7:00 a.m.)	9.60%	10.30%	10.80%
Total:	100.00%	100.00%	100.00%

Source: Typical Southern California vehicle mix.

TABLE 5-4: DISTRIBUTION OF TRAFFIC FLOW BY VEHICLE TYPE (VEHICLE MIX)

Roadway	Total % Traffic Flow			Total
	Autos	Medium Trucks	Heavy Trucks	
All Roadways	97.42%	1.84%	0.74%	100.00%

Source: Typical Southern California vehicle mix.

5.3 ON-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 5-5 presents the on-site roadway parameters including the ADT volumes used for this study. The on-site roadway parameters are based on the City of Ontario General Plan Mobility Element roadway classifications.

The maximum two-way traffic volumes are based on Future Year 2040 traffic volumes and reflect future long-range traffic conditions needed to assess the on-site traffic noise environment and to identify potential noise abatement measures (if any) that address the worst-case future noise conditions.

TABLE 5-5: ON-SITE ROADWAY PARAMETERS

Location	Classification[1]	Lanes	Average Daily Traffic Volume[2]	Speed Limit (mph)[2]	Site Conditions[2]
Haven Ave	Principal Arterial	4	11,400	40	Soft
Scholar Way	Local	4	7,000	25	Soft
Eucalyptus Ave	Collector	4	9,600	40	Soft
Parkview St	Local	2	3,300	25	Soft
Bellegrave Ave	Minor Arterial	4	6,600	40	Soft

[1] Road classifications based upon the City of Ontario General Plan Mobility Element.

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6 OFF-SITE TRANSPORTATION NOISE ANALYSIS

To assess the off-site transportation CNEL noise level impacts associated with development of the proposed Project, noise contours were developed based on *Subarea 29 Specific Plan Amendment Transportation Study*. Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway. Noise contours were developed for the following traffic scenarios:

- Existing Conditions Without Project: This scenario refers to the existing present-day noise conditions without the proposed Project.
    - Existing With Project: This scenario refers to the existing present-day noise conditions with the proposed Project.
- Opening Year 2025 Without the Project: This scenario refers to existing plus ambient growth through 2025 noise conditions without the proposed Project.
    - Opening Year 2025 Year With Project: This scenario includes existing plus ambient growth through 2025 plus the proposed Project traffic volumes identified in the *Traffic Impact Analysis*.
- Future Year 2040 Without the Project: This scenario refers to Year 2040 cumulative noise conditions without the proposed Project.
    - Future Year 2040 Year With Project: This scenario includes all cumulative projects plus the proposed Project traffic volumes identified in the *Traffic Impact Analysis*.

6.1 TRAFFIC NOISE CONTOURS

Noise contours were used to assess the Project's incremental traffic-related noise impacts at land uses adjacent to roadways conveying Project traffic. The noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA noise levels. The noise contours do not consider the effect of any existing noise barriers or topography that may attenuate ambient noise levels. In addition, because the noise contours reflect modeling of vehicular noise on area roadways, they appropriately do not reflect noise contributions from the surrounding stationary noise sources within the Project study area. Tables 6-1 and 6-6 present a summary of the exterior traffic noise levels, without barrier attenuation, for the seventy-seven study area roadway segments analyzed from the without Project to the With Project conditions for Existing, Opening Year, and Future Year 2040 conditions. Appendix 6.1 includes a summary of the traffic noise level contours for each of the traffic scenarios.

TABLE 6-1: EXISTING WITHOUT PROJECT CONDITIONS NOISE CONTOURS

Segment Number	Roadway	Segment	CNEL at Nearest Receiving Land Use (dBA)	Distance to Traffic Noise Contours (feet)		
				70 dB	65 dB	60 dB
1	Monterey Ave	n/o Varner Rd	63.8	19	41	22
2	Haven Ave	n/o SR-60 WB Ramps	69.6	RW	101	RW
3	Archibald Ave	n/o SR-60 EB Ramps	68.2	RW	82	44
4	Haven Ave	n/o SR-60 EB Ramps	68.0	RW	80	RW
5	Archibald Ave	n/o East Riverside Dr	69.3	45	97	52
6	Haven Ave	n/o East Riverside Dr	67.0	32	68	37
7	Riverside Dr	w/o Archibald Ave	68.5	RW	86	46
8	Riverside Dr	w/o Haven Ave	67.6	RW	75	RW
9	Archibald Ave	n/o Chino Ave.	69.1	44	94	51
10	Haven Ave	n/o Chino Ave.	63.2	RW	38	RW
11	Chino Ave.	w/o Archibald Ave	60.2	RW	RW	RW
12	Chino Ave.	w/o Haven Ave	58.2	RW	RW	RW
13	Ramona Ave.	n/o Edison Ave.	65.3	RW	52	RW
14	Central Ave.	n/o Edison Ave.	68.7	41	88	47
15	Mountain Ave.	n/o Edison Ave.	64.7	RW	48	RW
16	Euclid Ave.	n/o Edison Ave.	68.5	RW	85	RW
17	Grove Ave	n/o Edison Ave.	64.7	RW	48	RW
18	Archibald Ave	n/o Schaefer	68.2	RW	82	44
19	Archibald Ave	n/o Ontario Ranch Rd	68.1	RW	80	43
20	Haven Ave	n/o Ontario Ranch Rd	64.2	RW	44	RW
21	Hamner Ave	n/o Ontario Ranch Rd	66.6	RW	64	RW
22	Grand Ave	w/o SR-71 NB	72.1	69	150	80
23	Grand Ave	w/o SR-71 NB	71.2	60	130	70
24	Grand Ave	w/o Ramona Ave.	69.2	44	95	51
25	Edison Ave.	w/o Central Ave.	67.1	32	69	37
26	Edison Ave.	w/o Mountain Ave.	66.8	RW	66	35
27	Edison Ave.	w/o Euclid Ave.	65.1	RW	51	RW
28	Edison Ave.	w/o Archibald Ave	62.7	RW	35	RW
29	Ontario Ranch Rd	w/o Haven Ave	66.9	RW	67	RW
30	Ontario Ranch Rd	w/o I-15 SB Ramps	70.5	RW	116	62
31	Ontario Ranch Rd	w/o I-15 NB Ramps	67.2	RW	70	RW
32	Ontario Ranch Rd	w/o I-15 NB Ramps	66.0	RW	58	RW
33	Ramona Ave.	s/o Edison Ave.	65.2	RW	51	RW
34	Central Ave.	s/o Edison Ave.	69.9	49	105	56
35	Mountain Ave.	s/o Edison Ave.	59.7	RW	RW	RW
36	Euclid Ave.	n/o Merrill	68.6	40	87	46

TABLE 6-1: EXISTING WITHOUT PROJECT CONDITIONS NOISE CONTOURS

Segment Number	Roadway	Segment	CNEL at Nearest Receiving Land Use (dBA)	Distance to Traffic Noise Contours (feet)		
				70 dB	65 dB	60 dB
37	Grove Ave	n/o Merrill	64.5	RW	46	RW
38	Archibald Ave	n/o Merrill	68.9	RW	92	49
39	Haven Ave	n/o Eucalyptus Ave	62.3	RW	33	RW
40	Sumner Ave	s/o Bellegrave	62.1	RW	32	RW
41	Mill Creek Ave	n/o Eucalyptus Ave	0	DNE	DNE	DNE
42	Mill Creek Ave	n/o Bellegrave	53.7	RW	RW	RW
43	Hamner Ave	n/o Eucalyptus Ave	68.9	RW	91	RW
44	Eucalyptus Ave	w/o Archibald Ave	0	DNE	DNE	DNE
45	Eucalyptus Ave	w/o Sumner	58.3	RW	RW	RW
46	Eucalyptus Ave	w/o Hamner Ave	55.3	RW	RW	RW
47	Parkview St	s/o Sumner Ave	53.1	RW	RW	RW
48	Merrill Ave	w/o Grove Ave	64.8	RW	49	RW
49	Merrill Ave	w/o Charlotte	65.7	RW	56	RW
50	Merrill Ave	w/o Sumner Ave	63.2	RW	38	RW
51	Bellegrave	w/o Scholar	66.9	RW	67	36
52	Bellegrave	w/o Hamner Ave	67.5	34	74	40
53	Bellegrave	e/o Hamner Ave	66.8	RW	66	35
54	Euclid Ave.	n/o Kimball	68.5	40	86	46
55	Euclid Ave.	n/o Pine Ave	69.1	43	93	50
56	Archibald Ave	n/o Schlesiman Rd	68.5	RW	85	46
57	Sumner Ave	s/o Limonite Ave	65.3	RW	52	RW
58	Sumner Ave	s/o Limonite Ave	64.7	RW	48	RW
59	Scholar Way	s/o Limonite Ave	58.6	RW	RW	RW
60	Scholar Way	n/o Limonite Ave	61.0	RW	27	RW
61	Hamner Ave	n/o Limonite Ave	67.2	RW	70	RW
62	Hamner Ave	n/o 68th	67.8	RW	77	RW
63	Kimball	w/o Euclid Ave.	65.6	RW	55	RW
64	Limonite Ave	w/o Sumner Ave	68.6	RW	86	46
65	Limonite Ave	w/o Hamner Ave	69.8	48	104	56
66	Limonite Ave	w/o I-15 SB Ramps	71.6	64	139	74
67	Limonite Ave	w/o I-15 NB Ramps	71.8	66	142	76
68	Limonite Ave	e/o I-15 NB Ramps	71.5	63	136	73
69	Hamner Ave	n/o Schlesiman Rd	67.9	RW	78	RW
70	Pine Ave	w/o Archibald Ave	68.2	RW	82	44
71	Schlesiman Rd	w/o Hamner Ave	65.1	RW	50	RW
72	Euclid Ave.	n/o SR-71 NB Ramps	69.9	49	106	57

TABLE 6-1: EXISTING WITHOUT PROJECT CONDITIONS NOISE CONTOURS

Segment Number	Roadway	Segment	CNEL at Nearest Receiving Land Use (dBA)	Distance to Traffic Noise Contours (feet)		
				70 dB	65 dB	60 dB
73	Archibald Ave	n/o Chandler	68.0	RW	80	RW
74	Archibald Ave	n/o Corydon	68.9	RW	91	49
75	River	n/o Corydon	66.7	30	65	35
76	Hamner Ave	n/o Norco	68.5	RW	85	46
77	Hamner Ave	s/o Norco	69.2	44	95	51

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest receiving land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road. "DNE" = does not exist.

TABLE 6-2: EXISTING WITH PROJECT CONDITIONS NOISE CONTOURS

Segment Number	Roadway	Segment	CNEL at Nearest Receiving Land Use (dBA)	Distance to Traffic Noise Contours (feet)		
				70 dB	65 dB	60 dB
1	Monterey Ave	n/o Varner Rd	63.8	19	42	90
2	Haven Ave	n/o SR-60 WB Ramps	69.6	RW	101	218
3	Archibald Ave	n/o SR-60 EB Ramps	68.2	RW	82	176
4	Haven Ave	n/o SR-60 EB Ramps	68.7	RW	88	189
5	Archibald Ave	n/o East Riverside Dr	69.3	45	97	210
6	Haven Ave	n/o East Riverside Dr	67.9	36	78	167
7	Riverside Dr	w/o Archibald Ave	68.5	RW	86	185
8	Riverside Dr	w/o Haven Ave	67.7	RW	75	162
9	Archibald Ave	n/o Chino Ave.	69.2	44	95	205
10	Haven Ave	n/o Chino Ave.	65.0	RW	50	108
11	Chino Ave.	w/o Archibald Ave	60.3	RW	RW	52
12	Chino Ave.	w/o Haven Ave	58.2	RW	RW	38
13	Ramona Ave.	n/o Edison Ave.	65.3	RW	52	113
14	Central Ave.	n/o Edison Ave.	68.7	41	88	190
15	Mountain Ave.	n/o Edison Ave.	64.7	RW	48	103
16	Euclid Ave.	n/o Edison Ave.	68.5	RW	85	184
17	Grove Ave	n/o Edison Ave.	64.7	RW	48	103
18	Archibald Ave	n/o Schaefer	68.3	RW	83	178
19	Archibald Ave	n/o Ontario Ranch Rd	68.2	RW	81	175

TABLE 6-2: EXISTING WITH PROJECT CONDITIONS NOISE CONTOURS

Segment Number	Roadway	Segment	CNEL at Nearest Receiving Land Use (dBA)	Distance to Traffic Noise Contours (feet)		
				70 dB	65 dB	60 dB
20	Haven Ave	n/o Ontario Ranch Rd	65.7	RW	56	121
21	Hamner Ave	n/o Ontario Ranch Rd	67.0	RW	68	146
22	Grand Ave	w/o SR-71 NB	72.1	69	150	322
23	Grand Ave	w/o SR-71 NB	71.2	60	130	280
24	Grand Ave	w/o Ramona Ave.	69.2	44	95	205
25	Edison Ave.	w/o Central Ave.	67.1	32	69	148
26	Edison Ave.	w/o Mountain Ave.	66.8	RW	66	142
27	Edison Ave.	w/o Euclid Ave.	65.1	RW	51	109
28	Edison Ave.	w/o Archibald Ave	62.7	RW	35	76
29	Ontario Ranch Rd	w/o Haven Ave	66.9	RW	67	145
30	Ontario Ranch Rd	w/o I-15 SB Ramps	70.9	58	124	268
31	Ontario Ranch Rd	w/o I-15 NB Ramps	67.4	RW	72	155
32	Ontario Ranch Rd	w/o I-15 NB Ramps	66.0	RW	59	126
33	Ramona Ave.	s/o Edison Ave.	65.2	RW	51	111
34	Central Ave.	s/o Edison Ave.	69.9	49	105	227
35	Mountain Ave.	s/o Edison Ave.	59.7	RW	RW	48
36	Euclid Ave.	n/o Merrill	68.6	40	87	187
37	Grove Ave	n/o Merrill	64.5	RW	46	99
38	Archibald Ave	n/o Merrill	69.1	43	93	201
39	Haven Ave	n/o Eucalyptus Ave	65.1	RW	50	109
40	Sumner Ave	s/o Bellegrave	63.9	RW	42	90
41	Mill Creek Ave	n/o Eucalyptus Ave	DNE	DNE	DNE	DNE
42	Mill Creek Ave	n/o Bellegrave	56.9	RW	RW	31
43	Hamner Ave	n/o Eucalyptus Ave	69.4	RW	98	211
44	Eucalyptus Ave	w/o Archibald Ave	DNE	DNE	DNE	DNE
45	Eucalyptus Ave	w/o Sumner	60.7	RW	RW	55
46	Eucalyptus Ave	w/o Hamner Ave	63.3	RW	38	83
47	Parkview St	s/o Sumner Ave	55.0	RW	RW	23
48	Merrill Ave	w/o Grove Ave	64.8	RW	49	105
49	Merrill Ave	w/o Charlotte	65.8	RW	56	121
50	Merrill Ave	w/o Sumner Ave	63.6	RW	40	87
51	Bellegrave	w/o Scholar	67.9	36	78	168
52	Bellegrave	w/o Hamner Ave	68.6	40	86	186
53	Bellegrave	e/o Hamner Ave	67.2	32	70	151
54	Euclid Ave.	n/o Kimball	68.5	40	86	185
55	Euclid Ave.	n/o Pine Ave	68.5	39	85	183

TABLE 6-2: EXISTING WITH PROJECT CONDITIONS NOISE CONTOURS

Segment Number	Roadway	Segment	CNEL at Nearest Receiving Land Use (dBA)	Distance to Traffic Noise Contours (feet)		
				70 dB	65 dB	60 dB
56	Archibald Ave	n/o Schlesiman Rd	68.6	RW	87	187
57	Sumner Ave	s/o Limonite Ave	65.7	RW	56	120
58	Sumner Ave	s/o Limonite Ave	64.8	RW	48	104
59	Scholar Way	s/o Limonite Ave	59.4	RW	21	46
60	Scholar Way	n/o Limonite Ave	61.0	RW	27	59
61	Hamner Ave	n/o Limonite Ave	67.4	RW	72	155
62	Hamner Ave	n/o 68th	68.1	RW	80	173
63	Kimball	w/o Euclid Ave.	65.6	RW	55	119
64	Limonite Ave	w/o Sumner Ave	68.6	RW	87	187
65	Limonite Ave	w/o Hamner Ave	70.0	50	107	231
66	Limonite Ave	w/o I-15 SB Ramps	71.8	66	142	305
67	Limonite Ave	w/o I-15 NB Ramps	71.9	67	145	313
68	Limonite Ave	e/o I-15 NB Ramps	71.5	63	136	292
69	Hamner Ave	n/o Schlesiman Rd	68.2	RW	81	175
70	Pine Ave	w/o Archibald Ave	68.2	RW	82	177
71	Schlesiman Rd	w/o Hamner Ave	65.1	RW	50	109
72	Euclid Ave.	n/o SR-71 NB Ramps	69.3	45	97	210
73	Archibald Ave	n/o Chandler	68.2	RW	82	176
74	Archibald Ave	n/o Corydon	69.0	RW	92	199
75	River	n/o Corydon	66.7	30	65	141
76	Hamner Ave	n/o Norco	68.7	RW	89	191
77	Hamner Ave	s/o Norco	69.2	44	95	205

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest receiving land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road. “DNE” = Does not exist.

TABLE 6-3: OPENING YEAR 2025 WITHOUT PROJECT CONDITIONS NOISE CONTOURS

Segment Number	Roadway	Segment	CNEL at Nearest Receiving Land Use (dBA)	Distance to Traffic Noise Contours (feet)		
				70 dB	65 dB	60 dB
1	Monterey Ave	n/o Varner Rd	64.9	23	49	106
2	Haven Ave	n/o SR-60 WB Ramps	70.2	RW	111	239

TABLE 6-3: OPENING YEAR 2025 WITHOUT PROJECT CONDITIONS NOISE CONTOURS

Segment Number	Roadway	Segment	CNEL at Nearest Receiving Land Use (dBA)	Distance to Traffic Noise Contours (feet)		
				70 dB	65 dB	60 dB
3	Archibald Ave	n/o SR-60 EB Ramps	69.6	47	101	218
4	Haven Ave	n/o SR-60 EB Ramps	69.9	49	106	229
5	Archibald Ave	n/o East Riverside Dr	71.6	64	137	296
6	Haven Ave	n/o East Riverside Dr	69.5	46	100	215
7	Riverside Dr	w/o Archibald Ave	70.4	53	115	247
8	Riverside Dr	w/o Haven Ave	69.2	44	96	206
9	Archibald Ave	n/o Chino Ave.	71.3	61	131	283
10	Haven Ave	n/o Chino Ave.	68.8	41	89	193
11	Chino Ave.	w/o Archibald Ave	64.5	RW	46	100
12	Chino Ave.	w/o Haven Ave	62.7	RW	35	75
13	Ramona Ave.	n/o Edison Ave.	65.5	RW	54	116
14	Central Ave.	n/o Edison Ave.	69.2	45	96	207
15	Mountain Ave.	n/o Edison Ave.	64.5	RW	46	99
16	Euclid Ave.	n/o Edison Ave.	71.7	65	139	300
17	Grove Ave	n/o Edison Ave.	67.7	35	76	164
18	Archibald Ave	n/o Schaefer	70.6	55	119	256
19	Archibald Ave	n/o Ontario Ranch Rd	70.6	55	118	254
20	Haven Ave	n/o Ontario Ranch Rd	69.5	46	99	214
21	Hamner Ave	n/o Ontario Ranch Rd	69.2	RW	95	204
22	Grand Ave	w/o SR-71 NB	72.2	70	151	326
23	Grand Ave	w/o SR-71 NB	71.3	61	132	284
24	Grand Ave	w/o Ramona Ave.	69.3	45	97	208
25	Edison Ave.	w/o Central Ave.	67.4	33	72	155
26	Edison Ave.	w/o Mountain Ave.	67.7	35	76	164
27	Edison Ave.	w/o Euclid Ave.	67.2	33	71	152
28	Edison Ave.	w/o Archibald Ave	67.7	35	76	163
29	Ontario Ranch Rd	w/o Haven Ave	71.4	62	134	289
30	Ontario Ranch Rd	w/o I-15 SB Ramps	73.2	81	175	376
31	Ontario Ranch Rd	w/o I-15 NB Ramps	70.9	57	123	265
32	Ontario Ranch Rd	w/o I-15 NB Ramps	67.6	RW	74	160
33	Ramona Ave.	s/o Edison Ave.	65.3	RW	53	113
34	Central Ave.	s/o Edison Ave.	70.1	51	110	237
35	Mountain Ave.	s/o Edison Ave.	59.7	RW	RW	48
36	Euclid Ave.	n/o Merrill	71.6	64	137	296
37	Grove Ave	n/o Merrill	67.2	33	70	151
38	Archibald Ave	n/o Merrill	71.7	65	140	301

TABLE 6-3: OPENING YEAR 2025 WITHOUT PROJECT CONDITIONS NOISE CONTOURS

Segment Number	Roadway	Segment	CNEL at Nearest Receiving Land Use (dBA)	Distance to Traffic Noise Contours (feet)		
				70 dB	65 dB	60 dB
39	Haven Ave	n/o Eucalyptus Ave	66.2	RW	60	130
40	Sumner Ave	s/o Bellegrave	65.3	RW	52	112
41	Mill Creek Ave	n/o Eucalyptus Ave	DNE	DNE	DNE	DNE
42	Mill Creek Ave	n/o Bellegrave	54.1	RW	RW	RW
43	Hamner Ave	n/o Eucalyptus Ave	70.2	RW	111	240
44	Eucalyptus Ave	w/o Archibald Ave	61.7	RW	RW	65
45	Eucalyptus Ave	w/o Sumner	60.0	RW	RW	50
46	Eucalyptus Ave	w/o Hamner Ave	56.4	RW	RW	RW
47	Parkview St	s/o Sumner Ave	56.5	RW	RW	29
48	Merrill Ave	w/o Grove Ave	67.9	36	79	169
49	Merrill Ave	w/o Charlotte	68.4	39	84	181
50	Merrill Ave	w/o Sumner Ave	65.9	RW	57	123
51	Bellegrave	w/o Scholar	68.6	40	87	187
52	Bellegrave	w/o Hamner Ave	69.1	43	93	201
53	Bellegrave	e/o Hamner Ave	67.7	35	75	162
54	Euclid Ave.	n/o Kimball	71.0	58	126	272
55	Euclid Ave.	n/o Pine Ave	71.0	58	125	269
56	Archibald Ave	n/o Schlesiman Rd	70.4	53	115	247
57	Sumner Ave	s/o Limonite Ave	66.9	31	67	144
58	Sumner Ave	s/o Limonite Ave	66.5	RW	63	135
59	Scholar Way	s/o Limonite Ave	59.4	RW	21	46
60	Scholar Way	n/o Limonite Ave	61.5	RW	29	63
61	Hamner Ave	n/o Limonite Ave	67.7	RW	76	163
62	Hamner Ave	n/o 68th	68.3	RW	83	178
63	Kimball	w/o Euclid Ave.	66.0	RW	58	125
64	Limonite Ave	w/o Sumner Ave	70.0	50	107	231
65	Limonite Ave	w/o Hamner Ave	70.9	58	124	268
66	Limonite Ave	w/o I-15 SB Ramps	72.5	73	158	339
67	Limonite Ave	w/o I-15 NB Ramps	72.3	71	153	329
68	Limonite Ave	e/o I-15 NB Ramps	71.6	64	137	296
69	Hamner Ave	n/o Schlesiman Rd	68.0	RW	80	171
70	Pine Ave	w/o Archibald Ave	69.7	48	103	222
71	Schlesiman Rd	w/o Hamner Ave	65.9	RW	58	125
72	Euclid Ave.	n/o SR-71 NB Ramps	71.2	60	129	279
73	Archibald Ave	n/o Chandler	68.9	RW	91	196
74	Archibald Ave	n/o Corydon	69.3	45	97	208

TABLE 6-3: OPENING YEAR 2025 WITHOUT PROJECT CONDITIONS NOISE CONTOURS

Segment Number	Roadway	Segment	CNEL at Nearest Receiving Land Use (dBA)	Distance to Traffic Noise Contours (feet)		
				70 dB	65 dB	60 dB
75	River	n/o Corydon	67.1	32	69	149
76	Hamner Ave	n/o Norco	69.0	RW	92	199
77	Hamner Ave	s/o Norco	69.4	45	98	210

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest receiving land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road. "DNE" = Does not exist.

TABLE 6-4: OPENING YEAR 2025 WITH PROJECT CONDITIONS NOISE CONTOURS

Segment Number	Roadway	Segment	CNEL at Nearest Receiving Land Use (dBA)	Distance to Traffic Noise Contours (feet)		
				70 dB	65 dB	60 dB
1	Monterey Ave	n/o Varner Rd	64.9	23	49	26
2	Haven Ave	n/o SR-60 WB Ramps	70.2	RW	111	60
3	Archibald Ave	n/o SR-60 EB Ramps	69.6	47	101	54
4	Haven Ave	n/o SR-60 EB Ramps	70.3	53	114	61
5	Archibald Ave	n/o East Riverside Dr	71.6	64	138	74
6	Haven Ave	n/o East Riverside Dr	70.0	50	108	58
7	Riverside Dr	w/o Archibald Ave	70.4	53	115	62
8	Riverside Dr	w/o Haven Ave	69.3	45	96	51
9	Archibald Ave	n/o Chino Ave.	71.3	61	132	71
10	Haven Ave	n/o Chino Ave.	69.4	45	98	52
11	Chino Ave.	w/o Archibald Ave	64.5	RW	46	RW
12	Chino Ave.	w/o Haven Ave	62.7	RW	35	RW
13	Ramona Ave.	n/o Edison Ave.	65.5	RW	54	RW
14	Central Ave.	n/o Edison Ave.	69.2	45	96	51
15	Mountain Ave.	n/o Edison Ave.	64.5	RW	46	RW
16	Euclid Ave.	n/o Edison Ave.	71.7	65	139	75
17	Grove Ave	n/o Edison Ave.	67.8	35	76	41
18	Archibald Ave	n/o Schaefer	70.7	56	120	64
19	Archibald Ave	n/o Ontario Ranch Rd	70.6	55	119	64
20	Haven Ave	n/o Ontario Ranch Rd	70.0	50	107	57
21	Hamner Ave	n/o Ontario Ranch Rd	69.4	RW	98	RW

TABLE 6-4: OPENING YEAR 2025 WITH PROJECT CONDITIONS NOISE CONTOURS

Segment Number	Roadway	Segment	CNEL at Nearest Receiving Land Use (dBA)	Distance to Traffic Noise Contours (feet)		
				70 dB	65 dB	60 dB
22	Grand Ave	w/o SR-71 NB	72.2	70	151	81
23	Grand Ave	w/o SR-71 NB	71.3	61	132	71
24	Grand Ave	w/o Ramona Ave.	69.3	45	97	52
25	Edison Ave.	w/o Central Ave.	67.4	33	72	39
26	Edison Ave.	w/o Mountain Ave.	67.7	35	76	41
27	Edison Ave.	w/o Euclid Ave.	67.2	33	71	38
28	Edison Ave.	w/o Archibald Ave	67.7	35	76	41
29	Ontario Ranch Rd	w/o Haven Ave	71.4	62	134	72
30	Ontario Ranch Rd	w/o I-15 SB Ramps	73.4	84	182	97
31	Ontario Ranch Rd	w/o I-15 NB Ramps	70.9	58	124	66
32	Ontario Ranch Rd	w/o I-15 NB Ramps	67.6	RW	74	RW
33	Ramona Ave.	s/o Edison Ave.	65.3	RW	53	RW
34	Central Ave.	s/o Edison Ave.	70.1	51	110	59
35	Mountain Ave.	s/o Edison Ave.	59.7	RW	RW	RW
36	Euclid Ave.	n/o Merrill	71.6	64	138	74
37	Grove Ave	n/o Merrill	67.2	33	70	38
38	Archibald Ave	n/o Merrill	71.8	65	141	76
39	Haven Ave	n/o Eucalyptus Ave	67.6	34	74	40
40	Sumner Ave	s/o Bellegrave	66.2	RW	60	32
41	Mill Creek Ave	n/o Eucalyptus Ave	DNE	DNE	DNE	DNE
42	Mill Creek Ave	n/o Bellegrave	57.1	RW	RW	RW
43	Hamner Ave	n/o Eucalyptus Ave	70.6	RW	118	63
44	Eucalyptus Ave	w/o Archibald Ave	62.1	RW	32	RW
45	Eucalyptus Ave	w/o Sumner	61.8	RW	RW	RW
46	Eucalyptus Ave	w/o Hamner Ave	63.5	RW	40	RW
47	Parkview St	s/o Sumner Ave	57.5	RW	RW	RW
48	Merrill Ave	w/o Grove Ave	68.0	37	79	42
49	Merrill Ave	w/o Charlotte	68.4	39	84	45
50	Merrill Ave	w/o Sumner Ave	66.1	RW	59	32
51	Bellegrave	w/o Scholar	69.3	45	97	52
52	Bellegrave	w/o Hamner Ave	69.8	49	104	56
53	Bellegrave	e/o Hamner Ave	68.0	37	79	42
54	Euclid Ave.	n/o Kimball	71.0	58	126	68
55	Euclid Ave.	n/o Pine Ave	71.0	55	118	63
56	Archibald Ave	n/o Schlesiman Rd	70.5	54	116	62
57	Sumner Ave	s/o Limonite Ave	67.2	33	70	38

TABLE 6-4: OPENING YEAR 2025 WITH PROJECT CONDITIONS NOISE CONTOURS

Segment Number	Roadway	Segment	CNEL at Nearest Receiving Land Use (dBA)	Distance to Traffic Noise Contours (feet)		
				70 dB	65 dB	60 dB
58	Sumner Ave	s/o Limonite Ave	66.5	RW	63	34
59	Scholar Way	s/o Limonite Ave	60.1	RW	24	RW
60	Scholar Way	n/o Limonite Ave	61.5	RW	29	RW
61	Hamner Ave	n/o Limonite Ave	67.8	RW	77	RW
62	Hamner Ave	n/o 68th	68.5	RW	86	46
63	Kimball	w/o Euclid Ave.	66.0	RW	58	31
64	Limonite Ave	w/o Sumner Ave	70.0	50	107	58
65	Limonite Ave	w/o Hamner Ave	71.1	59	127	68
66	Limonite Ave	w/o I-15 SB Ramps	72.6	74	160	86
67	Limonite Ave	w/o I-15 NB Ramps	72.4	72	155	83
68	Limonite Ave	e/o I-15 NB Ramps	71.6	64	137	73
69	Hamner Ave	n/o Schlesiman Rd	68.3	RW	83	44
70	Pine Ave	w/o Archibald Ave	69.7	48	103	55
71	Schlesiman Rd	w/o Hamner Ave	65.9	RW	58	RW
72	Euclid Ave.	n/o SR-71 NB Ramps	70.8	56	122	65
73	Archibald Ave	n/o Chandler	69.0	43	93	50
74	Archibald Ave	n/o Corydon	69.4	45	98	52
75	River	n/o Corydon	67.2	32	70	37
76	Hamner Ave	n/o Norco	69.2	44	95	51
77	Hamner Ave	s/o Norco	69.4	45	98	52

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest receiving land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road. “DNE” = Does not exist.

TABLE 6-5: FUTURE YEAR 2040 WITHOUT PROJECT CONDITIONS NOISE CONTOURS

Segment Number	Roadway	Segment	CNEL at Nearest Receiving Land Use (dBA)	Distance to Traffic Noise Contours (feet)		
				70 dB	65 dB	60 dB
1	Monterey Ave	n/o Varner Rd	65.7	26	56	30
2	Haven Ave	n/o SR-60 WB Ramps	71.2	60	129	69
3	Archibald Ave	n/o SR-60 EB Ramps	69.3	45	96	51
4	Haven Ave	n/o SR-60 EB Ramps	70.0	50	108	58
5	Archibald Ave	n/o East Riverside Dr	69.8	48	104	56
6	Haven Ave	n/o East Riverside Dr	69.5	46	99	53

TABLE 6-5: FUTURE YEAR 2040 WITHOUT PROJECT CONDITIONS NOISE CONTOURS

Segment Number	Roadway	Segment	CNEL at Nearest Receiving Land Use (dBA)	Distance to Traffic Noise Contours (feet)		
				70 dB	65 dB	60 dB
7	Riverside Dr	w/o Archibald Ave	70.9	57	123	66
8	Riverside Dr	w/o Haven Ave	70.2	52	112	60
9	Archibald Ave	n/o Chino Ave.	70.2	52	111	60
10	Haven Ave	n/o Chino Ave.	66.6	RW	64	34
11	Chino Ave.	w/o Archibald Ave	65.4	RW	53	RW
12	Chino Ave.	w/o Haven Ave	62.8	RW	36	RW
13	Ramona Ave.	n/o Edison Ave.	65.8	RW	57	RW
14	Central Ave.	n/o Edison Ave.	69.4	45	98	52
15	Mountain Ave.	n/o Edison Ave.	64.8	RW	49	RW
16	Euclid Ave.	n/o Edison Ave.	71.2	60	129	69
17	Grove Ave	n/o Edison Ave.	68.0	37	79	42
18	Archibald Ave	n/o Schaefer	69.8	49	105	56
19	Archibald Ave	n/o Ontario Ranch Rd	68.2	RW	81	44
20	Haven Ave	n/o Ontario Ranch Rd	68.2	38	81	44
21	Hamner Ave	n/o Ontario Ranch Rd	69.9	RW	106	57
22	Grand Ave	w/o SR-71 NB	72.7	76	164	88
23	Grand Ave	w/o SR-71 NB	71.9	67	144	77
24	Grand Ave	w/o Ramona Ave.	70.2	52	112	60
25	Edison Ave.	w/o Central Ave.	69.1	43	93	50
26	Edison Ave.	w/o Mountain Ave.	69.6	47	101	54
27	Edison Ave.	w/o Euclid Ave.	69.0	43	92	50
28	Edison Ave.	w/o Archibald Ave	70.2	52	111	60
29	Ontario Ranch Rd	w/o Haven Ave	70.9	57	123	66
30	Ontario Ranch Rd	w/o I-15 SB Ramps	72.7	76	164	88
31	Ontario Ranch Rd	w/o I-15 NB Ramps	70.6	55	119	64
32	Ontario Ranch Rd	w/o I-15 NB Ramps	68.1	RW	80	RW
33	Ramona Ave.	s/o Edison Ave.	65.6	RW	55	RW
34	Central Ave.	s/o Edison Ave.	70.7	56	121	65
35	Mountain Ave.	s/o Edison Ave.	60.2	RW	RW	RW
36	Euclid Ave.	n/o Merrill	70.7	55	119	64
37	Grove Ave	n/o Merrill	67.3	33	71	38
38	Archibald Ave	n/o Merrill	70.8	56	122	65
39	Haven Ave	n/o Eucalyptus Ave	65.2	RW	51	RW
40	Sumner Ave	s/o Bellegrave	63.4	RW	39	RW
41	Mill Creek Ave	n/o Eucalyptus Ave	62.4	RW	33	RW
42	Mill Creek Ave	n/o Bellegrave	61.4	RW	RW	RW
43	Hamner Ave	n/o Eucalyptus Ave	69.9	RW	106	57
44	Eucalyptus Ave	w/o Archibald Ave	63.3	RW	39	RW
45	Eucalyptus Ave	w/o Sumner	63.2	RW	38	RW

TABLE 6-5: FUTURE YEAR 2040 WITHOUT PROJECT CONDITIONS NOISE CONTOURS

Segment Number	Roadway	Segment	CNEL at Nearest Receiving Land Use (dBA)	Distance to Traffic Noise Contours (feet)		
				70 dB	65 dB	60 dB
46	Eucalyptus Ave	w/o Hamner Ave	62.5	RW	34	RW
47	Parkview St	s/o Sumner Ave	57.3	RW	RW	RW
48	Merrill Ave	w/o Grove Ave	67.9	36	78	42
49	Merrill Ave	w/o Charlotte	67.7	35	76	41
50	Merrill Ave	w/o Sumner Ave	65.1	RW	50	RW
51	Bellegrave	w/o Scholar	69.3	45	97	52
52	Bellegrave	w/o Hamner Ave	70.0	50	107	58
53	Bellegrave	e/o Hamner Ave	68.7	41	89	48
54	Euclid Ave.	n/o Kimball	71.2	60	130	70
55	Euclid Ave.	n/o Pine Ave	71.3	61	132	71
56	Archibald Ave	n/o Schlesiman Rd	70.2	52	111	60
57	Sumner Ave	s/o Limonite Ave	66.3	RW	61	33
58	Sumner Ave	s/o Limonite Ave	65.4	RW	53	RW
59	Scholar Way	s/o Limonite Ave	61.0	RW	27	RW
60	Scholar Way	n/o Limonite Ave	62.4	RW	34	RW
61	Hamner Ave	n/o Limonite Ave	67.7	RW	76	RW
62	Hamner Ave	n/o 68th	68.3	RW	84	45
63	Kimball	w/o Euclid Ave.	68.0	37	79	42
64	Limonite Ave	w/o Sumner Ave	70.7	56	121	65
65	Limonite Ave	w/o Hamner Ave	71.2	60	129	69
66	Limonite Ave	w/o I-15 SB Ramps	72.8	77	167	89
67	Limonite Ave	w/o I-15 NB Ramps	72.6	74	160	86
68	Limonite Ave	e/o I-15 NB Ramps	71.5	63	137	73
69	Hamner Ave	n/o Schlesiman Rd	68.3	RW	84	45
70	Pine Ave	w/o Archibald Ave	70.3	52	113	61
71	Schlesiman Rd	w/o Hamner Ave	67.1	RW	69	RW
72	Euclid Ave.	n/o SR-71 NB Ramps	70.9	57	124	66
73	Archibald Ave	n/o Chandler	69.0	RW	92	50
74	Archibald Ave	n/o Corydon	69.8	49	105	56
75	River	n/o Corydon	67.8	36	77	41
76	Hamner Ave	n/o Norco	69.1	43	94	50
77	Hamner Ave	s/o Norco	70.0	50	108	58

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest receiving land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 6-6: FUTURE YEAR 2040 WITH PROJECT CONDITIONS NOISE CONTOURS

Segment Number	Roadway	Segment	CNEL at Nearest Receiving Land Use (dBA)	Distance to Traffic Noise Contours (feet)		
				70 dB	65 dB	60 dB
1	Monterey Ave	n/o Varner Rd	65.8	26	56	30
2	Haven Ave	n/o SR-60 WB Ramps	71.2	60	130	70
3	Archibald Ave	n/o SR-60 EB Ramps	69.3	45	97	52
4	Haven Ave	n/o SR-60 EB Ramps	70.2	51	110	59
5	Archibald Ave	n/o East Riverside Dr	69.8	49	105	56
6	Haven Ave	n/o East Riverside Dr	69.6	47	102	55
7	Riverside Dr	w/o Archibald Ave	70.9	57	123	66
8	Riverside Dr	w/o Haven Ave	70.2	52	112	60
9	Archibald Ave	n/o Chino Ave.	70.3	52	112	60
10	Haven Ave	n/o Chino Ave.	66.9	31	67	36
11	Chino Ave.	w/o Archibald Ave	65.4	RW	53	RW
12	Chino Ave.	w/o Haven Ave	62.8	RW	36	RW
13	Ramona Ave.	n/o Edison Ave.	65.8	RW	57	RW
14	Central Ave.	n/o Edison Ave.	69.4	45	98	52
15	Mountain Ave.	n/o Edison Ave.	64.8	RW	49	RW
16	Euclid Ave.	n/o Edison Ave.	71.2	60	130	70
17	Grove Ave	n/o Edison Ave.	68.0	37	79	42
18	Archibald Ave	n/o Schaefer	69.9	49	106	57
19	Archibald Ave	n/o Ontario Ranch Rd	68.3	RW	82	44
20	Haven Ave	n/o Ontario Ranch Rd	68.4	39	84	45
21	Hamner Ave	n/o Ontario Ranch Rd	70.0	RW	107	58
22	Grand Ave	w/o SR-71 NB	72.8	77	167	89
23	Grand Ave	w/o SR-71 NB	72.0	67	145	78
24	Grand Ave	w/o Ramona Ave.	70.5	54	116	62
25	Edison Ave.	w/o Central Ave.	69.3	45	97	52
26	Edison Ave.	w/o Mountain Ave.	69.8	49	105	56
27	Edison Ave.	w/o Euclid Ave.	69.2	44	95	51
28	Edison Ave.	w/o Archibald Ave	70.4	53	114	61
29	Ontario Ranch Rd	w/o Haven Ave	71.1	60	128	69
30	Ontario Ranch Rd	w/o I-15 SB Ramps	73.1	81	174	93
31	Ontario Ranch Rd	w/o I-15 NB Ramps	70.7	56	120	64
32	Ontario Ranch Rd	w/o I-15 NB Ramps	68.1	RW	80	RW
33	Ramona Ave.	s/o Edison Ave.	65.6	RW	55	RW
34	Central Ave.	s/o Edison Ave.	70.7	56	121	65
35	Mountain Ave.	s/o Edison Ave.	60.2	RW	RW	RW
36	Euclid Ave.	n/o Merrill	70.7	56	120	64

TABLE 6-6: FUTURE YEAR 2040 WITH PROJECT CONDITIONS NOISE CONTOURS

Segment Number	Roadway	Segment	CNEL at Nearest Receiving Land Use (dBA)	Distance to Traffic Noise Contours (feet)		
				70 dB	65 dB	60 dB
37	Grove Ave	n/o Merrill	67.3	33	71	38
38	Archibald Ave	n/o Merrill	70.9	57	123	66
39	Haven Ave	n/o Eucalyptus Ave	66.2	RW	60	32
40	Sumner Ave	s/o Bellegrave	64.7	RW	48	RW
41	Mill Creek Ave	n/o Eucalyptus Ave	62.9	RW	36	RW
42	Mill Creek Ave	n/o Bellegrave	62.3	RW	33	RW
43	Hamner Ave	n/o Eucalyptus Ave	70.2	RW	110	59
44	Eucalyptus Ave	w/o Archibald Ave	64.0	RW	43	RW
45	Eucalyptus Ave	w/o Sumner	63.8	RW	41	RW
46	Eucalyptus Ave	w/o Hamner Ave	64.2	RW	44	RW
47	Parkview St	s/o Sumner Ave	57.9	RW	RW	RW
48	Merrill Ave	w/o Grove Ave	67.9	36	78	42
49	Merrill Ave	w/o Charlotte	67.7	35	76	41
50	Merrill Ave	w/o Sumner Ave	65.3	RW	53	RW
51	Bellegrave	w/o Scholar	69.8	49	105	56
52	Bellegrave	w/o Hamner Ave	70.4	53	114	61
53	Bellegrave	e/o Hamner Ave	68.9	43	92	49
54	Euclid Ave.	n/o Kimball	71.2	60	130	70
55	Euclid Ave.	n/o Pine Ave	71.4	62	133	71
56	Archibald Ave	n/o Schlesiman Rd	70.3	52	112	60
57	Sumner Ave	s/o Limonite Ave	66.5	RW	63	34
58	Sumner Ave	s/o Limonite Ave	65.4	RW	53	RW
59	Scholar Way	s/o Limonite Ave	61.2	RW	28	RW
60	Scholar Way	n/o Limonite Ave	62.5	RW	34	RW
61	Hamner Ave	n/o Limonite Ave	67.8	RW	77	RW
62	Hamner Ave	n/o 68th	68.6	RW	87	47
63	Kimball	w/o Euclid Ave.	68.0	37	79	42
64	Limonite Ave	w/o Sumner Ave	70.8	56	121	65
65	Limonite Ave	w/o Hamner Ave	71.3	61	131	70
66	Limonite Ave	w/o I-15 SB Ramps	72.9	78	169	90
67	Limonite Ave	w/o I-15 NB Ramps	72.7	75	162	87
68	Limonite Ave	e/o I-15 NB Ramps	71.6	64	137	73
69	Hamner Ave	n/o Schlesiman Rd	68.6	RW	87	47
70	Pine Ave	w/o Archibald Ave	70.3	52	113	61
71	Schlesiman Rd	w/o Hamner Ave	67.1	RW	69	RW
72	Euclid Ave.	n/o SR-71 NB Ramps	70.9	58	124	67

TABLE 6-6: FUTURE YEAR 2040 WITH PROJECT CONDITIONS NOISE CONTOURS

Segment Number	Roadway	Segment	CNEL at Nearest Receiving Land Use (dBA)	Distance to Traffic Noise Contours (feet)		
				70 dB	65 dB	60 dB
73	Archibald Ave	n/o Chandler	69.1	43	94	50
74	Archibald Ave	n/o Corydon	69.9	49	106	57
75	River	n/o Corydon	67.9	36	77	42
76	Hamner Ave	n/o Norco	69.3	45	97	52
77	Hamner Ave	s/o Norco	70.0	50	108	58

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest receiving land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

6.2 EXISTING PLUS PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

An analysis of Existing traffic noise levels plus traffic noise generated by the proposed Project has been included in this report. However, the analysis of existing traffic noise levels plus traffic noise generated by the proposed Project scenario will not actually occur since the Project would not be fully constructed and operational until the Opening Year 2025 conditions.

Table 6-1 shows the Existing without Project conditions CNEL noise levels. The Existing without Project exterior noise levels are expected to range from 53.1 to 72.1 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 6-2 shows the Existing with Project conditions range from 55.0 to 72.1 dBA CNEL. Table 6-7 shows that the Project off-site traffic noise level increases range from 0.0 to 8.0 dBA CNEL on the study area roadway segments. Based on the significance criteria for off-site traffic noise, land uses adjacent to the study area roadway segments would experience *significant* noise level impacts due to unmitigated Project-related traffic noise levels along Eucalyptus Ave west of Hamner Ave (Segment 46).

6.3 OPENING YEAR 2025 PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 6-3 presents the Opening Year 2025 without Project conditions CNEL noise levels. The Opening Year 2025 without Project exterior noise levels are expected to range from 54.1 to 73.2 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography.

Table 6-4 shows the Opening Year 2025 with Project conditions range from 57.1 to 73.4 dBA CNEL. Table 6-8 shows that the Project off-site traffic noise level changes range from 0.0 to 7.1 dBA CNEL. Based on the significance criteria for off-site traffic noise, land uses adjacent to the study area roadway segments would experience *significant* noise level impacts due to

unmitigated Project-related traffic noise levels along Eucalyptus Avenue west of Hamner Avenuev (Segment 46).

6.4 FUTURE YEAR 2040 PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 6-5 presents the Future Year 2040 without Project conditions CNEL noise levels. The Future Year 2040 without Project exterior noise levels are expected to range from 57.3 to 72.8 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography.

Table 6-6 shows the Future Year 2040 with Project conditions range from 57.9 to 73.1 dBA CNEL. Table 6-9 shows that the Project off-site traffic noise level changes range from 0.0 to 1.7 dBA CNEL. The decreases in traffic noise shown in the future year condition is due to new roadways being constructed over time allowing for a redistribution of traffic within the City. Based on the significance criteria for off-site traffic noise, land uses adjacent to the study area roadway segments would experience *less than significant* noise level impacts due to unmitigated Project-related traffic noise levels.

TABLE 6-7: EXISTING WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Roadway	Segment	Noise level		Increase (dBA)	Allowable Increase (dBA)	Does the increase exceed the limit?
			E	E+P			
1	Monterey Ave	n/o Varner Rd	63.8	63.8	0.0	3.0	No
2	Haven Ave	n/o SR-60 WB Ramps	69.6	69.6	0.0	3.0	No
3	Archibald Ave	n/o SR-60 EB Ramps	68.2	68.2	0.0	3.0	No
4	Haven Ave	n/o SR-60 EB Ramps	68.0	68.7	0.7	3.0	No
5	Archibald Ave	n/o East Riverside Dr	69.3	69.3	0.0	1.5	No
6	Haven Ave	n/o East Riverside Dr	67.0	67.9	0.9	1.5	No
7	Riverside Dr	w/o Archibald Ave	68.5	68.5	0.0	1.5	No
8	Riverside Dr	w/o Haven Ave	67.6	67.7	0.1	1.5	No
9	Archibald Ave	n/o Chino Ave.	69.1	69.2	0.1	1.5	No
10	Haven Ave	n/o Chino Ave.	63.2	65.0	1.8	3.0	No
11	Chino Ave.	w/o Archibald Ave	60.2	60.3	0.1	3.0	No
12	Chino Ave.	w/o Haven Ave	58.2	58.2	0.0	5.0	No
13	Ramona Ave.	n/o Edison Ave.	65.3	65.3	0.0	3.0	No
14	Central Ave.	n/o Edison Ave.	68.7	68.7	0.0	3.0	No
15	Mountain Ave.	n/o Edison Ave.	64.7	64.7	0.0	3.0	No
16	Euclid Ave.	n/o Edison Ave.	68.5	68.5	0.0	1.5	No
17	Grove Ave	n/o Edison Ave.	64.7	64.7	0.0	3.0	No
18	Archibald Ave	n/o Schaefer	68.2	68.3	0.1	1.5	No
19	Archibald Ave	n/o Ontario Ranch Rd	68.1	68.2	0.1	1.5	No
20	Haven Ave	n/o Ontario Ranch Rd	64.2	65.7	1.5	3.0	No
21	Hamner Ave	n/o Ontario Ranch Rd	66.6	67.0	0.4	3.0	No
22	Grand Ave	w/o SR-71 NB	72.1	72.1	0.0	5.0	No
23	Grand Ave	w/o SR-71 NB	71.2	71.2	0.0	5.0	No
24	Grand Ave	w/o Ramona Ave.	69.2	69.2	0.0	3.0	No
25	Edison Ave.	w/o Central Ave.	67.1	67.1	0.0	3.0	No

TABLE 6-7: EXISTING WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Roadway	Segment	Noise level		Increase (dBA)	Allowable Increase (dBA)	Does the increase exceed the limit?
			E	E+P			
26	Edison Ave.	w/o Mountain Ave.	66.8	66.8	0.0	1.5	No
27	Edison Ave.	w/o Euclid Ave.	65.1	65.1	0.0	1.5	No
28	Edison Ave.	w/o Archibald Ave	62.7	62.7	0.0	3.0	No
29	Ontario Ranch Rd	w/o Haven Ave	66.9	66.9	0.0	1.5	No
30	Ontario Ranch Rd	w/o I-15 SB Ramps	70.5	70.9	0.4	5.0	No
31	Ontario Ranch Rd	w/o I-15 NB Ramps	67.2	67.4	0.2	3.0	No
32	Ontario Ranch Rd	w/o I-15 NB Ramps	66.0	66.0	0.0	3.0	No
33	Ramona Ave.	s/o Edison Ave.	65.2	65.2	0.0	3.0	No
34	Central Ave.	s/o Edison Ave.	69.9	69.9	0.0	1.5	No
35	Mountain Ave.	s/o Edison Ave.	59.7	59.7	0.0	5.0	No
36	Euclid Ave.	n/o Merrill	68.6	68.6	0.0	1.5	No
37	Grove Ave	n/o Merrill	64.5	64.5	0.0	3.0	No
38	Archibald Ave	n/o Merrill	68.9	69.1	0.2	1.5	No
39	Haven Ave	n/o Eucalyptus Ave	62.3	65.1	2.8	3.0	No
40	Sumner Ave	s/o Bellegrave	62.1	63.9	1.8	3.0	No
41	Mill Creek Ave	n/o Eucalyptus Ave	DNE	DNE	DNE	DNE	DNE
42	Mill Creek Ave	n/o Bellegrave	53.7	56.9	3.2	5.0	No
43	Hamner Ave	n/o Eucalyptus Ave	68.9	69.4	0.5	1.5	No
44	Eucalyptus Ave	w/o Archibald Ave	DNE	DNE	DNE	DNE	DNE
45	Eucalyptus Ave	w/o Sumner	58.3	60.7	2.4	5.0	No
46	Eucalyptus Ave	w/o Hamner Ave	55.3	63.3	8.0	5.0	**Yes**
47	Parkview St	s/o Sumner Ave	53.1	55.0	1.9	5.0	No
48	Merrill Ave	w/o Grove Ave	64.8	64.8	0.0	3.0	No
49	Merrill Ave	w/o Charlotte	65.7	65.8	0.1	1.5	No
50	Merrill Ave	w/o Sumner Ave	63.2	63.6	0.4	3.0	No

TABLE 6-7: EXISTING WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Roadway	Segment	Noise level		Increase (dBA)	Allowable Increase (dBA)	Does the increase exceed the limit?
			E	E+P			
51	Bellegrave	w/o Scholar	66.9	67.9	1.0	1.5	No
52	Bellegrave	w/o Hamner Ave	67.5	68.6	1.1	1.5	No
53	Bellegrave	e/o Hamner Ave	66.8	67.2	0.4	1.5	No
54	Euclid Ave.	n/o Kimball	68.5	68.5	0.0	3.0	No
55	Euclid Ave.	n/oPine Ave	69.1	68.5	-0.6	3.0	No
56	Archibald Ave	n/o Schlesiman Rd	68.5	68.6	0.1	1.5	No
57	Sumner Ave	s/o Limonite Ave	65.3	65.7	0.4	1.5	No
58	Sumner Ave	s/o Limonite Ave	64.7	64.8	0.1	3.0	No
59	Scholar Way	s/o Limonite Ave	58.6	59.4	0.8	5.0	No
60	Scholar Way	n/o Limonite Ave	61.0	61.0	0.0	3.0	No
61	Hamner Ave	n/o Limonite Ave	67.2	67.4	0.2	1.5	No
62	Hamner Ave	n/o 68th	67.8	68.1	0.3	1.5	No
63	Kimball	w/o Euclid Ave.	65.6	65.6	0.0	3.0	No
64	Limonite Ave	w/o Sumner Ave	68.6	68.6	0.0	1.5	No
65	Limonite Ave	w/o Hamner Ave	69.8	70.0	0.2	1.5	No
66	Limonite Ave	w/o I-15 SB Ramps	71.6	71.8	0.2	5.0	No
67	Limonite Ave	w/o I-15 NB Ramps	71.8	71.9	0.1	1.5	No
68	Limonite Ave	e/o I-15 NB Ramps	71.5	71.5	0.0	5.0	No
69	Hamner Ave	n/o Schlesiman Rd	67.9	68.2	0.3	1.5	No
70	Pine Ave	w/o Archibald Ave	68.2	68.2	0.0	1.5	No
71	Schlesiman Rd	w/o Hamner Ave	65.1	65.1	0.0	1.5	No
72	Euclid Ave.	n/o SR-71 NB Ramps	69.9	69.3	-0.6	3.0	No
73	Archibald Ave	n/o Chandler	68.0	68.2	0.2	1.5	No
74	Archibald Ave	n/o Corydon	68.9	69.0	0.1	1.5	No
75	River	n/o Corydon	66.7	66.7	0.0	1.5	No

TABLE 6-7: EXISTING WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Roadway	Segment	Noise level		Increase (dBA)	Allowable Increase (dBA)	Does the increase exceed the limit?
			E	E+P			
76	Hamner Ave	n/o Norco	68.5	68.7	0.2	1.5	No
77	Hamner Ave	s/o Norco	69.2	69.2	0.0	3.0	No

"DNE" = Does not exist.

TABLE 6-8: OPENING YEAR 2025 WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Roadway	Segment	Noise level		Increase (dBA)	Allowable Increase (dBA)	Does the increase exceed the limit?
			OY	OY+P			
1	Monterey Ave	n/o Varner Rd	64.9	64.9	0.0	3.0	No
2	Haven Ave	n/o SR-60 WB Ramps	70.2	70.2	0.0	3.0	No
3	Archibald Ave	n/o SR-60 EB Ramps	69.6	69.6	0.0	3.0	No
4	Haven Ave	n/o SR-60 EB Ramps	69.9	70.3	0.4	3.0	No
5	Archibald Ave	n/o East Riverside Dr	71.6	71.6	0.0	1.5	No
6	Haven Ave	n/o East Riverside Dr	69.5	70.0	0.5	1.5	No
7	Riverside Dr	w/o Archibald Ave	70.4	70.4	0.0	1.5	No
8	Riverside Dr	w/o Haven Ave	69.2	69.3	0.1	1.5	No
9	Archibald Ave	n/o Chino Ave.	71.3	71.3	0.0	1.5	No
10	Haven Ave	n/o Chino Ave.	68.8	69.4	0.6	3.0	No
11	Chino Ave.	w/o Archibald Ave	64.5	64.5	0.0	3.0	No
12	Chino Ave.	w/o Haven Ave	62.7	62.7	0.0	5.0	No
13	Ramona Ave.	n/o Edison Ave.	65.5	65.5	0.0	3.0	No
14	Central Ave.	n/o Edison Ave.	69.2	69.2	0.0	3.0	No
15	Mountain Ave.	n/o Edison Ave.	64.5	64.5	0.0	3.0	No
16	Euclid Ave.	n/o Edison Ave.	71.7	71.7	0.0	1.5	No

TABLE 6-8: OPENING YEAR 2025 WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Roadway	Segment	Noise level		Increase (dBA)	Allowable Increase (dBA)	Does the increase exceed the limit?
			OY	OY+P			
17	Grove Ave	n/o Edison Ave.	67.7	67.8	0.1	3.0	No
18	Archibald Ave	n/o Schaefer	70.6	70.7	0.1	1.5	No
19	Archibald Ave	n/o Ontario Ranch Rd	70.6	70.6	0.0	1.5	No
20	Haven Ave	n/o Ontario Ranch Rd	69.5	70.0	0.5	3.0	No
21	Hamner Ave	n/o Ontario Ranch Rd	69.2	69.4	0.2	3.0	No
22	Grand Ave	w/o SR-71 NB	72.2	72.2	0.0	5.0	No
23	Grand Ave	w/o SR-71 NB	71.3	71.3	0.0	5.0	No
24	Grand Ave	w/o Ramona Ave.	69.3	69.3	0.0	3.0	No
25	Edison Ave.	w/o Central Ave.	67.4	67.4	0.0	3.0	No
26	Edison Ave.	w/o Mountain Ave.	67.7	67.7	0.0	1.5	No
27	Edison Ave.	w/o Euclid Ave.	67.2	67.2	0.0	1.5	No
28	Edison Ave.	w/o Archibald Ave	67.7	67.7	0.0	3.0	No
29	Ontario Ranch Rd	w/o Haven Ave	71.4	71.4	0.0	1.5	No
30	Ontario Ranch Rd	w/o I-15 SB Ramps	73.2	73.4	0.2	5.0	No
31	Ontario Ranch Rd	w/o I-15 NB Ramps	70.9	70.9	0.0	3.0	No
32	Ontario Ranch Rd	w/o I-15 NB Ramps	67.6	67.6	0.0	3.0	No
33	Ramona Ave.	s/o Edison Ave.	65.3	65.3	0.0	3.0	No
34	Central Ave.	s/o Edison Ave.	70.1	70.1	0.0	1.5	No
35	Mountain Ave.	s/o Edison Ave.	59.7	59.7	0.0	5.0	No
36	Euclid Ave.	n/o Merrill	71.6	71.6	0.0	1.5	No
37	Grove Ave	n/o Merrill	67.2	67.2	0.0	3.0	No
38	Archibald Ave	n/o Merrill	71.7	71.8	0.1	1.5	No
39	Haven Ave	n/o Eucalyptus Ave	66.2	67.6	1.4	3.0	No
40	Sumner Ave	s/o Bellegrave	65.3	66.2	0.9	3.0	No
41	Mill Creek Ave	n/o Eucalyptus Ave	DNE	DNE	DNE	DNE	DNE

TABLE 6-8: OPENING YEAR 2025 WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Roadway	Segment	Noise level		Increase (dBA)	Allowable Increase (dBA)	Does the increase exceed the limit?
			OY	OY+P			
42	Mill Creek Ave	n/o Bellegrave	54.1	57.1	3.0	5.0	No
43	Hamner Ave	n/o Eucalyptus Ave	70.2	70.6	0.4	1.5	No
44	Eucalyptus Ave	w/o Archibald Ave	61.7	62.1	0.4	DNE	No
45	Eucalyptus Ave	w/o Sumner	60.0	61.8	1.8	5.0	No
46	Eucalyptus Ave	w/o Hamner Ave	56.4	63.5	7.1	5.0	**Yes**
47	Parkview St	s/o Sumner Ave	56.5	57.5	1.0	5.0	No
48	Merrill Ave	w/o Grove Ave	67.9	68.0	0.1	3.0	No
49	Merrill Ave	w/o Charlotte	68.4	68.4	0.0	1.5	No
50	Merrill Ave	w/o Sumner Ave	65.9	66.1	0.2	3.0	No
51	Bellegrave	w/o Scholar	68.6	69.3	0.7	1.5	No
52	Bellegrave	w/o Hamner Ave	69.1	69.8	0.7	1.5	No
53	Bellegrave	e/o Hamner Ave	67.7	68.0	0.3	1.5	No
54	Euclid Ave.	n/o Kimball	71.0	71.0	0.0	3.0	No
55	Euclid Ave.	n/oPine Ave	71.0	71.0	-0.0	3.0	No
56	Archibald Ave	n/o Schlesiman Rd	70.4	70.5	0.1	1.5	No
57	Sumner Ave	s/o Limonite Ave	66.9	67.2	0.3	1.5	No
58	Sumner Ave	s/o Limonite Ave	66.5	66.5	0.0	3.0	No
59	Scholar Way	s/o Limonite Ave	59.4	60.1	0.7	5.0	No
60	Scholar Way	n/o Limonite Ave	61.5	61.5	0.0	3.0	No
61	Hamner Ave	n/o Limonite Ave	67.7	67.8	0.1	1.5	No
62	Hamner Ave	n/o 68th	68.3	68.5	0.2	1.5	No
63	Kimball	w/o Euclid Ave.	66.0	66.0	0.0	3.0	No
64	Limonite Ave	w/o Sumner Ave	70.0	70.0	0.0	1.5	No
65	Limonite Ave	w/o Hamner Ave	70.9	71.1	0.2	1.5	No
66	Limonite Ave	w/o I-15 SB Ramps	72.5	72.6	0.1	5.0	No

TABLE 6-8: OPENING YEAR 2025 WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Roadway	Segment	Noise level		Increase (dBA)	Allowable Increase (dBA)	Does the increase exceed the limit?
			OY	OY+P			
67	Limonite Ave	w/o I-15 NB Ramps	72.3	72.4	0.1	1.5	No
68	Limonite Ave	e/o I-15 NB Ramps	71.6	71.6	0.0	5.0	No
69	Hamner Ave	n/o Schlesiman Rd	68.0	68.3	0.3	1.5	No
70	Pine Ave	w/o Archibald Ave	69.7	69.7	0.0	1.5	No
71	Schlesiman Rd	w/o Hamner Ave	65.9	65.9	0.0	1.5	No
72	Euclid Ave.	n/o SR-71 NB Ramps	71.2	70.8	-0.4	3.0	No
73	Archibald Ave	n/o Chandler	68.9	69.0	0.1	1.5	No
74	Archibald Ave	n/o Corydon	69.3	69.4	0.1	1.5	No
75	River	n/o Corydon	67.1	67.2	0.1	1.5	No
76	Hamner Ave	n/o Norco	69.0	69.2	0.2	1.5	No
77	Hamner Ave	s/o Norco	69.4	69.4	0.0	3.0	No

"DNE" = Does not exist.

TABLE 6-9: FUTURE YEAR 2040 WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Roadway	Segment	Noise level		Increase (dBA)	Allowable Increase (dBA)	Does the increase exceed the limit?
			FY	FY+P			
1	Monterey Ave	n/o Varner Rd	65.7	65.8	0.1	3.0	No
2	Haven Ave	n/o SR-60 WB Ramps	71.2	71.2	0.0	3.0	No
3	Archibald Ave	n/o SR-60 EB Ramps	69.3	69.3	0.0	3.0	No
4	Haven Ave	n/o SR-60 EB Ramps	70.0	70.2	0.2	3.0	No
5	Archibald Ave	n/o East Riverside Dr	69.8	69.8	0.0	1.5	No
6	Haven Ave	n/o East Riverside Dr	69.5	69.6	0.1	1.5	No
7	Riverside Dr	w/o Archibald Ave	70.9	70.9	0.0	1.5	No

TABLE 6-9: FUTURE YEAR 2040 WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Roadway	Segment	Noise level		Increase (dBA)	Allowable Increase (dBA)	Does the increase exceed the limit?
			FY	FY+P			
8	Riverside Dr	w/o Haven Ave	70.2	70.2	0.0	1.5	No
9	Archibald Ave	n/o Chino Ave.	70.2	70.3	0.1	1.5	No
10	Haven Ave	n/o Chino Ave.	66.6	66.9	0.3	1.5	No
11	Chino Ave.	w/o Archibald Ave	65.4	65.4	0.0	3.0	No
12	Chino Ave.	w/o Haven Ave	62.8	62.8	0.0	5.0	No
13	Ramona Ave.	n/o Edison Ave.	65.8	65.8	0.0	3.0	No
14	Central Ave.	n/o Edison Ave.	69.4	69.4	0.0	3.0	No
15	Mountain Ave.	n/o Edison Ave.	64.8	64.8	0.0	3.0	No
16	Euclid Ave.	n/o Edison Ave.	71.2	71.2	0.0	1.5	No
17	Grove Ave	n/o Edison Ave.	68.0	68.0	0.0	3.0	No
18	Archibald Ave	n/o Schaefer	69.8	69.9	0.1	1.5	No
19	Archibald Ave	n/o Ontario Ranch Rd	68.2	68.3	0.1	1.5	No
20	Haven Ave	n/o Ontario Ranch Rd	68.2	68.4	0.2	1.5	No
21	Hamner Ave	n/o Ontario Ranch Rd	69.9	70.0	0.1	3.0	No
22	Grand Ave	w/o SR-71 NB	72.7	72.8	0.1	5.0	No
23	Grand Ave	w/o SR-71 NB	71.9	72.0	0.1	5.0	No
24	Grand Ave	w/o Ramona Ave.	70.2	70.5	0.3	3.0	No
25	Edison Ave.	w/o Central Ave.	69.1	69.3	0.2	3.0	No
26	Edison Ave.	w/o Mountain Ave.	69.6	69.8	0.2	1.5	No
27	Edison Ave.	w/o Euclid Ave.	69.0	69.2	0.2	1.5	No
28	Edison Ave.	w/o Archibald Ave	70.2	70.4	0.2	3.0	No
29	Ontario Ranch Rd	w/o Haven Ave	70.9	71.1	0.2	1.5	No
30	Ontario Ranch Rd	w/o I-15 SB Ramps	72.7	73.1	0.4	5.0	No
31	Ontario Ranch Rd	w/o I-15 NB Ramps	70.6	70.7	0.1	3.0	No
32	Ontario Ranch Rd	w/o I-15 NB Ramps	68.1	68.1	0.0	3.0	No

TABLE 6-9: FUTURE YEAR 2040 WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Roadway	Segment	Noise level		Increase (dBA)	Allowable Increase (dBA)	Does the increase exceed the limit?
			FY	FY+P			
33	Ramona Ave.	s/o Edison Ave.	65.6	65.6	0.0	3.0	No
34	Central Ave.	s/o Edison Ave.	70.7	70.7	0.0	1.5	No
35	Mountain Ave.	s/o Edison Ave.	60.2	60.2	0.0	5.0	No
36	Euclid Ave.	n/o Merrill	70.7	70.7	0.0	1.5	No
37	Grove Ave	n/o Merrill	67.3	67.3	0.0	3.0	No
38	Archibald Ave	n/o Merrill	70.8	70.9	0.1	1.5	No
39	Haven Ave	n/o Eucalyptus Ave	65.2	66.2	1.0	1.5	No
40	Sumner Ave	s/o Bellegrave	63.4	64.7	1.3	3.0	No
41	Mill Creek Ave	n/o Eucalyptus Ave	62.4	62.9	0.5	DNE	No
42	Mill Creek Ave	n/o Bellegrave	61.4	62.3	0.9	5.0	No
43	Hamner Ave	n/o Eucalyptus Ave	69.9	70.2	0.3	1.5	No
44	Eucalyptus Ave	w/o Archibald Ave	63.3	64.0	0.7	1.5	No
45	Eucalyptus Ave	w/o Sumner	63.2	63.8	0.6	3.0	No
46	Eucalyptus Ave	w/o Hamner Ave	62.5	64.2	1.7	3.0	No
47	Parkview St	s/o Sumner Ave	57.3	57.9	0.6	5.0	No
48	Merrill Ave	w/o Grove Ave	67.9	67.9	0.0	3.0	No
49	Merrill Ave	w/o Charlotte	67.7	67.7	0.0	1.5	No
50	Merrill Ave	w/o Sumner Ave	65.1	65.3	0.2	3.0	No
51	Bellegrave	w/o Scholar	69.3	69.8	0.5	1.5	No
52	Bellegrave	w/o Hamner Ave	70.0	70.4	0.4	1.5	No
53	Bellegrave	e/o Hamner Ave	68.7	68.9	0.2	1.5	No
54	Euclid Ave.	n/o Kimball	71.2	71.2	0.0	3.0	No
55	Euclid Ave.	n/oPine Ave	71.3	71.4	0.1	3.0	No
56	Archibald Ave	n/o Schlesiman Rd	70.2	70.3	0.1	1.5	No
57	Sumner Ave	s/o Limonite Ave	66.3	66.5	0.2	1.5	No

TABLE 6-9: FUTURE YEAR 2040 WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Roadway	Segment	Noise level		Increase (dBA)	Allowable Increase (dBA)	Does the increase exceed the limit?
			FY	FY+P			
58	Sumner Ave	s/o Limonite Ave	65.4	65.4	0.0	3.0	No
59	Scholar Way	s/o Limonite Ave	61.0	61.2	0.2	5.0	No
60	Scholar Way	n/o Limonite Ave	62.4	62.5	0.1	3.0	No
61	Hamner Ave	n/o Limonite Ave	67.7	67.8	0.1	1.5	No
62	Hamner Ave	n/o 68th	68.3	68.6	0.3	1.5	No
63	Kimball	w/o Euclid Ave.	68.0	68.0	0.0	3.0	No
64	Limonite Ave	w/o Sumner Ave	70.7	70.8	0.1	1.5	No
65	Limonite Ave	w/o Hamner Ave	71.2	71.3	0.1	1.5	No
66	Limonite Ave	w/o I-15 SB Ramps	72.8	72.9	0.1	5.0	No
67	Limonite Ave	w/o I-15 NB Ramps	72.6	72.7	0.1	1.5	No
68	Limonite Ave	e/o I-15 NB Ramps	71.5	71.6	0.1	5.0	No
69	Hamner Ave	n/o Schlesiman Rd	68.3	68.6	0.3	1.5	No
70	Pine Ave	w/o Archibald Ave	70.3	70.3	0.0	1.5	No
71	Schlesiman Rd	w/o Hamner Ave	67.1	67.1	0.0	1.5	No
72	Euclid Ave.	n/o SR-71 NB Ramps	70.9	70.9	0.0	3.0	No
73	Archibald Ave	n/o Chandler	69.0	69.1	0.1	1.5	No
74	Archibald Ave	n/o Corydon	69.8	69.9	0.1	1.5	No
75	River	n/o Corydon	67.8	67.9	0.1	1.5	No
76	Hamner Ave	n/o Norco	69.1	69.3	0.2	1.5	No
77	Hamner Ave	s/o Norco	70.0	70.0	0.0	3.0	No

6.5 OFF-SITE TRAFFIC NOISE MITIGATION

To reduce the significant Project traffic noise level increases on the study area roadway Segment 46 potential noise mitigation is considered in this analysis. Due to the nature of the noise source, mitigation options are limited to barriers to shield receivers and roadway modification, such as lowering speed limits and alternate roadways surfaces. Barriers in the location of concern already exist or are not considered feasible due to property access requirements of existing noise sensitive land uses. The speed modeled for Segment 46 is already considered low and reducing the speed to 25 mph would reduce noise level by 3 dBA and would not reduce the impact to less than significant levels (i.e. -4 dBA). Rubberized open graded asphalt hot mix can provide noise attenuation of approximately 4 dBA for automobile traffic noise levels. (22) Thus, rubberized open graded asphalt could reduce the increase in noise levels to less than 5 dBA CNEL along Segment 46. However, the City of Ontario pavement standards require the use of rubberized gap graded asphalt, which would result in an approximate 1 dBA CNEL reduction. Since the City of Ontario does not allow for the use of rubberized open graded asphalt, the mitigation is not considered feasible. Therefore, due to the level of increase none of these measures would reduce the impacts to less than significant levels and the offsite noise level increases along Eucalyptus Avenue west of Hamner Avenue (Segment 46) would be *significant and unavoidable*.

7 ON-SITE TRAFFIC NOISE ANALYSIS

An on-site exterior noise impact analysis has been completed to determine the noise exposure levels that would result from adjacent transportation noise sources in the Project study area, and to identify potential noise attenuation measures that would achieve acceptable Project exterior and interior noise levels. The primary source of transportation noise affecting the Project site is anticipated to be from Haven Ave., Eucalyptus Ave., Bellegrave Ave., Parkview St., and Scholar Way. The Project would also be exposed to nominal traffic noise from the Project's internal roads. However, due to the low traffic volume/speed, traffic noise from these internal roads will not make a substantive contribution to ambient noise conditions.

7.1 EXTERIOR NOISE ANALYSIS

Using the FHWA traffic noise prediction model and the parameters outlined in Tables 6-3 to 6-5, the expected future exterior noise levels for the on-site Project land uses were estimated. Table 7-1 presents a summary of future on-site exterior traffic noise levels at 100 feet from surrounding roadway centerlines. The on-site traffic noise analysis calculations are provided in Appendix 7.1. All future residential uses and the school will require detailed analysis as a component of noise studies that evaluate the implementing projects within each planning area. These final noise studies would utilize any recommendations identified in this study in combination with precise grading plans and actual building design specifications to identify any additional noise abatement measures, such as exterior noise barriers and/or building materials (e.g., sound transmission class ratings for windows and doors), if necessary.

TABLE 7-1: EXTERIOR NOISE LEVELS

Planning Area	Land Use[1]	Noise-Sensitive Land Use?	Roadway	Exterior Noise Level at 100 feet (dBA CNEL)[2]	Land Use Compatibility[3]
30	Residential	Yes	Eucalyptus Ave	62.1	*Normally Acceptable*
31	Residential	Yes	Eucalyptus Ave	62.1	*Normally Acceptable*
32	Residential	Yes	Eucalyptus Ave	62.1	*Normally Acceptable*
33	Residential	Yes	Eucalyptus Ave	62.1	*Normally Acceptable*
30	Residential	Yes	Parkview St	50.2	*Clearly Acceptable*
31	Residential	Yes	Parkview St	50.2	*Clearly Acceptable*
34	School	Yes	Bellegrave Ave	59.0	*Clearly Acceptable*
33	Residential	Yes	Bellegrave Ave	59.0	*Clearly Acceptable*
34	School	Yes	Haven Ave	62.8	*Normally Acceptable*
32	Residential	Yes	Haven Ave	62.8	*Normally Acceptable*
33	Residential	Yes	Scholar Way	53.5	*Clearly Acceptable*

[1] Project land uses as shown on Exhibit 1-B.
[2] Exterior on-site traffic noise level calculations are included in Appendix 8.1.
[3] Based on the General Plan land use compatibility guidelines as shown on Exhibit 3-A.

The on-site exterior traffic noise analysis indicates that within 100 feet of roadway centerlines the noise sensitive residential lots in Planning Areas 30 through 34 will experience exterior noise levels ranging from 49.3 to 61.6 dBA CNEL. Based on City of Ontario *Land Use Compatibility for Community Noise Exposure* shown on Exhibit 3-A, the single-family land uses and schools are considered as *clearly acceptable to normally acceptable* with unmitigated exterior noise levels of less than 65 dBA CNEL. For *normally acceptable* exterior noise levels, a*coustical reports will be required for major new residential construction. Conventional construction with closed windows and fresh air supply systems of air conditioning will normally suffice*.

In addition, the Project will satisfy the City of Ontario 65 dBA CNEL exterior noise level standards for the residential land uses and schools. This noise analysis shows that the Project will satisfy the City of Ontario 65 dBA CNEL exterior noise level standards for single-family residential use without additional noise abatement measures.

7.1.4 EXTERIOR TRAFFIC NOISE LEVEL COMPLIANCE

Table 7-1 shows that on-site traffic noise levels do not exceed the City of Ontario 65 dBA CNEL exterior noise level standards for the noise sensitive residential land uses or schools.

7.2 INTERIOR NOISE ANALYSIS

To ensure that the interior noise levels comply with the interior noise level standards, future exterior noise levels were calculated at the estimated at the first and second floor building façade locations with planned residential areas 100 feet from the centerline of surrounding roadways.

7.2.1 NOISE REDUCTION METHODOLOGY

The interior noise level is the difference between the predicted exterior noise level at the building facade and the noise reduction of the structure. Typical building construction will provide a Noise Reduction (NR) of approximately 12 dBA with "windows open" and a minimum 25 dBA noise reduction with "windows closed." (5) (23) However, sound leaks, cracks and openings within the window assembly can greatly diminish its effectiveness in reducing noise. Several methods are used to improve interior noise reduction, including: [1] weather-stripped solid core exterior doors; [2] upgraded dual glazed windows; [3] mechanical ventilation/air conditioning; and [4] exterior wall/roof assembles free of cut outs or openings.

7.2.2 INTERIOR NOISE LEVEL ASSESSMENT

To provide the necessary interior noise level reduction, Tables 7-3 and 7-4 indicate that Project land uses adjacent to Haven Ave., Eucalyptus Ave., Bellegrave Ave., Parkview St., and Scholar Way will require a windows-closed condition and a means of mechanical ventilation (e.g. air conditioning). Tables 7-3 and 7-4 show that the future unmitigated noise levels at the first and second floor building façade are expected to range from 49.3 to 61.5 dBA CNEL. The interior noise assessment shows that the single-family residential uses within Planning Areas 30 through 34 can be satisfied using standard windows with a minimum STC rating of 27.

7.2.3 INTERIOR TRAFFIC NOISE LEVEL COMPLIANCE

Tables 7-3 and 7-4 shows that on-site interior traffic noise levels will not exceed the City of Ontario 45 dBA CNEL interior noise level standard for residential development and additional noise abatement measures are not needed.

TABLE 7-3: FIRST FLOOR INTERIOR NOISE LEVELS (CNEL)

Planning Area	Land Use[1]	Noise-Sensitive Land Use?	Noise Level at Façade[2]	Required Interior Noise Reduction[3]	Estimated Interior Noise Reduction[4]	Upgraded Windows[5]	Interior Noise Level[6]	Threshold[7]	Threshold Exceeded?
30	Single-Family Residential	Yes	60.9	15.9	25.0	No	35.9	45	No
31	Single-Family Residential	Yes	60.9	15.9	25.0	No	35.9	45	No
32	Single-Family Residential	Yes	60.9	15.9	25.0	No	35.9	45	No
33	Single-Family Residential	Yes	60.9	15.9	32.0	Yes	28.9	45	No
30	Single-Family Residential	Yes	49.3	4.3	32.0	Yes	17.3	45	No
31	Single-Family Residential	Yes	49.3	4.3	33.0	Yes	16.3	45	No
34	School	Yes	58.0	13.0	34.0	Yes	24.0	--	No
33	Single-Family Residential	Yes	58.0	13.0	35.0	Yes	23.0	45	No
34	School	Yes	61.6	16.6	36.0	Yes	25.6	--	No
32	Single-Family Residential	Yes	61.6	16.6	37.0	Yes	24.6	45	No
33	Single-Family Residential	Yes	52.6	7.6	38.0	Yes	14.6	45	No

[1] Project land uses as shown on Exhibit 1-B.
[2] Exterior noise level at the facade with a windows closed condition requiring a means of mechanical ventilation (e.g. air conditioning). See Appendix 7.1.
[3] Noise reduction to satisfy the interior noise level threshold.
[4] A minimum of 25 dBA noise reduction is assumed with standard building construction and approximately 2 dBA less than the STC rating for upgraded windows.
[5] Does the required interior noise reduction trigger upgraded windows with a minimum STC rating of greater than 27?
[6] Estimated interior noise level with minimum STC rating for all windows.
[7] Interior noise level threshold: 45 dBA CNEL for residential use (California Code of Regulations.

TABLE 7-4: SECOND FLOOR INTERIOR NOISE LEVELS (CNEL)

Planning Area	Land Use[1]	Noise-Sensitive Land Use?	Noise Level at Façade[2]	Required Interior Noise Reduction[3]	Estimated Interior Noise Reduction[4]	Upgraded Windows[5]	Interior Noise Level[6]	Threshold[7]	Threshold Exceeded?
30	Single-Family Residential	Yes	60.8	15.8	25.0	No	35.8	45	No
31	Single-Family Residential	Yes	60.8	15.8	26.0	No	34.8	45	No
32	Single-Family Residential	Yes	60.8	15.8	27.0	No	33.8	45	No
33	Single-Family Residential	Yes	60.8	15.8	28.0	No	32.8	45	No
30	Single-Family Residential	Yes	49.3	4.3	29.0	No	20.3	45	No
31	Single-Family Residential	Yes	49.3	4.3	30.0	No	19.3	45	No
34	School	Yes	57.9	12.9	31.0	No	26.9	--	No
33	Single-Family Residential	Yes	57.9	12.9	32.0	No	25.9	45	No
34	School	Yes	61.5	16.5	33.0	No	28.5	--	No
32	Single-Family Residential	Yes	61.5	16.5	34.0	No	27.5	45	No
33	Single-Family Residential	Yes	52.6	7.6	35.0	No	17.6	45	No

[1] Project land uses as shown on Exhibit 1-B.
[2] Exterior noise level at the facade with a windows closed condition requiring a means of mechanical ventilation (e.g. air conditioning). See Appendix 7.1.
[3] Noise reduction to satisfy the interior noise level threshold.
[4] A minimum of 25 dBA noise reduction is assumed with standard building construction and approximately 2 dBA less than the STC rating for upgraded windows.
[5] Does the required interior noise reduction trigger upgraded windows with a minimum STC rating of greater than 27?
[6] Estimated interior noise level with minimum STC rating for all windows.
[7] Interior noise level threshold: 45 dBA CNEL for residential use (California Code of Regulations.

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8 RECEIVER LOCATIONS

To assess the potential for long-term operational and short-term construction noise impacts, the following sensitive receiver locations, as shown on Exhibit 8-A, were identified as representative locations for analysis. Sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include schools, hospitals, single-family dwellings, mobile home parks, churches, libraries, and recreation areas. Moderately noise-sensitive land uses typically include multi-family dwellings, hotels, motels, dormitories, 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.

To describe the potential off-site Project noise levels, five receiver locations in the vicinity of the Project site were identified. The selection of receiver locations is based on FHWA guidelines and is consistent with additional guidance provided by Caltrans and the FTA. Other sensitive land uses in the Project study area that are located at greater distances than those identified in this noise study will experience lower noise levels than those presented in this report due to the additional attenuation from distance and the shielding of intervening structures. Distance is measured in a straight line from the project boundary to each receiver location.

R1: Location R1 represents the existing residence at the southwest corner of S. Tesoro Privado and E. Amanecer Privado, approximately 73 feet east of the Project site. Receptor R1 is placed at the private outdoor living areas (backyards) facing the Project site.

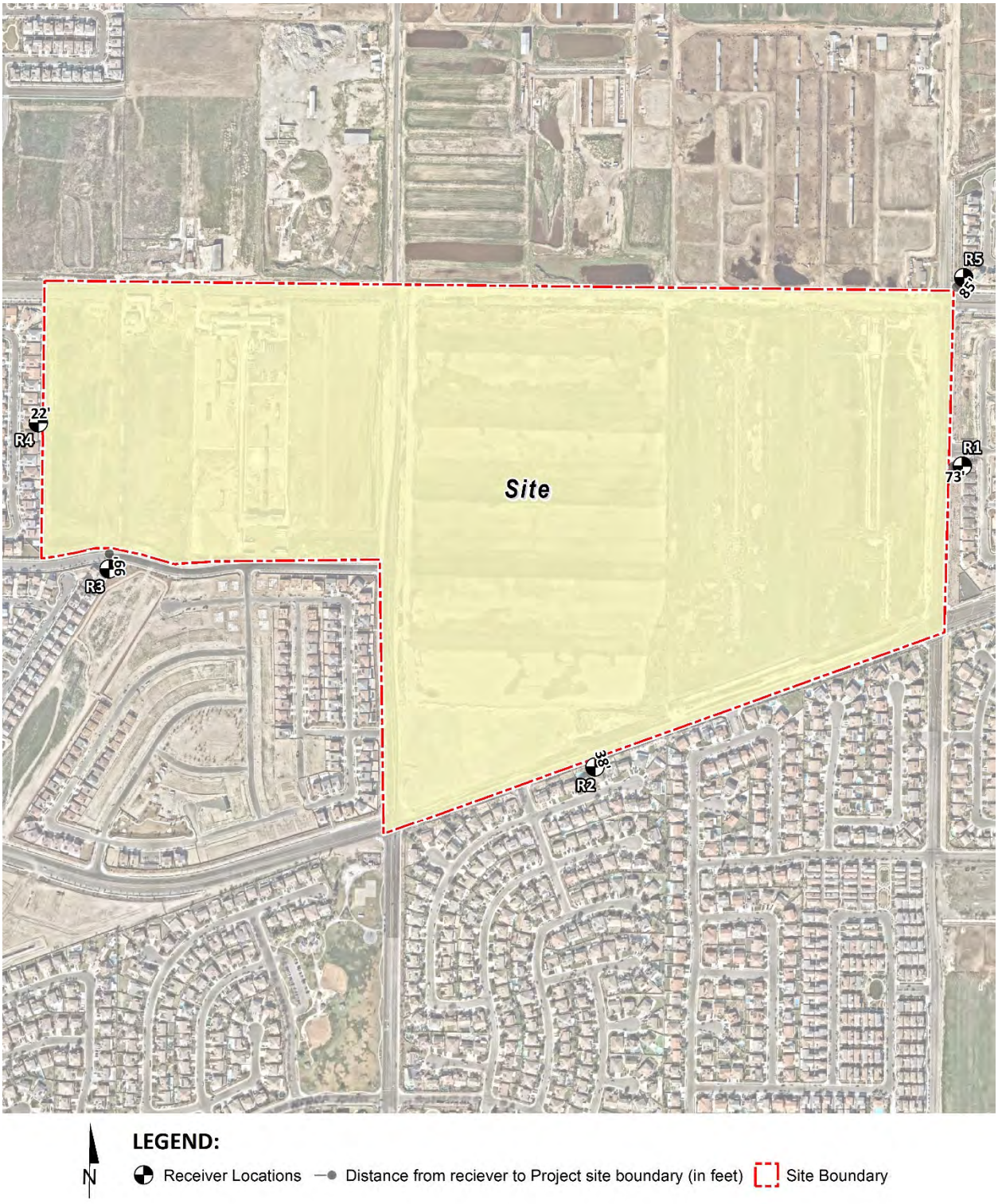
R2: Location R2 represents the existing residence at 5733 Red Haven Street in the City of Eastvale, approximately 38 feet south of the Project site. Receptor R2 is placed at the private outdoor living areas (backyards) facing the Project site.

R3: Location R3 represents the existing residence at 4807 S. Monarch Place, approximately 66 feet south of the Project site. Receptor R3 is placed at the private outdoor living areas (backyards) facing the Project site.

R4: Location R4 represents the existing residence at 4677 Sagewood Lane, approximately 22 feet west of the Project site. Receptor R4 is placed at the private outdoor living areas (backyards) facing the Project site.

R5: Location R5 represents the existing residence at 3902 E. Fincastle Street, approximately 85 feet west of the Project site. Receptor R4 is placed at the private outdoor living areas (backyards) facing the Project site.

EXHIBIT 8-A: RECEIVER LOCATIONS



9 OPERATIONAL NOISE ANALYSIS

This section analyzes the potential stationary-source operational noise impacts at the nearest receiver locations, identified in Section 8, resulting from the operation of the proposed Subarea 29 Specific Plan Amendment Project.

9.1 OPERATIONAL NOISE SOURCES

The residential portion of the Project has not been designed at this stage of project development. The Subarea 29 Specific Plan Amendment residential development is not expected to include any specific type of operational noise levels beyond the typical noise sources associated with similar residential land uses in the Project study area, such as people and children, parking lot activity, garage doors, small air conditioners, and trash collection. The proposed residential uses would also be considered a noise-sensitive receiving land use.

To allow the City to verify the proposed mechanical ventilation complies with the City's noise ordinance requirements, mitigation measure NOI-1 would require best engineering practices to be used in the placement of noise generating equipment when developing site plans for Project land uses containing HVAC units such that noise levels at the property line comply with City standards. Development plans shall be accompanied by an acoustical analysis demonstrating compliance with City standards for approval prior to issuance of building permits.

NOI-1: OPERATIONAL NOISE MITIGATION

Prior to the issuance of a building permit for residential development, the Property Owner/Developer shall prepare an acoustical study(ies) of proposed plans, which shall identify all noise-generating areas and associated equipment, predict noise levels at property lines from all identified areas, and recommended noise attenuation features to be implemented (e.g., enclosures, barriers, site orientation), as necessary, to comply with the City Municipal Code Section 5-29.04.

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10 CONSTRUCTION ANALYSIS

This section analyzes potential impacts resulting from the short-term construction activities associated with the development of the Project. Exhibit 10-A shows the construction activity boundaries in relation to the nearest sensitive receiver locations previously described in Section 8. According to Section 5-29.09 of the Municipal Code states: *No person, while engaged in construction, remodeling, digging, grading, demolition or any other related building activity, shall operate any tool, equipment or machine in a manner that produces loud noise that disturbs a person of normal sensitivity who works or resides in the vicinity, or a Police or Code Enforcement Officer, on any weekday except between the hours of 7:00 a.m. and 6:00 p.m. or on Saturday or Sunday between the hours of 9:00 a.m. and 6:00 p.m.* (13)

In addition, since neither the City of Ontario General Plan or County Code establish numeric maximum acceptable construction source noise levels at potentially affected receivers for CEQA analysis purposes. Therefore, a numerical construction threshold based on Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual is used for analysis of daytime construction impacts. The FTA considers a daytime exterior construction noise level of 80 dBA L_{eq} as a reasonable threshold for noise sensitive residential land use. (9 p. 179).

10.1 CONSTRUCTION NOISE LEVELS

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

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

10.2 CONSTRUCTION REFERENCE NOISE LEVELS

To describe construction noise activities, this construction noise analysis was prepared using reference construction equipment noise levels from the Federal Highway Administration (FHWA) published the Roadway Construction Noise Model (RCNM), which includes a national database of construction equipment reference noise emission levels. (24) The RCNM equipment database, provides a comprehensive list of the noise generating characteristics for specific types of construction equipment. In addition, the database provides an acoustical usage factor to estimate the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation.

EXHIBIT 10-A: CONSTRUCTION NOISE SOURCE LOCATIONS

10.3 CONSTRUCTION NOISE ANALYSIS

Using the reference construction equipment noise levels and the CadnaA noise prediction model, calculations of the Project construction noise level impacts at the nearby sensitive receiver locations were completed. Consistent with FTA guidance for general construction noise assessment, Table 10-1 presents the combined noise levels for the loudest construction equipment, assuming they operate at the same time. As shown on Table 10-2, the construction noise levels are expected to range from 41.3 to 58.1 dBA L_{eq} at the nearby receiver locations. Appendix 10.1 includes the detailed CadnaA construction noise model inputs.

TABLE 10-1: CONSTRUCTION REFERENCE NOISE LEVELS

Construction Stage	Reference Construction Equipmnet[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})	Composite Reference Noise Level (dBA L_{eq})
Demolition	Concrete Saw	83.0	86.5
	Excavator	77.0	
	Grapple (on backhoe)	83.0	
Site Preparation	Tractor	80.0	82.9
	Front End Loader	75.0	
	Dozer	78.0	
Grading	Tractor	80.0	84.2
	Grader	81.0	
	Compactor (ground)	76.0	
Building Construction	Crane	73.0	82.1
	Generator	78.0	
	Gradall	79.0	
Paving	Paver	74.0	77.8
	Dump Truck	72.0	
	Roller	73.0	
Architectural Coating	Man Lift	68.0	76.2
	Compressor (air)	74.0	
	Generator (<25kVA)	70.0	

[1] FHWA Road Construction Noise Model 2006.

TABLE 10-2: CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})						
	Demolition	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Levels[2]
R1	55.2	51.6	52.9	50.8	46.5	44.8	55.2
R2	56.9	53.3	54.6	52.5	48.2	46.5	56.9
R3	54.0	50.4	51.7	49.6	45.3	43.6	54.0
R4	58.1	54.5	55.8	53.7	49.4	47.7	58.1
R5	51.7	48.1	49.4	47.3	43.0	41.3	51.7

[1] Noise receiver locations are shown on Exhibit 8-A.

[2] Construction noise level calculations based on distance from the construction activity, which is measured from the Project site boundary to the nearest receiver locations. CadnaA construction noise model inputs are included in Appendix 8.1.

10.4 CONSTRUCTION NOISE LEVEL COMPLIANCE

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

TABLE 10-3: CONSTRUCTION NOISE LEVEL COMPLIANCE

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})		
	Highest Construction Noise Levels[2]	Threshold[3]	Threshold Exceeded?[4]
R1	55.2	80	No
R2	56.9	80	No
R3	54.0	80	No
R4	58.1	80	No
R5	51.7	80	No

[1] Noise receiver locations are shown on Exhibit 8-A.
[2] Highest construction noise level calculations based on distance from the construction noise source activity to the nearest receiver locations as shown on Table 10-2.
[3] Construction noise level thresholds as shown on Table 4-1.
[4] Do the estimated Project construction noise levels exceed the construction noise level threshold?

10.5 CONSTRUCTION VIBRATION ANALYSIS

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods employed. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Ground vibration levels associated with various types of construction equipment are summarized on Table 10-4. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the potential for human response (annoyance) and building damage using the following vibration assessment methods defined by the FTA. To describe the vibration impacts the FTA provides the following equation: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$

TABLE 10-4: 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

Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual

Table 10-5 presents the expected Project related vibration levels at the nearby receiver locations. At distances ranging from 22 to 85 feet from Project construction activities, construction vibration velocity levels are estimated to range from 0.01 to 0.11 in/sec PPV. Based on maximum acceptable continuous vibration threshold of 0.3 PPV (in/sec), the typical Project construction vibration levels will fall below the building damage thresholds at all the receiver locations. Therefore, the Project-related vibration impacts are considered *less than significant* during typical construction activities at the Project site. Moreover, the vibration levels reported at the sensitive receiver locations are unlikely to be sustained during the entire construction period but will occur rather only during the times that heavy construction equipment is operating adjacent to the Project site perimeter.

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

TABLE 10-5: PROJECT CONSTRUCTION VIBRATION LEVELS

Receiver[1]	Distance to Const. Activity (Feet)[2]	Typical Construction Vibration Levels PPV (in/sec)[3]				Thresholds PPV (in/sec)[4]	Thresholds Exceeded?[5]
		Small bulldozer	Loaded Trucks	Large bulldozer	Highest Vibration Level		
R1	73'	0.001	0.015	0.018	0.018	0.3	No
R2	38'	0.002	0.041	0.047	0.047	0.3	No
R3	66'	0.001	0.018	0.021	0.021	0.3	No
R4	22'	0.004	0.092	0.108	0.108	0.3	No
R5	85'	0.000	0.012	0.014	0.014	0.3	No

[1] Receiver locations are shown on Exhibit 7-A.
[2] Distance from receiver location to Project construction boundary.
[3] Based on the Vibration Source Levels of Construction Equipment (Table 10-4).
[4] Caltrans Transportation and Construction Vibration Guidance Manual, April 2020, Tables 19, p. 38.
[5] Does the peak vibration exceed the acceptable vibration thresholds?
"PPV" = Peak Particle Velocity

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11 REFERENCES

1. **State of California.** *California Environmental Quality Act, Appendix G.* 2018.
2. **Fehr and Peers, Inc.** *Subarea 29 Specific Plan Amendment and General Plan Amendment Traffic Impact Analysis.* 2023.
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 Noise Barrier Design Handbook.* 2001.
7. **U.S. Department of Transportation, Federal Highway Administration.** *Highway Traffic Noise in the United States, Problem and Response.* April 2000. p. 3.
8. **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.
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 Guidlines.* October 2019.
11. **City of Ontario.** *The Ontario Plan Safety Section, S4, Noise Hazards.* March 2014.
12. —. *The Ontario Plan Draft EIR.* April 2009.
13. —. *Municipal Code, Chapter 29, Section 5- Noise.*
14. **California Department of Transportation.** *Transportation and Construction Vibration Guidance Manual.* April 2020.
15. **City of Ontario.** *Ontario International Airport Land Use Compatibility Plan.* July 2018.
16. **State of California.** *California Environmental Quality Act, Environmental Checklist Form Appendix G.* 2021.
17. **California Court of Appeal.** *Gray v. County of Madera, F053661.* 167 Cal.App.4th 1099; - Cal.Rptr.3d, October 2008.
18. **Federal Interagency Committee on Noise.** *Federal Agency Review of Selected Airport Noise Analysis Issues.* August 1992.
19. **California Department of Transportation.** *Technical Noise Supplement.* November 2009.
20. **U.S. Department of Transportation, Federal Highway Administration.** *FHWA Highway Traffic Noise Prediction Model.* December 1978. FHWA-RD-77-108.
21. **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.

22. **California Department of Transportation Environmental Program.** *I-80 Davis OGAC Pavement Noise Study.* September 2001.

23. **California Department of Transportation.** *Traffic Noise Analysis Protocol.* May 2011.

24. **U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning.** *FHWA Roadway Construction Noise Model.* January, 2006.

12 CERTIFICATIONS

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed Subarea 29 Specific Plan Amendment 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 (619) 788-1971.

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EDUCATION

Bachelor of Science in Urban and Regional Planning
California Polytechnic State University, Pomona • June 2000

PROFESSIONAL AFFILIATIONS

ASA – Acoustical Society of America
AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
INCE – Institute of Noise Control Engineers

PROFESSIONAL CERTIFICATIONS

Approved Acoustical Consultant • County of San Diego
FHWA Traffic Noise Model of Training • November 2004
CadnaA Basic and Advanced Training Certificate • October 2008.

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APPENDIX 3.1:

CITY OF ONTARIO COUNTY CODE

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CHAPTER 29: NOISE

Sec. 5-29.01. Declaration of findings and policy.

It is hereby found and declared that:

(a) The making and creation of excessive, unnecessary or unusually loud noises within the limits of the City is a condition that has existed for some time, however, the extent and volume of such noises is increasing;

(b) The making, creation or maintenance of such excessive, unnecessary, unnatural or unusually loud noises that are prolonged, unusual and unnatural in their time, place and use affect and are a detriment to public health, comfort, convenience, safety, welfare and prosperity of the residents of the City; and

(c) The necessity in the public interest for the provisions and prohibitions hereinafter contained and enacted, is declared as a matter of legislative determination and public policy, and it is further declared that the provisions and prohibitions hereinafter contained and enacted are in pursuance of and for the purpose of securing and promoting the public health, comfort, convenience, safety, welfare and prosperity and the peace and quiet of the residents of the City.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.02. Definitions.

As used in this chapter, specific words and phrases are defined as follows:

(a) "Ambient noise level" shall mean the all-encompassing noise level associated with a given environment and is a composite of sounds from all sources, excluding the alleged offensive noise or excessive sound, at the location and approximate time at which a comparison with the alleged offensive noise is to be made.

(b) "Applicable (noise) zone" shall mean the noise zone category based on the actual use of the property, provided that the actual use is a legal use in the City.

(c) "A-weighted sound level" shall mean the sound pressure level in decibels (dBAs) as measured with a sound level meter using the A-weighted filter network (scale) at slow response and at a pressure of twenty (20) micropascals. The A-weighted filter de-emphasizes the very low and a very high frequency component of sound in a manner similar to the response of the human ear, and is a numerical method of rating human judgment of loudness.

(d) "Decibel (dBA)" shall mean a unit for measuring the amplitude of a sound, equal to twenty (20) times the logarithm to the base ten (10) of the ratio of pressure of the sound measured to the reference pressure of twenty (20) micropascals.

(e) "Equivalent sound or noise level (Leq)" shall mean the International Electrotechnical Commission (IEC) 60804 Standard for measurement, or the most recent revision thereof, for the sound level corresponding to a steady state noise level over a given sample period with the same amount of acoustic energy as the actual time varying noise level or the energy average noise level during the sample period. The measurement period for the purposes of this chapter is fifteen (15) minutes.

(f) "Impulsive noise" shall mean a noise of short duration usually less than one (1) second and of high intensity, with an abrupt onset and rapid decay. Such objectionable noises may also be repetitive.

(g) "Intrusive noise" shall mean that noise that intrudes over and above the ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, time of occurrence and tonal information content, as well as the prevailing ambient noise level.

(h) "Maintenance" shall mean the upkeep, repair or preservation of existing property or structures.

(i) "Noise" shall mean any unwanted sound or sound that is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing or is otherwise annoying.

(j) "Noise level (sound level)" shall mean the weighted sound pressure level obtained by use of a sound level meter having a standard frequency filter for attenuating part of the sound spectrum. For purposes of this chapter, all noise levels (sound levels) shall be A-weighted sound pressure level.

(k) "Noise (sound) level meter" shall mean an instrument, including a microphone, an amplifier, an output meter and frequency weighting networks for the measurement and determination of noise and sound levels. For the purposes of this chapter, the sound level meter must meet the International Electrotechnical Commission (IEC) 60651 and 60804 Standards, or the most recent revisions thereof, for Type 1 sound level meters or an instrument and the associated recording and analyzing equipment that will provide equivalent data.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.03. Designated noise zones.

The properties hereinafter described shall be assigned to the following noise zones:

Noise Zone I:	All single-family residential properties;
Noise Zone II:	All multi-family residential properties and mobile home parks;
Noise Zone III:	All commercial property;
Noise Zone IV:	The residential portion of mixed use properties;
Noise Zone V:	All manufacturing or industrial properties and all other uses.

The actual use of the property, and not necessarily its zoning designation, shall be the determining factor in establishing whether a property is in Noise Zone I, II, III, IV or V, provided that the actual use is a legal use within the applicable zone.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.04. Exterior noise standards.

(a) The following exterior noise standards, unless otherwise specifically indicated, shall apply to all properties within a designated noise zone.

Allowable Exterior Noise Level (1)		***Allowed Equivalent Noise Level, Leq. (2)***	
Noise Zone	***Type of Land Use***	***7 a.m. to 10 p.m.***	***10 p.m. to 7 a.m.***
I	Single-Family Residential	65 dBA	45 dBA
II	Multi-Family Residential, Mobile Home Parks	65 dBA	50 dBA
III	Commercial Property	65 dBA	60 dBA
IV	Residential Portion of Mixed Use	70 dBA	70 dBA
V	Manufacturing and Industrial, Other Uses	70 dBA	70 dBA

(1) If the ambient noise level exceeds the resulting standard, the ambient noise level shall be the standard.

(2) Measurements for compliance are made on the affected property pursuant to § 5-29.15.

(b) It is unlawful for any person at any location within the incorporated area of the City to create noise, or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which noise causes the noise level, when measured at any location on any other property, to exceed either of the following:

(1) The noise standard for the applicable zone for any fifteen-minute (15) period; and

(2) A maximum instantaneous (single instance) noise level equal to the value of the noise standard plus twenty (20) dBA for any period of time (measured using A-weighted slow response).

(c) In the event the ambient noise level exceeds the noise standard, the maximum allowable noise level under such category shall be increased to reflect the maximum ambient noise level.

(d) The Noise Zone IV standard shall apply to that portion of residential property falling within one hundred (100) feet of a commercial property or use, if the noise originates from that commercial property or use.

(e) If the measurement location is on a boundary between two (2) different noise zones, the lower noise level standard applicable to the noise zone shall apply.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.05. Interior noise standards.

(a) The following interior noise standards, unless otherwise specifically indicated, shall apply to all properties within a designated noise zone.

Allowable Interior Noise Level (1)		**Allowed Equivalent Noise Level, Leq.** (2)	
Noise Zone	***Type of Land Use***	***7 a.m. to 10 p.m.***	***10 p.m. to 7 a.m.***
I	Single-Family Residential	45 dBA	40 dBA
II	Multi-Family Residential, Mobile Home Parks	45 dBA	40 dBA
IV	Residential Portion of Mixed Use	45 dBA	40 dBA

(1) If the ambient noise level exceeds the resulting standard, the ambient noise level shall be the standard.

(2) Measurements for compliance are made on the affected property pursuant to § 5-29.15.

(b) It is unlawful for any person at any location within the incorporated area of the City to create noise, or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which noise causes the noise level, when measured at any location on any other property, to exceed either of the following:

(1) The noise standard for the applicable zone for any fifteen-minute (15) period;

(2) A maximum instantaneous (single instance) noise level equal to the value of the noise standard plus twenty (20) dBA for any period of time (measured using A-weighted slow response).

(c) In the event the ambient noise level exceeds the noise standard, the maximum allowable noise level under such category shall be increased to reflect the maximum ambient noise level.

(d) The Noise Zone IV standard shall apply to that portion of residential property falling within one hundred (100) feet of a commercial property or use, if the noise originates from that commercial property or use.

(e) If the measurement location is on a boundary between two (2) different noise zones, the lower noise level standard applicable to the noise zone shall apply.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.06. Exemptions.

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

(a) Any activity conducted on public property, or on private property with the consent of the owner, by any public entity or its officers, employees, representatives, agents, subcontractors, permittees, licensees or lessees that the public entity has authorized are exempt from the provisions of this chapter. This includes, without limitation, sporting and recreational activities that are sponsored, co-sponsored, permitted or allowed by the City or any school district within the City's jurisdictional boundaries. This also includes, without limitation, occasional outdoor gatherings, public dances, shows or sporting and entertainment events, provided such events are conducted pursuant to an approval, authorization, contract, lease, permit or sublease by the appropriate public entity, specifically the planning commission or City Council;

(b) Occasional outdoor gatherings, public dances, show, sporting and entertainment events, provided said events are conducted pursuant to a permit or license issued by the appropriate jurisdiction relative to the staging of said events;

(c) Any mechanical device, apparatus or equipment used, related to or connected with emergency machinery, vehicle, work or warning alarm or bell, provided the sounding of any bell or alarm on any building or motor vehicle shall terminate its operation within forty-five (45) minutes in any hour of its being activated;

(d) Noise sources associated with construction, repair, remodeling, demolition or grading of any real property. Such activities shall instead be subject to the provisions of § 5-29.09;

(e) Noise sources associated with construction, repair, remodeling, demolition or grading of public rights-of-way or during authorized seismic surveys;

(f) All mechanical devices, apparatus or equipment associated with agriculture operations provided that:

(1) Operations do not take place between 8:00 p.m. and 7:00 a.m.;

(2) Such operations and equipment are utilized for the protection or salvage of agricultural crops during periods of potential or actual frost damage or other adverse weather conditions; or

(3) Such operations and equipment are associated with agricultural pest control through pesticide application, provided the application is made in accordance with permits issued by or regulations enforced by the California Department of Agriculture;

(g) Noise sources associated with the maintenance of real property. Such activities shall instead be subject to the provisions of § 5-29.08;

(h) Any activity to the extent regulation thereof has been preempted by state or federal law;

(i) Any noise sources associated with people and/or music associated with a party at a residential property. Such noise shall be subject to the provisions of OMC § 5-29.07;

(j) Any noise source emanating from an ice cream truck within the City. Such noise shall be subject to the provisions of OMC § 4-18.04;

(k) Any noise sources associated with barking dogs or other intermittent noises made by animals on any properly within the City. Such noise shall be subject to the provisions of OMC Chapter 1, Title 6;

(l) Noise sources related to uses approved by a permit or development agreement adopted prior to the date of adoption of this chapter and that contains acoustic or noise standard conditions of approval. This exemption shall only be applicable during the effective period of the City-approved permit or development agreement.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.07. Loud and disturbing noise.

(a) It is unlawful for any person or property owner within the City to make, cause or allow to be made any loud, excessive, impulsive or intrusive noise, disturbance or commotion that disturbs the peace or quiet of any area or that causes discomfort or annoyance to any reasonable person of normal sensitivities in the area, after a Police or Code Enforcement Officer has first requested that the person or property owner cease and desist from making such noise. The types of loud, disturbing, excessive, impulsive or intrusive noise may include, but shall not be limited to, yelling, shouting, hooting, whistling, singing, playing a musical instrument, or emitting or transmitting any loud music or noise from any mechanical or electrical sound making or sound-amplifying device.

(b) The factors, standards, and conditions that may be considered in determining whether a violation of the provisions of this section has been committed, included, but not limited to, the following:

(1) The level of the noise;

(2) The level and intensity of the background (ambient) noise, if any;

(3) The proximity of the noise to residential or commercial sleeping areas;

(4) The nature and zoning of the area within which the noise emanates;

(5) The density of inhabitation of the area within which the noise emanates;

(6) The time of day and night the noise occurs;

(7) The duration of the noise;

(8) Whether the noise is constant, recurrent or intermittent;

(9) Whether the noise is produced by a commercial or noncommercial activity; and

(10) Whether the use is lawful under the provisions of Title 5 of this Code and whether the noise is one that could reasonably be expected from the activity or allowed use.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.08. Real property maintenance noise regulations.

(a) No person, while engaged in maintenance of real property, shall operate any tool, equipment or machine in a manner that produces loud noise that disturbs a person of normal sensitivity who works or resides in the vicinity, or a Police or Code Enforcement Officer, except between the hours of 8:00 a.m. and 6:00 p.m.

(b) Trimming or pruning that requires the use of chainsaws or mulching machines shall only be allowed between the hours of 8:00 a.m. and 6:00 p.m. on a weekday and between the hours of 9:00 a.m. and 5:00 p.m. on Saturday or Sunday.

(c) The use of electrical or gasoline powered blowers, such as commonly used by gardeners or other persons for cleaning lawns, yards, driveways, gutters and other property shall only be allowed between the hours of 8:00 a.m. and 6:00 p.m. on a weekday and between the hours of 9:00 a.m. and 5:00 p.m. on Saturday or Sunday.

(d) No landowner, gardener, property maintenance service, contractor, subcontractor or employer shall permit or allow any person or persons working under his or her direction or control to operate any tool, equipment or machine in violation of the provisions of this section.

(e) Exceptions. The provisions of this section shall not apply to the following:

(1) Emergency property maintenance required by the building official;

(2) The maintenance, repair or improvement of any public work or facility by public employees, by any person or persons acting pursuant to a public works contract, or by any person or persons performing such work or pursuant to the direction of, or on behalf of, any public agency; provided, however, this exception shall not apply to the City, or its employees, contractors or agents, unless:

(i) The City Manager or department head determines that the maintenance, repair or improvement is immediately necessary to maintain public service,

(ii) The maintenance, repair or improvement is of a nature that cannot feasibly be conducted during normal business hours, or

(iii) The City Council has approved project specifications, contract provisions, or an environmental document that specifically authorizes maintenance during hours of the day that would otherwise be prohibited pursuant to this section; and

(3) Any maintenance that complies with the noise limits specified in § 5-29.04.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.09. Construction activity noise regulations.

(a) No person, while engaged in construction, remodeling, digging, grading, demolition or any other related building activity, shall operate any tool, equipment or machine in a manner that produces loud noise that disturbs a person of normal sensitivity who works or resides in the vicinity, or a Police or Code Enforcement Officer, on any weekday except between the hours of 7:00 a.m. and 6:00 p.m. or on Saturday or Sunday between the hours of 9:00 a.m. and 6:00 p.m.

(b) No landowner, construction company owner, contractor, subcontractor, or employer shall permit or allow any person or persons working under their direction and control to operate any tool, equipment or machine in violation of the provisions of this section.

(c) Exceptions.

(1) The provisions of this section shall not apply to emergency construction work performed by a private party when authorized by the City Manager or his or her designee;

(2) The maintenance, repair or improvement of any public work or facility by public employees, by any person or persons acting pursuant to a public works contract, or by any person or persons performing such

work or pursuant to the direction of, or on behalf of, any public agency; provided, however, this exception shall not apply to the City, or its employees, contractors or agents, unless:

(i) The City Manager or a department head determines that the maintenance, repair or improvement is immediately necessary to maintain public services,

(ii) The maintenance, repair or improvement is of a nature that cannot feasibly be conducted during normal business hours, or

(iii) The City Council has approved project specifications, contract provisions, or an environmental document that specifically authorizes construction during hours of the day that would otherwise be prohibited pursuant to this section; and

(3) Any construction that complies with the noise limits specified in §§ 5-29.04 or 5-29.05.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.10. Other public agency exceptions.

The provisions of this chapter shall not be construed to prohibit any work at different hours by or under the direction of any other public agency or public or private utility companies in cases of necessity or emergency.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.11. Schools, day care centers, churches, libraries, museums, health care institutions; Special provisions.

It is unlawful for any person to create any noise that causes the outdoor noise level at any school, day care center, hospital or similar health care institution, church, library or museum while the same is in use, to exceed the noise standards specified in § 5-29.04 prescribed for the assigned Noise Zone I.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.12. Sound amplifying equipment.

Loudspeakers, sound amplifiers, public address systems or similar devices used to amplify sounds shall be subject to the provisions of § 5-29.13. Such sound amplifying equipment shall not be construed to include electronic devices, including but not limited to, radios, tape players, tape recorders, compact disc players, MP3 players, electric keyboards, music synthesizers, record players or televisions, which are designed and operated for personal use, or used entirely within a building and are not designed or used to convey the human voice, music or any other sound to an audience outside such building, or which are used in vehicles and heard only by occupants of the vehicle in which installed.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.13. Amplified sound.

(a) The City Council enacts the following legislation for the sole purpose of securing and promoting the public health, comfort, safety and welfare for its citizenry. While recognizing that the use of sound amplifying equipment may be entitled to certain protection by the constitutional rights of freedom of speech and assembly, the City Council finds that in order to protect the public safety and the correlative rights of the citizens of this community to privacy and freedom from public nuisance of loud and unnecessary noise, reasonable regulation of the time, place and manner of the use of amplifying equipment is necessary. In no event shall approval or authorization required herein be withheld by reason of the constitutionally protected content of any material proposed to be broadcast through amplifying equipment.

(b) It is unlawful for any person, other than personnel of law enforcement or governmental agencies, to install, use or operate a loudspeaker or sound amplifying device in a fixed or movable position or mounted upon any vehicle within the City for the purpose of giving instructions, directions, talks, addresses or lectures to any persons or assemblages of persons in or upon any street, alley, sidewalk, park, place or public property without a permit to do so from the Police Chief or his or her designee. Notwithstanding any other provision of this chapter, the provisions of this section shall also apply to the use of sound amplifying equipment upon public or private property when used in connection with outdoor or indoor public or private events, whether or

not admission is charged or food or beverages are sold, when such activity is to be attended by more than one hundred (100) persons and the noise emanating from the event will be audible at the property plane, or in the case of a street dance or concert on the nearest residential property. Those activities listed in § 5-29.06(a) are exempt from the requirements of this section.

(c) The Police Chief or his or her designee is authorized to approve and issue permits under this section.

(d) An application for a permit required by this section shall be filed with the Police Chief at least sixteen (16) days and no more than one hundred twenty (120) days prior to the date on which the sound amplifying equipment is intended to be used. Applications for events covered by the First Amendment of the United States Constitution are exempt from the time requirements of this section if it is shown that circumstances require a shorter filing period and the event will not constitute an unsafe condition. The application shall contain the following information:

(1) The name, address and telephone number of both the owner and the user of the sound amplifying equipment;

(2) The license number, if a sound truck is to be used;

(3) A general description of the sound amplifying equipment which is to be used;

(4) Whether sound amplifying equipment will be used for commercial or noncommercial purpose;

(5) The dates and times upon and within which, and the streets or property over or upon which, the equipment is proposed to be operated;

(6) The name or names of one (1) or more persons who will be present during the conduct of any activities for which registration is sought and who will have authority to reduce the volume of any sound amplifying equipment during the course of the activities if required pursuant to this chapter and, otherwise, to insure compliance with the provisions of this chapter;

(7) A statement by the applicant that he or she is willing and able to comply with the provisions of this chapter and the conditions of the permit; and

(8) A sketch of the area or facilities within which the activities are to be conducted, with approximate dimensions and illustration of the location and orientation of all sound-amplifying equipment.

(e) The Police Chief shall deny the permit application or revoke any permit if the chief finds any of the following:

(1) The application contains materially false or intentionally misleading information;

(2) The use of sound amplifying equipment at an event or activity proposed will be located in or upon a premises, building or structure that is hazardous to the health or safety of the employees or patrons of the premises, business, activity, or event, or the general public, under the standards established by the Uniform Building or Fire Codes, or other applicable codes, as set forth in OMC Titles 4 and 8;

(3) The use of sound amplifying equipment at an event or activity proposed in or upon a premises, building or structure that lacks adequate on-site parking for participants attending the proposed event or activity under the applicable standards set forth in OMC Title 9;

(4) The conditions of any motor vehicle movement are such that, in his or her opinion, the use of the equipment would constitute an unreasonable interference with traffic safety;

(5) The conditions of pedestrian movement are such that the use of the equipment would constitute a detriment to traffic safety;

(6) The application submitted by the applicant reveals that the applicant would violate the provisions of this section or any other provision of federal, state and/or local law;

(7) The applicant is unwilling or unable to comply with the provisions of this chapter or any conditions imposed upon any permit issued;

(8) There had already been a permitted event at the intended location, or within a two hundred (200) yard radius of the intended location and the prior permitted event was located on residentially zoned property or on

a street, alley, public parking lot or neighborhood park within three (3) months prior to the intended event. Community parks are exempt from this subsection (8); or

(9) The applicant or location has had previous violations within the past calendar year, and in the judgment of the Police Chief, issuance would be contrary to the intent of this section.

(f) In determining whether the use of the equipment would constitute an unreasonable interference with or detriment to traffic safety, the Police Chief shall consider, but shall not necessarily be limited to:

(1) The volumes, patterns and speed of vehicular and pedestrian traffic in the proposed area of use;

(2) The relationship of the proposed use of equipment and potential impacts upon traffic patterns;

(3) Availability of sufficient room for the operation of the equipment without significantly interfering with the traffic patterns;

(4) Proximity to schools, playgrounds and similar facilities where use of such equipment might attract children into traffic patterns; or

(5) Proximity to busy intersections or other potentially hazardous conditions where use of such equipment might constitute a hazard by reason of its tendency to distract drivers of vehicles or pedestrians.

(g) Issuance or denial.

(1) If the application is approved, the Police Chief shall return an approved copy of the application to the applicant and shall issue a permit. The permit shall constitute permission for the use of the sound amplifying equipment as requested.

(2) Any application filed shall be either approved or disapproved within five (5) days of the filing thereof.

(3) If the application is disapproved, the Police Chief shall return a disapproved copy forthwith to the applicant with a written statement on the reason for disapproval.

(i) Any person aggrieved by a decision of the Police Chief or his or her designee may file an appeal to the City Manager. A complete and proper appeal shall be filed with the City Clerk within ten (10) calendar days of the action that is the subject of the appeal. If the applicant fails to file an appeal within the ten (10) day filing period provided herein, denial shall take effect immediately upon expiration of such filing period. All appeals shall be in writing and shall contain the following information: (a) name(s) of the person filing the appeal, (b) a brief statement in ordinary and concise language of the relief sought, and (c) the signatures of all parties named as appellants and their mailing addresses. After receiving the appeal, the City Clerk shall immediately forward the matter to the City Manager for handling.

(ii) The City Manager shall, upon receipt of the appeal, set the matter for hearing before the City Manager or a hearing officer. Any hearing officer shall be a licensed attorney or recognized mediator designated by the City Manager. The hearing shall be set for not more than ten (10) calendar days after the receipt of the appeal unless a longer time is requested or consented to by the appellant. Notice of such hearing shall be given in writing and mailed at least five (5) calendar days prior to the date of the hearing, by U.S. mail, with a proof of service attached, addressed to the address listed on the permit application, or the written appeal if different from the permit application. The notice shall state the grounds of the complaint or reason for the denial and shall state the time and place where such hearing will be held.

(iii) The City Manager or hearing officer shall, within ten (10) calendar days following the conclusion of the hearing, make a written finding and decision, which shall be delivered to the City and the appellant by first class mail. Notwithstanding any provision in this Code, the decision of the City Manager or hearing officer shall be the final administrative decision of the City. Any party dissatisfied with the decision of the City Manager or hearing officer may seek review of such decision under the provisions of Code Civil Procedure, §§ 1094.5 and 1094.8, as amended from time to time.

(h) In addition to any other provisions of this Code, the use of sound-amplifying equipment and sound trucks in the City shall be subject to the following regulations:

(1) The only sounds permitted are music and human speech;

(2) Sound shall not be emitted within one hundred (100) yards of hospitals, churches, schools and City Hall;

(3) The volume of sound shall be controlled so that it will not be audible for a distance in excess of one hundred (100) feet from the sound amplifying equipment or sound truck, and so that the volume is not unreasonably loud, raucous, jarring, disturbing or a nuisance to persons within the range of allowed audibility; or

(4) The sound amplifying equipment or sound truck shall not be used between the hours of 8:00 p.m. and 8:00 a.m.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.14. Motor vehicles.

The use of any motor vehicle in such a condition as to create excessive, impulsive or intrusive noises is prohibited. The discharge into the open air of the exhaust of any internal combustion engine, stationary or mounted on wheels, motorboat or motor vehicle, including motor cycle, whether or not discharged through a muffler or other similar device, which discharge creates excessive, unusual, impulsive or intrusive noise is prohibited. Motor vehicles shall comply with the noise regulations of the California Vehicle Code.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.15. Noise level measurement.

(a) The location selected for measuring exterior noise levels in a residential area shall be at any part of a private yard, patio, deck or balcony normally used for human activity and identified by the owner or, if occupied by someone other than the owner, the occupant of the affected property as suspected of exceeding the noise level standard. This location may be the closest point in the private yard or patio, or on the deck or balcony, to the noise source, but should not be located in nonhuman activity areas such as trash container storage areas, planter beds, above or contacting a property line fence, or other areas not normally used as part of the yard, patio, deck or balcony. The location selected for measuring exterior noise levels in a nonresidential area shall be at the closest point to the noise source. The measurement microphone height shall be five (5) feet above finish elevation or, in the case of a deck or balcony, the measurement microphone height shall be five (5) feet above the finished floor level.

(b) The location selected for measuring interior noise levels shall be made within the affected residential unit. The measurements shall be made at a point at least four (4) feet from the wall, ceiling or floor, or within the frame of a window opening, nearest the noise source. The measurements shall be made with windows in an open position.

(c) Any decibel measurement made pursuant to the provisions of this chapter shall be measured in decibels (dBAs) as measured with a sound level meter using the A-weighted sound pressure level.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.16. Prima facie violation.

Any noise exceeding the noise level standard as specified in §§ 5-29.04 and 5-29.05, shall be deemed to be prima facie evidence of a violation of the provisions of this chapter.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.17. Penalty.

(a) Any person who negligently or knowingly violates any provision of this chapter shall be guilty of an infraction and upon conviction shall be punishable by a fine specified in OMC § 1-2.01. Each day a violation occurs shall constitute a separate offense and shall be punishable as such.

(b) Any person who negligently or knowingly violates any provision of this chapter may also be subject to fine(s) specified in the administrative citation schedule of fines set forth in OMC § 1-5.04. The manner of issuing administrative citations shall comply with all the procedures specified in OMC Chapter 5, Title 1.

(c) As an additional remedy, the operation or maintenance of any device, instrument, vehicle or machinery in violation of any provisions of this chapter, which operation or maintenance causes or creates sound levels exceeding the allowable standards as specified in this chapter, shall be deemed and is declared to be a public nuisance and may be subject to abatement by a restraining order or injunction issued by a court of competent jurisdiction.

(d) Any violation of this chapter is declared to be a public nuisance and may be abated in accordance with law. The expense of enforcing this chapter is declared to be public nuisance and may be by resolution of the City Council declared to be a lien and special assessment against the property on which such nuisance is maintained, and any such charge shall also be a personal obligation of the property owner.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.18. Enforcement and administration.

(a) It shall be the responsibility of Police or Code Enforcement Officers to enforce the provisions of this chapter and to perform all other functions required by this chapter. Such duties shall include, but not be limited to investigating potential violations, issuing warning notices and citations, and providing evidence to the City prosecutor for legal action.

(b) For violations of § 5-29.07, Police or Code Enforcement Officers shall obtain a declaration under penalty of perjury from two (2) declarants living in separate households within a sixty (60) day period stating in detail all of the following:

(1) That the declarant is a resident of a residential neighborhood located within two hundred (200) yards of the noise source; and

(2) Within the past month declarant has heard noise for substantially long periods to the extreme annoyance of the declarant.

(3) Declarations from two (2) declarants are required to prove a violation of § 5-29.07, but are not required to prove that a person has violated any other provision of this chapter.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.19. City Manager waiver.

The City Manager is authorized to grant a temporary waiver to the provisions of this chapter for a period of time necessary to correct the violations of this chapter, if such temporary waiver would be in the public interest and there is no feasible and prudent alternative to the activity, or the method of conducting the activity, for which the temporary waiver is sought. This time period may include a commitment to a program that includes placing necessary orders and entering into necessary contracts within thirty (30) days for repair or installation.

(§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.20. Noise abatement program.

(a) In circumstances where adopted community-wide noise standards and policies prove impractical in controlling noise generated from a specific source, the City Council may establish a noise abatement program that recognizes the characteristics of the noise source and affected property and that incorporates specialized mitigation measures.

(b) Noise abatement programs shall set forth in detail the approved terms, conditions and requirements for achieving maximum compliance with noise standards and policies. Said terms, conditions and requirements may include, but shall not be limited to, limitations, restrictions, or prohibitions on operating hours, location of operations, and the types of equipment.

(§ 2, Ord. 2888, eff. March 6, 2008)

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APPENDIX 6.1:

OFF-SITE MODEL INPUTS

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Model Input

Project Name	The Lake Subarea 29		
Project Number	14252		
Modeling Scenario	Existing 2021		
Site Absorption	Soft	**Peak Hour Ratio**	10
Descriptor	CNEL	**Traffic Volume**	ADT

Segment Number	Roadway	Segment From	Segment To	Traffic Volume	Speed (mph)	Distance to Centerline	Vehicle Cassification Mix (%) Automobiles	Motorcycles	Bus	Medium Trucks	Heavy Trucks	24-Hour Traffic Distribution (%) Day	Evening	Night	K-Factor
1	Monterey Ave	North of Varner Rd		12,700	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
2	Haven Ave	north of SR-60 WB Ramps		35,000	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
3	Archibald Ave	between SR-60 WB Ramps & SR-60 EB Ramps		20,900	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
4	Haven Ave	between SR-60 WB Ramps & SR-60 EB Ramps		24,500	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
5	Archibald Ave	between SR-60 EB Ramps & Riverside Ave		27,100	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
6	Haven Ave	between SR-60 EB Ramps & East Riverside		19,500	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
7	Riverside Ave	west of Archibald Ave		22,500	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
8	Riverside Ave	between Archibald Ave & Haven Ave		18,400	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
9	Archibald Ave	between Riverside Ave & Chino		26,000	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
10	Haven Ave	between East Riverside & Chino		8,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
11	Chino Ave	west of Archibald Ave		4,800	40	50	97.42			1.84	0.74	77.7	12.68	9.62	
12	Chino Ave	between Archibald Ave & Haven Ave		3,000	40	50	97.42			1.84	0.74	77.7	12.68	9.62	
13	Ramona Place	north of Edison		13,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
14	Central Ave	north of Edison		28,600	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
15	Mountain Ave	north of Edison		11,400	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
16	Euclid Ave	north of Edison		27,200	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
17	Grove Ave	north of Edison		9,300	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
18	Archibald Ave	between Chino & Schaefer		20,900	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
19	Archibald Ave	between Schaefer & Ontario Ranch Rd		20,400	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
20	Haven Ave	between Chino & Ontario Ranch Rd		10,200	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
21	Hamner Ave	north of Ontario Ranch Rd		17,800	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
22	Grand Ave	west of SR-71 NB Off-Ramp		63,200	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
23	Grand Ave	between SR-71 SB Ramps & SR-71 NB Off-Ran		51,300	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
24	Grand Ave	between SR-71 NB Off-Ramp & Ramona		32,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
25	Edison Ave	between Ramona & Central		19,600	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
26	Edison Ave	between Central & Mountain		18,500	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
27	Edison Ave	between Mountain & Euclid		12,500	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
28	Edison Ave	between Grove Ave & Archibald Ave		7,200	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
29	Ontario Ranch Rd	between Archibald Ave & Haven Ave		15,600	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
30	Ontario Ranch Rd	between Haven Ave & I-15 SB Ramps		35,300	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
31	Ontario Ranch Rd	between I-15 SB Ramps & I-15 NB Ramps		16,700	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
32	Ontario Ranch Rd	west of I-15 NB Ramps		12,600	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
33	Ramona Place	south of Edison		12,700	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
34	Central Ave	south of Edison		37,400	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
35	Mountain Ave	south of Edison		3,600	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
36	Euclid Ave	between Edison & Merrill		27,900	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
37	Grove Ave	between Edison & Merrill		8,900	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
38	Archibald Ave	between Eucalyptus Ave & Merrill		24,900	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
39	Haven Ave	between Ontario Ranch Rd & Eucalyptus Ave		6,500	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
40	Sumner Ave	between Eucalyptus Ave & Bellegrave		6,200	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
41	Mill Creek Ave	north of Eucalyptus Ave		0	45	50	0			1.84	0.74	0	12.68	9.62	
42	Mill Creek Ave	between Eucalyptus Ave & Bellegrave		900	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
43	Hamner Ave	north of Eucalyptus Ave		29,900	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
44	Eucalyptus Ave	west of Archibald Ave		0	45	50	0			1.84	0.74	0	12.68	9.62	
45	Eucalyptus Ave	between Archibald Ave & Sumner		2,600	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
46	Eucalyptus Ave	between Mill Creek Ave & Hamner Ave		1,300	45	50	97.42			1.84	0.74	77.7	12.68	9.62	

47	Parkview St	between Archibald Ave & Sumner Ave	1,100	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
48	Merrill Ave	between Euclid & Grove Ave	11,700	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
49	Merrill Ave	between Grove Ave & Charlotte	14,400	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
50	Merrill Ave	between Celebation Ave & Sumner Ave	8,000	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
51	Bellegrave Ave	between Sumner Ave & Scholar	15,400	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
52	Bellegrave Ave	between Scholar & Hamner Ave	18,000	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
53	Bellegrave Ave	west of Hamner Ave	15,200	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
54	Euclid Ave	between Merrill & Kimball	27,400	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
55	Euclid Ave	between Pine & Kimball	31,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
56	Archibald Ave	between Merrill & Schlesiman Rd	22,400	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
57	Sumner Ave	between Bellegrave & Limonite Ave	13,000	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
58	Sumner Ave	south of Limonite Ave	11,500	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
59	Scholar Way	between Bellegrave & Limonite Ave	3,900	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
60	Scholar Way	south of Limonite Ave	6,700	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
61	Hamner Ave	between Limonite Ave & Limonite Ave	20,300	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
62	Hamner Ave	between Limonite Ave & 68th	23,200	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
63	Kimball Ave	west of Euclid	11,500	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
64	Limonite Ave	between Archibald Ave & Sumner Ave	22,800	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
65	Limonite Ave	between Sumner Ave & Hamner Ave	30,200	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
66	Limonite Ave	between Hamner Ave & I-15 SB Ramps	46,300	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
67	Limonite Ave	between I-15 SB Ramps & I-15 NB Ramps	48,100	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
68	Limonite Ave	west of I-15 NB Ramps	45,000	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
69	Hamner Ave	between 68th & Schlesiman Rd	23,800	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
70	Pine Ave	between Euclid & Archibald Ave	25,800	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
71	Schlesiman Rd	between Archibald Ave & Hamner Ave	12,400	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
72	Euclid Ave	between Pine & SR-71 NB Ramps	37,800	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
73	Archibald Ave	between Schlesiman Rd & Chandler	20,200	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
74	Archibald Ave	between Chandler & Corydon	24,600	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
75	River Ave	south of Corydon	24,900	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
76	Hamner Ave	between Schlesiman Rd & Norco	27,300	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
77	Hamner Ave	south of Norco	32,000	45	50	97.42			1.84	0.74	77.7	12.68	9.62	

Model Results

Project Name	The Lake Subarea 29
Project Number	14252
Modeling Scenario	Existing 2021

Segment Number	Roadway	Segment From	Segment To	Noise Levels (dB) CNEL Automobiles	Motorcycles	Bus	Medium Trucks	Heavy Trucks	Total	Distance to Traffic Noise Contours (feet) 70 dB	65 dB	60 dB	55 dB	50 dB
1	Monterey Ave	North of Varner Rd	0	62.8	0.0	0.0	52.8	54.4	63.8	19	41	89	192	413
2	Haven Ave	north of SR-60 WB Ran	0	68.8	0.0	0.0	58.3	58.9	69.6	47	101	217	468	1,008
3	Archibald Ave	between SR-60 WB Ra	0	67.5	0.0	0.0	56.6	57.2	68.2	38	82	176	379	816
4	Haven Ave	between SR-60 WB Ra	0	67.3	0.0	0.0	56.7	57.4	68.0	37	80	171	369	795
5	Archibald Ave	between SR-60 EB Ran	0	68.6	0.0	0.0	57.7	58.3	69.3	45	97	209	450	970
6	Haven Ave	between SR-60 EB Ran	0	66.3	0.0	0.0	55.7	56.4	67.0	32	68	147	317	683
7	Riverside Ave	west of Archibald Ave	0	67.8	0.0	0.0	56.9	57.5	68.5	40	86	185	398	857
8	Riverside Ave	between Archibald Av	0	66.9	0.0	0.0	56.1	56.6	67.6	35	75	161	348	749
9	Archibald Ave	between Riverside Ave	0	68.4	0.0	0.0	57.6	58.1	69.1	44	94	203	438	944
10	Haven Ave	between East Riversid	0	62.5	0.0	0.0	51.9	52.6	63.2	18	38	82	176	380
11	Chino Ave	west of Archibald Ave	0	59.4	0.0	0.0	49.1	50.0	60.2	11	24	52	111	239
12	Chino Ave	between Archibald Av	0	57.3	0.0	0.0	47.0	47.9	58.2	8	17	38	81	175
13	Ramona Place	north of Edison	0	64.5	0.0	0.0	54.0	54.7	65.3	24	52	113	243	524
14	Central Ave	north of Edison	0	67.9	0.0	0.0	57.4	58.1	68.7	41	88	190	409	881
15	Mountain Ave	north of Edison	0	63.9	0.0	0.0	53.4	54.1	64.7	22	48	103	222	477
16	Euclid Ave	north of Edison	0	67.7	0.0	0.0	57.2	57.8	68.5	40	85	184	396	852
17	Grove Ave	north of Edison	0	64.0	0.0	0.0	53.1	53.6	64.7	22	48	102	221	475
18	Archibald Ave	between Chino & Scha	0	67.5	0.0	0.0	56.6	57.2	68.2	38	82	176	379	816
19	Archibald Ave	between Schaefer & O	0	67.4	0.0	0.0	56.5	57.1	68.1	37	80	173	373	803
20	Haven Ave	between Chino & Onta	0	63.5	0.0	0.0	52.9	53.6	64.2	21	44	95	206	443
21	Hamner Ave	north of Ontario Ranch	0	65.9	0.0	0.0	55.3	56.0	66.6	30	64	138	298	643
22	Grand Ave	west of SR-71 NB Off-R	0	71.4	0.0	0.0	60.8	61.5	72.1	69	150	322	694	1,495
23	Grand Ave	between SR-71 SB Ran	0	70.5	0.0	0.0	59.9	60.6	71.2	60	130	280	604	1,301
24	Grand Ave	between SR-71 NB Off	0	68.4	0.0	0.0	57.9	58.6	69.2	44	95	205	442	952
25	Edison Ave	between Ramona & Co	0	66.3	0.0	0.0	55.7	56.4	67.1	32	69	148	318	685
26	Edison Ave	between Central & Mo	0	66.0	0.0	0.0	55.5	56.2	66.8	31	66	142	306	659
27	Edison Ave	between Mountain &	0	64.3	0.0	0.0	53.8	54.5	65.1	24	51	109	236	508
28	Edison Ave	between Grove Ave &	0	61.9	0.0	0.0	51.4	52.1	62.7	16	35	76	163	351
29	Ontario Ranch Rd	between Archibald Av	0	66.2	0.0	0.0	55.4	55.9	66.9	31	67	145	312	671
30	Ontario Ranch Rd	between Haven Ave &	0	69.8	0.0	0.0	58.9	59.4	70.5	54	116	249	537	1,157
31	Ontario Ranch Rd	between I-15 SB Ramp	0	66.5	0.0	0.0	55.6	56.2	67.2	33	70	151	326	702
32	Ontario Ranch Rd	west of I-15 NB Ramps	0	65.3	0.0	0.0	54.4	55.0	66.0	27	58	125	270	582
33	Ramona Place	south of Edison	0	64.4	0.0	0.0	53.8	54.5	65.2	24	51	111	238	513
34	Central Ave	south of Edison	0	69.1	0.0	0.0	58.5	59.2	69.9	49	105	227	489	1,054
35	Mountain Ave	south of Edison	0	58.9	0.0	0.0	48.4	49.1	59.7	10	22	48	103	221
36	Euclid Ave	between Edison & Me	0	67.8	0.0	0.0	57.3	57.9	68.6	40	87	187	402	867
37	Grove Ave	between Edison & Me	0	63.8	0.0	0.0	52.9	53.5	64.5	21	46	99	214	462
38	Archibald Ave	between Eucalyptus A	0	68.3	0.0	0.0	57.4	57.9	68.9	43	92	198	426	917
39	Haven Ave	between Ontario Ranc	0	61.5	0.0	0.0	50.9	51.6	62.3	15	33	71	152	328
40	Sumner Ave	between Eucalyptus A	0	61.3	0.0	0.0	50.7	51.4	62.1	15	32	69	148	318
41	Mill Creek Ave	north of Eucalyptus Av	0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0
42	Mill Creek Ave	between Eucalyptus A	0	52.9	0.0	0.0	42.4	43.0	53.7	4	9	19	41	88
43	Hamner Ave	north of Eucalyptus Av	0	68.1	0.0	0.0	57.6	58.2	68.9	42	91	196	421	908
44	Eucalyptus Ave	west of Archibald Ave	0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0
45	Eucalyptus Ave	between Archibald Av	0	57.5	0.0	0.0	47.0	47.6	58.3	8	18	38	83	178

46	Eucalyptus Ave	between Mill Creek Av	0	54.5	0.0	0.0	43.9	44.6	55.3	5	11	24	52	112
47	Parkview St	between Archibald Av	0	52.2	0.0	0.0	42.2	43.8	53.1	4	8	17	38	81
48	Merrill Ave	between Euclid & Gro	0	64.1	0.0	0.0	53.5	54.2	64.8	23	49	105	225	486
49	Merrill Ave	between Grove Ave &	0	65.0	0.0	0.0	54.4	55.1	65.7	26	56	120	259	558
50	Merrill Ave	between Celebation A	0	62.4	0.0	0.0	51.8	52.5	63.2	17	38	81	175	377
51	Bellegrave Ave	between Sumner Ave	0	66.2	0.0	0.0	55.3	55.8	66.9	31	67	143	309	666
52	Bellegrave Ave	between Scholar & Ha	0	66.8	0.0	0.0	56.0	56.5	67.5	34	74	159	343	738
53	Bellegrave Ave	west of Hamner Ave	0	66.1	0.0	0.0	55.2	55.8	66.8	31	66	142	306	660
54	Euclid Ave	between Merrill & Kim	0	67.7	0.0	0.0	57.2	57.9	68.5	40	86	185	398	857
55	Euclid Ave	between Pine & Kimba	0	68.3	0.0	0.0	57.7	58.4	69.1	43	93	201	433	932
56	Archibald Ave	between Merrill & Sch	0	67.8	0.0	0.0	56.9	57.5	68.5	40	85	184	397	854
57	Sumner Ave	between Bellegrave &	0	64.5	0.0	0.0	53.9	54.6	65.3	24	52	112	242	521
58	Sumner Ave	south of Limonite Ave	0	64.0	0.0	0.0	53.4	54.1	64.7	22	48	103	223	480
59	Scholar Way	between Bellegrave &	0	57.7	0.0	0.0	47.7	49.3	58.6	9	19	41	87	188
60	Scholar Way	south of Limonite Ave	0	60.0	0.0	0.0	50.1	51.7	61.0	13	27	58	125	270
61	Hamner Ave	between Limonite Ave	0	66.4	0.0	0.0	55.9	56.6	67.2	33	70	151	326	701
62	Hamner Ave	between Limonite Ave	0	67.0	0.0	0.0	56.5	57.1	67.8	36	77	165	356	767
63	Kimball Ave	west of Euclid	0	64.9	0.0	0.0	54.0	54.6	65.6	25	55	118	254	548
64	Limonite Ave	between Archibald Av	0	67.9	0.0	0.0	57.0	57.5	68.6	40	86	186	401	865
65	Limonite Ave	between Sumner Ave	0	69.1	0.0	0.0	58.2	58.8	69.8	48	104	225	484	1,043
66	Limonite Ave	between Hamner Ave	0	70.9	0.0	0.0	60.1	60.6	71.6	64	139	299	643	1,386
67	Limonite Ave	between I-15 SB Ramp	0	71.1	0.0	0.0	60.2	60.8	71.8	66	142	306	660	1,422
68	Limonite Ave	west of I-15 NB Ramps	0	70.8	0.0	0.0	60.0	60.5	71.5	63	136	293	631	1,360
69	Hamner Ave	between 68th & Schle	0	67.1	0.0	0.0	56.6	57.3	67.9	36	78	168	362	780
70	Pine Ave	between Euclid & Arch	0	67.5	0.0	0.0	56.9	57.6	68.2	38	82	177	382	823
71	Schlesiman Rd	between Archibald Av	0	64.3	0.0	0.0	53.7	54.4	65.1	23	50	109	234	505
72	Euclid Ave	between Pine & SR-71	0	69.1	0.0	0.0	58.6	59.3	69.9	49	106	229	493	1,062
73	Archibald Ave	between Schlesiman R	0	67.3	0.0	0.0	56.5	57.0	68.0	37	80	172	370	797
74	Archibald Ave	between Chandler & C	0	68.2	0.0	0.0	57.3	57.9	68.9	42	91	196	422	909
75	River Ave	south of Corydon	0	65.7	0.0	0.0	55.8	57.4	66.7	30	65	140	301	648
76	Hamner Ave	between Schlesiman R	0	67.7	0.0	0.0	57.2	57.9	68.5	40	85	184	397	854
77	Hamner Ave	south of Norco	0	68.4	0.0	0.0	57.9	58.5	69.2	44	95	205	441	950

Model Input

Project Name	The Lake Subarea 29		
Project Number	14252		
Modeling Scenario	Existing Plus Project 2021		
Site Absorption	Soft	**Peak Hour Ratio**	10
Descriptor	CNEL	**Traffic Volume**	ADT

Segment Number	Roadway	Segment From	Segment To	Traffic Volume	Speed (mph)	Distance to Centerline	Vehicle Cassification Mix (%) Automobiles	Motorcycles	Bus	Medium Trucks	Heavy Trucks	24-Hour Traffic Distribution (%) Day	Evening	Night	K-Factor
1	Monterey Ave	North of Varner Rd		12,800	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
2	Haven Ave	north of SR-60 WB Ramps		35,200	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
3	Archibald Ave	between SR-60 WB Ramps & SR-60 EB Ramps		21,000	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
4	Haven Ave	between SR-60 WB Ramps & SR-60 EB Ramps		28,500	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
5	Archibald Ave	between SR-60 EB Ramps & Riverside Ave		27,300	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
6	Haven Ave	between SR-60 EB Ramps & East Riverside		23,600	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
7	Riverside Ave	west of Archibald Ave		22,500	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
8	Riverside Ave	between Archibald Ave & Haven Ave		18,500	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
9	Archibald Ave	between Riverside Ave & Chino		26,300	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
10	Haven Ave	between East Riverside & Chino		12,300	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
11	Chino Ave	west of Archibald Ave		4,900	40	50	97.42			1.84	0.74	77.7	12.68	9.62	
12	Chino Ave	between Archibald Ave & Haven Ave		3,000	40	50	97.42			1.84	0.74	77.7	12.68	9.62	
13	Ramona Ave	north of Edison		13,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
14	Central Ave	north of Edison		28,600	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
15	Mountain Ave	north of Edison		11,400	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
16	Euclid Ave	north of Edison		27,300	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
17	Grove Ave	north of Edison		9,400	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
18	Archibald Ave	between Chino & Schaefer		21,300	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
19	Archibald Ave	between Schaefer & Ontario Ranch Rd		20,800	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
20	Haven Ave	between Chino & Ontario Ranch Rd		14,500	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
21	Hamner Ave	north of Ontario Ranch Rd		19,300	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
22	Grand Ave	west of SR-71 NB Off-Ramp		63,200	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
23	Grand Ave	between SR-71 SB Ramps & SR-71 NB Off-Ramp		51,300	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
24	Grand Ave	between SR-71 NB Off-Ramp & Ramona		32,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
25	Edison Ave	between Ramona & Central		19,600	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
26	Edison Ave	between Central & Mountain		18,500	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
27	Edison Ave	between Mountain & Euclid		12,500	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
28	Edison Ave	between Grove Ave & Archibald Ave		7,200	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
29	Ontario Ranch Rd	between Archibald Ave & Haven Ave		15,700	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
30	Ontario Ranch Rd	between Haven Ave & I-15 SB Ramps		39,400	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
31	Ontario Ranch Rd	between I-15 SB Ramps & I-15 NB Ramps		17,300	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
32	Ontario Ranch Rd	west of I-15 NB Ramps		12,700	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
33	Ramona Place	south of Edison		12,700	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
34	Central Ave	south of Edison		37,400	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
35	Mountain Ave	south of Edison		3,600	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
36	Euclid Ave	between Edison & Merrill		28,000	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
37	Grove Ave	between Edison & Merrill		8,900	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
38	Archibald Ave	between Eucalyptus Ave & Merrill		25,600	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
39	Haven Ave	between Ontario Ranch Rd & Eucalyptus Ave		12,400	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
40	Sumner Ave	between Eucalyptus Ave & Bellegrave		9,400	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
41	Mill Creek Ave	north of Eucalyptus Ave		0	45	50	0			1.84	0.74	0	12.68	9.62	
42	Mill Creek Ave	between Eucalyptus Ave & Bellegrave		1,900	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
43	Hamner Ave	north of Eucalyptus Ave		33,400	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
44	Eucalyptus Ave	west of Archibald Ave		600	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
45	Eucalyptus Ave	between Archibald Ave & Sumner		4,500	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
46	Eucalyptus Ave	between Mill Creek Ave & Hamner Ave		8,200	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
47	Parkview St	between Archibald Ave & Sumner Ave		1,700	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
48	Merrill Ave	between Euclid & Grove Ave		11,800	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
49	Merrill Ave	between Grove Ave & Charlotte		14,600	45	50	97.42			1.84	0.74	77.7	12.68	9.62	

50	Merrill Ave	between Celebation Ave & Sumner Ave	8,800	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
51	Bellegrave Ave	between Sumner Ave & Scholar	19,500	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
52	Bellegrave Ave	between Scholar & Hamner Ave	22,800	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
53	Bellegrave Ave	west of Hamner Ave	16,600	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
54	Euclid Ave	between Merrill & Kimball	27,400	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
55	Euclid Ave	between Pine & Kimball	27,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
56	Archibald Ave	between Merrill & Schlesiman Rd	22,900	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
57	Sumner Ave	between Bellegrave & Limonite Ave	14,400	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
58	Sumner Ave	south of Limonite Ave	11,600	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
59	Scholar Way	between Bellegrave & Limonite Ave	4,700	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
60	Scholar Way	south of Limonite Ave	6,800	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
61	Hamner Ave	between Limonite Ave & Limonite Ave	21,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
62	Hamner Ave	between Limonite Ave & 68th	24,800	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
63	Kimball Ave	west of Euclid	11,600	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
64	Limonite Ave	between Archibald Ave & Sumner Ave	22,900	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
65	Limonite Ave	between Sumner Ave & Hamner Ave	31,400	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
66	Limonite Ave	between Hamner Ave & I-15 SB Ramps	47,800	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
67	Limonite Ave	between I-15 SB Ramps & I-15 NB Ramps	49,600	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
68	Limonite Ave	west of I-15 NB Ramps	44,800	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
69	Hamner Ave	between 68th & Schlesiman Rd	25,400	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
70	Pine Ave	between Euclid & Archibald Ave	25,800	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
71	Schlesiman Rd	between Archibald Ave & Hamner Ave	12,400	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
72	Euclid Ave	between Pine & SR-71 NB Ramps	33,200	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
73	Archibald Ave	between Schlesiman Rd & Chandler	20,900	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
74	Archibald Ave	between Chandler & Corydon	25,200	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
75	River Ave	south of Corydon	25,200	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
76	Hamner Ave	between Schlesiman Rd & Norco	28,800	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
77	Hamner Ave	south of Norco	32,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	

Model Results

Project Name	The Lake Subarea 29
Project Number	14252
Modeling Scenario	Existing Plus Project 2021

Segment Number	Roadway	Segment From	Segment To	Noise Levels (dB) CNEL Automobiles	Motorcycles	Bus	Medium Trucks	Heavy Trucks	Total	Distance to Traffic Noise Contours (feet) 70 dB	65 dB	60 dB	55 dB	50 dB
1	Monterey Ave	North of Varner Rd	0	62.8	0.0	0.0	52.9	54.5	63.8	19	42	90	193	416
2	Haven Ave	north of SR-60 WB Ran	0	68.8	0.0	0.0	58.3	59.0	69.6	47	101	218	470	1,012
3	Archibald Ave	between SR-60 WB Ra	0	67.5	0.0	0.0	56.6	57.2	68.2	38	82	176	380	818
4	Haven Ave	between SR-60 WB Ra	0	67.9	0.0	0.0	57.4	58.0	68.7	41	88	189	408	879
5	Archibald Ave	between SR-60 EB Ran	0	68.7	0.0	0.0	57.8	58.3	69.3	45	97	210	452	975
6	Haven Ave	between SR-60 EB Ran	0	67.1	0.0	0.0	56.5	57.2	67.9	36	78	167	360	775
7	Riverside Ave	west of Archibald Ave	0	67.8	0.0	0.0	56.9	57.5	68.5	40	86	185	398	857
8	Riverside Ave	between Archibald Av	0	67.0	0.0	0.0	56.1	56.6	67.7	35	75	162	349	752
9	Archibald Ave	between Riverside Ave	0	68.5	0.0	0.0	57.6	58.2	69.2	44	95	205	441	951
10	Haven Ave	between East Riversid	0	64.3	0.0	0.0	53.7	54.4	65.0	23	50	108	233	502
11	Chino Ave	west of Archibald Ave	0	59.5	0.0	0.0	49.2	50.0	60.3	11	24	52	113	243
12	Chino Ave	between Archibald Av	0	57.3	0.0	0.0	47.0	47.9	58.2	8	17	38	81	175
13	Ramona Ave	north of Edison	0	64.5	0.0	0.0	54.0	54.7	65.3	24	52	113	243	524
14	Central Ave	north of Edison	0	67.9	0.0	0.0	57.4	58.1	68.7	41	88	190	409	881
15	Mountain Ave	north of Edison	0	63.9	0.0	0.0	53.4	54.1	64.7	22	48	103	222	477
16	Euclid Ave	north of Edison	0	67.7	0.0	0.0	57.2	57.9	68.5	40	85	184	397	854
17	Grove Ave	north of Edison	0	64.0	0.0	0.0	53.2	53.7	64.7	22	48	103	222	479
18	Archibald Ave	between Chino & Scha	0	67.6	0.0	0.0	56.7	57.2	68.3	38	83	178	383	826
19	Archibald Ave	between Schaefer & O	0	67.5	0.0	0.0	56.6	57.1	68.2	38	81	175	377	813
20	Haven Ave	between Chino & Onta	0	65.0	0.0	0.0	54.4	55.1	65.7	26	56	121	260	560
21	Hamner Ave	north of Ontario Ranch	0	66.2	0.0	0.0	55.7	56.3	67.0	31	68	146	315	678
22	Grand Ave	west of SR-71 NB Off-R	0	71.4	0.0	0.0	60.8	61.5	72.1	69	150	322	694	1,495
23	Grand Ave	between SR-71 SB Ran	0	70.5	0.0	0.0	59.9	60.6	71.2	60	130	280	604	1,301
24	Grand Ave	between SR-71 NB Off	0	68.4	0.0	0.0	57.9	58.6	69.2	44	95	205	442	952
25	Edison Ave	between Ramona & Ce	0	66.3	0.0	0.0	55.7	56.4	67.1	32	69	148	318	685
26	Edison Ave	between Central & Mc	0	66.0	0.0	0.0	55.5	56.2	66.8	31	66	142	306	659
27	Edison Ave	between Mountain & I	0	64.3	0.0	0.0	53.8	54.5	65.1	24	51	109	236	508
28	Edison Ave	between Grove Ave &	0	61.9	0.0	0.0	51.4	52.1	62.7	16	35	76	163	351
29	Ontario Ranch Rd	between Archibald Av	0	66.2	0.0	0.0	55.4	55.9	66.9	31	67	145	313	674
30	Ontario Ranch Rd	between Haven Ave &	0	70.2	0.0	0.0	59.4	59.9	70.9	58	124	268	578	1,245
31	Ontario Ranch Rd	between I-15 SB Ramp	0	66.7	0.0	0.0	55.8	56.3	67.4	33	72	155	334	719
32	Ontario Ranch Rd	west of I-15 NB Ramps	0	65.3	0.0	0.0	54.5	55.0	66.0	27	59	126	272	585
33	Ramona Place	south of Edison	0	64.4	0.0	0.0	53.8	54.5	65.2	24	51	111	238	513
34	Central Ave	south of Edison	0	69.1	0.0	0.0	58.5	59.2	69.9	49	105	227	489	1,054
35	Mountain Ave	south of Edison	0	58.9	0.0	0.0	48.4	49.1	59.7	10	22	48	103	221
36	Euclid Ave	between Edison & Me	0	67.8	0.0	0.0	57.3	58.0	68.6	40	87	187	403	869
37	Grove Ave	between Edison & Me	0	63.8	0.0	0.0	52.9	53.5	64.5	21	46	99	214	462
38	Archibald Ave	between Eucalyptus A	0	68.4	0.0	0.0	57.5	58.0	69.1	43	93	201	433	934
39	Haven Ave	between Ontario Ranc	0	64.3	0.0	0.0	53.7	54.4	65.1	23	50	109	234	505
40	Sumner Ave	between Eucalyptus A	0	63.1	0.0	0.0	52.5	53.2	63.9	19	42	90	195	420
41	Mill Creek Ave	north of Eucalyptus Av	0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0
42	Mill Creek Ave	between Eucalyptus A	0	56.2	0.0	0.0	45.6	46.3	56.9	7	14	31	67	145
43	Hamner Ave	north of Eucalyptus Av	0	68.6	0.0	0.0	58.0	58.7	69.4	45	98	211	454	977
44	Eucalyptus Ave	west of Archibald Ave	0	51.2	0.0	0.0	40.6	41.3	51.9	3	7	14	31	67
45	Eucalyptus Ave	between Archibald Av	0	59.9	0.0	0.0	49.3	50.0	60.7	12	26	55	119	257
46	Eucalyptus Ave	between Mill Creek Av	0	62.5	0.0	0.0	51.9	52.6	63.3	18	38	83	178	383
47	Parkview St	between Archibald Av	0	54.1	0.0	0.0	44.1	45.7	55.0	5	11	23	50	108
48	Merrill Ave	between Euclid & Grov	0	64.1	0.0	0.0	53.5	54.2	64.8	23	49	105	227	488
49	Merrill Ave	between Grove Ave &	0	65.0	0.0	0.0	54.5	55.1	65.8	26	56	121	261	563

50	Merrill Ave	between Celebation A	0	62.8	0.0	0.0	52.3	52.9	63.6	19	40	87	186	402
51	Bellegrave Ave	between Sumner Ave	0	67.2	0.0	0.0	56.3	56.9	67.9	36	78	168	362	779
52	Bellegrave Ave	between Scholar & Ha	0	67.9	0.0	0.0	57.0	57.5	68.6	40	86	186	401	865
53	Bellegrave Ave	west of Hamner Ave	0	66.5	0.0	0.0	55.6	56.2	67.2	32	70	151	325	700
54	Euclid Ave	between Merrill & Kim	0	67.7	0.0	0.0	57.2	57.9	68.5	40	86	185	398	857
55	Euclid Ave	between Pine & Kimba	0	67.7	0.0	0.0	57.1	57.8	68.5	39	85	183	395	850
56	Archibald Ave	between Merrill & Sch	0	67.9	0.0	0.0	57.0	57.6	68.6	40	87	187	402	867
57	Sumner Ave	between Bellegrave &	0	65.0	0.0	0.0	54.4	55.1	65.7	26	56	120	259	558
58	Sumner Ave	south of Limonite Ave	0	64.0	0.0	0.0	53.5	54.1	64.8	22	48	104	224	483
59	Scholar Way	between Bellegrave &	0	58.5	0.0	0.0	48.5	50.1	59.4	10	21	46	99	213
60	Scholar Way	south of Limonite Ave	0	60.1	0.0	0.0	50.1	51.7	61.0	13	27	59	127	273
61	Hamner Ave	between Limonite Ave	0	66.6	0.0	0.0	56.1	56.7	67.4	33	72	155	334	720
62	Hamner Ave	between Limonite Ave	0	67.3	0.0	0.0	56.8	57.4	68.1	37	80	173	372	801
63	Kimball Ave	west of Euclid	0	64.9	0.0	0.0	54.1	54.6	65.6	26	55	119	256	551
64	Limonite Ave	between Archibald Av	0	67.9	0.0	0.0	57.0	57.6	68.6	40	87	187	402	867
65	Limonite Ave	between Sumner Ave	0	69.3	0.0	0.0	58.4	58.9	70.0	50	107	231	497	1,070
66	Limonite Ave	between Hamner Ave	0	71.1	0.0	0.0	60.2	60.8	71.8	66	142	305	657	1,416
67	Limonite Ave	between I-15 SB Ramp	0	71.2	0.0	0.0	60.4	60.9	71.9	67	145	313	674	1,451
68	Limonite Ave	west of I-15 NB Ramps	0	70.8	0.0	0.0	59.9	60.5	71.5	63	136	292	630	1,356
69	Hamner Ave	between 68th & Schles	0	67.4	0.0	0.0	56.9	57.5	68.2	38	81	175	378	814
70	Pine Ave	between Euclid & Arch	0	67.5	0.0	0.0	56.9	57.6	68.2	38	82	177	382	823
71	Schlesiman Rd	between Archibald Av	0	64.3	0.0	0.0	53.7	54.4	65.1	23	50	109	234	505
72	Euclid Ave	between Pine & SR-71	0	68.6	0.0	0.0	58.0	58.7	69.3	45	97	210	452	974
73	Archibald Ave	between Schlesiman R	0	67.5	0.0	0.0	56.6	57.2	68.2	38	82	176	379	816
74	Archibald Ave	between Chandler & C	0	68.3	0.0	0.0	57.4	58.0	69.0	43	92	199	429	924
75	River Ave	south of Corydon	0	65.8	0.0	0.0	55.8	57.4	66.7	30	65	141	303	653
76	Hamner Ave	between Schlesiman R	0	68.0	0.0	0.0	57.4	58.1	68.7	41	89	191	411	886
77	Hamner Ave	south of Norco	0	68.4	0.0	0.0	57.9	58.6	69.2	44	95	205	442	952

Model Input

Project Name	The Lake Subarea 29		
Project Number	14252		
Modeling Scenario	Future Year 2040		
Site Absorption	Soft	**Peak Hour Ratio**	10
Descriptor	CNEL	**Traffic Volume**	ADT

Segment Number	Roadway	Segment From	Segment To	Traffic Volume	Speed (mph)	Distance to Centerline	Vehicle Cassification Mix (%) Automobiles	Motorcycles	Bus	Medium Trucks	Heavy Trucks	24-Hour Traffic Distribution (%) Day	Evening	Night	K-Factor
1	Monterey Ave	North of Varner Rd		20,000	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
2	Haven Ave	north of SR-60 WB Ramps		50,900	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
3	Archibald Ave	between SR-60 WB Ramps & SR-60 EB Ramps		26,700	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
4	Haven Ave	between SR-60 WB Ramps & SR-60 EB Ramps		38,900	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
5	Archibald Ave	between SR-60 EB Ramps & Riverside Ave		30,100	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
6	Haven Ave	between SR-60 EB Ramps & East Riverside		34,300	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
7	Riverside Ave	west of Archibald Ave		38,700	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
8	Riverside Ave	between Archibald Ave & Haven Ave		33,500	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
9	Archibald Ave	between Riverside Ave & Chino		33,200	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
10	Haven Ave	between East Riverside & Chino		17,700	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
11	Chino Ave	west of Archibald Ave		16,000	40	50	97.42			1.84	0.74	77.7	12.68	9.62	
12	Chino Ave	between Archibald Ave & Haven Ave		8,800	40	50	97.42			1.84	0.74	77.7	12.68	9.62	
13	Ramona Place	north of Edison		14,700	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
14	Central Ave	north of Edison		33,300	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
15	Mountain Ave	north of Edison		11,700	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
16	Euclid Ave	north of Edison		50,900	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
17	Grove Ave	north of Edison		20,000	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
18	Archibald Ave	between Chino & Schaefer		30,500	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
19	Archibald Ave	between Schaefer & Ontario Ranch Rd		20,800	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
20	Haven Ave	between Chino & Ontario Ranch Rd		25,300	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
21	Hamner Ave	north of Ontario Ranch Rd		37,600	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
22	Grand Ave	west of SR-71 NB Off-Ramp		72,300	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
23	Grand Ave	between SR-71 SB Ramps & SR-71 NB Off-Ramp		59,500	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
24	Grand Ave	between SR-71 NB Off-Ramp & Ramona		40,800	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
25	Edison Ave	between Ramona & Central		31,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
26	Edison Ave	between Central & Mountain		35,200	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
27	Edison Ave	between Mountain & Euclid		30,700	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
28	Edison Ave	between Grove Ave & Archibald Ave		40,500	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
29	Ontario Ranch Rd	between Archibald Ave & Haven Ave		38,700	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
30	Ontario Ranch Rd	between Haven Ave & I-15 SB Ramps		59,700	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
31	Ontario Ranch Rd	between I-15 SB Ramps & I-15 NB Ramps		36,800	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
32	Ontario Ranch Rd	west of I-15 NB Ramps		20,300	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
33	Ramona Place	south of Edison		14,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
34	Central Ave	south of Edison		45,900	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
35	Mountain Ave	south of Edison		4,000	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
36	Euclid Ave	between Edison & Merrill		45,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
37	Grove Ave	between Edison & Merrill		17,100	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
38	Archibald Ave	between Eucalyptus Ave & Merrill		38,000	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
39	Haven Ave	between Ontario Ranch Rd & Eucalyptus Ave		12,700	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
40	Sumner Ave	between Eucalyptus Ave & Bellegrave		8,500	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
41	Mill Creek Ave	north of Eucalyptus Ave		6,700	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
42	Mill Creek Ave	between Eucalyptus Ave & Bellegrave		5,300	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
43	Hamner Ave	north of Eucalyptus Ave		37,900	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
44	Eucalyptus Ave	west of Archibald Ave		8,300	45	50	97.42			1.84	0.74	77.7	12.68	9.62	

45	Eucalyptus Ave	between Archibald Ave & Sumner	8,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
46	Eucalyptus Ave	between Mill Creek Ave & Hamner Ave	6,900	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
47	Parkview St	between Archibald Ave & Sumner Ave	2,900	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
48	Merrill Ave	between Euclid & Grove Ave	23,900	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
49	Merrill Ave	between Grove Ave & Charlotte	22,900	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
50	Merrill Ave	between Celebation Ave & Sumner Ave	12,400	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
51	Bellegrave Ave	between Sumner Ave & Scholar	27,300	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
52	Bellegrave Ave	between Scholar & Hamner Ave	31,600	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
53	Bellegrave Ave	west of Hamner Ave	23,700	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
54	Euclid Ave	between Merrill & Kimball	51,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
55	Euclid Ave	between Pine & Kimball	52,500	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
56	Archibald Ave	between Merrill & Schlesiman Rd	33,200	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
57	Sumner Ave	between Bellegrave & Limonite Ave	16,400	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
58	Sumner Ave	south of Limonite Ave	13,300	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
59	Scholar Way	between Bellegrave & Limonite Ave	6,700	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
60	Scholar Way	south of Limonite Ave	9,300	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
61	Hamner Ave	between Limonite Ave & Limonite Ave	22,700	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
62	Hamner Ave	between Limonite Ave & 68th	26,400	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
63	Kimball Ave	west of Euclid	20,000	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
64	Limonite Ave	between Archibald Ave & Sumner Ave	37,600	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
65	Limonite Ave	between Sumner Ave & Hamner Ave	41,700	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
66	Limonite Ave	between Hamner Ave & I-15 SB Ramps	61,100	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
67	Limonite Ave	between I-15 SB Ramps & I-15 NB Ramps	57,500	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
68	Limonite Ave	west of I-15 NB Ramps	45,300	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
69	Hamner Ave	between 68th & Schlesiman Rd	26,400	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
70	Pine Ave	between Euclid & Archibald Ave	41,500	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
71	Schlesiman Rd	between Archibald Ave & Hamner Ave	19,700	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
72	Euclid Ave	between Pine & SR-71 NB Ramps	47,500	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
73	Archibald Ave	between Schlesiman Rd & Chandler	25,200	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
74	Archibald Ave	between Chandler & Corydon	30,500	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
75	River Ave	south of Corydon	32,300	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
76	Hamner Ave	between Schlesiman Rd & Norco	31,300	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
77	Hamner Ave	south of Norco	38,700	45	50	97.42			1.84	0.74	77.7	12.68	9.62	

Model Results

Project Name	The Lake Subarea 29
Project Number	14252
Modeling Scenario	Future Year 2040

Segment Number	Roadway	Segment From	Segment To	Noise Levels (dB) CNEL Automobiles	Motorcycles	Bus	Medium Trucks	Heavy Trucks	Total	Distance to Traffic Noise Contours (feet) 70 dB	65 dB	60 dB	55 dB	50 dB
1	Monterey Ave	North of Varner Rd	0	64.8	0.0	0.0	54.8	56.4	65.7	26	56	121	260	560
2	Haven Ave	north of SR-60 WB Ran	0	70.4	0.0	0.0	59.9	60.6	71.2	60	129	279	601	1,294
3	Archibald Ave	between SR-60 WB Ra	0	68.6	0.0	0.0	57.7	58.2	69.3	45	96	207	446	960
4	Haven Ave	between SR-60 WB Ra	0	69.3	0.0	0.0	58.7	59.4	70.0	50	108	233	502	1,082
5	Archibald Ave	between SR-60 EB Ran	0	69.1	0.0	0.0	58.2	58.7	69.8	48	104	224	483	1,040
6	Haven Ave	between SR-60 EB Ran	0	68.7	0.0	0.0	58.2	58.8	69.5	46	99	214	462	995
7	Riverside Ave	west of Archibald Ave	0	70.2	0.0	0.0	59.3	59.8	70.9	57	123	265	571	1,230
8	Riverside Ave	between Archibald Av	0	69.5	0.0	0.0	58.7	59.2	70.2	52	112	241	519	1,117
9	Archibald Ave	between Riverside Ave	0	69.5	0.0	0.0	58.6	59.2	70.2	52	111	239	516	1,111
10	Haven Ave	between East Riversid	0	65.9	0.0	0.0	55.3	56.0	66.6	30	64	138	297	640
11	Chino Ave	west of Archibald Ave	0	64.6	0.0	0.0	54.3	55.2	65.4	25	53	115	248	534
12	Chino Ave	between Archibald Av	0	62.0	0.0	0.0	51.7	52.6	62.8	17	36	77	166	358
13	Ramona Place	north of Edison	0	65.0	0.0	0.0	54.5	55.2	65.8	26	57	122	263	566
14	Central Ave	north of Edison	0	68.6	0.0	0.0	58.0	58.7	69.4	45	98	210	453	976
15	Mountain Ave	north of Edison	0	64.1	0.0	0.0	53.5	54.2	64.8	23	49	105	225	486
16	Euclid Ave	north of Edison	0	70.4	0.0	0.0	59.9	60.6	71.2	60	129	279	601	1,294
17	Grove Ave	north of Edison	0	67.3	0.0	0.0	56.4	57.0	68.0	37	79	171	368	792
18	Archibald Ave	between Chino & Scha	0	69.1	0.0	0.0	58.3	58.8	69.8	49	105	226	487	1,050
19	Archibald Ave	between Schaefer & C	0	67.5	0.0	0.0	56.6	57.1	68.2	38	81	175	377	813
20	Haven Ave	between Chino & Onta	0	67.4	0.0	0.0	56.8	57.5	68.2	38	81	175	377	812
21	Hamner Ave	north of Ontario Ranch	0	69.1	0.0	0.0	58.6	59.2	69.9	49	106	228	491	1,058
22	Grand Ave	west of SR-71 NB Off-R	0	72.0	0.0	0.0	61.4	62.1	72.7	76	164	352	759	1,636
23	Grand Ave	between SR-71 SB Ran	0	71.1	0.0	0.0	60.6	61.2	71.9	67	144	309	667	1,436
24	Grand Ave	between SR-71 NB Off	0	69.5	0.0	0.0	58.9	59.6	70.2	52	112	241	518	1,117
25	Edison Ave	between Ramona & Co	0	68.3	0.0	0.0	57.7	58.4	69.1	43	93	201	433	932
26	Edison Ave	between Central & Mo	0	68.8	0.0	0.0	58.3	59.0	69.6	47	101	218	470	1,012
27	Edison Ave	between Mountain &	0	68.2	0.0	0.0	57.7	58.4	69.0	43	92	199	429	924
28	Edison Ave	between Grove Ave &	0	69.4	0.0	0.0	58.9	59.6	70.2	52	111	239	516	1,111
29	Ontario Ranch Rd	between Archibald Av	0	70.2	0.0	0.0	59.3	59.8	70.9	57	123	265	571	1,230
30	Ontario Ranch Rd	between Haven Ave &	0	72.0	0.0	0.0	61.2	61.7	72.7	76	164	354	762	1,642
31	Ontario Ranch Rd	between I-15 SB Ramp	0	69.9	0.0	0.0	59.1	59.6	70.6	55	119	256	552	1,190
32	Ontario Ranch Rd	west of I-15 NB Ramps	0	67.4	0.0	0.0	56.5	57.0	68.1	37	80	172	371	800
33	Ramona Place	south of Edison	0	64.9	0.0	0.0	54.3	55.0	65.6	26	55	119	255	550
34	Central Ave	south of Edison	0	70.0	0.0	0.0	59.4	60.1	70.7	56	121	260	561	1,208
35	Mountain Ave	south of Edison	0	59.4	0.0	0.0	48.8	49.5	60.2	11	24	51	110	237
36	Euclid Ave	between Edison & Me	0	69.9	0.0	0.0	59.4	60.0	70.7	55	119	257	554	1,194
37	Grove Ave	between Edison & Me	0	66.6	0.0	0.0	55.7	56.3	67.3	33	71	154	331	714
38	Archibald Ave	between Eucalyptus A	0	70.1	0.0	0.0	59.2	59.8	70.8	56	122	262	564	1,215
39	Haven Ave	between Ontario Ranc	0	64.4	0.0	0.0	53.8	54.5	65.2	24	51	111	238	513
40	Sumner Ave	between Eucalyptus A	0	62.7	0.0	0.0	52.1	52.8	63.4	18	39	85	182	393
41	Mill Creek Ave	north of Eucalyptus Av	0	61.6	0.0	0.0	51.1	51.8	62.4	16	33	72	155	335
42	Mill Creek Ave	between Eucalyptus A	0	60.6	0.0	0.0	50.1	50.7	61.4	13	29	62	133	286
43	Hamner Ave	north of Eucalyptus Av	0	69.2	0.0	0.0	58.6	59.3	69.9	49	106	229	494	1,063

44	Eucalyptus Ave	west of Archibald Ave	0	62.6	0.0	0.0	52.0	52.7	63.3	18	39	83	179	386
45	Eucalyptus Ave	between Archibald Av	0	62.5	0.0	0.0	51.9	52.6	63.2	18	38	82	176	380
46	Eucalyptus Ave	between Mill Creek Av	0	61.8	0.0	0.0	51.2	51.9	62.5	16	34	74	159	342
47	Parkview St	between Archibald Av	0	56.4	0.0	0.0	46.4	48.0	57.3	7	15	33	72	154
48	Merrill Ave	between Euclid & Gro	0	67.2	0.0	0.0	56.6	57.3	67.9	36	78	168	363	782
49	Merrill Ave	between Grove Ave &	0	67.0	0.0	0.0	56.4	57.1	67.7	35	76	164	353	760
50	Merrill Ave	between Celebation A	0	64.3	0.0	0.0	53.7	54.4	65.1	23	50	109	234	505
51	Bellegrave Ave	between Sumner Ave	0	68.7	0.0	0.0	57.8	58.3	69.3	45	97	210	452	975
52	Bellegrave Ave	between Scholar & Ha	0	69.3	0.0	0.0	58.4	59.0	70.0	50	107	232	499	1,075
53	Bellegrave Ave	west of Hamner Ave	0	68.0	0.0	0.0	57.2	57.7	68.7	41	89	191	412	887
54	Euclid Ave	between Merrill & Kim	0	70.5	0.0	0.0	59.9	60.6	71.2	60	130	280	602	1,298
55	Euclid Ave	between Pine & Kimba	0	70.6	0.0	0.0	60.0	60.7	71.3	61	132	285	613	1,321
56	Archibald Ave	between Merrill & Sch	0	69.5	0.0	0.0	58.6	59.2	70.2	52	111	239	516	1,111
57	Sumner Ave	between Bellegrave &	0	65.5	0.0	0.0	55.0	55.6	66.3	28	61	131	282	608
58	Sumner Ave	south of Limonite Ave	0	64.6	0.0	0.0	54.0	54.7	65.4	25	53	114	246	529
59	Scholar Way	between Bellegrave &	0	60.0	0.0	0.0	50.1	51.7	61.0	13	27	58	125	270
60	Scholar Way	south of Limonite Ave	0	61.5	0.0	0.0	51.5	53.1	62.4	16	34	72	156	336
61	Hamner Ave	between Limonite Ave	0	66.9	0.0	0.0	56.4	57.1	67.7	35	76	163	351	756
62	Hamner Ave	between Limonite Ave	0	67.6	0.0	0.0	57.0	57.7	68.3	39	84	180	388	836
63	Kimball Ave	west of Euclid	0	67.3	0.0	0.0	56.4	57.0	68.0	37	79	171	368	792
64	Limonite Ave	between Archibald Av	0	70.0	0.0	0.0	59.2	59.7	70.7	56	121	260	560	1,207
65	Limonite Ave	between Sumner Ave	0	70.5	0.0	0.0	59.6	60.2	71.2	60	129	279	600	1,293
66	Limonite Ave	between Hamner Ave	0	72.1	0.0	0.0	61.3	61.8	72.8	77	167	359	774	1,668
67	Limonite Ave	between I-15 SB Ramp	0	71.9	0.0	0.0	61.0	61.6	72.6	74	160	345	743	1,602
68	Limonite Ave	west of I-15 NB Ramps	0	70.8	0.0	0.0	60.0	60.5	71.5	63	137	294	634	1,366
69	Hamner Ave	between 68th & Schle	0	67.6	0.0	0.0	57.0	57.7	68.3	39	84	180	388	836
70	Pine Ave	between Euclid & Arch	0	69.6	0.0	0.0	59.0	59.7	70.3	52	113	243	524	1,130
71	Schlesiman Rd	between Archibald Av	0	66.3	0.0	0.0	55.8	56.4	67.1	32	69	148	319	687
72	Euclid Ave	between Pine & SR-71	0	70.1	0.0	0.0	59.6	60.3	70.9	57	124	266	574	1,236
73	Archibald Ave	between Schlesiman R	0	68.3	0.0	0.0	57.4	58.0	69.0	43	92	199	429	924
74	Archibald Ave	between Chandler & C	0	69.1	0.0	0.0	58.3	58.8	69.8	49	105	226	487	1,050
75	River Ave	south of Corydon	0	66.9	0.0	0.0	56.9	58.5	67.8	36	77	166	357	770
76	Hamner Ave	between Schlesiman R	0	68.3	0.0	0.0	57.8	58.4	69.1	43	94	202	434	936
77	Hamner Ave	south of Norco	0	69.2	0.0	0.0	58.7	59.4	70.0	50	108	232	501	1,078

Model Input

Project Name	The Lake Subarea 29		
Project Number	14252		
Modeling Scenario	Future Year + Project 2040		
Site Absorption	Soft	**Peak Hour Ratio**	10
Descriptor	CNEL	**Traffic Volume**	ADT

Segment Number	Roadway	Segment From	Segment To	Traffic Volume	Speed (mph)	Distance to Centerline	Vehicle Cassification Mix (%) Automobiles	Motorcycles	Bus	Medium Trucks	Heavy Trucks	24-Hour Traffic Distribution (%) Day	Evening	Night	K-Factor
1	Monterey Ave	North of Varner Rd		20,100	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
2	Haven Ave	north of SR-60 WB Ramps		51,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
3	Archibald Ave	between SR-60 WB Ramps & SR-60 EB Ramps		27,000	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
4	Haven Ave	between SR-60 WB Ramps & SR-60 EB Ramps		40,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
5	Archibald Ave	between SR-60 EB Ramps & Riverside Ave		30,500	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
6	Haven Ave	between SR-60 EB Ramps & East Riverside		35,600	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
7	Riverside Ave	west of Archibald Ave		38,700	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
8	Riverside Ave	between Archibald Ave & Haven Ave		33,500	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
9	Archibald Ave	between Riverside Ave & Chino		33,600	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
10	Haven Ave	between East Riverside & Chino		19,000	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
11	Chino Ave	west of Archibald Ave		16,000	40	50	97.42			1.84	0.74	77.7	12.68	9.62	
12	Chino Ave	between Archibald Ave & Haven Ave		8,800	40	50	97.42			1.84	0.74	77.7	12.68	9.62	
13	Ramona Place	north of Edison		14,700	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
14	Central Ave	north of Edison		33,300	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
15	Mountain Ave	north of Edison		11,700	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
16	Euclid Ave	north of Edison		51,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
17	Grove Ave	north of Edison		20,000	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
18	Archibald Ave	between Chino & Schaefer		30,900	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
19	Archibald Ave	between Schaefer & Ontario Ranch Rd		21,200	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
20	Haven Ave	between Chino & Ontario Ranch Rd		26,600	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
21	Hamner Ave	north of Ontario Ranch Rd		38,500	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
22	Grand Ave	west of SR-71 NB Off-Ramp		74,400	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
23	Grand Ave	between SR-71 SB Ramps & SR-71 NB Off-Ramp		60,600	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
24	Grand Ave	between SR-71 NB Off-Ramp & Ramona		43,000	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
25	Edison Ave	between Ramona & Central		33,200	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
26	Edison Ave	between Central & Mountain		37,000	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
27	Edison Ave	between Mountain & Euclid		32,000	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
28	Edison Ave	between Grove Ave & Archibald Ave		42,000	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
29	Ontario Ranch Rd	between Archibald Ave & Haven Ave		41,200	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
30	Ontario Ranch Rd	between Haven Ave & I-15 SB Ramps		64,900	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
31	Ontario Ranch Rd	between I-15 SB Ramps & I-15 NB Ramps		37,300	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
32	Ontario Ranch Rd	west of I-15 NB Ramps		20,300	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
33	Ramona Place	south of Edison		14,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
34	Central Ave	south of Edison		45,900	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
35	Mountain Ave	south of Edison		4,000	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
36	Euclid Ave	between Edison & Merrill		45,300	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
37	Grove Ave	between Edison & Merrill		17,100	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
38	Archibald Ave	between Eucalyptus Ave & Merrill		38,900	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
39	Haven Ave	between Ontario Ranch Rd & Eucalyptus Ave		16,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
40	Sumner Ave	between Eucalyptus Ave & Bellegrave		11,400	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
41	Mill Creek Ave	north of Eucalyptus Ave		7,600	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
42	Mill Creek Ave	between Eucalyptus Ave & Bellegrave		6,600	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
43	Hamner Ave	north of Eucalyptus Ave		40,000	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
44	Eucalyptus Ave	west of Archibald Ave		9,600	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
45	Eucalyptus Ave	between Archibald Ave & Sumner		9,200	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
46	Eucalyptus Ave	between Mill Creek Ave & Hamner Ave		10,200	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
47	Parkview St	between Archibald Ave & Sumner Ave		3,300	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
48	Merrill Ave	between Euclid & Grove Ave		23,900	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
49	Merrill Ave	between Grove Ave & Charlotte		23,000	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
50	Merrill Ave	between Celebation Ave & Sumner Ave		13,200	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
51	Bellegrave Ave	between Sumner Ave & Scholar		30,600	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
52	Bellegrave Ave	between Scholar & Hamner Ave		34,600	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
53	Bellegrave Ave	west of Hamner Ave		24,900	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
54	Euclid Ave	between Merrill & Kimball		51,300	45	50	97.42			1.84	0.74	77.7	12.68	9.62	

55	Euclid Ave	between Pine & Kimball	52,800	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
56	Archibald Ave	between Merrill & Schlesiman Rd	33,800	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
57	Sumner Ave	between Bellegrave & Limonite Ave	17,400	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
58	Sumner Ave	south of Limonite Ave	13,400	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
59	Scholar Way	between Bellegrave & Limonite Ave	7,000	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
60	Scholar Way	south of Limonite Ave	9,400	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
61	Hamner Ave	between Limonite Ave & Limonite Ave	23,500	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
62	Hamner Ave	between Limonite Ave & 68th	28,000	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
63	Kimball Ave	west of Euclid	20,000	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
64	Limonite Ave	between Archibald Ave & Sumner Ave	37,800	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
65	Limonite Ave	between Sumner Ave & Hamner Ave	42,600	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
66	Limonite Ave	between Hamner Ave & I-15 SB Ramps	62,100	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
67	Limonite Ave	between I-15 SB Ramps & I-15 NB Ramps	58,500	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
68	Limonite Ave	west of I-15 NB Ramps	45,400	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
69	Hamner Ave	between 68th & Schlesiman Rd	28,000	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
70	Pine Ave	between Euclid & Archibald Ave	41,500	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
71	Schlesiman Rd	between Archibald Ave & Hamner Ave	19,700	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
72	Euclid Ave	between Pine & SR-71 NB Ramps	47,800	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
73	Archibald Ave	between Schlesiman Rd & Chandler	25,700	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
74	Archibald Ave	between Chandler & Corydon	31,100	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
75	River Ave	south of Corydon	32,600	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
76	Hamner Ave	between Schlesiman Rd & Norco	32,900	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
77	Hamner Ave	south of Norco	38,900	45	50	97.42			1.84	0.74	77.7	12.68	9.62	

Model Results

Project Name	The Lake Subarea 29
Project Number	14252
Modeling Scenario	Future Year + Project 2040

Segment Number	Roadway	Segment From	Segment To	Noise Levels (dB) CNEL Automobiles	Motorcycles	Bus	Medium Trucks	Heavy Trucks	Total	Distance to Traffic Noise Contours (feet) 70 dB	65 dB	60 dB	55 dB	50 dB
1	Monterey Ave	North of Varner Rd	0	64.8	0.0	0.0	54.8	56.4	65.8	26	56	121	261	561
2	Haven Ave	north of SR-60 WB Ramps	0	70.5	0.0	0.0	59.9	60.6	71.2	60	130	280	602	1,298
3	Archibald Ave	between SR-60 WB Ramps & SR-60 EB Ramps	0	68.6	0.0	0.0	57.7	58.3	69.3	45	97	208	449	968
4	Haven Ave	between SR-60 WB Ramps & SR-60 EB Ramps	0	69.4	0.0	0.0	58.8	59.5	70.2	51	110	238	513	1,104
5	Archibald Ave	between SR-60 EB Ramps & Riverside Ave	0	69.1	0.0	0.0	58.3	58.8	69.8	49	105	226	487	1,050
6	Haven Ave	between SR-60 EB Ramps & East Riverside	0	68.9	0.0	0.0	58.3	59.0	69.6	47	102	220	473	1,020
7	Riverside Ave	west of Archibald Ave	0	70.2	0.0	0.0	59.3	59.8	70.9	57	123	265	571	1,230
8	Riverside Ave	between Archibald Ave & Haven Ave	0	69.5	0.0	0.0	58.7	59.2	70.2	52	112	241	519	1,117
9	Archibald Ave	between Riverside Ave & Chino	0	69.6	0.0	0.0	58.7	59.2	70.3	52	112	241	520	1,120
10	Haven Ave	between East Riverside & Chino	0	66.2	0.0	0.0	55.6	56.3	66.9	31	67	145	311	671
11	Chino Ave	west of Archibald Ave	0	64.6	0.0	0.0	54.3	55.2	65.4	25	53	115	248	534
12	Chino Ave	between Archibald Ave & Haven Ave	0	62.0	0.0	0.0	51.7	52.6	62.8	17	36	77	166	358
13	Ramona Place	north of Edison	0	65.0	0.0	0.0	54.5	55.2	65.8	26	57	122	263	566
14	Central Ave	north of Edison	0	68.6	0.0	0.0	58.0	58.7	69.4	45	98	210	453	976
15	Mountain Ave	north of Edison	0	64.1	0.0	0.0	53.5	54.2	64.8	23	49	105	225	486
16	Euclid Ave	north of Edison	0	70.5	0.0	0.0	59.9	60.6	71.2	60	130	280	602	1,298
17	Grove Ave	north of Edison	0	67.3	0.0	0.0	56.4	57.0	68.0	37	79	171	368	792
18	Archibald Ave	between Chino & Schaefer	0	69.2	0.0	0.0	58.3	58.9	69.9	49	106	228	491	1,059
19	Archibald Ave	between Schaefer & Ontario Ranch Rd	0	67.6	0.0	0.0	56.7	57.2	68.3	38	82	177	382	824
20	Haven Ave	between Chino & Ontario Ranch Rd	0	67.6	0.0	0.0	57.1	57.7	68.4	39	84	181	390	840
21	Hamner Ave	north of Ontario Ranch Rd	0	69.2	0.0	0.0	58.7	59.3	70.0	50	107	232	499	1,075
22	Grand Ave	west of SR-71 NB Off-Ramp	0	72.1	0.0	0.0	61.5	62.2	72.8	77	167	359	774	1,667
23	Grand Ave	between SR-71 SB Ramps & SR-71 NB Off-Ran	0	71.2	0.0	0.0	60.6	61.3	72.0	67	145	313	675	1,454
24	Grand Ave	between SR-71 NB Off-Ramp & Ramona	0	69.7	0.0	0.0	59.1	59.8	70.5	54	116	249	537	1,157
25	Edison Ave	between Ramona & Central	0	68.6	0.0	0.0	58.0	58.7	69.3	45	97	210	452	974
26	Edison Ave	between Central & Mountain	0	69.1	0.0	0.0	58.5	59.2	69.8	49	105	225	486	1,046
27	Edison Ave	between Mountain & Euclid	0	68.4	0.0	0.0	57.9	58.5	69.2	44	95	205	441	950
28	Edison Ave	between Grove Ave & Archibald Ave	0	69.6	0.0	0.0	59.0	59.7	70.4	53	114	245	529	1,139
29	Ontario Ranch Rd	between Archibald Ave & Haven Ave	0	70.4	0.0	0.0	59.6	60.1	71.1	60	128	276	595	1,283
30	Ontario Ranch Rd	between Haven Ave & I-15 SB Ramps	0	72.4	0.0	0.0	61.5	62.1	73.1	81	174	374	806	1,736
31	Ontario Ranch Rd	between I-15 SB Ramps & I-15 NB Ramps	0	70.0	0.0	0.0	59.1	59.7	70.7	56	120	259	557	1,200
32	Ontario Ranch Rd	west of I-15 NB Ramps	0	67.4	0.0	0.0	56.5	57.0	68.1	37	80	172	371	800
33	Ramona Place	south of Edison	0	64.9	0.0	0.0	54.3	55.0	65.6	26	55	119	255	550
34	Central Ave	south of Edison	0	70.0	0.0	0.0	59.4	60.1	70.7	56	121	260	561	1,208
35	Mountain Ave	south of Edison	0	59.4	0.0	0.0	48.8	49.5	60.2	11	24	51	110	237
36	Euclid Ave	between Edison & Merrill	0	69.9	0.0	0.0	59.4	60.1	70.7	56	120	258	556	1,198
37	Grove Ave	between Edison & Merrill	0	66.6	0.0	0.0	55.7	56.3	67.3	33	71	154	331	714
38	Archibald Ave	between Eucalyptus Ave & Merrill	0	70.2	0.0	0.0	59.3	59.9	70.9	57	123	266	573	1,234
39	Haven Ave	between Ontario Ranch Rd & Eucalyptus Ave	0	65.4	0.0	0.0	54.9	55.6	66.2	28	60	129	279	601
40	Sumner Ave	between Eucalyptus Ave & Bellegrave	0	63.9	0.0	0.0	53.4	54.1	64.7	22	48	103	222	477
41	Mill Creek Ave	north of Eucalyptus Ave	0	62.2	0.0	0.0	51.6	52.3	62.9	17	36	78	169	364
42	Mill Creek Ave	between Eucalyptus Ave & Bellegrave	0	61.6	0.0	0.0	51.0	51.7	62.3	15	33	71	154	332
43	Hamner Ave	north of Eucalyptus Ave	0	69.4	0.0	0.0	58.8	59.5	70.2	51	110	237	512	1,102
44	Eucalyptus Ave	west of Archibald Ave	0	63.2	0.0	0.0	52.6	53.3	64.0	20	43	92	198	426
45	Eucalyptus Ave	between Archibald Ave & Sumner	0	63.0	0.0	0.0	52.4	53.1	63.8	19	41	89	192	414
46	Eucalyptus Ave	between Mill Creek Ave & Hamner Ave	0	63.5	0.0	0.0	52.9	53.6	64.2	21	44	95	206	443
47	Parkview St	between Archibald Ave & Sumner Ave	0	57.0	0.0	0.0	47.0	48.6	57.9	8	17	36	78	168
48	Merrill Ave	between Euclid & Grove Ave	0	67.2	0.0	0.0	56.6	57.3	67.9	36	78	168	363	782
49	Merrill Ave	between Grove Ave & Charlotte	0	67.0	0.0	0.0	56.4	57.1	67.7	35	76	164	354	762
50	Merrill Ave	between Celebation Ave & Sumner Ave	0	64.6	0.0	0.0	54.0	54.7	65.3	24	53	113	244	526
51	Bellegrave Ave	between Sumner Ave & Scholar	0	69.1	0.0	0.0	58.3	58.8	69.8	49	105	227	488	1,052
52	Bellegrave Ave	between Scholar & Hamner Ave	0	69.7	0.0	0.0	58.8	59.4	70.4	53	114	246	530	1,142
53	Bellegrave Ave	west of Hamner Ave	0	68.3	0.0	0.0	57.4	57.9	68.9	43	92	198	426	917

54	Euclid Ave	between Merrill & Kimball	0	70.5	0.0	0.0	59.9	60.6	71.2	60	130	280	604	1,301
55	Euclid Ave	between Pine & Kimball	0	70.6	0.0	0.0	60.0	60.7	71.4	62	133	286	616	1,326
56	Archibald Ave	between Merrill & Schlesiman Rd	0	69.6	0.0	0.0	58.7	59.3	70.3	52	112	242	522	1,124
57	Sumner Ave	between Bellegrave & Limonite Ave	0	65.8	0.0	0.0	55.2	55.9	66.5	29	63	136	294	633
58	Sumner Ave	south of Limonite Ave	0	64.6	0.0	0.0	54.1	54.8	65.4	25	53	115	247	532
59	Scholar Way	between Bellegrave & Limonite Ave	0	60.2	0.0	0.0	50.2	51.8	61.2	13	28	60	129	278
60	Scholar Way	south of Limonite Ave	0	61.5	0.0	0.0	51.5	53.1	62.5	16	34	73	157	338
61	Hamner Ave	between Limonite Ave & Limonite Ave	0	67.1	0.0	0.0	56.5	57.2	67.8	36	77	167	359	773
62	Hamner Ave	between Limonite Ave & 68th	0	67.8	0.0	0.0	57.3	58.0	68.6	40	87	187	403	869
63	Kimball Ave	west of Euclid	0	67.3	0.0	0.0	56.4	57.0	68.0	37	79	171	368	792
64	Limonite Ave	between Archibald Ave & Sumner Ave	0	70.1	0.0	0.0	59.2	59.7	70.8	56	121	261	562	1,211
65	Limonite Ave	between Sumner Ave & Hamner Ave	0	70.6	0.0	0.0	59.7	60.3	71.3	61	131	283	609	1,311
66	Limonite Ave	between Hamner Ave & I-15 SB Ramps	0	72.2	0.0	0.0	61.4	61.9	72.9	78	169	363	783	1,686
67	Limonite Ave	between I-15 SB Ramps & I-15 NB Ramps	0	72.0	0.0	0.0	61.1	61.6	72.7	75	162	349	752	1,620
68	Limonite Ave	west of I-15 NB Ramps	0	70.9	0.0	0.0	60.0	60.5	71.6	64	137	295	635	1,368
69	Hamner Ave	between 68th & Schlesiman Rd	0	67.8	0.0	0.0	57.3	58.0	68.6	40	87	187	403	869
70	Pine Ave	between Euclid & Archibald Ave	0	69.6	0.0	0.0	59.0	59.7	70.3	52	113	243	524	1,130
71	Schlesiman Rd	between Archibald Ave & Hamner Ave	0	66.3	0.0	0.0	55.8	56.4	67.1	32	69	148	319	687
72	Euclid Ave	between Pine & SR-71 NB Ramps	0	70.2	0.0	0.0	59.6	60.3	70.9	58	124	267	576	1,241
73	Archibald Ave	between Schlesiman Rd & Chandler	0	68.4	0.0	0.0	57.5	58.1	69.1	43	94	202	435	936
74	Archibald Ave	between Chandler & Corydon	0	69.2	0.0	0.0	58.3	58.9	69.9	49	106	229	494	1,063
75	River Ave	south of Corydon	0	66.9	0.0	0.0	56.9	58.5	67.9	36	77	167	360	775
76	Hamner Ave	between Schlesiman Rd & Norco	0	68.5	0.0	0.0	58.0	58.7	69.3	45	97	208	449	968
77	Hamner Ave	south of Norco	0	69.3	0.0	0.0	58.7	59.4	70.0	50	108	233	502	1,082

Model Input

Project Name	The Lake Subarea 29		
Project Number	14252		
Modeling Scenario	Opening Year 2025		
Site Absorption	Soft	**Peak Hour Ratio**	10
Descriptor	CNEL	**Traffic Volume**	ADT

Segment Number	Roadway	Segment		Traffic Volume	Speed (mph)	Distance to Centerline	Vehicle Cassification Mix (%)					24-Hour Traffic Distribution (%)			K-Factor
		From	To				Automobiles	Motorcycles	Bus	Medium Trucks	Heavy Trucks	Day	Evening	Night	
1	Monterey Ave	North of Varner Rd		16,500	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
2	Haven Ave	north of SR-60 WB Ramps		40,300	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
3	Archibald Ave	between SR-60 WB Ramps & SR-60 EB Ramps		28,900	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
4	Haven Ave	between SR-60 WB Ramps & SR-60 EB Ramps		37,800	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
5	Archibald Ave	between SR-60 EB Ramps & Riverside Ave		45,700	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
6	Haven Ave	between SR-60 EB Ramps & East Riverside		34,500	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
7	Riverside Ave	west of Archibald Ave		34,900	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
8	Riverside Ave	between Archibald Ave & Haven Ave		26,600	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
9	Archibald Ave	between Riverside Ave & Chino		42,600	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
10	Haven Ave	between East Riverside & Chino		29,200	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
11	Chino Ave	west of Archibald Ave		12,900	40	50	97.42			1.84	0.74	77.7	12.68	9.62	
12	Chino Ave	between Archibald Ave & Haven Ave		8,500	40	50	97.42			1.84	0.74	77.7	12.68	9.62	
13	Ramona Place	north of Edison		13,700	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
14	Central Ave	north of Edison		32,500	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
15	Mountain Ave	north of Edison		10,800	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
16	Euclid Ave	north of Edison		56,700	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
17	Grove Ave	north of Edison		18,800	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
18	Archibald Ave	between Chino & Schaefer		36,800	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
19	Archibald Ave	between Schaefer & Ontario Ranch Rd		36,400	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
20	Haven Ave	between Chino & Ontario Ranch Rd		34,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
21	Hamner Ave	north of Ontario Ranch Rd		31,800	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
22	Grand Ave	west of SR-71 NB Off-Ramp		64,400	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
23	Grand Ave	between SR-71 SB Ramps & SR-71 NB Off-Ran		52,400	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
24	Grand Ave	between SR-71 NB Off-Ramp & Ramona		32,800	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
25	Edison Ave	between Ramona & Central		21,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
26	Edison Ave	between Central & Mountain		23,000	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
27	Edison Ave	between Mountain & Euclid		20,500	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
28	Edison Ave	between Grove Ave & Archibald Ave		22,800	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
29	Ontario Ranch Rd	between Archibald Ave & Haven Ave		44,100	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
30	Ontario Ranch Rd	between Haven Ave & I-15 SB Ramps		65,500	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
31	Ontario Ranch Rd	between I-15 SB Ramps & I-15 NB Ramps		38,600	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
32	Ontario Ranch Rd	west of I-15 NB Ramps		18,100	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
33	Ramona Place	south of Edison		13,200	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
34	Central Ave	south of Edison		39,800	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
35	Mountain Ave	south of Edison		3,600	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
36	Euclid Ave	between Edison & Merrill		55,700	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
37	Grove Ave	between Edison & Merrill		16,700	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
38	Archibald Ave	between Eucalyptus Ave & Merrill		46,800	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
39	Haven Ave	between Ontario Ranch Rd & Eucalyptus Ave		16,200	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
40	Sumner Ave	between Eucalyptus Ave & Bellegrave		13,000	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
41	Mill Creek Ave	north of Eucalyptus Ave		0	45	50	0			1.84	0.74	0	12.68	9.62	
42	Mill Creek Ave	between Eucalyptus Ave & Bellegrave		1,000	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
43	Hamner Ave	north of Eucalyptus Ave		40,600	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
44	Eucalyptus Ave	west of Archibald Ave		5,700	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
45	Eucalyptus Ave	between Archibald Ave & Sumner		3,900	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
46	Eucalyptus Ave	between Mill Creek Ave & Hamner Ave		1,700	45	50	97.42			1.84	0.74	77.7	12.68	9.62	

47	Parkview St	between Archibald Ave & Sumner Ave	2,400	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
48	Merrill Ave	between Euclid & Grove Ave	24,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
49	Merrill Ave	between Grove Ave & Charlotte	26,600	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
50	Merrill Ave	between Celebation Ave & Sumner Ave	14,900	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
51	Bellegrave Ave	between Sumner Ave & Scholar	22,900	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
52	Bellegrave Ave	between Scholar & Hamner Ave	25,500	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
53	Bellegrave Ave	west of Hamner Ave	18,500	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
54	Euclid Ave	between Merrill & Kimball	48,900	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
55	Euclid Ave	between Pine & Kimball	48,200	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
56	Archibald Ave	between Merrill & Schlesiman Rd	34,900	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
57	Sumner Ave	between Bellegrave & Limonite Ave	18,900	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
58	Sumner Ave	south of Limonite Ave	17,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
59	Scholar Way	between Bellegrave & Limonite Ave	4,700	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
60	Scholar Way	south of Limonite Ave	7,500	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
61	Hamner Ave	between Limonite Ave & Limonite Ave	22,700	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
62	Hamner Ave	between Limonite Ave & 68th	26,000	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
63	Kimball Ave	west of Euclid	12,500	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
64	Limonite Ave	between Archibald Ave & Sumner Ave	31,500	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
65	Limonite Ave	between Sumner Ave & Hamner Ave	39,300	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
66	Limonite Ave	between Hamner Ave & I-15 SB Ramps	56,100	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
67	Limonite Ave	between I-15 SB Ramps & I-15 NB Ramps	53,500	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
68	Limonite Ave	west of I-15 NB Ramps	45,600	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
69	Hamner Ave	between 68th & Schlesiman Rd	24,500	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
70	Pine Ave	between Euclid & Archibald Ave	36,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
71	Schlesiman Rd	between Archibald Ave & Hamner Ave	15,200	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
72	Euclid Ave	between Pine & SR-71 NB Ramps	50,900	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
73	Archibald Ave	between Schlesiman Rd & Chandler	24,600	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
74	Archibald Ave	between Chandler & Corydon	26,900	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
75	River Ave	south of Corydon	27,500	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
76	Hamner Ave	between Schlesiman Rd & Norco	30,600	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
77	Hamner Ave	south of Norco	33,300	45	50	97.42			1.84	0.74	77.7	12.68	9.62	

Model Results

Project Name	The Lake Subarea 29
Project Number	14252
Modeling Scenario	Opening Year 2025

Segment Number	Roadway	Segment From	Segment To	Noise Levels (dB) CNEL Automobiles	Motorcycles	Bus	Medium Trucks	Heavy Trucks	Total	Distance to Traffic Noise Contours (feet) 70 dB	65 dB	60 dB	55 dB	50 dB
1	Monterey Ave	North of Varner Rd	0	63.9	0.0	0.0	54.0	55.6	64.9	23	49	106	228	492
2	Haven Ave	north of SR-60 WB Ran	0	69.4	0.0	0.0	58.9	59.5	70.2	51	111	239	514	1,108
3	Archibald Ave	between SR-60 WB Ra	0	68.9	0.0	0.0	58.0	58.6	69.6	47	101	218	470	1,013
4	Haven Ave	between SR-60 WB Ra	0	69.1	0.0	0.0	58.6	59.3	69.9	49	106	229	493	1,062
5	Archibald Ave	between SR-60 EB Ran	0	70.9	0.0	0.0	60.0	60.6	71.6	64	137	296	638	1,374
6	Haven Ave	between SR-60 EB Ran	0	68.7	0.0	0.0	58.2	58.9	69.5	46	100	215	464	999
7	Riverside Ave	west of Archibald Ave	0	69.7	0.0	0.0	58.8	59.4	70.4	53	115	247	533	1,148
8	Riverside Ave	between Archibald Av	0	68.5	0.0	0.0	57.7	58.2	69.2	44	96	206	445	958
9	Archibald Ave	between Riverside Ave	0	70.6	0.0	0.0	59.7	60.3	71.3	61	131	283	609	1,311
10	Haven Ave	between East Riversid	0	68.0	0.0	0.0	57.5	58.1	68.8	41	89	193	415	894
11	Chino Ave	west of Archibald Ave	0	63.7	0.0	0.0	53.4	54.3	64.5	21	46	100	215	462
12	Chino Ave	between Archibald Av	0	61.9	0.0	0.0	51.6	52.4	62.7	16	35	75	163	350
13	Ramona Place	north of Edison	0	64.7	0.0	0.0	54.2	54.9	65.5	25	54	116	250	540
14	Central Ave	north of Edison	0	68.5	0.0	0.0	57.9	58.6	69.2	45	96	207	446	960
15	Mountain Ave	north of Edison	0	63.7	0.0	0.0	53.1	53.8	64.5	21	46	99	214	460
16	Euclid Ave	north of Edison	0	70.9	0.0	0.0	60.3	61.0	71.7	65	139	300	646	1,391
17	Grove Ave	north of Edison	0	67.0	0.0	0.0	56.2	56.7	67.7	35	76	164	353	760
18	Archibald Ave	between Chino & Scha	0	69.9	0.0	0.0	59.1	59.6	70.6	55	119	256	552	1,190
19	Archibald Ave	between Schaefer & O	0	69.9	0.0	0.0	59.0	59.6	70.6	55	118	254	548	1,181
20	Haven Ave	between Chino & Onta	0	68.7	0.0	0.0	58.1	58.8	69.5	46	99	214	460	991
21	Hamner Ave	north of Ontario Ranch	0	68.4	0.0	0.0	57.8	58.5	69.2	44	95	204	439	946
22	Grand Ave	west of SR-71 NB Off-R	0	71.5	0.0	0.0	60.9	61.6	72.2	70	151	326	703	1,514
23	Grand Ave	between SR-71 SB Ran	0	70.6	0.0	0.0	60.0	60.7	71.3	61	132	284	613	1,320
24	Grand Ave	between SR-71 NB Off	0	68.5	0.0	0.0	58.0	58.6	69.3	45	97	208	448	966
25	Edison Ave	between Ramona & Co	0	66.6	0.0	0.0	56.1	56.7	67.4	33	72	155	334	720
26	Edison Ave	between Central & Mo	0	67.0	0.0	0.0	56.4	57.1	67.7	35	76	164	354	762
27	Edison Ave	between Mountain &	0	66.5	0.0	0.0	55.9	56.6	67.2	33	71	152	328	706
28	Edison Ave	between Grove Ave &	0	67.0	0.0	0.0	56.4	57.1	67.7	35	76	163	352	758
29	Ontario Ranch Rd	between Archibald Av	0	70.7	0.0	0.0	59.9	60.4	71.4	62	134	289	623	1,342
30	Ontario Ranch Rd	between Haven Ave &	0	72.5	0.0	0.0	61.6	62.1	73.2	81	175	376	811	1,747
31	Ontario Ranch Rd	between I-15 SB Ramp	0	70.2	0.0	0.0	59.3	59.8	70.9	57	123	265	570	1,228
32	Ontario Ranch Rd	west of I-15 NB Ramps	0	66.9	0.0	0.0	56.0	56.5	67.6	34	74	160	344	741
33	Ramona Place	south of Edison	0	64.6	0.0	0.0	54.0	54.7	65.3	24	53	113	244	526
34	Central Ave	south of Edison	0	69.4	0.0	0.0	58.8	59.5	70.1	51	110	237	510	1,099
35	Mountain Ave	south of Edison	0	58.9	0.0	0.0	48.4	49.1	59.7	10	22	48	103	221
36	Euclid Ave	between Edison & Me	0	70.8	0.0	0.0	60.3	60.9	71.6	64	137	296	638	1,375
37	Grove Ave	between Edison & Me	0	66.5	0.0	0.0	55.6	56.2	67.2	33	70	151	326	702
38	Archibald Ave	between Eucalyptus A	0	71.0	0.0	0.0	60.1	60.7	71.7	65	140	301	648	1,396
39	Haven Ave	between Ontario Ranc	0	65.5	0.0	0.0	54.9	55.6	66.2	28	60	130	280	603
40	Sumner Ave	between Eucalyptus A	0	64.5	0.0	0.0	53.9	54.6	65.3	24	52	112	242	521
41	Mill Creek Ave	north of Eucalyptus Av	0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0
42	Mill Creek Ave	between Eucalyptus A	0	53.4	0.0	0.0	42.8	43.5	54.1	4	9	20	44	94
43	Hamner Ave	north of Eucalyptus Av	0	69.5	0.0	0.0	58.9	59.6	70.2	52	111	240	517	1,113
44	Eucalyptus Ave	west of Archibald Ave	0	60.9	0.0	0.0	50.4	51.0	61.7	14	30	65	140	301
45	Eucalyptus Ave	between Archibald Av	0	59.3	0.0	0.0	48.7	49.4	60.0	11	23	50	108	234

46	Eucalyptus Ave	between Mill Creek Av	0	55.7	0.0	0.0	45.1	45.8	56.4	6	13	29	62	134
47	Parkview St	between Archibald Av	0	55.6	0.0	0.0	45.6	47.2	56.5	6	14	29	63	136
48	Merrill Ave	between Euclid & Gro	0	67.2	0.0	0.0	56.6	57.3	67.9	36	79	169	365	786
49	Merrill Ave	between Grove Ave &	0	67.6	0.0	0.0	57.1	57.7	68.4	39	84	181	390	840
50	Merrill Ave	between Celebation A	0	65.1	0.0	0.0	54.5	55.2	65.9	26	57	123	265	571
51	Bellegrave Ave	between Sumner Ave	0	67.9	0.0	0.0	57.0	57.6	68.6	40	87	187	402	867
52	Bellegrave Ave	between Scholar & Ha	0	68.4	0.0	0.0	57.5	58.0	69.1	43	93	201	432	931
53	Bellegrave Ave	west of Hamner Ave	0	67.0	0.0	0.0	56.1	56.6	67.7	35	75	162	349	752
54	Euclid Ave	between Merrill & Kim	0	70.3	0.0	0.0	59.7	60.4	71.0	58	126	272	585	1,260
55	Euclid Ave	between Pine & Kimba	0	70.2	0.0	0.0	59.6	60.3	71.0	58	125	269	579	1,248
56	Archibald Ave	between Merrill & Sch	0	69.7	0.0	0.0	58.8	59.4	70.4	53	115	247	533	1,148
57	Sumner Ave	between Bellegrave &	0	66.1	0.0	0.0	55.6	56.3	66.9	31	67	144	310	669
58	Sumner Ave	south of Limonite Ave	0	65.7	0.0	0.0	55.1	55.8	66.5	29	63	135	290	626
59	Scholar Way	between Bellegrave &	0	58.5	0.0	0.0	48.5	50.1	59.4	10	21	46	99	213
60	Scholar Way	south of Limonite Ave	0	60.5	0.0	0.0	50.5	52.1	61.5	14	29	63	135	291
61	Hamner Ave	between Limonite Ave	0	66.9	0.0	0.0	56.4	57.1	67.7	35	76	163	351	756
62	Hamner Ave	between Limonite Ave	0	67.5	0.0	0.0	57.0	57.6	68.3	38	83	178	384	827
63	Kimball Ave	west of Euclid	0	65.3	0.0	0.0	54.4	54.9	66.0	27	58	125	269	579
64	Limonite Ave	between Archibald Av	0	69.3	0.0	0.0	58.4	58.9	70.0	50	107	231	498	1,072
65	Limonite Ave	between Sumner Ave	0	70.2	0.0	0.0	59.4	59.9	70.9	58	124	268	577	1,243
66	Limonite Ave	between Hamner Ave	0	71.8	0.0	0.0	60.9	61.5	72.5	73	158	339	731	1,576
67	Limonite Ave	between I-15 SB Ramp	0	71.6	0.0	0.0	60.7	61.2	72.3	71	153	329	709	1,527
68	Limonite Ave	west of I-15 NB Ramps	0	70.9	0.0	0.0	60.0	60.6	71.6	64	137	296	637	1,372
69	Hamner Ave	between 68th & Schle	0	67.3	0.0	0.0	56.7	57.4	68.0	37	80	171	369	795
70	Pine Ave	between Euclid & Arch	0	68.9	0.0	0.0	58.4	59.1	69.7	48	103	222	478	1,029
71	Schlesiman Rd	between Archibald Av	0	65.2	0.0	0.0	54.6	55.3	65.9	27	58	125	268	578
72	Euclid Ave	between Pine & SR-71	0	70.4	0.0	0.0	59.9	60.6	71.2	60	129	279	601	1,294
73	Archibald Ave	between Schlesiman R	0	68.2	0.0	0.0	57.3	57.9	68.9	42	91	196	422	909
74	Archibald Ave	between Chandler & C	0	68.6	0.0	0.0	57.7	58.3	69.3	45	97	208	448	965
75	River Ave	south of Corydon	0	66.2	0.0	0.0	56.2	57.8	67.1	32	69	149	321	692
76	Hamner Ave	between Schlesiman R	0	68.2	0.0	0.0	57.7	58.3	69.0	43	92	199	428	922
77	Hamner Ave	south of Norco	0	68.6	0.0	0.0	58.0	58.7	69.4	45	98	210	453	976

Model Input

Project Name	The Lake Subarea 29		
Project Number	14252		
Modeling Scenario	Opening Year+Project 2025		
Site Absorption	Soft	**Peak Hour Ratio**	10
Descriptor	CNEL	**Traffic Volume**	ADT

Segment Number	Roadway	Segment		Traffic Volume	Speed (mph)	Distance to Centerline	Vehicle Cassification Mix (%)					24-Hour Traffic Distribution (%)			K-Factor
		From	To				Automobiles	Motorcycles	Bus	Medium Trucks	Heavy Trucks	Day	Evening	Night	
1	Monterey Ave	North of Varner Rd		16,600	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
2	Haven Ave	north of SR-60 WB Ramps		40,500	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
3	Archibald Ave	between SR-60 WB Ramps & SR-60 EB Ramps		29,000	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
4	Haven Ave	between SR-60 WB Ramps & SR-60 EB Ramps		41,800	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
5	Archibald Ave	between SR-60 EB Ramps & Riverside Ave		45,900	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
6	Haven Ave	between SR-60 EB Ramps & East Riverside		38,600	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
7	Riverside Ave	west of Archibald Ave		34,900	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
8	Riverside Ave	between Archibald Ave & Haven Ave		26,700	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
9	Archibald Ave	between Riverside Ave & Chino		42,900	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
10	Haven Ave	between East Riverside & Chino		33,400	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
11	Chino Ave	west of Archibald Ave		13,000	40	50	97.42			1.84	0.74	77.7	12.68	9.62	
12	Chino Ave	between Archibald Ave & Haven Ave		8,500	40	50	97.42			1.84	0.74	77.7	12.68	9.62	
13	Ramona Place	north of Edison		13,700	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
14	Central Ave	north of Edison		32,500	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
15	Mountain Ave	north of Edison		10,800	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
16	Euclid Ave	north of Edison		56,800	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
17	Grove Ave	north of Edison		18,900	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
18	Archibald Ave	between Chino & Schaefer		37,200	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
19	Archibald Ave	between Schaefer & Ontario Ranch Rd		36,800	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
20	Haven Ave	between Chino & Ontario Ranch Rd		38,400	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
21	Hamner Ave	north of Ontario Ranch Rd		33,300	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
22	Grand Ave	west of SR-71 NB Off-Ramp		64,400	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
23	Grand Ave	between SR-71 SB Ramps & SR-71 NB Off-Ran		52,400	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
24	Grand Ave	between SR-71 NB Off-Ramp & Ramona		32,800	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
25	Edison Ave	between Ramona & Central		21,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
26	Edison Ave	between Central & Mountain		23,000	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
27	Edison Ave	between Mountain & Euclid		20,500	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
28	Edison Ave	between Grove Ave & Archibald Ave		22,800	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
29	Ontario Ranch Rd	between Archibald Ave & Haven Ave		44,200	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
30	Ontario Ranch Rd	between Haven Ave & I-15 SB Ramps		69,600	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
31	Ontario Ranch Rd	between I-15 SB Ramps & I-15 NB Ramps		39,200	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
32	Ontario Ranch Rd	west of I-15 NB Ramps		18,200	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
33	Ramona Place	south of Edison		13,200	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
34	Central Ave	south of Edison		39,800	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
35	Mountain Ave	south of Edison		3,600	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
36	Euclid Ave	between Edison & Merrill		55,800	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
37	Grove Ave	between Edison & Merrill		16,700	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
38	Archibald Ave	between Eucalyptus Ave & Merrill		47,500	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
39	Haven Ave	between Ontario Ranch Rd & Eucalyptus Ave		22,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
40	Sumner Ave	between Eucalyptus Ave & Bellegrave		16,200	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
41	Mill Creek Ave	north of Eucalyptus Ave		0	45	50	0			1.84	0.74	0	12.68	9.62	
42	Mill Creek Ave	between Eucalyptus Ave & Bellegrave		2,000	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
43	Hamner Ave	north of Eucalyptus Ave		44,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
44	Eucalyptus Ave	west of Archibald Ave		6,300	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
45	Eucalyptus Ave	between Archibald Ave & Sumner		5,800	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
46	Eucalyptus Ave	between Mill Creek Ave & Hamner Ave		8,600	45	50	97.42			1.84	0.74	77.7	12.68	9.62	

47	Parkview St	between Archibald Ave & Sumner Ave	3,000	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
48	Merrill Ave	between Euclid & Grove Ave	24,200	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
49	Merrill Ave	between Grove Ave & Charlotte	26,800	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
50	Merrill Ave	between Celebation Ave & Sumner Ave	15,700	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
51	Bellegrave Ave	between Sumner Ave & Scholar	27,000	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
52	Bellegrave Ave	between Scholar & Hamner Ave	30,300	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
53	Bellegrave Ave	west of Hamner Ave	19,900	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
54	Euclid Ave	between Merrill & Kimball	48,900	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
55	Euclid Ave	between Pine & Kimball	44,200	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
56	Archibald Ave	between Merrill & Schlesiman Rd	35,400	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
57	Sumner Ave	between Bellegrave & Limonite Ave	20,300	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
58	Sumner Ave	south of Limonite Ave	17,200	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
59	Scholar Way	between Bellegrave & Limonite Ave	5,500	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
60	Scholar Way	south of Limonite Ave	7,600	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
61	Hamner Ave	between Limonite Ave & Limonite Ave	23,500	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
62	Hamner Ave	between Limonite Ave & 68th	27,600	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
63	Kimball Ave	west of Euclid	12,600	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
64	Limonite Ave	between Archibald Ave & Sumner Ave	31,600	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
65	Limonite Ave	between Sumner Ave & Hamner Ave	40,500	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
66	Limonite Ave	between Hamner Ave & I-15 SB Ramps	57,600	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
67	Limonite Ave	between I-15 SB Ramps & I-15 NB Ramps	55,000	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
68	Limonite Ave	west of I-15 NB Ramps	45,400	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
69	Hamner Ave	between 68th & Schlesiman Rd	26,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
70	Pine Ave	between Euclid & Archibald Ave	36,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
71	Schlesiman Rd	between Archibald Ave & Hamner Ave	15,200	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
72	Euclid Ave	between Pine & SR-71 NB Ramps	46,300	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
73	Archibald Ave	between Schlesiman Rd & Chandler	25,300	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
74	Archibald Ave	between Chandler & Corydon	27,500	50	50	97.42			1.84	0.74	77.7	12.68	9.62	
75	River Ave	south of Corydon	27,800	25	50	97.42			1.84	0.74	77.7	12.68	9.62	
76	Hamner Ave	between Schlesiman Rd & Norco	32,100	45	50	97.42			1.84	0.74	77.7	12.68	9.62	
77	Hamner Ave	south of Norco	33,400	45	50	97.42			1.84	0.74	77.7	12.68	9.62	

Model Results

Project Name	The Lake Subarea 29
Project Number	14252
Modeling Scenario	Opening Year+Project 2025

Segment Number	Roadway	Segment From	Segment To	Noise Levels (dB) CNEL Automobiles	Motorcycles	Bus	Medium Trucks	Heavy Trucks	Total	Distance to Traffic Noise Contours (feet) 70 dB	65 dB	60 dB	55 dB	50 dB
1	Monterey Ave	North of Varner Rd	0	64.0	0.0	0.0	54.0	55.6	64.9	23	49	106	229	494
2	Haven Ave	north of SR-60 WB Ran	0	69.4	0.0	0.0	58.9	59.6	70.2	52	111	239	516	1,111
3	Archibald Ave	between SR-60 WB Ra	0	68.9	0.0	0.0	58.0	58.6	69.6	47	101	219	471	1,015
4	Haven Ave	between SR-60 WB Ra	0	69.6	0.0	0.0	59.0	59.7	70.3	53	114	245	527	1,135
5	Archibald Ave	between SR-60 EB Ran	0	70.9	0.0	0.0	60.0	60.6	71.6	64	138	297	640	1,378
6	Haven Ave	between SR-60 EB Ran	0	69.2	0.0	0.0	58.7	59.4	70.0	50	108	232	500	1,076
7	Riverside Ave	west of Archibald Ave	0	69.7	0.0	0.0	58.8	59.4	70.4	53	115	247	533	1,148
8	Riverside Ave	between Archibald Av	0	68.6	0.0	0.0	57.7	58.2	69.3	45	96	207	446	960
9	Archibald Ave	between Riverside Ave	0	70.6	0.0	0.0	59.7	60.3	71.3	61	132	284	612	1,318
10	Haven Ave	between East Riversid	0	68.6	0.0	0.0	58.0	58.7	69.4	45	98	211	454	977
11	Chino Ave	west of Archibald Ave	0	63.7	0.0	0.0	53.4	54.3	64.5	22	46	100	216	465
12	Chino Ave	between Archibald Av	0	61.9	0.0	0.0	51.6	52.4	62.7	16	35	75	163	350
13	Ramona Place	north of Edison	0	64.7	0.0	0.0	54.2	54.9	65.5	25	54	116	250	540
14	Central Ave	north of Edison	0	68.5	0.0	0.0	57.9	58.6	69.2	45	96	207	446	960
15	Mountain Ave	north of Edison	0	63.7	0.0	0.0	53.1	53.8	64.5	21	46	99	214	460
16	Euclid Ave	north of Edison	0	70.9	0.0	0.0	60.4	61.0	71.7	65	139	300	646	1,393
17	Grove Ave	north of Edison	0	67.1	0.0	0.0	56.2	56.7	67.8	35	76	164	354	763
18	Archibald Ave	between Chino & Scha	0	70.0	0.0	0.0	59.1	59.7	70.7	56	120	258	556	1,198
19	Archibald Ave	between Schaefer & O	0	69.9	0.0	0.0	59.1	59.6	70.6	55	119	256	552	1,190
20	Haven Ave	between Chino & Onta	0	69.2	0.0	0.0	58.7	59.3	70.0	50	107	231	498	1,073
21	Hamner Ave	north of Ontario Ranch	0	68.6	0.0	0.0	58.0	58.7	69.4	45	98	210	453	976
22	Grand Ave	west of SR-71 NB Off-R	0	71.5	0.0	0.0	60.9	61.6	72.2	70	151	326	703	1,514
23	Grand Ave	between SR-71 SB Ran	0	70.6	0.0	0.0	60.0	60.7	71.3	61	132	284	613	1,320
24	Grand Ave	between SR-71 NB Off	0	68.5	0.0	0.0	58.0	58.6	69.3	45	97	208	448	966
25	Edison Ave	between Ramona & Ce	0	66.6	0.0	0.0	56.1	56.7	67.4	33	72	155	334	720
26	Edison Ave	between Central & Mo	0	67.0	0.0	0.0	56.4	57.1	67.7	35	76	164	354	762
27	Edison Ave	between Mountain &	0	66.5	0.0	0.0	55.9	56.6	67.2	33	71	152	328	706
28	Edison Ave	between Grove Ave &	0	67.0	0.0	0.0	56.4	57.1	67.7	35	76	163	352	758
29	Ontario Ranch Rd	between Archibald Av	0	70.7	0.0	0.0	59.9	60.4	71.4	62	134	290	624	1,344
30	Ontario Ranch Rd	between Haven Ave &	0	72.7	0.0	0.0	61.8	62.4	73.4	84	182	392	844	1,819
31	Ontario Ranch Rd	between I-15 SB Ramp	0	70.2	0.0	0.0	59.4	59.9	70.9	58	124	267	576	1,241
32	Ontario Ranch Rd	west of I-15 NB Ramps	0	66.9	0.0	0.0	56.0	56.6	67.6	35	74	160	345	744
33	Ramona Place	south of Edison	0	64.6	0.0	0.0	54.0	54.7	65.3	24	53	113	244	526
34	Central Ave	south of Edison	0	69.4	0.0	0.0	58.8	59.5	70.1	51	110	237	510	1,099
35	Mountain Ave	south of Edison	0	58.9	0.0	0.0	48.4	49.1	59.7	10	22	48	103	221
36	Euclid Ave	between Edison & Me	0	70.8	0.0	0.0	60.3	61.0	71.6	64	138	297	639	1,376
37	Grove Ave	between Edison & Me	0	66.5	0.0	0.0	55.6	56.2	67.2	33	70	151	326	702
38	Archibald Ave	between Eucalyptus A	0	71.1	0.0	0.0	60.2	60.7	71.8	65	141	304	655	1,410
39	Haven Ave	between Ontario Ranc	0	66.8	0.0	0.0	56.3	56.9	67.6	34	74	160	345	742
40	Sumner Ave	between Eucalyptus A	0	65.5	0.0	0.0	54.9	55.6	66.2	28	60	130	280	603
41	Mill Creek Ave	north of Eucalyptus Av	0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0
42	Mill Creek Ave	between Eucalyptus A	0	56.4	0.0	0.0	45.8	46.5	57.1	7	15	32	69	150
43	Hamner Ave	north of Eucalyptus Av	0	69.8	0.0	0.0	59.3	59.9	70.6	55	118	253	546	1,176
44	Eucalyptus Ave	west of Archibald Ave	0	61.4	0.0	0.0	50.8	51.5	62.1	15	32	69	149	321
45	Eucalyptus Ave	between Archibald Av	0	61.0	0.0	0.0	50.4	51.1	61.8	14	30	66	141	304

46	Eucalyptus Ave	between Mill Creek Av	0	62.7	0.0	0.0	52.2	52.8	63.5	18	40	85	184	396
47	Parkview St	between Archibald Av	0	56.5	0.0	0.0	46.6	48.2	57.5	7	16	34	73	158
48	Merrill Ave	between Euclid & Gro	0	67.2	0.0	0.0	56.6	57.3	68.0	37	79	170	366	789
49	Merrill Ave	between Grove Ave &	0	67.7	0.0	0.0	57.1	57.8	68.4	39	84	182	392	844
50	Merrill Ave	between Celebation A	0	65.3	0.0	0.0	54.8	55.4	66.1	27	59	127	274	591
51	Bellegrave Ave	between Sumner Ave	0	68.6	0.0	0.0	57.7	58.3	69.3	45	97	208	449	968
52	Bellegrave Ave	between Scholar & Ha	0	69.1	0.0	0.0	58.2	58.8	69.8	49	104	225	485	1,045
53	Bellegrave Ave	west of Hamner Ave	0	67.3	0.0	0.0	56.4	57.0	68.0	37	79	170	366	790
54	Euclid Ave	between Merrill & Kim	0	70.3	0.0	0.0	59.7	60.4	71.0	58	126	272	585	1,260
55	Euclid Ave	between Pine & Kimba	0	69.8	0.0	0.0	59.3	59.9	70.6	55	118	254	547	1,178
56	Archibald Ave	between Merrill & Sch	0	69.8	0.0	0.0	58.9	59.5	70.5	54	116	250	538	1,159
57	Sumner Ave	between Bellegrave &	0	66.4	0.0	0.0	55.9	56.6	67.2	33	70	151	326	701
58	Sumner Ave	south of Limonite Ave	0	65.7	0.0	0.0	55.2	55.8	66.5	29	63	135	291	628
59	Scholar Way	between Bellegrave &	0	59.2	0.0	0.0	49.2	50.8	60.1	11	24	51	110	237
60	Scholar Way	south of Limonite Ave	0	60.6	0.0	0.0	50.6	52.2	61.5	14	29	63	136	294
61	Hamner Ave	between Limonite Ave	0	67.1	0.0	0.0	56.5	57.2	67.8	36	77	167	359	773
62	Hamner Ave	between Limonite Ave	0	67.8	0.0	0.0	57.2	57.9	68.5	40	86	185	400	861
63	Kimball Ave	west of Euclid	0	65.3	0.0	0.0	54.4	55.0	66.0	27	58	125	270	582
64	Limonite Ave	between Archibald Av	0	69.3	0.0	0.0	58.4	59.0	70.0	50	107	232	499	1,075
65	Limonite Ave	between Sumner Ave	0	70.4	0.0	0.0	59.5	60.0	71.1	59	127	273	589	1,268
66	Limonite Ave	between Hamner Ave	0	71.9	0.0	0.0	61.0	61.6	72.6	74	160	345	744	1,604
67	Limonite Ave	between I-15 SB Ramp	0	71.7	0.0	0.0	60.8	61.4	72.4	72	155	335	722	1,555
68	Limonite Ave	west of I-15 NB Ramps	0	70.9	0.0	0.0	60.0	60.5	71.6	64	137	295	635	1,368
69	Hamner Ave	between 68th & Schle	0	67.5	0.0	0.0	57.0	57.7	68.3	38	83	179	385	829
70	Pine Ave	between Euclid & Arch	0	68.9	0.0	0.0	58.4	59.1	69.7	48	103	222	478	1,029
71	Schlesiman Rd	between Archibald Av	0	65.2	0.0	0.0	54.6	55.3	65.9	27	58	125	268	578
72	Euclid Ave	between Pine & SR-71	0	70.0	0.0	0.0	59.5	60.1	70.8	56	122	262	564	1,215
73	Archibald Ave	between Schlesiman R	0	68.3	0.0	0.0	57.5	58.0	69.0	43	93	200	430	927
74	Archibald Ave	between Chandler & C	0	68.7	0.0	0.0	57.8	58.4	69.4	45	98	211	455	980
75	River Ave	south of Corydon	0	66.2	0.0	0.0	56.2	57.8	67.2	32	70	150	323	697
76	Hamner Ave	between Schlesiman R	0	68.4	0.0	0.0	57.9	58.6	69.2	44	95	205	442	952
77	Hamner Ave	south of Norco	0	68.6	0.0	0.0	58.0	58.7	69.4	45	98	211	454	977

APPENDIX 7.1:

ON-SITE MODEL INPUTS

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Backyard With Wall
Road Name: Eucalyptus Ave
Lot No: 30

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	960 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	25.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	70.887
Medium Trucks:	70.762
Heavy Trucks:	70.775

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	-1.62	-3.17	-1.20	*-0.32*	0.000	0.000
Medium Trucks:	76.31	-18.86	-3.15	-1.20	*-0.49*	0.000	0.000
Heavy Trucks:	81.16	-22.81	-3.16	-1.20	*-1.05*	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	59.5	57.7	51.7	60.3	60.9
Medium Trucks:	53.1	51.6	45.2	43.7	52.1	52.4
Heavy Trucks:	54.0	52.6	43.5	44.8	53.1	53.3
Vehicle Noise:	62.6	60.8	58.1	53.0	61.6	62.1

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.4	59.5	57.7	51.7	60.3	60.9
Medium Trucks:	53.1	51.6	45.2	43.7	52.1	52.4
Heavy Trucks:	54.0	52.6	43.5	44.8	53.1	53.3
Vehicle Noise:	62.6	60.8	58.1	53.0	61.6	62.1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Backyard With Wall
Road Name: Eucalyptus Ave
Lot No: 31

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	960 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	25.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	70.887
Medium Trucks:	70.762
Heavy Trucks:	70.775

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	-1.62	-3.17	-1.20	*-0.32*	0.000	0.000
Medium Trucks:	76.31	-18.86	-3.15	-1.20	*-0.49*	0.000	0.000
Heavy Trucks:	81.16	-22.81	-3.16	-1.20	*-1.05*	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	59.5	57.7	51.7	60.3	60.9
Medium Trucks:	53.1	51.6	45.2	43.7	52.1	52.4
Heavy Trucks:	54.0	52.6	43.5	44.8	53.1	53.3
Vehicle Noise:	62.6	60.8	58.1	53.0	61.6	62.1

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.4	59.5	57.7	51.7	60.3	60.9
Medium Trucks:	53.1	51.6	45.2	43.7	52.1	52.4
Heavy Trucks:	54.0	52.6	43.5	44.8	53.1	53.3
Vehicle Noise:	62.6	60.8	58.1	53.0	61.6	62.1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Backyard With Wall
Road Name: Eucalyptus Ave
Lot No: 32

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	960 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	25.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	70.887
Medium Trucks:	70.762
Heavy Trucks:	70.775

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	-1.62	-3.17	-1.20	*-0.32*	0.000	0.000
Medium Trucks:	76.31	-18.86	-3.15	-1.20	*-0.49*	0.000	0.000
Heavy Trucks:	81.16	-22.81	-3.16	-1.20	*-1.05*	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	59.5	57.7	51.7	60.3	60.9
Medium Trucks:	53.1	51.6	45.2	43.7	52.1	52.4
Heavy Trucks:	54.0	52.6	43.5	44.8	53.1	53.3
Vehicle Noise:	62.6	60.8	58.1	53.0	61.6	62.1

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.4	59.5	57.7	51.7	60.3	60.9
Medium Trucks:	53.1	51.6	45.2	43.7	52.1	52.4
Heavy Trucks:	54.0	52.6	43.5	44.8	53.1	53.3
Vehicle Noise:	62.6	60.8	58.1	53.0	61.6	62.1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Backyard With Wall
Road Name: Eucalyptus Ave
Lot No: 33

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	960 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	25.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	70.887
Medium Trucks:	70.762
Heavy Trucks:	70.775

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	-1.62	-3.17	-1.20	*-0.32*	0.000	0.000
Medium Trucks:	76.31	-18.86	-3.15	-1.20	*-0.49*	0.000	0.000
Heavy Trucks:	81.16	-22.81	-3.16	-1.20	*-1.05*	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	59.5	57.7	51.7	60.3	60.9
Medium Trucks:	53.1	51.6	45.2	43.7	52.1	52.4
Heavy Trucks:	54.0	52.6	43.5	44.8	53.1	53.3
Vehicle Noise:	62.6	60.8	58.1	53.0	61.6	62.1

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.4	59.5	57.7	51.7	60.3	60.9
Medium Trucks:	53.1	51.6	45.2	43.7	52.1	52.4
Heavy Trucks:	54.0	52.6	43.5	44.8	53.1	53.3
Vehicle Noise:	62.6	60.8	58.1	53.0	61.6	62.1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Backyard With Wall
Road Name: Parkview St
Lot No: 30

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	330 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	25.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.941
Medium Trucks:	93.847
Heavy Trucks:	93.856

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	-4.21	-5.62	-1.20	*-0.35*	0.000	0.000
Medium Trucks:	71.09	-21.45	-5.61	-1.20	*-0.48*	0.000	0.000
Heavy Trucks:	77.24	-25.41	-5.61	-1.20	*-0.89*	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:	48.4	46.5	44.7	38.7	47.3	47.9
Medium Trucks:	42.8	41.3	35.0	33.4	41.9	42.1
Heavy Trucks:	45.0	43.6	34.6	35.8	44.2	44.3
Vehicle Noise:	50.8	49.1	45.5	41.3	49.8	50.2

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	48.4	46.5	44.7	38.7	47.3	47.9
Medium Trucks:	42.8	41.3	35.0	33.4	41.9	42.1
Heavy Trucks:	45.0	43.6	34.6	35.8	44.2	44.3
Vehicle Noise:	50.8	49.1	45.5	41.3	49.8	50.2

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Backyard With Wall
Road Name: Parkview St
Lot No: 31

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	330 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	25.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.941
Medium Trucks:	93.847
Heavy Trucks:	93.856

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	-4.21	-5.62	-1.20	*-0.35*	0.000	0.000
Medium Trucks:	71.09	-21.45	-5.61	-1.20	*-0.48*	0.000	0.000
Heavy Trucks:	77.24	-25.41	-5.61	-1.20	*-0.89*	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:	48.4	46.5	44.7	38.7	47.3	47.9
Medium Trucks:	42.8	41.3	35.0	33.4	41.9	42.1
Heavy Trucks:	45.0	43.6	34.6	35.8	44.2	44.3
Vehicle Noise:	50.8	49.1	45.5	41.3	49.8	50.2

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	48.4	46.5	44.7	38.7	47.3	47.9
Medium Trucks:	42.8	41.3	35.0	33.4	41.9	42.1
Heavy Trucks:	45.0	43.6	34.6	35.8	44.2	44.3
Vehicle Noise:	50.8	49.1	45.5	41.3	49.8	50.2

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Backyard With Wall
Road Name: Belgrave Ave
Lot No: 34

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	660 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	30 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	25.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	83.815
Medium Trucks:	83.710
Heavy Trucks:	83.720

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	-3.24	-4.62	-1.20	*-0.34*	0.000	0.000
Medium Trucks:	76.31	-20.48	-4.61	-1.20	*-0.49*	0.000	0.000
Heavy Trucks:	81.16	-24.44	-4.62	-1.20	*-0.95*	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:	58.3	56.4	54.6	48.6	57.2	57.8
Medium Trucks:	50.0	48.5	42.1	40.6	49.1	49.3
Heavy Trucks:	50.9	49.5	40.4	41.7	50.1	50.2
Vehicle Noise:	59.5	57.7	55.0	49.9	58.5	59.0

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	58.3	56.4	54.6	48.6	57.2	57.8
Medium Trucks:	50.0	48.5	42.1	40.6	49.1	49.3
Heavy Trucks:	50.9	49.5	40.4	41.7	50.1	50.2
Vehicle Noise:	59.5	57.7	55.0	49.9	58.5	59.0

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Backyard With Wall
Road Name: Belgrave Ave
Lot No: 33

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	660 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	30 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	25.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	83.815
Medium Trucks:	83.710
Heavy Trucks:	83.720

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	-3.24	-4.62	-1.20	*-0.34*	0.000	0.000
Medium Trucks:	76.31	-20.48	-4.61	-1.20	*-0.49*	0.000	0.000
Heavy Trucks:	81.16	-24.44	-4.62	-1.20	*-0.95*	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:	58.3	56.4	54.6	48.6	57.2	57.8
Medium Trucks:	50.0	48.5	42.1	40.6	49.1	49.3
Heavy Trucks:	50.9	49.5	40.4	41.7	50.1	50.2
Vehicle Noise:	59.5	57.7	55.0	49.9	58.5	59.0

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	58.3	56.4	54.6	48.6	57.2	57.8
Medium Trucks:	50.0	48.5	42.1	40.6	49.1	49.3
Heavy Trucks:	50.9	49.5	40.4	41.7	50.1	50.2
Vehicle Noise:	59.5	57.7	55.0	49.9	58.5	59.0

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Backyard With Wall
Road Name: Haven Ave
Lot No: 34

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,140 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	25.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	70.887
Medium Trucks:	70.762
Heavy Trucks:	70.775

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	-0.87	-3.17	-1.20	*-0.32*	0.000	0.000
Medium Trucks:	76.31	-18.11	-3.15	-1.20	*-0.49*	0.000	0.000
Heavy Trucks:	81.16	-22.06	-3.16	-1.20	*-1.05*	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	60.2	58.5	52.4	61.0	61.6
Medium Trucks:	53.8	52.3	46.0	44.4	52.9	53.1
Heavy Trucks:	54.7	53.3	44.3	45.5	53.9	54.0
Vehicle Noise:	63.4	61.6	58.8	53.8	62.3	62.8

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.1	60.2	58.5	52.4	61.0	61.6
Medium Trucks:	53.8	52.3	46.0	44.4	52.9	53.1
Heavy Trucks:	54.7	53.3	44.3	45.5	53.9	54.0
Vehicle Noise:	63.4	61.6	58.8	53.8	62.3	62.8

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Backyard With Wall
Road Name: Haven Ave
Lot No: 32

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,140 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	25.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	70.887
Medium Trucks:	70.762
Heavy Trucks:	70.775

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	-0.87	-3.17	-1.20	*-0.32*	0.000	0.000
Medium Trucks:	76.31	-18.11	-3.15	-1.20	*-0.49*	0.000	0.000
Heavy Trucks:	81.16	-22.06	-3.16	-1.20	*-1.05*	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	60.2	58.5	52.4	61.0	61.6
Medium Trucks:	53.8	52.3	46.0	44.4	52.9	53.1
Heavy Trucks:	54.7	53.3	44.3	45.5	53.9	54.0
Vehicle Noise:	63.4	61.6	58.8	53.8	62.3	62.8

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.1	60.2	58.5	52.4	61.0	61.6
Medium Trucks:	53.8	52.3	46.0	44.4	52.9	53.1
Heavy Trucks:	54.7	53.3	44.3	45.5	53.9	54.0
Vehicle Noise:	63.4	61.6	58.8	53.8	62.3	62.8

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Backyard With Wall
Road Name: Scholar Way
Lot No: 33

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	700 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	25.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.941
Medium Trucks:	93.847
Heavy Trucks:	93.856

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	-0.95	-5.62	-1.20	*-0.35*	0.000	0.000
Medium Trucks:	71.09	-18.19	-5.61	-1.20	*-0.48*	0.000	0.000
Heavy Trucks:	77.24	-22.14	-5.61	-1.20	*-0.89*	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:	51.7	49.8	48.0	42.0	50.6	51.2
Medium Trucks:	46.1	44.6	38.2	36.7	45.1	45.4
Heavy Trucks:	48.3	46.9	37.8	39.1	47.4	47.6
Vehicle Noise:	54.1	52.4	48.8	44.5	53.1	53.5

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	51.7	49.8	48.0	42.0	50.6	51.2
Medium Trucks:	46.1	44.6	38.2	36.7	45.1	45.4
Heavy Trucks:	48.3	46.9	37.8	39.1	47.4	47.6
Vehicle Noise:	54.1	52.4	48.8	44.5	53.1	53.5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: First Floor With Wall
Road Name: Eucalyptus Ave
Lot No: 30

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	960 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	35.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	81.394
Medium Trucks:	81.285
Heavy Trucks:	81.296

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	-1.62	-4.37	-1.20	*-0.20*	0.000	0.000
Medium Trucks:	76.31	-18.86	-4.36	-1.20	*-0.36*	0.000	0.000
Heavy Trucks:	81.16	-22.81	-4.36	-1.20	*-0.92*	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:	60.2	58.3	56.5	50.5	59.1	59.7
Medium Trucks:	51.9	50.4	44.0	42.5	50.9	51.2
Heavy Trucks:	52.8	51.4	42.3	43.6	51.9	52.1
Vehicle Noise:	61.4	59.6	56.9	51.8	60.4	60.9

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.2	58.3	56.5	50.5	59.1	59.7
Medium Trucks:	51.9	50.4	44.0	42.5	50.9	51.2
Heavy Trucks:	52.8	51.4	42.3	43.6	51.9	52.1
Vehicle Noise:	61.4	59.6	56.9	51.8	60.4	60.9

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: First Floor With Wall
Road Name: Eucalyptus Ave
Lot No: 31

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	960 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	35.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	81.394
Medium Trucks:	81.285
Heavy Trucks:	81.296

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	-1.62	-4.37	-1.20	*-0.20*	0.000	0.000
Medium Trucks:	76.31	-18.86	-4.36	-1.20	*-0.36*	0.000	0.000
Heavy Trucks:	81.16	-22.81	-4.36	-1.20	*-0.92*	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:	60.2	58.3	56.5	50.5	59.1	59.7
Medium Trucks:	51.9	50.4	44.0	42.5	50.9	51.2
Heavy Trucks:	52.8	51.4	42.3	43.6	51.9	52.1
Vehicle Noise:	61.4	59.6	56.9	51.8	60.4	60.9

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.2	58.3	56.5	50.5	59.1	59.7
Medium Trucks:	51.9	50.4	44.0	42.5	50.9	51.2
Heavy Trucks:	52.8	51.4	42.3	43.6	51.9	52.1
Vehicle Noise:	61.4	59.6	56.9	51.8	60.4	60.9

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: First Floor With Wall
Road Name: Eucalyptus Ave
Lot No: 32

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	960 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	35.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	81.394
Medium Trucks:	81.285
Heavy Trucks:	81.296

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	-1.62	-4.37	-1.20	*-0.20*	0.000	0.000
Medium Trucks:	76.31	-18.86	-4.36	-1.20	*-0.36*	0.000	0.000
Heavy Trucks:	81.16	-22.81	-4.36	-1.20	*-0.92*	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:	60.2	58.3	56.5	50.5	59.1	59.7
Medium Trucks:	51.9	50.4	44.0	42.5	50.9	51.2
Heavy Trucks:	52.8	51.4	42.3	43.6	51.9	52.1
Vehicle Noise:	61.4	59.6	56.9	51.8	60.4	60.9

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.2	58.3	56.5	50.5	59.1	59.7
Medium Trucks:	51.9	50.4	44.0	42.5	50.9	51.2
Heavy Trucks:	52.8	51.4	42.3	43.6	51.9	52.1
Vehicle Noise:	61.4	59.6	56.9	51.8	60.4	60.9

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: First Floor With Wall
Road Name: Eucalyptus Ave
Lot No: 33

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	960 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	35.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	81.394
Medium Trucks:	81.285
Heavy Trucks:	81.296

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	-1.62	-4.37	-1.20	*-0.20*	0.000	0.000
Medium Trucks:	76.31	-18.86	-4.36	-1.20	*-0.36*	0.000	0.000
Heavy Trucks:	81.16	-22.81	-4.36	-1.20	*-0.92*	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:	60.2	58.3	56.5	50.5	59.1	59.7
Medium Trucks:	51.9	50.4	44.0	42.5	50.9	51.2
Heavy Trucks:	52.8	51.4	42.3	43.6	51.9	52.1
Vehicle Noise:	61.4	59.6	56.9	51.8	60.4	60.9

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.2	58.3	56.5	50.5	59.1	59.7
Medium Trucks:	51.9	50.4	44.0	42.5	50.9	51.2
Heavy Trucks:	52.8	51.4	42.3	43.6	51.9	52.1
Vehicle Noise:	61.4	59.6	56.9	51.8	60.4	60.9

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: First Floor With Wall
Road Name: Parkview St
Lot No: 30

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	330 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	35.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	103.947
Medium Trucks:	103.862
Heavy Trucks:	103.870

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	-4.21	-6.49	-1.20	*-0.23*	0.000	0.000
Medium Trucks:	71.09	-21.45	-6.49	-1.20	*-0.35*	0.000	0.000
Heavy Trucks:	77.24	-25.41	-6.49	-1.20	*-0.76*	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:	47.5	45.6	43.9	37.8	46.4	47.0
Medium Trucks:	41.9	40.4	34.1	32.5	41.0	41.2
Heavy Trucks:	44.1	42.7	33.7	34.9	43.3	43.4
Vehicle Noise:	49.9	48.2	44.7	40.4	48.9	49.3

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	47.5	45.6	43.9	37.8	46.4	47.0
Medium Trucks:	41.9	40.4	34.1	32.5	41.0	41.2
Heavy Trucks:	44.1	42.7	33.7	34.9	43.3	43.4
Vehicle Noise:	49.9	48.2	44.7	40.4	48.9	49.3

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: First Floor With Wall
Road Name: Parkview St
Lot No: 31

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	330 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	35.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	103.947
Medium Trucks:	103.862
Heavy Trucks:	103.870

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	-4.21	-6.49	-1.20	*-0.23*	0.000	0.000
Medium Trucks:	71.09	-21.45	-6.49	-1.20	*-0.35*	0.000	0.000
Heavy Trucks:	77.24	-25.41	-6.49	-1.20	*-0.76*	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:	47.5	45.6	43.9	37.8	46.4	47.0
Medium Trucks:	41.9	40.4	34.1	32.5	41.0	41.2
Heavy Trucks:	44.1	42.7	33.7	34.9	43.3	43.4
Vehicle Noise:	49.9	48.2	44.7	40.4	48.9	49.3

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	47.5	45.6	43.9	37.8	46.4	47.0
Medium Trucks:	41.9	40.4	34.1	32.5	41.0	41.2
Heavy Trucks:	44.1	42.7	33.7	34.9	43.3	43.4
Vehicle Noise:	49.9	48.2	44.7	40.4	48.9	49.3

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: First Floor With Wall
Road Name: Belgrave Ave
Lot No: 34

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	660 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	30 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	35.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.941
Medium Trucks:	93.847
Heavy Trucks:	93.856

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	-3.24	-5.62	-1.20	*-0.22*	0.000	0.000
Medium Trucks:	76.31	-20.48	-5.61	-1.20	*-0.35*	0.000	0.000
Heavy Trucks:	81.16	-24.44	-5.61	-1.20	*-0.82*	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:	57.3	55.4	53.6	47.6	56.2	56.8
Medium Trucks:	49.0	47.5	41.2	39.6	48.1	48.3
Heavy Trucks:	49.9	48.5	39.5	40.7	49.1	49.2
Vehicle Noise:	58.5	56.8	54.0	48.9	57.5	58.0

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	57.3	55.4	53.6	47.6	56.2	56.8
Medium Trucks:	49.0	47.5	41.2	39.6	48.1	48.3
Heavy Trucks:	49.9	48.5	39.5	40.7	49.1	49.2
Vehicle Noise:	58.5	56.8	54.0	48.9	57.5	58.0

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: First Floor With Wall
Road Name: Belgrave Ave
Lot No: 33

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	660 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	30 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	35.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.941
Medium Trucks:	93.847
Heavy Trucks:	93.856

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	-3.24	-5.62	-1.20	*-0.22*	0.000	0.000
Medium Trucks:	76.31	-20.48	-5.61	-1.20	*-0.35*	0.000	0.000
Heavy Trucks:	81.16	-24.44	-5.61	-1.20	*-0.82*	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:	57.3	55.4	53.6	47.6	56.2	56.8
Medium Trucks:	49.0	47.5	41.2	39.6	48.1	48.3
Heavy Trucks:	49.9	48.5	39.5	40.7	49.1	49.2
Vehicle Noise:	58.5	56.8	54.0	48.9	57.5	58.0

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	57.3	55.4	53.6	47.6	56.2	56.8
Medium Trucks:	49.0	47.5	41.2	39.6	48.1	48.3
Heavy Trucks:	49.9	48.5	39.5	40.7	49.1	49.2
Vehicle Noise:	58.5	56.8	54.0	48.9	57.5	58.0

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: First Floor With Wall
Road Name: Haven Ave
Lot No: 34

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,140 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	35.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	81.394
Medium Trucks:	81.285
Heavy Trucks:	81.296

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	-0.87	-4.37	-1.20	*-0.20*	0.000	0.000
Medium Trucks:	76.31	-18.11	-4.36	-1.20	*-0.36*	0.000	0.000
Heavy Trucks:	81.16	-22.06	-4.36	-1.20	*-0.92*	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:	60.9	59.0	57.3	51.2	59.8	60.4
Medium Trucks:	52.6	51.1	44.8	43.2	51.7	51.9
Heavy Trucks:	53.5	52.1	43.1	44.3	52.7	52.8
Vehicle Noise:	62.2	60.4	57.6	52.6	61.1	61.6

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.9	59.0	57.3	51.2	59.8	60.4
Medium Trucks:	52.6	51.1	44.8	43.2	51.7	51.9
Heavy Trucks:	53.5	52.1	43.1	44.3	52.7	52.8
Vehicle Noise:	62.2	60.4	57.6	52.6	61.1	61.6

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: First Floor With Wall
Road Name: Haven Ave
Lot No: 32

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,140 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	35.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	81.394
Medium Trucks:	81.285
Heavy Trucks:	81.296

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	-0.87	-4.37	-1.20	*-0.20*	0.000	0.000
Medium Trucks:	76.31	-18.11	-4.36	-1.20	*-0.36*	0.000	0.000
Heavy Trucks:	81.16	-22.06	-4.36	-1.20	*-0.92*	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:	60.9	59.0	57.3	51.2	59.8	60.4
Medium Trucks:	52.6	51.1	44.8	43.2	51.7	51.9
Heavy Trucks:	53.5	52.1	43.1	44.3	52.7	52.8
Vehicle Noise:	62.2	60.4	57.6	52.6	61.1	61.6

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.9	59.0	57.3	51.2	59.8	60.4
Medium Trucks:	52.6	51.1	44.8	43.2	51.7	51.9
Heavy Trucks:	53.5	52.1	43.1	44.3	52.7	52.8
Vehicle Noise:	62.2	60.4	57.6	52.6	61.1	61.6

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: First Floor With Wall
Road Name: Scholar Way
Lot No: 33

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	700 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	35.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	103.947
Medium Trucks:	103.862
Heavy Trucks:	103.870

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	-0.95	-6.49	-1.20	*-0.23*	0.000	0.000
Medium Trucks:	71.09	-18.19	-6.49	-1.20	*-0.35*	0.000	0.000
Heavy Trucks:	77.24	-22.14	-6.49	-1.20	*-0.76*	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:	50.8	48.9	47.1	41.1	49.7	50.3
Medium Trucks:	45.2	43.7	37.3	35.8	44.3	44.5
Heavy Trucks:	47.4	46.0	37.0	38.2	46.6	46.7
Vehicle Noise:	53.2	51.5	47.9	43.7	52.2	52.6

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	50.8	48.9	47.1	41.1	49.7	50.3
Medium Trucks:	45.2	43.7	37.3	35.8	44.3	44.5
Heavy Trucks:	47.4	46.0	37.0	38.2	46.6	46.7
Vehicle Noise:	53.2	51.5	47.9	43.7	52.2	52.6

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Second Floor With Wall
Road Name: Eucalyptus Ave
Lot No: 30

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	960 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	35.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	82.438
Medium Trucks:	82.079
Heavy Trucks:	81.461

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	-1.62	-4.48	-1.20	*-1.52*	0.000	0.000
Medium Trucks:	76.31	-18.86	-4.44	-1.20	*-1.90*	0.000	0.000
Heavy Trucks:	81.16	-22.81	-4.38	-1.20	*-3.05*	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:	60.1	58.2	56.4	50.3	59.0	59.6
Medium Trucks:	51.8	50.3	43.9	42.4	50.9	51.1
Heavy Trucks:	52.8	51.3	42.3	43.6	51.9	52.0
Vehicle Noise:	61.3	59.5	56.8	51.7	60.3	60.8

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.1	58.2	56.4	50.3	59.0	59.6
Medium Trucks:	51.8	50.3	43.9	42.4	50.9	51.1
Heavy Trucks:	52.8	51.3	42.3	43.6	51.9	52.0
Vehicle Noise:	61.3	59.5	56.8	51.7	60.3	60.8

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Second Floor With Wall
Road Name: Eucalyptus Ave
Lot No: 31

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	960 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	35.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	82.438
Medium Trucks:	82.079
Heavy Trucks:	81.461

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	-1.62	-4.48	-1.20	*-1.52*	0.000	0.000
Medium Trucks:	76.31	-18.86	-4.44	-1.20	*-1.90*	0.000	0.000
Heavy Trucks:	81.16	-22.81	-4.38	-1.20	*-3.05*	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:	60.1	58.2	56.4	50.3	59.0	59.6
Medium Trucks:	51.8	50.3	43.9	42.4	50.9	51.1
Heavy Trucks:	52.8	51.3	42.3	43.6	51.9	52.0
Vehicle Noise:	61.3	59.5	56.8	51.7	60.3	60.8

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.1	58.2	56.4	50.3	59.0	59.6
Medium Trucks:	51.8	50.3	43.9	42.4	50.9	51.1
Heavy Trucks:	52.8	51.3	42.3	43.6	51.9	52.0
Vehicle Noise:	61.3	59.5	56.8	51.7	60.3	60.8

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Second Floor With Wall
Road Name: Eucalyptus Ave
Lot No: 32

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	960 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	35.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	82.438
Medium Trucks:	82.079
Heavy Trucks:	81.461

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	-1.62	-4.48	-1.20	*-1.52*	0.000	0.000
Medium Trucks:	76.31	-18.86	-4.44	-1.20	*-1.90*	0.000	0.000
Heavy Trucks:	81.16	-22.81	-4.38	-1.20	*-3.05*	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:	60.1	58.2	56.4	50.3	59.0	59.6
Medium Trucks:	51.8	50.3	43.9	42.4	50.9	51.1
Heavy Trucks:	52.8	51.3	42.3	43.6	51.9	52.0
Vehicle Noise:	61.3	59.5	56.8	51.7	60.3	60.8

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.1	58.2	56.4	50.3	59.0	59.6
Medium Trucks:	51.8	50.3	43.9	42.4	50.9	51.1
Heavy Trucks:	52.8	51.3	42.3	43.6	51.9	52.0
Vehicle Noise:	61.3	59.5	56.8	51.7	60.3	60.8

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Second Floor With Wall
Road Name: Eucalyptus Ave
Lot No: 33

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	960 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	35.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	82.438
Medium Trucks:	82.079
Heavy Trucks:	81.461

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	-1.62	-4.48	-1.20	*-1.52*	0.000	0.000
Medium Trucks:	76.31	-18.86	-4.44	-1.20	*-1.90*	0.000	0.000
Heavy Trucks:	81.16	-22.81	-4.38	-1.20	*-3.05*	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:	60.1	58.2	56.4	50.3	59.0	59.6
Medium Trucks:	51.8	50.3	43.9	42.4	50.9	51.1
Heavy Trucks:	52.8	51.3	42.3	43.6	51.9	52.0
Vehicle Noise:	61.3	59.5	56.8	51.7	60.3	60.8

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.1	58.2	56.4	50.3	59.0	59.6
Medium Trucks:	51.8	50.3	43.9	42.4	50.9	51.1
Heavy Trucks:	52.8	51.3	42.3	43.6	51.9	52.0
Vehicle Noise:	61.3	59.5	56.8	51.7	60.3	60.8

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Second Floor With Wall
Road Name: Parkview St
Lot No: 30

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	330 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	35.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	104.766
Medium Trucks:	104.484
Heavy Trucks:	104.000

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	-4.21	-6.56	-1.20	*-1.72*	0.000	0.000
Medium Trucks:	71.09	-21.45	-6.54	-1.20	*-2.03*	0.000	0.000
Heavy Trucks:	77.24	-25.41	-6.50	-1.20	*-2.92*	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:	47.5	45.6	43.8	37.7	46.4	47.0
Medium Trucks:	41.9	40.4	34.0	32.5	40.9	41.2
Heavy Trucks:	44.1	42.7	33.7	34.9	43.3	43.4
Vehicle Noise:	49.9	48.2	44.6	40.3	48.9	49.3

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	47.5	45.6	43.8	37.7	46.4	47.0
Medium Trucks:	41.9	40.4	34.0	32.5	40.9	41.2
Heavy Trucks:	44.1	42.7	33.7	34.9	43.3	43.4
Vehicle Noise:	49.9	48.2	44.6	40.3	48.9	49.3

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Second Floor With Wall
Road Name: Parkview St
Lot No: 31

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	330 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	35.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	104.766
Medium Trucks:	104.484
Heavy Trucks:	104.000

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	-4.21	-6.56	-1.20	*-1.72*	0.000	0.000
Medium Trucks:	71.09	-21.45	-6.54	-1.20	*-2.03*	0.000	0.000
Heavy Trucks:	77.24	-25.41	-6.50	-1.20	*-2.92*	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:	47.5	45.6	43.8	37.7	46.4	47.0
Medium Trucks:	41.9	40.4	34.0	32.5	40.9	41.2
Heavy Trucks:	44.1	42.7	33.7	34.9	43.3	43.4
Vehicle Noise:	49.9	48.2	44.6	40.3	48.9	49.3

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	47.5	45.6	43.8	37.7	46.4	47.0
Medium Trucks:	41.9	40.4	34.0	32.5	40.9	41.2
Heavy Trucks:	44.1	42.7	33.7	34.9	43.3	43.4
Vehicle Noise:	49.9	48.2	44.6	40.3	48.9	49.3

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Second Floor With Wall
Road Name: Belgrave Ave
Lot No: 34

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	660 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	30 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	35.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	94.847
Medium Trucks:	94.535
Heavy Trucks:	94.000

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	-3.24	-5.70	-1.20	*-1.63*	0.000	0.000
Medium Trucks:	76.31	-20.48	-5.67	-1.20	*-1.98*	0.000	0.000
Heavy Trucks:	81.16	-24.44	-5.62	-1.20	*-2.97*	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:	57.2	55.3	53.6	47.5	56.1	56.7
Medium Trucks:	49.0	47.5	41.1	39.5	48.0	48.2
Heavy Trucks:	49.9	48.5	39.4	40.7	49.0	49.2
Vehicle Noise:	58.5	56.7	53.9	48.9	57.4	57.9

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	57.2	55.3	53.6	47.5	56.1	56.7
Medium Trucks:	49.0	47.5	41.1	39.5	48.0	48.2
Heavy Trucks:	49.9	48.5	39.4	40.7	49.0	49.2
Vehicle Noise:	58.5	56.7	53.9	48.9	57.4	57.9

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Second Floor With Wall
Road Name: Belgrave Ave
Lot No: 33

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	660 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	30 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	35.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	94.847
Medium Trucks:	94.535
Heavy Trucks:	94.000

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	-3.24	-5.70	-1.20	*-1.63*	0.000	0.000
Medium Trucks:	76.31	-20.48	-5.67	-1.20	*-1.98*	0.000	0.000
Heavy Trucks:	81.16	-24.44	-5.62	-1.20	*-2.97*	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:	57.2	55.3	53.6	47.5	56.1	56.7
Medium Trucks:	49.0	47.5	41.1	39.5	48.0	48.2
Heavy Trucks:	49.9	48.5	39.4	40.7	49.0	49.2
Vehicle Noise:	58.5	56.7	53.9	48.9	57.4	57.9

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	57.2	55.3	53.6	47.5	56.1	56.7
Medium Trucks:	49.0	47.5	41.1	39.5	48.0	48.2
Heavy Trucks:	49.9	48.5	39.4	40.7	49.0	49.2
Vehicle Noise:	58.5	56.7	53.9	48.9	57.4	57.9

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Second Floor With Wall
Road Name: Haven Ave
Lot No: 34

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,140 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	35.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	82.438
Medium Trucks:	82.079
Heavy Trucks:	81.461

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	-0.87	-4.48	-1.20	*-1.52*	0.000	0.000
Medium Trucks:	76.31	-18.11	-4.44	-1.20	*-1.90*	0.000	0.000
Heavy Trucks:	81.16	-22.06	-4.38	-1.20	*-3.05*	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	58.9	57.1	51.1	59.7	60.3
Medium Trucks:	52.6	51.1	44.7	43.1	51.6	51.8
Heavy Trucks:	53.5	52.1	43.1	44.3	52.7	52.8
Vehicle Noise:	62.1	60.3	57.5	52.5	61.0	61.5

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.8	58.9	57.1	51.1	59.7	60.3
Medium Trucks:	52.6	51.1	44.7	43.1	51.6	51.8
Heavy Trucks:	53.5	52.1	43.1	44.3	52.7	52.8
Vehicle Noise:	62.1	60.3	57.5	52.5	61.0	61.5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Second Floor With Wall
Road Name: Haven Ave
Lot No: 32

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,140 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	35.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	82.438
Medium Trucks:	82.079
Heavy Trucks:	81.461

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	-0.87	-4.48	-1.20	*-1.52*	0.000	0.000
Medium Trucks:	76.31	-18.11	-4.44	-1.20	*-1.90*	0.000	0.000
Heavy Trucks:	81.16	-22.06	-4.38	-1.20	*-3.05*	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	58.9	57.1	51.1	59.7	60.3
Medium Trucks:	52.6	51.1	44.7	43.1	51.6	51.8
Heavy Trucks:	53.5	52.1	43.1	44.3	52.7	52.8
Vehicle Noise:	62.1	60.3	57.5	52.5	61.0	61.5

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.8	58.9	57.1	51.1	59.7	60.3
Medium Trucks:	52.6	51.1	44.7	43.1	51.6	51.8
Heavy Trucks:	53.5	52.1	43.1	44.3	52.7	52.8
Vehicle Noise:	62.1	60.3	57.5	52.5	61.0	61.5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - v10/31/19

Scenario: Second Floor With Wall
Road Name: Scholar Way
Lot No: 33

Project Name: SubArea 29
Job Number: 14252
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	700 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	110.0 feet
Barrier Distance to Observer:	35.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Barrier Elevation:	0.0 feet
Road Grade:	1.0%

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	20
Medium Trucks (2 Axles):	20
Heavy Trucks (3+ Axles):	20

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.00		
Medium Trucks:	2.30		
Heavy Trucks:	8.01	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	104.766
Medium Trucks:	104.484
Heavy Trucks:	104.000

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	59.44	-0.95	-6.56	-1.20	*-1.72*	0.000	0.000
Medium Trucks:	71.09	-18.19	-6.54	-1.20	*-2.03*	0.000	0.000
Heavy Trucks:	77.24	-22.14	-6.50	-1.20	*-2.92*	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:	50.7	48.8	47.1	41.0	49.6	50.2
Medium Trucks:	45.2	43.7	37.3	35.7	44.2	44.4
Heavy Trucks:	47.4	46.0	36.9	38.2	46.5	46.7
Vehicle Noise:	53.1	51.4	47.9	43.6	52.1	52.6

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	50.7	48.8	47.1	41.0	49.6	50.2
Medium Trucks:	45.2	43.7	37.3	35.7	44.2	44.4
Heavy Trucks:	47.4	46.0	36.9	38.2	46.5	46.7
Vehicle Noise:	53.1	51.4	47.9	43.6	52.1	52.6

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APPENDIX 10.1:

CADNAA CONSTRUCTION NOISE MODEL INPUTS

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14252 - Sub Area 29 - PA 30-34

CadnaA Noise Prediction Model: 14252_02 - Construction.cna
Date: 09.05.22
Analyst: B. Maddux

Calculation Configuration

Configuration	
Parameter	**Value**
General	
Max. Error (dB)	**0.00**
Max. Search Radius (#(Unit,LEN))	**2000.01**
Min. Dist Src to Rcvr	**0.00**
Partition	
Raster Factor	**0.50**
Max. Length of Section (#(Unit,LEN))	**999.99**
Min. Length of Section (#(Unit,LEN))	**1.01**
Min. Length of Section (%)	**0.00**
Proj. Line Sources	**On**
Proj. Area Sources	**On**
Ref. Time	
Reference Time Day (min)	**960.00**
Reference Time Night (min)	**480.00**
Daytime Penalty (dB)	**0.00**
Recr. Time Penalty (dB)	**5.00**
Night-time Penalty (dB)	**10.00**
DTM	
Standard Height (m)	**0.00**
Model of Terrain	**Triangulation**
Reflection	
max. Order of Reflection	**2**
Search Radius Src	**100.00**
Search Radius Rcvr	**100.00**
Max. Distance Source - Rcvr	**1000.00 1000.00**
Min. Distance Rvcr - Reflector	**1.00 1.00**
Min. Distance Source - Reflector	**0.10**
Industrial (ISO 9613)	
Lateral Diffraction	**some Obj**
Obst. within Area Src do not shield	**On**
Screening	**Incl. Ground Att. over Barrier**
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	**3.0 20.0 0.0**
Temperature (#(Unit,TEMP))	**10**
rel. Humidity (%)	**70**
Ground Absorption G	**0.50**
Wind Speed for Dir. (#(Unit,SPEED))	**3.0**
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	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	57.8	-48.2	54.8	80.0	0.0	0.0				5.00	a	6162499.84	2305584.08	5.00
R2		R2	59.5	-46.5	56.5	80.0	0.0	0.0				5.00	a	6160724.68	2304132.32	5.00
R3		R3	56.6	-49.4	53.6	80.0	0.0	0.0				5.00	a	6158379.07	2305087.41	5.00
R4		R4	60.8	-45.3	57.7	80.0	0.0	0.0				5.00	a	6158037.10	2305793.44	5.00
R5		R5	54.3	-51.7	51.3	80.0	0.0	0.0				5.00	a	6162505.97	2306493.56	5.00

Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL''			Lw / Li			Operating Time			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
ConstructionActivity		ConstructionActivity00001	124.2	18.2	18.2	65.5	-40.5	-40.5	PWL-Pt	118.2					0	a

Name	Height				Coordinates			
	Begin		End		x	y	z	Ground
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
ConstructionActivity	0.00	a			6158067.57	2306478.03	0.00	0.00
					6162456.30	2306430.09	0.00	0.00
					6162411.55	2304780.72	0.00	0.00
					6159704.15	2303805.80	0.00	0.00
					6159684.97	2305132.33	0.00	0.00
					6158876.57	2305123.00	0.00	0.00
					6158697.27	2305109.95	0.00	0.00
					6158534.25	2305157.90	0.00	0.00

Name	Height		Coordinates			
	Begin	End	x	y	z	Ground
	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
			6158396.80	2305186.67	0.00	0.00
			6158307.30	2305186.67	0.00	0.00
			6158115.52	2305146.97	0.00	0.00
			6158051.59	2305138.72	0.00	0.00