



Rancho Diamante (TTM No. 36841)
NOISE IMPACT ANALYSIS
CITY OF HEMET

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NOVEMBER 18, 2019

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LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
ANSI	American National Standards Institute
BNSF	Burlington Northern Santa Fe
Calveno	California Vehicle Noise
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
dBA	A-weighted decibels
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
INCE	Institute of Noise Control Engineering
Leq	Equivalent continuous (average) sound level
Lmax	Maximum level measured over the time interval
Lmin	Minimum level measured over the time interval
mph	Miles per hour
PPV	Peak Particle Velocity
Project	Rancho Diamante (TTM No. 36841)
RC ALUCP	Riverside County Airport Land Use Compatibility Plan
REMEL	Reference Energy Mean Emission Level
RMS	Root-mean-square
TTM	Tentative Tract Map
VdB	Vibration Decibels

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EXECUTIVE SUMMARY

Urban Crossroads, Inc. has prepared this noise study to determine the noise exposure and the necessary noise mitigation measures for the proposed Rancho Diamante (TTM No. 36841) development ("Project"). The Project site is located on the southwest corner of Warren Road and the new Stetson Avenue extension in the City of Hemet. The Project is proposed to consist of the development of up to 588 single-family detached residential dwelling units and approximately 100,000 square feet of neighborhood commercial retail use. This study has been prepared to satisfy the City of Hemet noise standards and to ensure that adequate noise mitigation measures are incorporated into the Project's development.

OFF-SITE TRAFFIC NOISE ANALYSIS

Traffic generated by the proposed Project will influence the traffic noise levels in surrounding off-site areas. To quantify the off-site traffic noise increases on the surrounding off-site areas, the changes in traffic noise levels on 37 roadway segments surrounding the Project site were estimated 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 the *Rancho Diamante (TTM No. 36841) Traffic Impact Analysis* prepared by Urban Crossroads, Inc. (1) To assess the off-site noise level impacts associated with the proposed Project, noise contour boundaries were developed for Existing, Year 2024 (Phase 1), Year 2026 (Project Buildout), and Horizon Year 2040 traffic conditions. The off-site traffic noise analysis indicates that the Project's contributions to roadway noise levels at adjacent sensitive land uses will be *less than significant* for Existing, Year 2024 (Phase 1), Year 2026 (Project Buildout), and Horizon Year 2040 conditions.

ON-SITE TRANSPORTATION NOISE ANALYSIS

The results of this analysis indicate that future transportation noise from Stetson Avenue, Warren Road, and Mustang Way are the principal source of community noise that will impact the Project site. The Project will also experience some background traffic noise impacts from the Project's internal streets, however, due to the distance, topography and low traffic volume/speed, traffic noise from these roads will not make a significant contribution to the noise environment. Additional potential on-site noise impacts are expected from the Burlington Northern Santa Fe (BNSF) rail lines north of the Project site. The BNSF rail lines are currently used for freight transportation, however, future Metrolink rail activity is expected with the planned extension of the Metrolink 91 Line in the City of Perris. The on-site noise mitigation measures recommended in this noise analysis have been designed to reduce the exterior and interior noise levels to satisfy the City of Hemet transportation related CNEL noise criteria for residential and commercial development. With the recommended noise mitigation measures shown on Exhibit ES-A, the on-site noise impacts will be *less than significant*.

ON-SITE EXTERIOR TRAFFIC NOISE MITIGATION

To satisfy the City of Hemet 65 dBA CNEL exterior noise level standards for residential land use, the planned 6-foot high noise barriers are required for the outdoor living areas (backyards) of lots 303 to 305, 306, 315, 316, 322, 362, 363, 371 to 379, 393, 394, 398 to 402, 412, 414 to 422 adjacent to Stetson Avenue, and lots 1 to 17, 512, 519, 520, 522, 540, 541, 574, 585, 586 adjacent to Warren Road. With the planned noise barriers shown on Exhibit ES-A, the mitigated future exterior noise levels will range from 58.0 to 64.8 dBA CNEL. This noise analysis shows that the planned noise barriers will satisfy the City of Hemet 65 dBA CNEL exterior noise level standards for residential development. The planned noise barriers used in this analysis are consistent with the October 16th, 2015 fence and wall plans for the Project prepared by Gillespie Moody Patterson, Inc. In addition, the future unmitigated exterior noise levels approaching 68.5 dBA CNEL will satisfy the 70 dBA CNEL exterior noise level standard for commercial uses.

The planned noise barriers shall be constructed so that the top of each wall and /or berm combination extends to the planned height above the pad elevation of the lot it is shielding. When the road is elevated above the pad elevation, the barrier shall extend to the planned height above the highest point between the residential home and the road. The barrier shall provide a weight of at least 4 pounds per square foot of face area with no decorative cutouts or line-of-sight openings between shielded areas and the roadways. The noise barrier shall be constructed using the following materials:

- Masonry block
- Stucco veneer over wood framing (or foam core), or 1-inch thick tongue and groove wood of sufficient weight per square foot
- Glass (1/4-inch-thick), or other transparent material with sufficient weight per square foot
- Earthen berm
- Any combination of these construction materials

The barrier shall consist of a solid face from top to bottom. Unnecessary openings or decorative cutouts shall not be made. All gaps (except for weep holes) should be filled with grout or caulking.

ON-SITE EXTERIOR RAIL NOISE MITIGATION

The results of the Federal Transit Administration (FTA) model for railroad noise indicates that the single-family residential homes closest to the BNSF rail lines will experience unmitigated average daily noise levels approaching 51.7 dBA CNEL due to freight and Metrolink commuter rail activities. The average daily railroad noise analysis indicates that no exterior rail noise mitigation is required to satisfy the City of Hemet 65 dBA CNEL residential use and 70 dBA CNEL commercial use exterior noise level standards. In addition, since the exterior noise levels due to rail activity will result in interior noise levels which are lower than the on-site traffic-related interior noise levels, the recommended interior traffic noise mitigation measures will satisfy the City of Hemet 45 dBA CNEL interior noise level standards for residential development. While the average daily railroad noise activities are not expected to exceed the City of Hemet 65 dBA CNEL residential use and 70 dBA CNEL commercial use exterior noise level standards, peak rail pass-by events may

negatively impact the nearby residential homes. The City of Hemet General Plan *Final Environmental Impact Report* indicates that the noise sources associated with the BNSF rail line pass-by events include warning horns/wayside horns, at-grade crossing bells, and locomotive engine and rail car noise. (2) However, due to the planned 6-foot high barriers, residential lots with higher pad elevations than the rail centerline, and setback distances to the residential lots, the infrequent peak rail pass-by event noise levels will be further reduced at the outdoor living areas (backyards). To ensure that residents within the Rancho Diamante (TTM No. 36841) community understand the potential for short-term noise events, occupancy disclosure notices shall be required for all future homeowners. The occupancy disclosures shall indicate that rail pass-by and aircraft flyover noise will be clearly noticeable due to the location of the Project site in relation to the BNSF/Metrolink extension rail lines, and the Hemet-Ryan Airport. The on-site rail noise mitigation measures are outlined on Exhibit ES-A.

While this analysis considers the potential future noise activity associated with the planned Metrolink rail line extension, any planned extension will require additional CEQA analysis and approval by the lead agency.

ON-SITE INTERIOR TRANSPORTATION NOISE MITIGATION

Based on the interior noise analysis, all lots adjacent to Stetson Avenue, Warren Road, and Mustang Way will require a windows closed condition and a means of mechanical ventilation (e.g. air conditioning). In order to meet the City of Hemet 45 dBA CNEL interior noise standards the Project shall provide the following or equivalent noise mitigation measures:

- **Windows:** All windows and sliding glass doors shall be well fitted, well weather-stripped assemblies and shall have a minimum STC rating of 27; While a minimum STC rating of 27 will satisfy the City of Hemet requirements, upgraded windows with STC ratings of 30 to 32 for all lots are recommended to further reduce the interior noise levels and to minimize the potential noise impacts associated with peak pass-by events.
- **Doors:** All exterior doors shall be well weather-stripped and have minimum STC ratings of 25. Well-sealed perimeter gaps around the doors are essential to achieve the optimal STC rating. (3)
- **Walls:** At any penetrations of exterior walls by pipes, ducts, or conduits, the space between the wall and pipes, ducts, or conduits shall be caulked or filled with mortar to form an airtight seal.
- **Roof:** Roof sheathing of wood construction shall be per manufacturer's specification or caulked plywood of at least one-half inch thick. Ceilings shall be per manufacturer's specification or well-sealed gypsum board of at least one-half inch thick. Insulation with at least a rating of R-19 shall be used in the attic space.
- **Attic:** Attic vents should be oriented away from Stetson Avenue and Warren Road. If such an orientation cannot be avoided, then an acoustical baffle shall be placed in the attic space behind the vents. Insulation with at least a rating of R-19 shall be used in the attic space.
- **Ventilation:** When any habitable room is in use, arrangements shall be such that circulated air is received when any exterior door(s) or window(s) are closed. A forced air circulation system (e.g. air conditioning) or active ventilation system (e.g. fresh air supply) shall be provided which satisfies the requirements of the Uniform Building Code.

With the interior noise mitigation measures provided in this study, the proposed Rancho Diamante (TTM No. 36841) Project is expected to meet the City of Hemet 45 dBA CNEL interior noise level standards for residential development.

ON-SITE RAIL VIBRATION LEVEL ANALYSIS

Reference vibration levels provided by the FTA are used in this analysis to represent the potential vibration levels from the BNSF and Metrolink rail line extension activities. At 50 feet from the rail centerline, the reference vibration level will approach a peak particle velocity (PPV) of 0.018 in/sec, or 0.013 in/sec root-mean-square (RMS) velocity. For vibration levels expressed in velocity, the human body responds to the average vibration amplitude often described as the root-mean-square (RMS) or the average of the squared amplitude of the signal, typically calculated over a one-second period.

Based on the distance to the nearest residential receiver of roughly 279 feet, the RMS vibration levels would approach 0.001 in/sec RMS and will not exceed the County of Riverside vibration level threshold of 0.01 in/sec RMS. Therefore, the on-site vibration impacts due to the BNSF and potential Metrolink rail line extension would be *less than significant* at the residential lots within the Project site. Further, the vibration levels at the closest sensitive receiver locations would only occur during rail pass-by events, which will be infrequent in nature and unlikely to be sustained for long periods of time.

OPERATIONAL NOISE AND VIBRATION ANALYSIS

Using reference noise levels to represent the expected noise sources from the Rancho Diamante (TTM No. 36841) site, this analysis estimates the Project-related stationary-source noise levels at nearby sensitive receiver locations. The normal activities associated with the proposed Rancho Diamante (TTM No. 36841) are anticipated to include roof-top air conditioning units, parking lot vehicle movements, and drive-through speakerphones. The operational noise analysis shows that the unmitigated Project-related stationary-source noise levels will satisfy the City of Hemet daytime and nighttime exterior noise level standards at the nearby sensitive receiver locations.

Further, this analysis demonstrates that the Project will contribute a *less than significant* long-term operational noise level impact to the existing ambient noise environment at any of the sensitive receiver locations during the daytime and nighttime hours. Therefore, the operational noise level impacts associated with the proposed 24-hour seven days per week Project activities, such as the roof-top air conditioning units, parking lot vehicle movements, and drive-through speakerphones, are considered *less than significant*.

CONSTRUCTION NOISE ANALYSIS

Construction noise represents a short-term increase on the ambient noise levels. Based on the five phases of Project construction, the temporary construction-related noise impacts are expected to create temporary and intermittent high-level noise at receivers surrounding the Project site when certain activities occur near the property line. With the recommended construction noise mitigation measures, including temporary noise barriers, the construction

noise levels will satisfy the City of Hemet 75 dBA Lmax construction noise level threshold at the nearby sensitive receiver locations. Therefore, the construction of the Project will result in a *less than significant impact* with the construction noise mitigation measures provided below.

CONSTRUCTION VIBRATION ANALYSIS

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. It is expected that ground-borne vibration from Project construction activities would cause only intermittent, localized intrusion. For the purposes of this analysis, and consistent with criteria employed in the City of Hemet *General Plan Program Environmental Impact Report*, construction-source vibration impacts would be considered potentially significant if received vibration levels exceed FTA 80 VdB thresholds for human annoyance (4) and the Caltrans guidelines of 0.2 in/sec PPV (5) to prevent building damage.

At distances ranging from 125 to 3,536 feet from Project construction activity, construction vibration velocity levels are expected to range from 22.5 to 66.0 VdB and would remain below the FTA 80 VdB threshold for human annoyance at all receiver locations. The Project construction-source vibration levels would approach to 0.01 in/sec PPV at potentially affected sensitive receiver locations and will not exceed the Caltrans 0.2 in/sec PPV building damage threshold. Project construction activities will not include or require equipment, facilities, or activities that would result in an exceedance of the vibration threshold, and therefore, impacts due to vibration are considered *less than significant*.

CONSTRUCTION NOISE & VIBRATION MITIGATION MEASURES

Though construction noise is temporary, intermittent and of short duration, and will not present any long-term impacts, the following mitigation measures would reduce any noise level increases produced by the construction equipment to the nearby noise-sensitive residential land uses:

- Prior to approval of grading plans and/or issuance of building permits, plans shall include a note indicating that noise-generating Project construction activities shall only occur between the permitted hours on Monday through Friday between 6:00 a.m. to 6:00 p.m. from June 1st through September 30th, and 7:00 a.m. to 6:00 p.m. from October 1st through May 31st; Saturday activity is limited to between 7:00 a.m. to 6:00 p.m. with no activity allowed on Sundays. The Project construction supervisor shall ensure compliance with the note and the City shall conduct periodic inspection at its discretion.
- If receiver location R6 is an inhabited noise-sensitive residential home at the time of Project construction, the installation of a minimum 6-foot high temporary noise control barrier, as shown on Exhibit 11-A, at the Project site boundaries when construction activities occur within 140 feet is required. The noise control barrier must present a solid face from top to bottom. The noise control barrier must be a minimum height of 6-feet.
 - The temporary noise barriers shall provide a minimum transmission loss of 20 dBA (Federal Highway Administration, Noise Barrier Design Handbook). The noise barrier may be constructed using an acoustical blanket (e.g. vinyl acoustic curtains or quilted blankets) attached to the construction site perimeter fence or equivalent temporary fence posts.

- The noise barriers must be maintained and any damage promptly repaired. Gaps, holes, or weaknesses in the barrier or openings between the barrier and the ground shall be promptly repaired.
 - The noise control barriers and associated elements shall be completely removed and the site appropriately restored upon the conclusion of the construction activity.
- During all Project site construction, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the Project site.
- The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receivers nearest the Project site (i.e., at the center) during all Project construction.
- The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment (Monday through Friday between 6:00 a.m. to 6:00 p.m. from June 1st through September 30th, and 7:00 a.m. to 6:00 p.m. from October 1st through May 31st; Saturday activity is limited to between 7:00 a.m. to 6:00 p.m. with no activity allowed on Sundays). The Project Applicant shall prepare a haul route exhibit to design delivery routes to minimize the exposure of sensitive land uses or residential dwellings to delivery truck-related noise.

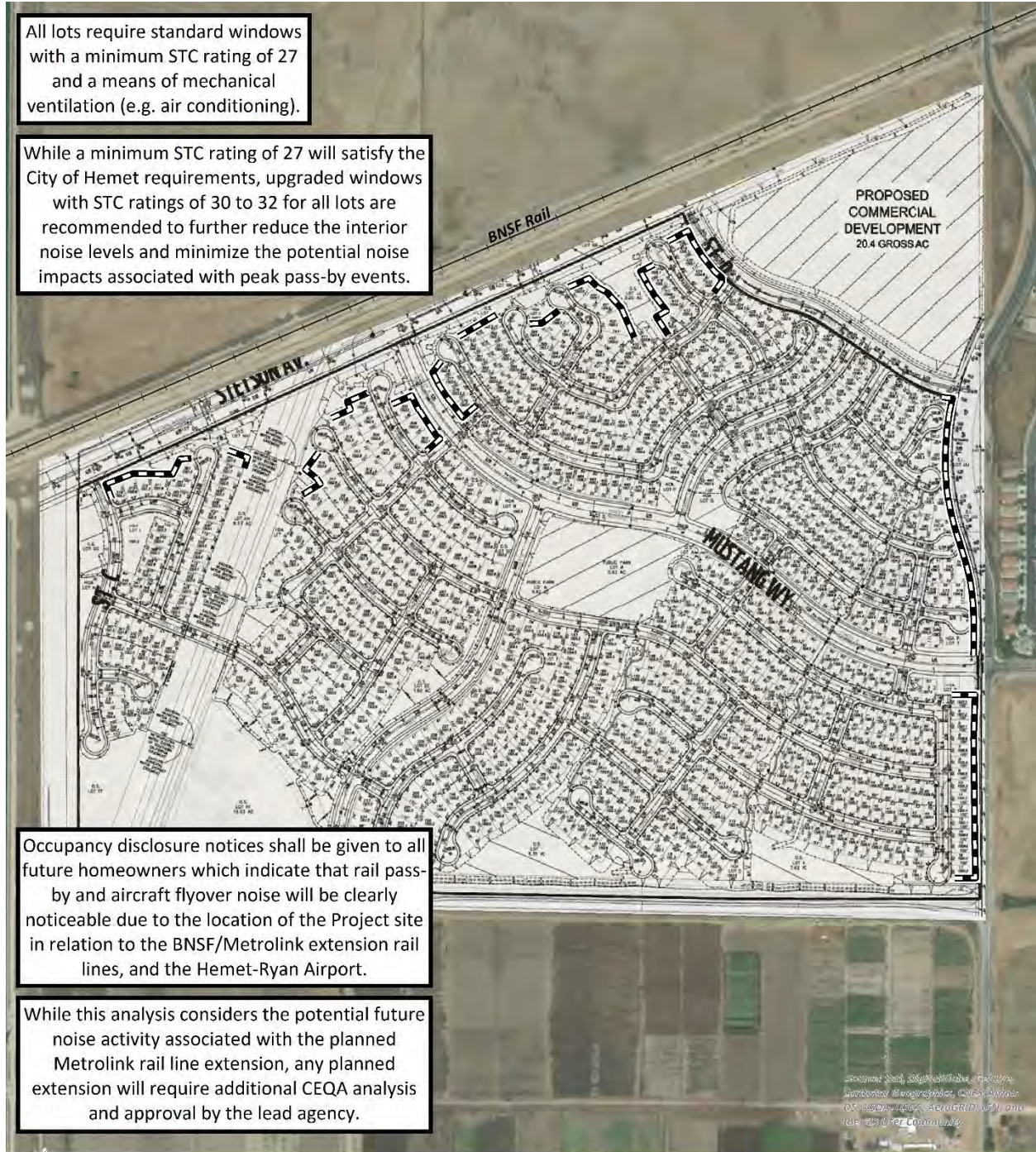
EXHIBIT ES-A: SUMMARY OF RECOMMENDATIONS

All lots require standard windows with a minimum STC rating of 27 and a means of mechanical ventilation (e.g. air conditioning).

While a minimum STC rating of 27 will satisfy the City of Hemet requirements, upgraded windows with STC ratings of 30 to 32 for all lots are recommended to further reduce the interior noise levels and minimize the potential noise impacts associated with peak pass-by events.

Occupancy disclosure notices shall be given to all future homeowners which indicate that rail pass-by and aircraft flyover noise will be clearly noticeable due to the location of the Project site in relation to the BNSF/Metrolink extension rail lines, and the Hemet-Ryan Airport.

While this analysis considers the potential future noise activity associated with the planned Metrolink rail line extension, any planned extension will require additional CEQA analysis and approval by the lead agency.



SUMMARY OF SIGNIFICANCE FINDINGS

The results of this Rancho Diamante (TTM No. 36841) Noise Impact Analysis are summarized below based on the significance criteria in Section 4 of this report. Table ES-1 shows the findings of significance for each potential noise and/or vibration impact before and after any required mitigation measures.

TABLE ES-1: SUMMARY OF SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Off-Site Traffic Noise	7	<i>Less Than Significant</i>	<i>n/a</i>
On-Site Traffic Noise	8	<i>Potentially Significant</i>	<i>Less Than Significant</i>
Operational Noise	10	<i>Less Than Significant</i>	<i>n/a</i>
Construction Noise	11	<i>Potentially Significant</i>	<i>Less Than Significant</i>
Construction Vibration		<i>Less Than Significant</i>	<i>n/a</i>

"n/a" = No mitigation is required since the unmitigated impact will be less than significant.

1 INTRODUCTION

This noise analysis has been completed to determine the noise impacts associated with the development of the proposed Rancho Diamante (TTM No. 36841) (“Project”). This noise study describes the proposed Project, provides information regarding noise fundamentals, outlines the local regulatory setting, provides the study methods and procedures for traffic noise analysis, and evaluates the future exterior noise environment. In addition, this study includes an analysis of the potential Project-related long-term operational and short-term construction noise and vibration impacts.

1.1 SITE LOCATION

The proposed Rancho Diamante (TTM No. 36841) Project is located on the southwest corner of Warren Road and the new Stetson Avenue extension in the City of Hemet, as shown on Exhibit 1-A. State Route 79 (SR-79) is located approximately 1.75 miles west of the Project site, and State Route 74 (SR-74) is located roughly 1.5 miles to the north of the Project site. Existing residential land uses in the Project study area are located north on Stetson Avenue, east of Warren Road, and west on California Avenue. Agriculture land uses are located south of the Project site on Warren Road. The Hemet-Ryan Airport is located approximately 0.5 miles northeast of the Project site on Stetson Avenue. An existing Burlington Northern Santa Fe (BNSF) railroad line is located north of the Project site adjacent to the future Stetson Avenue extension.

1.2 PROJECT DESCRIPTION

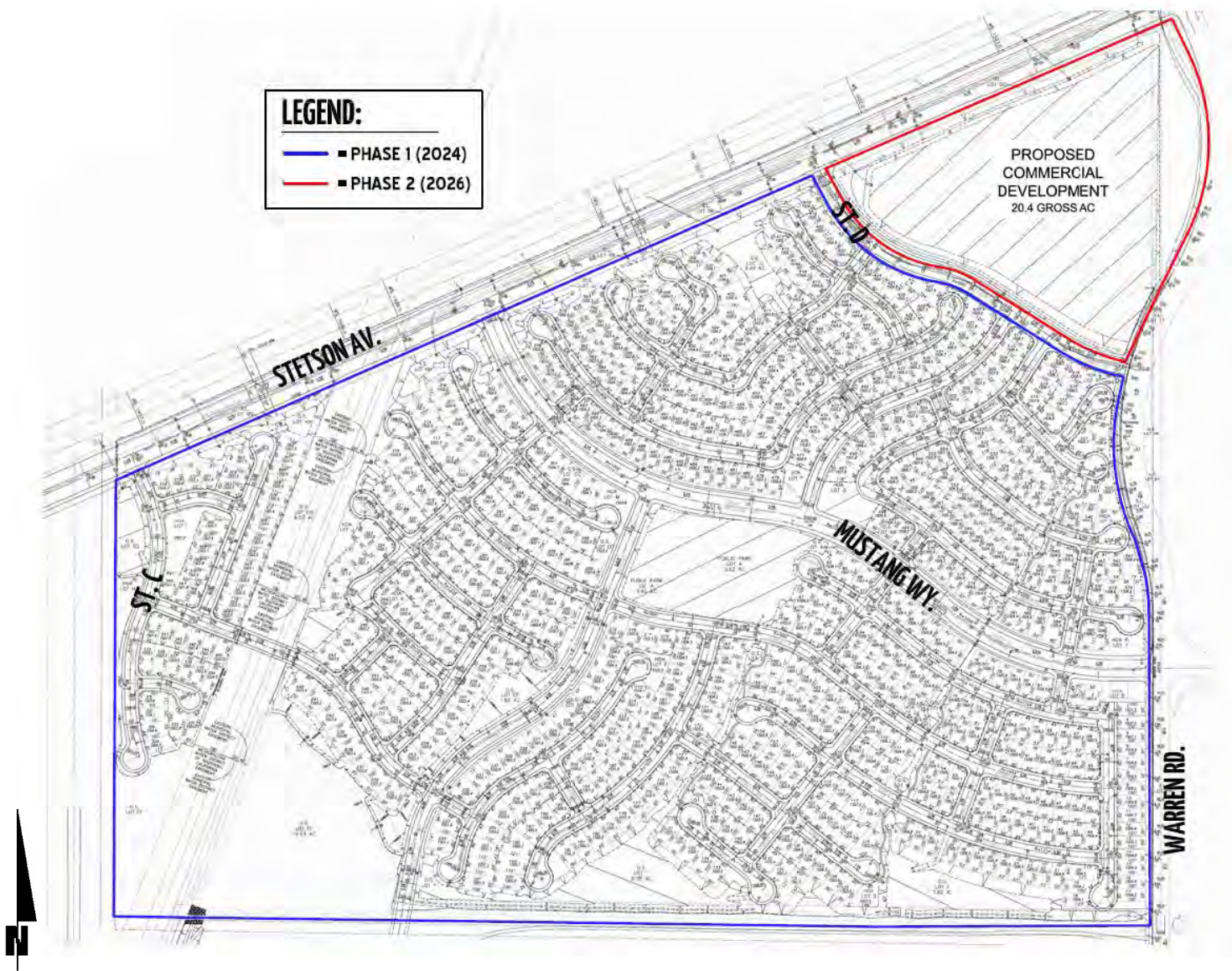
The Project is proposed to include the development of up to 588 single-family detached residential dwelling units and approximately 100,000 square feet of neighborhood commercial retail use, as shown on Exhibit 1-B. For the purposes of this analysis, potential impacts have been assessed for two development phases. The two phases and their anticipated opening years are as follows:

- Phase 1 (2024) – 588 single-family residential dwelling units;
- Phase 2 (2026) – 100,000 square feet of neighborhood retail.

EXHIBIT 1-A: LOCATION MAP



EXHIBIT 1-B: SITE PLAN



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2 FUNDAMENTALS

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

EXHIBIT 2-A: TYPICAL NOISE LEVELS

COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE
THRESHOLD OF PAIN		140	INTOLERABLE OR DEAFENING	HEARING LOSS
NEAR JET ENGINE		130		
		120		
JET FLY-OVER AT 300m (1000 ft)	ROCK BAND	110		
LOUD AUTO HORN		100	VERY NOISY	
GAS LAWN MOWER AT 1m (3 ft)		90		
DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph)	FOOD BLENDER AT 1m (3 ft)	80		
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70	LOUD	SPEECH INTERFERENCE
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60		
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	SLEEP 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. (6) The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud jet engine noises equate to 110 dBA

at approximately 100 feet, which can cause serious discomfort. (7) 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 commonly used figure is the equivalent level (Leq). 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 (Leq) 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 Leq sound levels in the evening from 7:00 p.m. to 10:00 p.m., and the addition of 10 decibels to dBA Leq sound levels at night between 10:00 p.m. and 7:00 a.m. These additions are made to account for the noise sensitive time periods during the evening and night hours when sound appears louder. CNEL does not represent the actual sound level heard at any particular time, but rather represents the total sound exposure. The City of Hemet 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 manner in which noise reduces with distance depends on the following factors.

2.3.1 GEOMETRIC SPREADING

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

2.3.2 GROUND ABSORPTION

The propagation path of noise from a highway to a receptor 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 receptor, 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 receptor 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.

2.3.3 ATMOSPHERIC EFFECTS

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

2.3.4 SHIELDING

A large object or barrier in the path between a noise source and a receptor can substantially attenuate noise levels at the receptor. 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 resident. 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 FHWA does not consider the planting of vegetation to be a noise abatement measure.

2.4 NOISE CONTROL

Noise control is the process of obtaining an acceptable noise environment for a particular observation point or receptor by controlling the noise source, transmission path, receptor, or all three. This concept is known as the source-path-receptor concept. In general, noise control measures can be applied to any and all of 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 receptor. Noise barriers, however, do have limitations. For a noise barrier to work, it must be high enough and long enough to block the path of the noise source. (8)

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. (9)

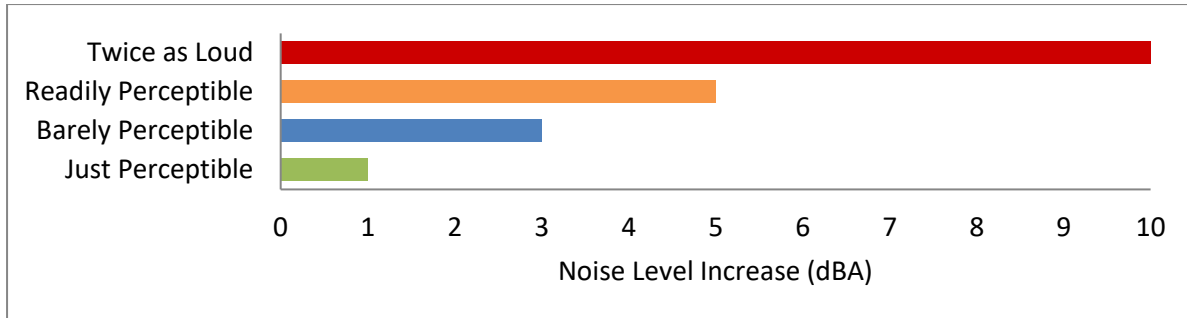
2.7 COMMUNITY RESPONSE TO NOISE

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

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

Approximately ten percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints will occur. Another twenty-five percent of the population will not complain even in very severe noise environments. Thus, a variety of reactions can be expected from people exposed to any given noise environment. (10) Surveys have shown that about ten percent of the people exposed to traffic noise of 60 dBA will report being highly annoyed with the noise, and each increase of one dBA is associated with approximately two percent more people being highly annoyed. When traffic noise exceeds 60 dBA or aircraft noise exceeds 55 dBA, people may begin to complain. (10)

Despite this variability in behavior on an individual level, the population as a whole can be expected to exhibit the following responses to changes in noise levels as shown on Exhibit 2-B. An increase or decrease of 1 dBA cannot be perceived except in carefully controlled laboratory experiments, a change of 3 dBA are considered *barely perceptible*, and changes of 5 dBA are considered *readily perceptible*. (8)

EXHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION

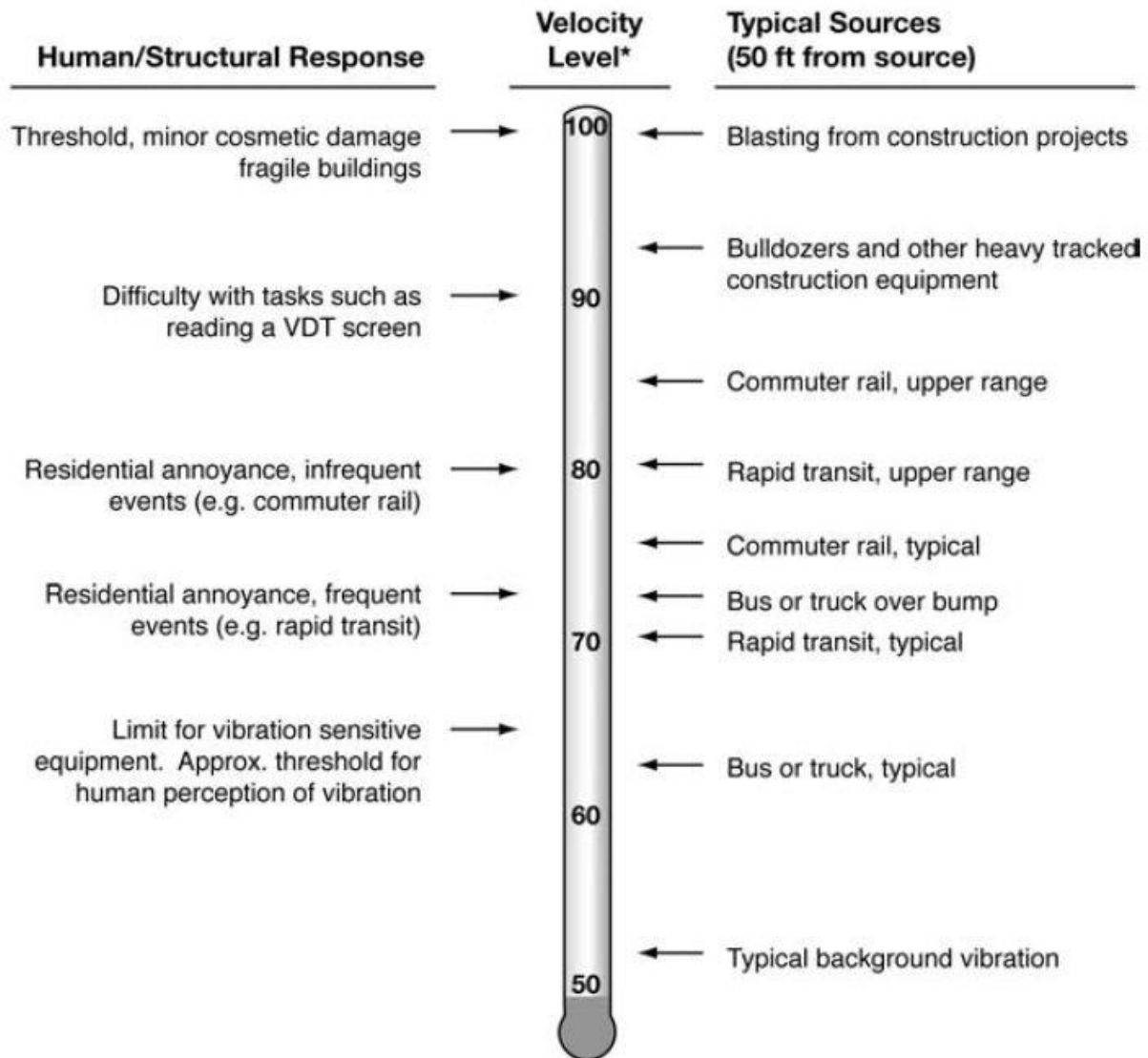
2.8 VIBRATION

According to the Federal Transit Administration (FTA) *Transit Noise Impact and Vibration Assessment* (4), 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.

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 Impact and Vibration Assessment.

3 REGULATORY SETTING

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. In most areas, automobile and truck traffic is the major source of environmental noise. Traffic activity generally produces an average sound level that remains fairly 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 according to guidelines adopted by the Governor's Office of Planning and Research. (11) 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 the potential environmental noise impacts.

3.2 STATE OF CALIFORNIA BUILDING CODE

The State of California's noise insulation standards are codified in the California Code of Regulations, Title 24, Building Standards Administrative Code, Part 2, and the California Building Code. These noise standards are applied to new construction in California for the purpose of controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential buildings, schools, or hospitals, are developed near major transportation noise sources, and where such noise sources create an exterior noise level of 60 dBA CNEL or higher. Acoustical studies that accompany building plans for noise-sensitive land uses must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For new residential buildings, schools, and hospitals, the acceptable interior noise limit for new construction is 45 dBA CNEL.

3.3 CITY OF HEMET GENERAL PLAN PUBLIC SAFETY ELEMENT

The City of Hemet General Plan Public Safety Element, Section 6.10 *Noise*, sets goals, policies, and implementation programs to address existing and future noise conditions. (12) To protect City of Hemet residents from excessive noise levels, the Public Safety Element contains the following goals:

- PS-4 Protect lives and property from the potential dangers associated with the use of Hemet-Ryan Airport while recognizing and maintaining its function as a part of Hemet's transportation system.*
- PS-11 Manage noise levels through land use planning and development review.*
- PS-12 Minimize noise conflicts from transportation sources and airports.*
- PS-13 Minimize noise conflicts with stationary noise generators.*

The noise policies specified in the City of Hemet Public Safety Element provide the guidelines necessary to satisfy these goals. To ensure that residents are not exposed to excessive noise levels from the Hemet-Ryan Airport (Goal PS-4), Policies 4.1, 4.6, and 4.10 new developments must demonstrate a reduction of the noise levels due to aircraft activity. Goal PS-11 and Policies 11.1 to 11.4 require new developments to satisfy the noise standards of the Public Safety Element and incorporate design techniques as a means to minimize noise. Table 6.4 includes the *Land Use Compatibility Standards for Exterior and Interior Noise* to satisfy Goal PS-12 and Policies 12.1 to 12.4 for transportation-related noise sources. To prevent noise conflicts with stationary noise generators (Goal PS-13), Policies 13.1 to 13.3 restrict the locations of sensitive land uses in relation to major noise sources in the City of Hemet. (12)

3.3.1 LAND USE COMPATIBILITY

The noise criteria identified in the City of Hemet Public Safety Element (Table 6.3) are guidelines to evaluate the land use compatibility of transportation-related noise. The compatibility criteria, shown on Exhibit 3-A, provides the City with a planning tool to gauge the compatibility of land uses relative to existing and future exterior noise levels.

The *Land Use Compatibility for Community Noise Environments* (Table 6.3) matrix indicates that noise-sensitive land uses such as single-family residences are considered *normally acceptable* with exterior noise levels below 60 dBA CNEL and *conditionally acceptable* with noise levels below 70 dBA CNEL. Commercial uses within the Project site are considered *normally acceptable* with exterior noise levels of up to 70 dBA CNEL and *conditionally acceptable* with exterior noise levels of up to 75 dBA CNEL. For *conditionally acceptable* land uses, *new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design.* (12)

3.3.2 TRANSPORTATION NOISE STANDARDS

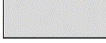
To encourage the reduction of noise from transportation-related noise sources such as motor vehicles, aircraft operations and railroad movements (Goal PS-12), Table 6.4 of the City of Hemet General Plan Public Safety Element, shown on Exhibit 3-B, identifies a maximum allowable


exterior noise level of 65 dBA CNEL and an interior noise level limit of 45 dBA CNEL for new residential developments, and an exterior noise level of 70 dBA CNEL for commercial uses.


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

Land Use Category	Community Noise Exposure CNEL, dBA					
	55	60	65	70	75	80
Residential						
Transient lodging: hotels, motels						
Schools, libraries, churches, hospitals, nursing homes						
Auditoriums, concert halls, amphitheaters						
Sports arena, outdoor spectator sports						
Playgrounds, neighborhood parks						
Golf courses, riding stables, Water Recreation, Cemeteries						
Office buildings, business commercial and professional						
Industrial, manufacturing, utilities, agriculture						

Notes: CNEL = community noise equivalent level; dBA = A-weighted decibel.

 **Normally Acceptable**—Specified land use is satisfactory, based on the assumption that any buildings involved are of normal conventional construction, without any special noise requirements

 **Conditionally Acceptable**—New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design.

 **Normally Unacceptable**—New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirement must be made and needed noise insulation features included in the design.

 **Clearly Unacceptable**—New construction or development clearly should not be undertaken.

Source: City of Hemet General Plan Public Safety Element, Table 6.3.

EXHIBIT 3-B: LAND USE COMPATIBILITY STANDARDS FOR EXTERIOR AND INTERIOR NOISE

Land Use	Maximum Allowable Noise (CNEL)	
	Exterior (dBA)	Interior (dBA)
Residential and mixed use with residential component	65	45
School classrooms	65	45
School playgrounds	70	--
Libraries	—	50
Hospitals, convalescent homes—sleeping areas	—	40
Hospitals, convalescent homes—living areas	—	50
Passive recreation areas	65	—
Active recreation areas	70	—
Commercial and industrial areas	70	—
Office areas	—	50

Notes: CNEL = community noise equivalent level; dBA = A-weighted decibel; — = not applicable/not available.

The acceptable interior noise level for other uses depends upon the specific nature of the indoor activity.

Source: City of Hemet General Plan Public Safety Element, Table 6.4.

3.4 OPERATIONAL NOISE STANDARDS

To analyze noise impacts originating from a designated fixed location or private property such as the Rancho Diamante (TTM No. 36841) Project, stationary-source (operational) noise such as the expected roof-top air conditioning units, parking lot vehicle movements, and drive-through speakerphones are typically evaluated against standards established under a jurisdiction's Municipal Code or General Plan.

The City of Hemet has set exterior noise limits to control community noise impacts from non-transportation noise sources (such as roof-top air conditioning units, parking lot vehicle movements, and drive-through speakerphones, etc.). Table 6.5 *Noise Level Performance Standards for Non-Transportation Noise Sources*, shown on Exhibit 3-C, from the City of Hemet General Plan Public Safety Element, identifies exterior noise level limits of 60 dBA Leq and 75 dBA Lmax during the daytime hours (7:00 a.m. to 10:00 p.m.) and 45 dBA Leq and 65 dBA Lmax during the nighttime hours (10:00 p.m. to 7:00 p.m.) (12)

EXHIBIT 3-C: PERFORMANCE STANDARDS FOR NON-TRANSPORTATION NOISE SOURCES

Noise Level Descriptor	Daytime (7 a.m.–10 p.m.)	Nighttime (10 p.m.–7 a.m.)
Hourly average level (L_{eq})	60 dBA	45 dBA
Maximum equivalent levels (L_{max})	75 dBA	65 dBA

Notes: Each of the noise levels specified shall be lowered by 5 decibels for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings). The noise standard is to be applied at the property lines of the affected land use.

Source: City of Hemet General Plan Public Safety Element, Table 6.5.

3.5 CONSTRUCTION NOISE STANDARDS

To analyze noise impacts originating from the construction of the Rancho Diamante (TTM No. 36841) site, noise from construction activities are typically evaluated against standards established under a City's Municipal Code. The Municipal Code noise standards for construction are described below for the City of Hemet to determine the potential noise impacts at nearby receiver locations. The construction-related noise standards are summarized on Table 3-1.

The City of Hemet has set restrictions to control noise impacts associated with the construction of the proposed Project. Section 67-10 of the City's Municipal Code states: *Grading is allowed Monday through Friday between the hours of 6:00 a.m. and 6:00 p.m. from June 1 through September 30, and between the hours of 7:00 a.m. and 6:00 p.m. from October 1 through May 31. Grading is allowed on Saturdays between the hours of 7:00 a.m. and 6:00 p.m. year-round. Grading on Sundays is prohibited.* (13) For the purposes of this analysis, Project construction activities shall be limited to the hours specified for grading on Monday through Friday between 6:00 a.m. to 6:00 p.m. from June 1st through September 30th, and 7:00 a.m. to 6:00 p.m. from October 1st through May 31st; Saturday activity is limited to between 7:00 a.m. to 6:00 p.m. with no activity allowed on Sundays. 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. Therefore, an acceptable construction noise level threshold is used based on the Table 6.5 *Noise Level Performance Standards for Non-Transportation Noise Sources*, previously shown on Exhibit 3-C, from the City of Hemet General Plan Public Safety Element of 75 dBA L_{max} during the daytime hours of 7:00 a.m. to 10:00 p.m. (12) The L_{max} noise level threshold is used to evaluate the maximum noise levels due to construction activity at the Project site. Table 3-2 shows the construction noise standards used in this analysis.

TABLE 3-1: CONSTRUCTION NOISE STANDARDS

Jurisdiction	Permitted Hours of Construction Activity ¹	Acceptable Construction Noise Level Threshold ²
City of Hemet	Monday through Friday between 6:00 a.m. to 6:00 p.m. from June 1st through September 30th, and 7:00 a.m. to 6:00 p.m. from October 1st through May 31st; Saturdays between 7:00 a.m. to 6:00 p.m.; no activity allowed on Sundays.	75 dBA Lmax

¹ Source: City of Hemet Municipal Code, Chapter 67, Section 67-10 (Appendix 3.1).

² Threshold based on the City of Hemet General Plan Public Safety Element, Table 6.5, maximum noise level standard for non-transportation noise sources.

3.6 CONSTRUCTION VIBRATION STANDARDS

Construction activity can result in varying degrees of ground-borne vibration, depending on the equipment and methods used, distance to the affected structures and soil type. (14) 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. (14) Occasionally large bulldozers and loaded trucks can cause perceptible vibration levels at close proximity.

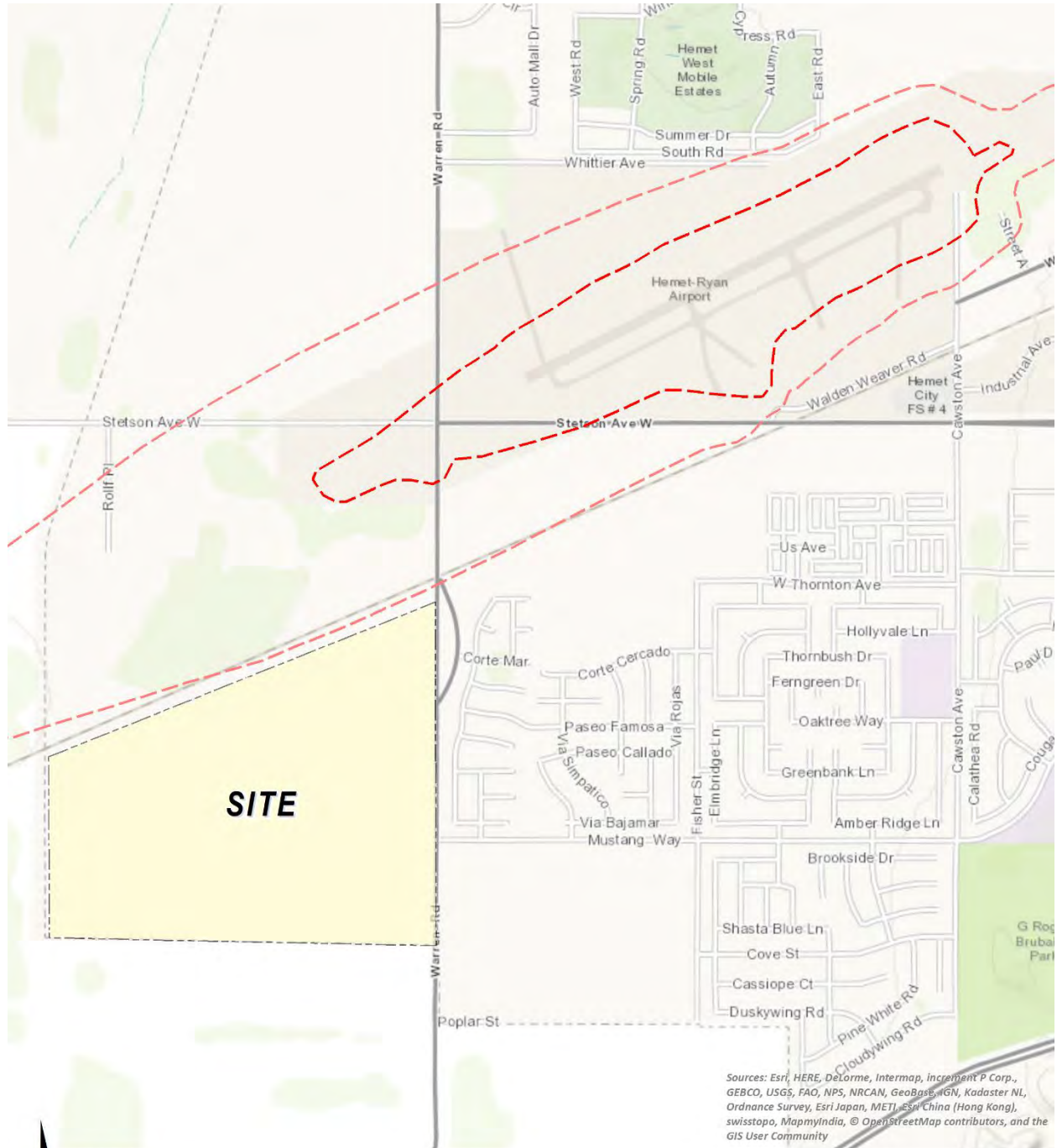
For the purposes of this analysis, and consistent with criteria employed in the City of Hemet *General Plan Program Environmental Impact Report*, construction-source vibration impacts would be considered potentially significant if received vibration levels exceed FTA 80 VdB thresholds for human annoyance (4) and the Caltrans guidelines of 0.2 in/sec PPV (5) to prevent building damage.

3.7 HEMET-RYAN AIRPORT LAND USE COMPATIBILITY

The Hemet-Ryan Airport is located approximately 0.5 miles northeast of the Project site on Stetson Avenue. The *Riverside County Airport Land Use Compatibility Plan Policy Document* (RC ALUCP) includes the policies for determining the land use compatibility of the Project since it is located within 2 miles of the Hemet-Ryan Airport runway. Chapter 2 *Countywide Policies* of the RC ALUCP establishes Policy 4.1.4 which identifies the maximum CNEL considered *normally acceptable* for new residential land uses in the vicinity of an airport as 60 dBA CNEL. Future 2031 Airport Noise Contours are provided in Figure 4.6.2 of the *Hemet-Ryan Airport Master Plan Environmental Impact Report* (EIR) and shown on Exhibit 3-D.

As shown on Exhibit 3-D, the Project site is located outside of the Hemet-Ryan Airport 60 dBA CNEL noise level contour boundary, and therefore, is considered *normally acceptable* residential land use. (15) Further, Policy 4.1.6 of the RC ALUCP identifies an interior noise level limit of 45 dBA CNEL with windows closed for residential homes affected by aircraft-related noise. Based on Policy 4.1.4 and Table 2B of the RC ALUCP, the Project is considered *normally acceptable*, and *slight interference with outdoor activities may occur*, but *conventional construction methods will eliminate most noise intrusions upon indoor activities*. (15) Standard building construction typically provides up to 25 dBA CNEL of attenuation which would reduce the interior noise levels due to aircraft activity at residential homes within the Project site to less than the Policy 4.1.6 interior noise level standard of 45 dBA CNEL.

EXHIBIT 3-D: HEMET-RYAN AIRPORT NOISE LEVEL CONTOUR BOUNDARIES



Source: County of Riverside Hemet-Ryan Airport Master Plan Environmental Impact Report, Figure 4.6.2.

4 SIGNIFICANCE CRITERIA

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

- A. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- B. Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels.
- C. A substantial permanent increase in ambient noise levels in the Project vicinity above existing levels without the proposed Project; or
- D. A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above noise levels existing without the proposed Project.
- E. For a project located within 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, expose people residing or working in the Project area to excessive noise levels.
- F. For a project within the vicinity of a private airstrip, expose people residing or working in the Project area to excessive noise levels.

While the CEQA Guidelines and the City of Hemet General Plan Guidelines provide direction on noise compatibility and establish noise standards by land use type that are sufficient to assess the significance of noise impacts under CEQA Guideline A, they do not define the levels at which increases are considered substantial for use under Guidelines B, C, and D. CEQA Guidelines E and F apply to nearby public and private airports, if any, and the Project's land use compatibility, as discussed below.

As previously shown on Exhibit 3-D, the Project site is located outside of the Hemet-Ryan Airport 60 dBA CNEL noise level contour boundary, and therefore, is considered *normally acceptable* residential land use. (15) Further, Policy 4.1.6 identifies an interior noise level limit of 45 dBA CNEL with windows closed for residential homes affected by aircraft-related noise. Based on Policy 4.1.4 and Table 2B of the RC ALUCP, the Project is considered *normally acceptable*, and *slight interference with outdoor activities may occur*, but *conventional construction methods will eliminate most noise intrusions upon indoor activities*. (15) Standard building construction typically provides up to 25 dBA CNEL of attenuation which would reduce the interior noise levels due to aircraft activity at residential homes within the Project site to less than the Policy 4.1.6 45 dBA CNEL interior noise level standard. With standard building construction, the Project is expected to satisfy the City of Hemet 45 dBA CNEL interior noise level standard, and therefore, the potential impacts under CEQA guidelines E and F are considered to be *less than significant*, and are not further analyzed in this noise study.

4.1 NOISE-SENSITIVE RECEIVERS

Noise level increases resulting from the Project are evaluated based on the Appendix G CEQA Guidelines described above at the closest sensitive receiver locations. Under CEQA, consideration must be given to the magnitude of the increase, the existing ambient noise levels, and the location of noise-sensitive receivers to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes *that there is no single noise increase that renders the noise impact significant.* (16)

Unfortunately, there is no completely satisfactory way to measure the subjective effects of noise or of the corresponding human reactions of annoyance and dissatisfaction. 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) (17) 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 (i.e., CNEL).

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, FICON identifies a *readily perceptible* 5 dBA or greater project-related noise level increase is considered a significant impact when the noise criteria for a given land use is exceeded. Per FICON, in areas where the without project noise levels range from 60 to 65 dBA, a 3 dBA *barely perceptible* noise level increase appears to be appropriate for most people. When the without project noise levels already exceed 65 dBA, any increase in community noise louder than 1.5 dBA or greater is considered a significant impact if the noise criteria for a given land use is exceeded, since it likely contributes to an existing noise exposure exceedance. Table 4-1 below provides a summary of the potential noise impact significance criteria, based on guidance from FICON.

TABLE 4-1: SIGNIFICANCE OF NOISE IMPACTS AT NOISE-SENSITIVE RECEIVERS

Without Project Noise Level	Potential Significant Impact
< 60 dBA	5 dBA or more
60 - 65 dBA	3 dBA or more
> 65 dBA	1.5 dBA or more

Federal Interagency Committee on Noise (FICON), 1992.

4.2 NON-NOISE-SENSITIVE RECEIVERS

The City of Hemet General Plan Public Safety Element, Table 6.4, is used to establish the satisfactory noise levels of significance for non-noise-sensitive land uses in the Project study area, such as commercial, business park, and industrial land uses. As previously shown on Exhibit 3-C, the exterior noise level standard for non-noise-sensitive land uses is 70 dBA CNEL. (12)

To determine if Project-related traffic noise level increases are significant at off-site non-noise-sensitive land uses, a *readily perceptible* 5 dBA and *barely perceptible* 3 dBA criteria were used. When the without Project noise levels at the non-noise-sensitive land uses are below the 70 dBA CNEL standard, a *readily perceptible* 5 dBA or greater noise level increase is considered a significant impact. When the without Project noise levels are greater than the 70 dBA CNEL standard, a *barely perceptible* 3 dBA or greater noise level increase is considered a significant impact since the noise level criteria is already exceeded. The noise level increases used to determine significant impacts for non-noise-sensitive land uses is generally consistent with the FICON noise level increase thresholds for noise-sensitive land uses but instead rely on the City of Hemet General Plan Public Safety Element, Table 6.4, 70 dBA CNEL exterior noise level standard. Table 4.2 provides a summary of the noise impact significance criteria.

4.3 SIGNIFICANCE CRITERIA

Noise impacts shall be considered significant if any of the following occur as a direct result of the proposed development. Table 4-2 shows the significance criteria summary matrix.

OFF-SITE TRAFFIC NOISE

- When the noise levels at existing and future noise-sensitive land uses (e.g. residential):
 - are less than 60 dBA CNEL and the Project creates a readily perceptible 5 dBA CNEL or greater Project related noise level increase; or
 - range from 60 to 65 dBA CNEL and the Project creates a barely perceptible 3 dBA CNEL or greater Project noise level increase; or
 - already exceed 65 dBA CNEL, and the Project creates a community noise level impact of greater than 1.5 dBA CNEL (FICON, 1992).
- When the noise levels at existing and future non-noise-sensitive land uses (e.g. commercial):
 - are less than the City of Hemet General Plan Public Safety Element, Table 6.4, 70 dBA CNEL and the Project creates a readily perceptible 5 dBA CNEL or greater Project related noise level increase; or
 - are greater than the City of Hemet General Plan Public Safety Element, Table 6.4, 70 dBA CNEL and the Project creates a barely perceptible 3 dBA CNEL or greater Project noise level increase.

ON-SITE TRANSPORTATION NOISE AND VIBRATION

- If the on-site exterior noise levels exceed 65 dBA CNEL and the interior noise levels exceed 45 dBA CNEL at the residential uses located within the Project site (City of Hemet General Plan Public Safety Element, Table 6.4).

- If the on-site vibration levels due to nearby rail activity exceed the County of Riverside acceptable vibration standard of 0.01 in/sec (RMS) at sensitive receiver locations (County of Riverside General Plan, Policy N 16.3).

OPERATIONAL NOISE

- If Project-related operational (stationary-source) noise levels exceed the exterior 60 dBA Leq and 75 dBA Lmax daytime or 45 dBA Leq and 65 dBA Lmax nighttime noise level standards at sensitive residential land uses in the City of Hemet (City of Hemet General Plan Public Safety Element, Table 6.5); or
- If the existing ambient noise levels at the nearby noise-sensitive receivers near the Project site:
 - are less than 60 dBA Leq and the Project creates a readily perceptible 5 dBA Leq or greater Project-related noise level increase; or
 - range from 60 to 65 dBA Leq and the Project creates a barely perceptible 3 dBA Leq or greater Project-related noise level increase; or
 - already exceed 65 dBA, Leq and the Project creates a community noise level impact of greater than 1.5 dBA Leq (FICON, 1992).

CONSTRUCTION NOISE AND VIBRATION

- If Project-related construction activities:
 - occur anytime other than between the permitted hours of Monday through Friday between 6:00 a.m. to 6:00 p.m. from June 1st through September 30th, and 7:00 a.m. to 6:00 p.m. from October 1st through May 31st; Saturdays between 7:00 a.m. to 6:00 p.m.; no activity allowed on Sundays (City of Hemet Municipal Code, Section 67-10); or
 - generate noise levels which exceed the maximum noise level threshold for non-transportation noise sources of 75 dBA Lmax at the nearby sensitive receiver locations (City of Hemet General Plan Public Safety Element, Table 6.5).
- If short-term Project generated construction vibration levels exceed:
 - the FTA human annoyance threshold of 80 VdB (FTA Transit Noise and Vibration Impact Assessment); or
 - the Caltrans building damage threshold of 0.2 in/sec PPV at sensitive residential structures (Caltrans Transportation and Construction Vibration Guidance Manual).

TABLE 4-2: SIGNIFICANCE CRITERIA SUMMARY

Analysis	Land Use	Condition(s)	Significance Criteria	
			Daytime	Nighttime
Off-Site ¹	Noise-Sensitive	if ambient is < 60 dBA CNEL	≥ 5 dBA CNEL Project increase	
		if ambient is 60 - 65 dBA CNEL	≥ 3 dBA CNEL Project increase	
		if ambient is > 65 dBA CNEL	≥ 1.5 dBA CNEL Project increase	
	Non-Noise-Sensitive ²	if ambient is < 70 dBA CNEL	≥ 5 dBA CNEL Project increase	
		if ambient is > 70 dBA CNEL	≥ 3 dBA CNEL Project increase	
On-Site ²	Residential	Exterior Noise Level	65 dBA CNEL	
		Interior Noise Level	45 dBA CNEL	
		Exterior Vibration Level ⁵	0.01 in/sec (RMS)	
	Commercial	Exterior Noise Level	70 dBA CNEL	
Operational	Noise-Sensitive	Exterior Noise Level ²	60 dBA Leq or 75 dBA Lmax	45 dBA Leq or 65 dBA Lmax
		if ambient is < 60 dBA Leq ¹	≥ 5 dBA Leq Project increase	
		if ambient is 60 - 65 dBA Leq ¹	≥ 3 dBA Leq Project increase	
		if ambient is > 65 dBA Leq ¹	≥ 1.5 dBA Leq Project increase	
Construction	Permitted hours Monday through Friday between 6:00 a.m. to 6:00 p.m. from June 1st through September 30th, and 7:00 a.m. to 6:00 p.m. from October 1st through May 31st; Saturdays between 7:00 a.m. to 6:00 p.m.; no activity allowed on Sundays. ³			
	Noise-Sensitive	Noise Level Threshold ⁴	75 dBA Lmax	n/a
		Vibration Level Threshold ^{5,6}	80 VdB	n/a
			0.2 in/sec PPV	n/a

¹ Source: FICON, 1992.² Source: City of Hemet General Plan Public Safety Element.³ Source: City of Hemet Municipal Code, Chapter 67, Section 67-10 (Appendix 3.1).⁴ Maximum stationary noise level standard is used as an acceptable threshold for construction noise based on the City of Hemet General Plan Public Safety Element, Table 6.5, Noise Level Performance Standards for Non-Transportation Noise Sources.⁵ Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment.⁶ Source: Caltrans Transportation and Construction Vibration Guidance Manual.

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

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5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, five 24-hour noise level measurements were taken at sensitive receiver locations in the Project study area. The receiver locations were selected to describe and document the existing noise environment within the Project study area. Exhibit 5-A provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Wednesday, September 27th, 2017. Appendix 5.1 includes study area photos.

5.1 MEASUREMENT PROCEDURE AND CRITERIA

To describe the existing noise environment, the hourly noise levels were measured during typical weekday conditions over a 24-hour period. By collecting individual hourly noise level measurements, it is possible to describe the daytime and nighttime hourly noise levels and calculate the 24-hour CNEL. The long-term noise readings were recorded using Piccolo Type 2 integrating sound level meter and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (18)

5.2 NOISE MEASUREMENT LOCATIONS

The long-term noise level measurements were positioned as close to the nearest sensitive receiver locations as possible to assess the existing ambient hourly noise levels surrounding the Project site. Both Caltrans and the FTA recognize that it is not reasonable to collect noise level measurements that can fully represent every part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development projects. This is demonstrated in the Caltrans general site location guidelines which indicate that, *sites must be free of noise contamination by sources other than sources of interest. Avoid sites located near sources such as barking dogs, lawnmowers, pool pumps, and air conditioners unless it is the express intent of the analyst to measure these sources.* (19) Further, FTA guidance states, *that it is not necessary nor recommended that existing noise exposure be determined by measuring at every noise-sensitive location in the project area. Rather, the recommended approach is to characterize the noise environment for clusters of sites based on measurements or estimates at representative locations in the community.* (4)

Based on recommendations of Caltrans and the FTA, it is not necessary to collect measurements at each individual building or residence, because each receiver measurement represents a group of buildings that share acoustical equivalence. (4) In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source. Receivers represent a location of noise sensitive areas and are used to estimate the future noise level impacts. Collecting reference ambient noise level measurements at the nearby

5.3 NOISE MEASUREMENT RESULTS

The noise measurements presented below focus on the average or equivalent sound levels (Leq). The equivalent sound level (Leq) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. Table 5-1 identifies the hourly daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) noise levels at each noise level measurement location. Appendix 5.2 provides a summary of the existing hourly ambient noise levels described below:

- Location L1 represents the noise levels northwest of the Project site at the intersection of Stetson Avenue and California Avenue, south of existing residential homes. The noise level measurements collected show an overall 24-hour exterior noise level of 61.3 dBA CNEL. The hourly noise levels measured at location L1 ranged from 50.5 to 61.6 dBA Leq during the daytime hours and from 45.2 to 57.6 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 58.5 dBA Leq with an average nighttime noise level of 53.4 dBA Leq.
- Location L2 represents the noise levels north of the Project site on Stetson Avenue, west of the Hemet-Ryan Airport runway and east of existing residential homes. The noise level measurements collected show an overall 24-hour exterior noise level of 64.3 dBA CNEL. The hourly noise levels measured at location L2 ranged from 55.1 to 63.4 dBA Leq during the daytime hours and from 51.6 to 61.2 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 60.6 dBA Leq with an average nighttime noise level of 56.8 dBA Leq.
- Location L3 represents the noise levels east of the Project site across Warren Road adjacent to the existing 6-foot high barrier for residential homes. The 24-hour CNEL indicates that the overall exterior noise level is 64.1 dBA CNEL. At location L3 the background ambient noise levels ranged from 56.1 to 61.5 dBA Leq during the daytime hours to levels of 50.7 to 61.4 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 59.3 dBA Leq with an average nighttime noise level of 57.0 dBA Leq.
- Located east of the Project site across Warren Road, location L4 represents the noise levels north of existing agricultural land uses. The noise level measurements collected show an overall 24-hour exterior noise level of 73.2 dBA CNEL. The hourly noise levels measured at location L4 ranged from 65.3 to 70.8 dBA Leq during the daytime hours and from 57.6 to 70.7 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 68.7 dBA Leq with an average nighttime noise level of 66.0 dBA Leq.
- Location L5 represents the noise levels southwest of the Project site near existing residential homes on California Avenue. The noise level measurements collected show an overall 24-hour exterior noise level of 57.6 dBA CNEL. The hourly noise levels measured at location L5 ranged from 49.5 to 58.0 dBA Leq during the daytime hours and from 44.2 to 55.4 dBA Leq during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 53.6 dBA Leq with an average nighttime noise level of 50.2 dBA Leq.

Table 5-1 provides the (energy average) noise levels used to describe the daytime and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. Appendix 5.2 provides summary worksheets of the noise levels for each hour as well as

the minimum, maximum, L₁, L₂, L₅, L₈, L₂₅, L₅₀, L₉₀, L₉₅, and L₉₉ percentile noise levels observed during the daytime and nighttime periods.

The background ambient noise levels in the Project study area are dominated by the transportation-related noise associated with the arterial roadway network and Hemet-Ryan Airport. This includes the auto, heavy truck, and aircraft activities near the noise level measurement locations. The 24-hour existing noise level measurements shown on Table 5-1 present the worst-case existing unmitigated ambient noise conditions.

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

Location ¹	Distance To Project Boundary (Feet)	Description	Energy Average Hourly Noise Level (dBA Leq) ²		CNEL
			Daytime	Nighttime	
L1	3,630'	Located northwest of the Project site at the intersection of Stetson Avenue and California Avenue, south of existing residential homes.	58.5	53.4	61.3
L2	2,215'	Located north of the Project site on Stetson Avenue, west of the Hemet-Ryan Airport runway and east of existing residential homes.	60.6	56.8	64.3
L3	285'	Located east of the Project site across Warren Road adjacent to an existing 6-foot high barrier for residential homes.	59.3	57.0	64.1
L4	60'	Located east of the Project site across Warren Road, north of existing agricultural land uses.	68.7	66.0	73.2
L5	1,120'	Located southwest of the Project site near existing residential homes on California Avenue.	53.6	50.2	57.6

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

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

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

6 METHODS AND PROCEDURES

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

6.1 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.

6.2 OFF-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 6-1 presents the roadway parameters used to assess the Project's off-site transportation noise impacts. Table 6-1 identifies the 37 study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications according to the City of Hemet and County of Riverside General Plan Circulation Elements, and the posted vehicle speeds. For the purpose of this analysis, soft site conditions were used to analyze the traffic noise impacts within the Project study area. Soft site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. Research conducted by Caltrans has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model used in this analysis. (22)

The Existing, Year 2024 (Phase 1), Year 2026 (Project Buildout), and Horizon Year 2040 average daily traffic volumes used for this study are presented on Tables 6-2 and 6-3, and were provided by the *Rancho Diamante (TTM No. 36841) Traffic Impact Analysis* prepared by Urban Crossroads, Inc. (1) Table 6-4 presents the time of day vehicle splits and Table 6-5 presents the traffic flow distributions (vehicle mix) used for this analysis. The vehicle mix provides the hourly distribution percentages of automobile, medium trucks, and heavy trucks for input into the FHWA noise prediction model.

TABLE 6-1: OFF-SITE ROADWAY PARAMETERS

ID	Roadway	Segment	Adjacent Land Use ¹	Distance From Centerline To Nearest Adjacent Land Use (Feet) ²	Vehicle Speed (mph) ³
1	Winchester Rd.	s/o Florida Av.	Residential	47'	45
2	Winchester Rd.	n/o 9th St.	Residential	47'	45
3	Patterson Av.	s/o Grand Av.	Business Park	22'	40
4	California Av.	n/o Stowe Rd.	Residential	47'	40
5	California Av.	s/o Stowe Rd.	Residential	47'	40
6	California Av.	n/o Simpson Rd.	Residential	47'	25
7	California Av.	s/o Simpson Rd.	Residential	47'	25
8	Warren Rd.	s/o Esplanade Av.	Residential	70'	55
9	Warren Rd.	n/o Devonshire Av.	Residential	70'	55
10	Warren Rd.	n/o Florida Av.	Mixed Use	70'	55
11	Warren Rd.	s/o Florida Av.	Mixed Use	70'	55
12	Warren Rd.	n/o Whittier Av.	Mixed Use	70'	55
13	Warren Rd.	s/o Whittier Av.	Industrial	70'	55
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	70'	55
15	Warren Rd.	s/o Mustang Wy.	Residential	70'	45
16	Warren Rd.	s/o Simpson Rd.	Residential	70'	45
17	Sanderson Av.	s/o Florida Av.	Commercial	54'	30
18	Sanderson Av.	n/o Stetson Av.	Commercial	54'	45
19	Florida Av.	w/o Winchester Rd.	Residential	76'	50
20	Florida Av.	e/o Warren Rd.	Mixed Use	70'	45
21	Stowe Rd.	w/o California Av.	Residential	47'	40
22	Grand Av.	e/o Patterson Av.	Residential	70'	40
23	Grand Av.	w/o Calvert Av.	Residential	70'	40
24	Grand Av.	e/o Calvert Av.	Business Park	70'	40
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	70'	50
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	70'	50
27	Stetson Av. (S.)	w/o California Av.	Residential	70'	50
28	Stetson Av. (S.)	e/o California Av.	Residential	70'	50
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	70'	50
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	70'	50
31	Stetson Av. (S.)	e/o Fisher St.	Residential	70'	50
32	Stetson Av.	e/o New Stetson Av.	Business Park	70'	50
33	Stetson Av.	e/o Cawston Av.	Airport	70'	50
34	Stetson Av.	e/o Sanderson Av.	Residential	70'	45
35	9th St.	w/o Winchester Rd.	Residential	70'	25
36	9th St.	e/o Winchester Rd.	Residential	70'	25
37	Simpson Rd.	e/o Warren Rd.	Residential	70'	45

¹ Source: City of Hemet General Plan Land Use Element, Figure 2.1.

² Distance to adjacent land use is based upon the right-of-way distances for each functional roadway classification provided in the City of Hemet and County of Riverside General Plan Circulation Elements.

³ Posted speed limits.

TABLE 6-2: AVERAGE DAILY TRAFFIC VOLUMES (1 OF 2)

ID	Roadway	Segment	Average Daily Traffic (1,000's) ¹				
			Existing (2017)			Year 2024 (Phase 1)	
			Without Project	With Phase 1	With Buildout	Without Project	With Phase 1
1	Winchester Rd.	s/o Florida Av.	12.4	12.5	12.7	18.5	18.7
2	Winchester Rd.	n/o 9th St.	14.2	14.3	14.3	18.2	18.4
3	Patterson Av.	s/o Grand Av.	0.1	0.1	0.1	0.1	0.1
4	California Av.	n/o Stowe Rd.	2.9	2.9	2.9	2.9	3.9
5	California Av.	s/o Stowe Rd.	0.3	0.3	0.3	0.3	0.4
6	California Av.	n/o Simpson Rd.	0.1	0.1	0.1	0.1	0.1
7	California Av.	s/o Simpson Rd.	0.1	0.1	0.1	0.2	0.2
8	Warren Rd.	s/o Esplanade Av.	13.7	14.5	14.7	23.7	24.4
9	Warren Rd.	n/o Devonshire Av.	13.7	14.5	14.7	22.9	23.7
10	Warren Rd.	n/o Florida Av.	10.4	11.2	11.7	19.6	20.5
11	Warren Rd.	s/o Florida Av.	16.2	18.5	20.4	27.0	29.3
12	Warren Rd.	n/o Whittier Av.	14.4	16.8	18.6	23.9	26.3
13	Warren Rd.	s/o Whittier Av.	14.3	16.8	18.5	16.9	19.3
14	Warren Rd.	s/o Stetson Av. (N.)	10.2	13.7	16.0	19.0	22.6
15	Warren Rd.	s/o Mustang Wy.	12.5	14.2	14.4	20.4	22.1
16	Warren Rd.	s/o Simpson Rd.	9.4	10.6	10.5	15.7	16.9
17	Sanderson Av.	s/o Florida Av.	26.5	26.7	26.7	38.7	38.9
18	Sanderson Av.	n/o Stetson Av.	26.1	26.5	26.5	42.6	43.0
19	Florida Av.	w/o Winchester Rd.	24.8	25.2	25.3	37.8	38.2
20	Florida Av.	e/o Warren Rd.	23.7	24.9	25.6	44.5	45.7
21	Stowe Rd.	w/o California Av.	2.8	2.8	2.8	2.8	3.7
22	Grand Av.	e/o Patterson Av.	n/a	n/a	n/a	n/a	n/a
23	Grand Av.	w/o Calvert Av.	n/a	n/a	n/a	n/a	n/a
24	Grand Av.	e/o Calvert Av.	n/a	n/a	n/a	n/a	n/a
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	n/a	n/a	n/a	n/a	n/a
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	n/a	n/a	n/a	n/a	n/a
27	Stetson Av. (S.)	w/o California Av.	n/a	n/a	n/a	n/a	n/a
28	Stetson Av. (S.)	e/o California Av.	n/a	n/a	n/a	n/a	n/a
29	Stetson Av. (S.)	w/o Warren Rd.	n/a	n/a	n/a	n/a	n/a
30	Stetson Av. (S.)	e/o Warren Rd.	n/a	n/a	n/a	n/a	n/a
31	Stetson Av. (S.)	e/o Fisher St.	n/a	n/a	n/a	n/a	n/a
32	Stetson Av.	e/o New Stetson Av.	n/a	n/a	n/a	n/a	n/a
33	Stetson Av.	e/o Cawston Av.	11.1	12.2	12.4	13.2	14.3
34	Stetson Av.	e/o Sanderson Av.	26.7	27.1	27.2	35.2	35.6
35	9th St.	w/o Winchester Rd.	1.6	1.6	1.6	2.4	2.4
36	9th St.	e/o Winchester Rd.	0.1	0.1	0.2	0.2	0.2
37	Simpson Rd.	e/o Warren Rd.	12.5	14.2	14.4	20.4	22.1

¹ Source: Rancho Diamante Traffic Impact Analysis, April 2018.

"n/a" = Roadway segment does not exist under the given traffic scenario.

TABLE 6-3: AVERAGE DAILY TRAFFIC VOLUMES (2 OF 2)

ID	Roadway	Segment	Average Daily Traffic (1,000's) ¹			
			Year 2026 (Buildout)		Horizon Year 2040	
			Without Project	With Buildout	Without Project	With Project
1	Winchester Rd.	s/o Florida Av.	22.0	22.3	24.4	25.0
2	Winchester Rd.	n/o 9th St.	21.6	21.8	29.0	29.1
3	Patterson Av.	s/o Grand Av.	0.1	0.1	13.6	13.6
4	California Av.	n/o Stowe Rd.	4.7	4.7	12.3	12.8
5	California Av.	s/o Stowe Rd.	0.4	0.4	16.9	17.7
6	California Av.	n/o Simpson Rd.	0.1	0.1	18.1	18.6
7	California Av.	s/o Simpson Rd.	0.2	0.2	4.9	5.4
8	Warren Rd.	s/o Esplanade Av.	27.8	28.8	34.4	34.9
9	Warren Rd.	n/o Devonshire Av.	27.8	28.8	35.2	35.9
10	Warren Rd.	n/o Florida Av.	23.6	24.9	26.2	27.1
11	Warren Rd.	s/o Florida Av.	31.3	35.4	36.1	38.5
12	Warren Rd.	n/o Whittier Av.	18.3	22.5	28.2	30.9
13	Warren Rd.	s/o Whittier Av.	18.2	22.5	25.9	28.6
14	Warren Rd.	s/o Stetson Av. (N.)	22.7	28.5	20.7	23.4
15	Warren Rd.	s/o Mustang Wy.	23.4	25.3	19.5	20.0
16	Warren Rd.	s/o Simpson Rd.	17.8	18.9	16.4	16.7
17	Sanderson Av.	s/o Florida Av.	45.1	45.3	33.9	34.1
18	Sanderson Av.	n/o Stetson Av.	50.8	51.1	33.9	34.1
19	Florida Av.	w/o Winchester Rd.	43.3	43.8	69.3	69.6
20	Florida Av.	e/o Warren Rd.	51.3	53.2	86.1	86.9
21	Stowe Rd.	w/o California Av.	4.5	4.5	8.6	9.0
22	Grand Av.	e/o Patterson Av.	n/a	n/a	33.1	34.3
23	Grand Av.	w/o Calvert Av.	n/a	n/a	33.7	34.9
24	Grand Av.	e/o Calvert Av.	n/a	n/a	23.7	25.2
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	n/a	n/a	29.5	31.2
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	n/a	n/a	29.9	31.9
27	Stetson Av. (S.)	w/o California Av.	n/a	n/a	29.9	31.9
28	Stetson Av. (S.)	e/o California Av.	n/a	n/a	37.7	41.1
29	Stetson Av. (S.)	w/o Warren Rd.	n/a	n/a	33.6	35.6
30	Stetson Av. (S.)	e/o Warren Rd.	n/a	n/a	30.1	31.2
31	Stetson Av. (S.)	e/o Fisher St.	n/a	n/a	30.2	31.2
32	Stetson Av.	e/o New Stetson Av.	n/a	n/a	35.8	36.8
33	Stetson Av.	e/o Cawston Av.	14.3	15.5	32.9	33.6
34	Stetson Av.	e/o Sanderson Av.	38.4	38.9	30.9	31.3
35	9th St.	w/o Winchester Rd.	3.2	3.3	20.5	21.0
36	9th St.	e/o Winchester Rd.	0.2	0.3	11.5	12.4
37	Simpson Rd.	e/o Warren Rd.	23.4	25.3	14.6	15.0

¹ Source: Rancho Diamante Traffic Impact Analysis, April 2018.

"n/a" = Roadway segment does not exist under the given traffic scenario.

TABLE 6-4: TIME OF DAY VEHICLE SPLITS

Time Period	Vehicle Type		
	Autos	Medium Trucks	Heavy Trucks
Daytime (7:00 a.m. - 7:00 p.m.)	77.5%	84.8%	86.5%
Evening (7:00 p.m. - 10:00 p.m.)	12.9%	4.9%	2.7%
Nighttime (10:00 p.m. - 7:00 a.m.)	9.6%	10.3%	10.8%
Total:	100.0%	100.0%	100.0%

Source: Typical Southern California vehicle mix.

TABLE 6-5: DISTRIBUTION OF TRAFFIC FLOW BY VEHICLE TYPE (VEHICLE MIX)

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

Source: County of Riverside Office of Industrial Hygiene.

6.3 ON-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

The on-site roadway parameters including the average daily traffic (ADT) volumes used for this study are presented on Table 6-6. Based on the City of Hemet General Plan Circulation Element, Figure 4.1, Stetson Avenue and Warren Road are classified as 6-lane Arterials. Mustang Way is classified as a 4-lane Secondary. To predict the future on-site noise environment at the Project site, the Horizon Year 2040 with Project average daily traffic volumes were obtained from the *Rancho Diamante (TTM No. 36841) Traffic Impact Analysis*, prepared by Urban Crossroads, Inc. (1) The traffic volumes shown on Table 6-6 reflect future long-range traffic conditions needed to assess the future on-site traffic noise environment and to identify the appropriate noise mitigation measures that address the worst-case future noise conditions. For the purposes of this analysis, soft site conditions were used to analyze the on-site traffic noise impacts for the Project study area. Soft site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation.

Table 6-4 presents the time of day vehicle splits by vehicle type, and Table 6-5 presents the total traffic flow distributions (vehicle mixes) used for this analysis. The vehicle mix provides the hourly distribution percentages of automobile, medium trucks, and heavy trucks for input into the FHWA Model based on roadway types.

To predict the future noise environment at each lot within the Project site, coordinate information was collected to identify the noise transmission path between the noise source and receiver. The coordinate information is based on the Project site plan showing the plotting of each lot in relationship to Stetson Avenue, Warrant Road, and Mustang Way, as shown in Appendix 6.1.

TABLE 6-6: ON-SITE ROADWAY PARAMETERS

Roadway Segment	Lanes	Classification	Average Daily Traffic Volume ¹	Speed Limit (mph) ²	Site Conditions
Stetson Av. e/o "C Street"	6	Arterial	40,200	50	Soft
Stetson Av. e/o Mustang Wy.	6	Arterial	35,300	50	Soft
Warren Rd. s/o Stetson Av.	6	Arterial	21,100	45	Soft
Warren Rd. s/o Mustang Wy.	6	Arterial	20,000	40	Soft
Mustang Wy. s/o Stetson Av.	4	Secondary	14,200	40	Soft
Mustang Wy. w/o Warren rd.	4	Secondary	5,000	40	Soft

¹ Source: Rancho Diamante Traffic Impact Analysis, April 2018, Year 2040 with Project ADT volumes.

² Posted speed limits. Future Stetson Avenue speed limit is based on closest existing posted speed limit on Stetson Avenue.

The site plan is used to identify the relationship between the roadway centerline elevation, the pad elevation and the centerline distance to the noise barrier, and the building façade. The exterior noise level impacts at the backyard receivers were placed five feet above the pad elevation and ten feet from the proposed barrier location or at the proposed building façade, whichever is greater. All second-floor receivers were located fourteen feet above the proposed finished floor elevation.

6.4 FTA RAIL NOISE PREDICTION MODEL

The estimated railroad noise impacts from the Burlington Northern Santa Fe (BNSF) rail lines north of the Project site are calculated using the Federal Transit Administration (FTA) General Transit Noise Assessment Model. The FTA Model calculates the predicted noise level based on the type of train, distance to receiver, number of trains per hour, speed, number of cars per train, and type of railroad tracks. The rail activities at the BNSF rail lines north of the Project site currently include up to 2 freight trains per day based on the U.S. Department of Transportation Crossing Inventory Form number 027366S at Warren Road. An extension of the Metrolink 91 Line in the City of Perris is proposed to extend to the rail lines north of the Project site.

The future rail volumes are based on a doubling of the existing freight train volumes from the U.S. Department of Transportation Crossing Inventory and observations made during the noise level measurements. The Metrolink extension volumes are estimated based on the similar Riverside Line commuter train volume of 12 trains per day, and the speed of each train is based on the Southern California Regional Rail Authority *Metrolink Fact Sheet* for Quarter 3 of 2015. The future noise conditions at the residential land use within the Project site are based on the estimated future rail volumes for the freight and Metrolink rail activities. The FTA Model inputs are shown on Table 6-7.

TABLE 6-7: ON-SITE RAILROAD PARAMETERS

BNSF Railroad Activities	Train/Engine Type ¹	Speed (mph) ²	Trains Per Hour		Trains Per Day ³
			Daytime	Nighttime	
Diesel Locomotives (Freight) ¹	Diesel	15	2	2	4
Commuter Rail Cars (Future Metrolink Extension) ²	Commuter	40	6	6	12

¹ Based on observations made during the noise level measurements taken in the Project study area and the U.S. Department of Transportation Crossing Inventory Form for crossing number 027366S at Warren Road.

² Proposed Metrolink 91 Line extension from the City of Perris.

³ Future rail volumes are based on a doubling of the existing freight train volumes from the U.S. Department of Transportation Crossing Inventory and observations made during the noise level measurements. The Metrolink extension volumes are estimated based on the similar Riverside Line commuter train volume of 12 trains per day.

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

6.5 CONSTRUCTION VIBRATION ASSESSMENT METHODOLOGY

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

However, while vehicular traffic is rarely perceptible, construction has the potential to result in varying degrees of temporary ground vibration, depending on the specific construction activities and equipment used. Ground vibration levels associated with various types of construction equipment are summarized on Table 8. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the human response (annoyance) and potential for building damage using the following vibration assessment methods defined by the FTA: (4)

- To describe the human response (annoyance) associated with vibration impacts the FTA provides the following equation: $L_{VdB}(D) = L_{VdB}(25 \text{ ft}) - 30 \log(D/25)$
- To describe the potential vibration levels capable of causing building damage the FTA provides the following equation: $PPV_{\text{equip}} = PPV_{\text{ref}} \times (25/D)^{1.5}$

TABLE 6-8: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	PPV (in/sec) at 25 feet	Vibration Decibel (VdB) at 25 feet
Small bulldozer	0.003	58
Jackhammer	0.035	79
Loaded Trucks	0.076	86
Large bulldozer	0.089	87

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

7 OFF-SITE TRANSPORTATION NOISE IMPACTS

To assess the off-site transportation CNEL noise level impacts associated with development of the proposed Project, noise contours were developed based on the *Rancho Diamante (TTM No. 36841) Traffic Impact Analysis*. (1) 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.
 - With Phase 1 of the Project: This scenario refers to the existing present-day noise conditions with Phase 1 of the proposed Project.
 - With Project Buildout: This scenario refers to the existing present-day noise conditions with Buildout of the proposed Project.
- Year 2024 Without / With Phase 1 of the Project: This scenario refers to Year 2024 noise conditions without and with Phase 1 of the proposed Project.
- Year 2026 Without / With Buildout of the Project: This scenario refers to Year 2026 noise conditions without and with Buildout of the proposed Project.
- Horizon Year 2040 Without / With Project: This scenario refers to the background noise conditions at future Year 2040 without and with the proposed Project. This scenario corresponds to 2040 conditions, and includes all cumulative projects identified in the Traffic Impact Analysis.

7.1 TRAFFIC NOISE CONTOURS

To quantify the Project's operational traffic noise impacts on the surrounding areas, the changes in traffic noise levels on roadway segments surrounding the Project were calculated based on the changes in the average daily traffic volumes. Based on the noise impact significance criteria described in Section 4 and shown on Table 4-2, a significant off-site traffic noise level impact occurs:

- When the noise levels at existing and future noise-sensitive land uses (e.g. residential, etc.):
 - are less than 60 dBA CNEL and the Project creates a readily perceptible 5 dBA CNEL or greater Project related noise level increase; or
 - range from 60 to 65 dBA CNEL and the Project creates a barely perceptible 3 dBA CNEL or greater Project noise level increase; or
 - already exceed 65 dBA CNEL, and the Project creates a community noise level impact of greater than 1.5 dBA CNEL (FICON, 1992).
- When the noise levels at existing and future non-noise-sensitive land uses (e.g. commercial):
 - are less than the City of Hemet General Plan Noise Element, Table N-1, normally acceptable 70 dBA CNEL and the Project creates a readily perceptible 5 dBA CNEL or greater Project related noise level increase; or

- are greater than the City of Hemet General Plan Noise Element, Table N-1, normally acceptable 70 dBA CNEL and the Project creates a barely perceptible 3 dBA CNEL or greater Project noise level increase.

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 take into account the effect of any existing noise barriers or topography that may affect ambient noise levels. In addition, since the noise contours reflect modeling of vehicular noise on area roadways, they appropriately do not reflect noise contribution from any surrounding stationary noise sources within the Project study area. Tables 7-1 to 7-9 present a summary of the unmitigated exterior traffic noise levels for the 37 study area roadway segments analyzed from the without Project to the with Project conditions in each of the timeframes: Existing, Year 2024 (Phase 1), Year 2026 (Project Buildout), and Horizon Year 2040 conditions. Appendix 7.1 includes a summary of the traffic noise level contours for each of the nine traffic scenarios.

TABLE 7-1: EXISTING WITHOUT PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned Land Use ¹	dBA CNEL			
				@ Adj. Land Use	70	65	60
					CL to Contour Distance (Feet) ²		
1	Winchester Rd.	s/o Florida Av.	Residential	68.3	RW	78	168
2	Winchester Rd.	n/o 9th St.	Residential	68.9	RW	85	184
3	Patterson Av.	s/o Grand Av.	Business Park	50.7	RW	RW	RW
4	California Av.	n/o Stowe Rd.	Residential	60.7	RW	RW	52
5	California Av.	s/o Stowe Rd.	Residential	50.9	RW	RW	RW
6	California Av.	n/o Simpson Rd.	Residential	41.2	RW	RW	RW
7	California Av.	s/o Simpson Rd.	Residential	41.2	RW	RW	RW
8	Warren Rd.	s/o Esplanade Av.	Residential	69.3	RW	135	291
9	Warren Rd.	n/o Devonshire Av.	Residential	69.3	RW	135	291
10	Warren Rd.	n/o Florida Av.	Mixed Use	68.1	RW	112	242
11	Warren Rd.	s/o Florida Av.	Mixed Use	70.0	70	151	325
12	Warren Rd.	n/o Whittier Av.	Mixed Use	69.5	RW	140	301
13	Warren Rd.	s/o Whittier Av.	Industrial	69.5	RW	139	299
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	68.0	RW	111	239
15	Warren Rd.	s/o Mustang Wy.	Residential	66.7	RW	91	195
16	Warren Rd.	s/o Simpson Rd.	Residential	65.4	RW	75	161
17	Sanderson Av.	s/o Florida Av.	Commercial	66.7	RW	70	150
18	Sanderson Av.	n/o Stetson Av.	Commercial	70.9	62	133	287
19	Florida Av.	w/o Winchester Rd.	Residential	69.8	RW	159	343
20	Florida Av.	e/o Warren Rd.	Mixed Use	69.5	RW	139	299
21	Stowe Rd.	w/o California Av.	Residential	60.6	RW	RW	51
22	Grand Av.	e/o Patterson Av.	Residential	44.4	RW	RW	RW
23	Grand Av.	w/o Calvert Av.	Residential	44.4	RW	RW	RW
24	Grand Av.	e/o Calvert Av.	Business Park	44.4	RW	RW	RW
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	46.9	RW	RW	RW
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	46.9	RW	RW	RW
27	Stetson Av. (S.)	w/o California Av.	Residential	46.9	RW	RW	RW
28	Stetson Av. (S.)	e/o California Av.	Residential	46.9	RW	RW	RW
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	46.9	RW	RW	RW
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	46.9	RW	RW	RW
31	Stetson Av. (S.)	e/o Fisher St.	Residential	46.9	RW	RW	RW
32	Stetson Av.	e/o New Stetson Av.	Business Park	46.9	RW	RW	RW
33	Stetson Av.	e/o Cawston Av.	Airport	67.3	RW	100	215
34	Stetson Av.	e/o Sanderson Av.	Residential	70.0	70	150	324
35	9th St.	w/o Winchester Rd.	Residential	51.6	RW	RW	RW
36	9th St.	e/o Winchester Rd.	Residential	39.6	RW	RW	RW
37	Simpson Rd.	e/o Warren Rd.	Residential	66.7	RW	91	195

¹ Source: City of Hemet General Plan Land Use Element, Figure 2.1.

² "RW" = Location of the respective noise contour falls within the right-of-way of the road.

"n/a" = Roadway segment does not exist under the given traffic scenario.

TABLE 7-2: EXISTING WITH PHASE 1 PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned Land Use ¹	dBA CNEL			
				@ Adj. Land Use	70	65	60
					CL to Contour Distance (Feet) ²		
1	Winchester Rd.	s/o Florida Av.	Residential	68.3	RW	78	169
2	Winchester Rd.	n/o 9th St.	Residential	68.9	RW	86	185
3	Patterson Av.	s/o Grand Av.	Business Park	50.7	RW	RW	RW
4	California Av.	n/o Stowe Rd.	Residential	60.7	RW	RW	52
5	California Av.	s/o Stowe Rd.	Residential	50.9	RW	RW	RW
6	California Av.	n/o Simpson Rd.	Residential	41.2	RW	RW	RW
7	California Av.	s/o Simpson Rd.	Residential	41.2	RW	RW	RW
8	Warren Rd.	s/o Esplanade Av.	Residential	69.5	RW	140	302
9	Warren Rd.	n/o Devonshire Av.	Residential	69.5	RW	140	302
10	Warren Rd.	n/o Florida Av.	Mixed Use	68.4	RW	118	254
11	Warren Rd.	s/o Florida Av.	Mixed Use	70.6	77	165	355
12	Warren Rd.	n/o Whittier Av.	Mixed Use	70.2	72	155	333
13	Warren Rd.	s/o Whittier Av.	Industrial	70.2	72	155	333
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	69.3	RW	135	291
15	Warren Rd.	s/o Mustang Wy.	Residential	67.2	RW	99	213
16	Warren Rd.	s/o Simpson Rd.	Residential	66.0	RW	81	175
17	Sanderson Av.	s/o Florida Av.	Commercial	66.7	RW	70	151
18	Sanderson Av.	n/o Stetson Av.	Commercial	71.0	63	135	290
19	Florida Av.	w/o Winchester Rd.	Residential	69.9	RW	161	347
20	Florida Av.	e/o Warren Rd.	Mixed Use	69.7	RW	143	309
21	Stowe Rd.	w/o California Av.	Residential	60.6	RW	RW	51
22	Grand Av.	e/o Patterson Av.	Residential	44.4	RW	RW	RW
23	Grand Av.	w/o Calvert Av.	Residential	44.4	RW	RW	RW
24	Grand Av.	e/o Calvert Av.	Business Park	44.4	RW	RW	RW
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	46.9	RW	RW	RW
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	46.9	RW	RW	RW
27	Stetson Av. (S.)	w/o California Av.	Residential	46.9	RW	RW	RW
28	Stetson Av. (S.)	e/o California Av.	Residential	46.9	RW	RW	RW
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	46.9	RW	RW	RW
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	46.9	RW	RW	RW
31	Stetson Av. (S.)	e/o Fisher St.	Residential	46.9	RW	RW	RW
32	Stetson Av.	e/o New Stetson Av.	Business Park	46.9	RW	RW	RW
33	Stetson Av.	e/o Cawston Av.	Airport	67.7	RW	106	229
34	Stetson Av.	e/o Sanderson Av.	Residential	70.0	70	152	327
35	9th St.	w/o Winchester Rd.	Residential	51.6	RW	RW	RW
36	9th St.	e/o Winchester Rd.	Residential	39.6	RW	RW	RW
37	Simpson Rd.	e/o Warren Rd.	Residential	67.2	RW	99	213

¹ Source: City of Hemet General Plan Land Use Element, Figure 2.1.

² "RW" = Location of the respective noise contour falls within the right-of-way of the road.

"n/a" = Roadway segment does not exist under the given traffic scenario.

TABLE 7-3: EXISTING WITH PROJECT BUILDOUT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned Land Use ¹	dBA CNEL			
				@ Adj. Land Use	70	65	60
					CL to Contour Distance (Feet) ²		
1	Winchester Rd.	s/o Florida Av.	Residential	68.4	RW	79	170
2	Winchester Rd.	n/o 9th St.	Residential	68.9	RW	86	185
3	Patterson Av.	s/o Grand Av.	Business Park	50.7	RW	RW	RW
4	California Av.	n/o Stowe Rd.	Residential	60.7	RW	RW	52
5	California Av.	s/o Stowe Rd.	Residential	50.9	RW	RW	RW
6	California Av.	n/o Simpson Rd.	Residential	41.2	RW	RW	RW
7	California Av.	s/o Simpson Rd.	Residential	41.2	RW	RW	RW
8	Warren Rd.	s/o Esplanade Av.	Residential	69.6	RW	142	305
9	Warren Rd.	n/o Devonshire Av.	Residential	69.6	RW	142	305
10	Warren Rd.	n/o Florida Av.	Mixed Use	68.6	RW	122	262
11	Warren Rd.	s/o Florida Av.	Mixed Use	71.0	82	176	379
12	Warren Rd.	n/o Whittier Av.	Mixed Use	70.6	77	166	357
13	Warren Rd.	s/o Whittier Av.	Industrial	70.6	77	165	355
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	70.0	RW	150	323
15	Warren Rd.	s/o Mustang Wy.	Residential	67.3	RW	100	214
16	Warren Rd.	s/o Simpson Rd.	Residential	65.9	RW	81	174
17	Sanderson Av.	s/o Florida Av.	Commercial	66.7	RW	70	151
18	Sanderson Av.	n/o Stetson Av.	Commercial	71.0	63	135	290
19	Florida Av.	w/o Winchester Rd.	Residential	69.9	RW	161	348
20	Florida Av.	e/o Warren Rd.	Mixed Use	69.8	RW	146	315
21	Stowe Rd.	w/o California Av.	Residential	60.6	RW	RW	51
22	Grand Av.	e/o Patterson Av.	Residential	44.4	RW	RW	RW
23	Grand Av.	w/o Calvert Av.	Residential	44.4	RW	RW	RW
24	Grand Av.	e/o Calvert Av.	Business Park	44.4	RW	RW	RW
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	46.9	RW	RW	RW
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	46.9	RW	RW	RW
27	Stetson Av. (S.)	w/o California Av.	Residential	46.9	RW	RW	RW
28	Stetson Av. (S.)	e/o California Av.	Residential	46.9	RW	RW	RW
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	46.9	RW	RW	RW
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	46.9	RW	RW	RW
31	Stetson Av. (S.)	e/o Fisher St.	Residential	46.9	RW	RW	RW
32	Stetson Av.	e/o New Stetson Av.	Business Park	46.9	RW	RW	RW
33	Stetson Av.	e/o Cawston Av.	Airport	67.8	RW	108	232
34	Stetson Av.	e/o Sanderson Av.	Residential	70.1	71	152	328
35	9th St.	w/o Winchester Rd.	Residential	51.6	RW	RW	RW
36	9th St.	e/o Winchester Rd.	Residential	42.6	RW	RW	RW
37	Simpson Rd.	e/o Warren Rd.	Residential	67.3	RW	100	214

¹ Source: City of Hemet General Plan Land Use Element, Figure 2.1.

² "RW" = Location of the respective noise contour falls within the right-of-way of the road.

"n/a" = Roadway segment does not exist under the given traffic scenario.

TABLE 7-4: YEAR 2024 WITHOUT PHASE 1 PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned Land Use ¹	dBA CNEL			
				@ Adj. Land Use	70	65	60
					CL to Contour Distance (Feet) ²		
1	Winchester Rd.	s/o Florida Av.	Residential	70.0	47	102	219
2	Winchester Rd.	n/o 9th St.	Residential	70.0	47	101	217
3	Patterson Av.	s/o Grand Av.	Business Park	50.7	RW	RW	RW
4	California Av.	n/o Stowe Rd.	Residential	60.7	RW	RW	52
5	California Av.	s/o Stowe Rd.	Residential	50.9	RW	RW	RW
6	California Av.	n/o Simpson Rd.	Residential	41.2	RW	RW	RW
7	California Av.	s/o Simpson Rd.	Residential	44.2	RW	RW	RW
8	Warren Rd.	s/o Esplanade Av.	Residential	71.7	90	195	419
9	Warren Rd.	n/o Devonshire Av.	Residential	71.5	88	190	410
10	Warren Rd.	n/o Florida Av.	Mixed Use	70.8	80	171	369
11	Warren Rd.	s/o Florida Av.	Mixed Use	72.2	99	212	457
12	Warren Rd.	n/o Whittier Av.	Mixed Use	71.7	91	196	422
13	Warren Rd.	s/o Whittier Av.	Industrial	70.2	72	155	335
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	70.7	78	168	362
15	Warren Rd.	s/o Mustang Wy.	Residential	68.8	RW	126	271
16	Warren Rd.	s/o Simpson Rd.	Residential	67.7	RW	105	227
17	Sanderson Av.	s/o Florida Av.	Commercial	68.3	RW	90	193
18	Sanderson Av.	n/o Stetson Av.	Commercial	73.0	86	185	399
19	Florida Av.	w/o Winchester Rd.	Residential	71.6	98	211	454
20	Florida Av.	e/o Warren Rd.	Mixed Use	72.2	98	211	455
21	Stowe Rd.	w/o California Av.	Residential	60.6	RW	RW	51
22	Grand Av.	e/o Patterson Av.	Residential	44.4	RW	RW	RW
23	Grand Av.	w/o Calvert Av.	Residential	44.4	RW	RW	RW
24	Grand Av.	e/o Calvert Av.	Business Park	44.4	RW	RW	RW
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	46.9	RW	RW	RW
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	46.9	RW	RW	RW
27	Stetson Av. (S.)	w/o California Av.	Residential	46.9	RW	RW	RW
28	Stetson Av. (S.)	e/o California Av.	Residential	46.9	RW	RW	RW
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	46.9	RW	RW	RW
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	46.9	RW	RW	RW
31	Stetson Av. (S.)	e/o Fisher St.	Residential	46.9	RW	RW	RW
32	Stetson Av.	e/o New Stetson Av.	Business Park	46.9	RW	RW	RW
33	Stetson Av.	e/o Cawston Av.	Airport	68.1	RW	112	241
34	Stetson Av.	e/o Sanderson Av.	Residential	71.2	84	181	389
35	9th St.	w/o Winchester Rd.	Residential	53.4	RW	RW	RW
36	9th St.	e/o Winchester Rd.	Residential	42.6	RW	RW	RW
37	Simpson Rd.	e/o Warren Rd.	Residential	68.8	RW	126	271

¹ Source: City of Hemet General Plan Land Use Element, Figure 2.1.

² "RW" = Location of the respective noise contour falls within the right-of-way of the road.

"n/a" = Roadway segment does not exist under the given traffic scenario.

TABLE 7-5: YEAR 2024 WITH PHASE 1 PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned Land Use ¹	dBA CNEL			
				@ Adj. Land Use	70	65	60
					CL to Contour Distance (Feet) ²		
1	Winchester Rd.	s/o Florida Av.	Residential	70.1	48	102	221
2	Winchester Rd.	n/o 9th St.	Residential	70.0	47	101	218
3	Patterson Av.	s/o Grand Av.	Business Park	50.7	RW	RW	RW
4	California Av.	n/o Stowe Rd.	Residential	62.0	RW	RW	64
5	California Av.	s/o Stowe Rd.	Residential	52.1	RW	RW	RW
6	California Av.	n/o Simpson Rd.	Residential	41.2	RW	RW	RW
7	California Av.	s/o Simpson Rd.	Residential	44.2	RW	RW	RW
8	Warren Rd.	s/o Esplanade Av.	Residential	71.8	92	198	427
9	Warren Rd.	n/o Devonshire Av.	Residential	71.7	90	195	419
10	Warren Rd.	n/o Florida Av.	Mixed Use	71.0	82	177	381
11	Warren Rd.	s/o Florida Av.	Mixed Use	72.6	104	224	483
12	Warren Rd.	n/o Whittier Av.	Mixed Use	72.1	97	209	449
13	Warren Rd.	s/o Whittier Av.	Industrial	70.8	79	170	366
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	71.5	87	188	406
15	Warren Rd.	s/o Mustang Wy.	Residential	69.2	RW	132	285
16	Warren Rd.	s/o Simpson Rd.	Residential	68.0	RW	111	239
17	Sanderson Av.	s/o Florida Av.	Commercial	68.3	RW	90	194
18	Sanderson Av.	n/o Stetson Av.	Commercial	73.1	86	186	401
19	Florida Av.	w/o Winchester Rd.	Residential	71.7	99	212	457
20	Florida Av.	e/o Warren Rd.	Mixed Use	72.3	100	215	463
21	Stowe Rd.	w/o California Av.	Residential	61.8	RW	RW	62
22	Grand Av.	e/o Patterson Av.	Residential	44.4	RW	RW	RW
23	Grand Av.	w/o Calvert Av.	Residential	44.4	RW	RW	RW
24	Grand Av.	e/o Calvert Av.	Business Park	44.4	RW	RW	RW
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	46.9	RW	RW	RW
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	46.9	RW	RW	RW
27	Stetson Av. (S.)	w/o California Av.	Residential	46.9	RW	RW	RW
28	Stetson Av. (S.)	e/o California Av.	Residential	46.9	RW	RW	RW
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	46.9	RW	RW	RW
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	46.9	RW	RW	RW
31	Stetson Av. (S.)	e/o Fisher St.	Residential	46.9	RW	RW	RW
32	Stetson Av.	e/o New Stetson Av.	Business Park	46.9	RW	RW	RW
33	Stetson Av.	e/o Cawston Av.	Airport	68.4	RW	118	255
34	Stetson Av.	e/o Sanderson Av.	Residential	71.2	84	182	392
35	9th St.	w/o Winchester Rd.	Residential	53.4	RW	RW	RW
36	9th St.	e/o Winchester Rd.	Residential	42.6	RW	RW	RW
37	Simpson Rd.	e/o Warren Rd.	Residential	69.2	RW	132	285

¹ Source: City of Hemet General Plan Land Use Element, Figure 2.1.² "RW" = Location of the respective noise contour falls within the right-of-way of the road.

"n/a" = Roadway segment does not exist under the given traffic scenario.

TABLE 7-6: YEAR 2026 WITHOUT PROJECT BUILDOUT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned Land Use ¹	dBA CNEL			
				@ Adj. Land Use	70	65	60
					CL to Contour Distance (Feet) ²		
1	Winchester Rd.	s/o Florida Av.	Residential	70.8	53	114	246
2	Winchester Rd.	n/o 9th St.	Residential	70.7	52	113	243
3	Patterson Av.	s/o Grand Av.	Business Park	50.7	RW	RW	RW
4	California Av.	n/o Stowe Rd.	Residential	62.8	RW	RW	72
5	California Av.	s/o Stowe Rd.	Residential	52.1	RW	RW	RW
6	California Av.	n/o Simpson Rd.	Residential	41.2	RW	RW	RW
7	California Av.	s/o Simpson Rd.	Residential	44.2	RW	RW	RW
8	Warren Rd.	s/o Esplanade Av.	Residential	72.4	100	216	466
9	Warren Rd.	n/o Devonshire Av.	Residential	72.4	100	216	466
10	Warren Rd.	n/o Florida Av.	Mixed Use	71.6	90	194	418
11	Warren Rd.	s/o Florida Av.	Mixed Use	72.9	109	234	505
12	Warren Rd.	n/o Whittier Av.	Mixed Use	70.5	76	164	353
13	Warren Rd.	s/o Whittier Av.	Industrial	70.5	76	163	352
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	71.5	88	189	407
15	Warren Rd.	s/o Mustang Wy.	Residential	69.4	RW	138	296
16	Warren Rd.	s/o Simpson Rd.	Residential	68.2	RW	115	247
17	Sanderson Av.	s/o Florida Av.	Commercial	69.0	RW	99	214
18	Sanderson Av.	n/o Stetson Av.	Commercial	73.8	97	208	448
19	Florida Av.	w/o Winchester Rd.	Residential	72.2	107	231	497
20	Florida Av.	e/o Warren Rd.	Mixed Use	72.8	108	232	500
21	Stowe Rd.	w/o California Av.	Residential	62.6	RW	RW	70
22	Grand Av.	e/o Patterson Av.	Residential	44.4	RW	RW	RW
23	Grand Av.	w/o Calvert Av.	Residential	44.4	RW	RW	RW
24	Grand Av.	e/o Calvert Av.	Business Park	44.4	RW	RW	RW
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	46.9	RW	RW	RW
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	46.9	RW	RW	RW
27	Stetson Av. (S.)	w/o California Av.	Residential	46.9	RW	RW	RW
28	Stetson Av. (S.)	e/o California Av.	Residential	46.9	RW	RW	RW
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	46.9	RW	RW	RW
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	46.9	RW	RW	RW
31	Stetson Av. (S.)	e/o Fisher St.	Residential	46.9	RW	RW	RW
32	Stetson Av.	e/o New Stetson Av.	Business Park	46.9	RW	RW	RW
33	Stetson Av.	e/o Cawston Av.	Airport	68.4	RW	118	255
34	Stetson Av.	e/o Sanderson Av.	Residential	71.6	89	191	412
35	9th St.	w/o Winchester Rd.	Residential	54.6	RW	RW	RW
36	9th St.	e/o Winchester Rd.	Residential	42.6	RW	RW	RW
37	Simpson Rd.	e/o Warren Rd.	Residential	69.4	RW	138	296

¹ Source: City of Hemet General Plan Land Use Element, Figure 2.1.² "RW" = Location of the respective noise contour falls within the right-of-way of the road.

"n/a" = Roadway segment does not exist under the given traffic scenario.

TABLE 7-7: YEAR 2026 WITH PROJECT BUILDOUT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned Land Use ¹	dBA CNEL			
				@ Adj. Land Use	70	65	60
					CL to Contour Distance (Feet) ²		
1	Winchester Rd.	s/o Florida Av.	Residential	70.8	53	115	248
2	Winchester Rd.	n/o 9th St.	Residential	70.7	53	113	244
3	Patterson Av.	s/o Grand Av.	Business Park	50.7	RW	RW	RW
4	California Av.	n/o Stowe Rd.	Residential	62.8	RW	RW	72
5	California Av.	s/o Stowe Rd.	Residential	52.1	RW	RW	RW
6	California Av.	n/o Simpson Rd.	Residential	41.2	RW	RW	RW
7	California Av.	s/o Simpson Rd.	Residential	44.2	RW	RW	RW
8	Warren Rd.	s/o Esplanade Av.	Residential	72.5	103	222	477
9	Warren Rd.	n/o Devonshire Av.	Residential	72.5	103	222	477
10	Warren Rd.	n/o Florida Av.	Mixed Use	71.9	93	201	433
11	Warren Rd.	s/o Florida Av.	Mixed Use	73.4	118	254	548
12	Warren Rd.	n/o Whittier Av.	Mixed Use	71.4	87	188	405
13	Warren Rd.	s/o Whittier Av.	Industrial	71.4	87	188	405
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	72.5	102	220	474
15	Warren Rd.	s/o Mustang Wy.	Residential	69.7	RW	145	312
16	Warren Rd.	s/o Simpson Rd.	Residential	68.5	RW	119	257
17	Sanderson Av.	s/o Florida Av.	Commercial	69.0	RW	100	215
18	Sanderson Av.	n/o Stetson Av.	Commercial	73.8	97	209	450
19	Florida Av.	w/o Winchester Rd.	Residential	72.3	108	233	501
20	Florida Av.	e/o Warren Rd.	Mixed Use	73.0	110	238	513
21	Stowe Rd.	w/o California Av.	Residential	62.6	RW	RW	70
22	Grand Av.	e/o Patterson Av.	Residential	44.4	RW	RW	RW
23	Grand Av.	w/o Calvert Av.	Residential	44.4	RW	RW	RW
24	Grand Av.	e/o Calvert Av.	Business Park	44.4	RW	RW	RW
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	46.9	RW	RW	RW
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	46.9	RW	RW	RW
27	Stetson Av. (S.)	w/o California Av.	Residential	46.9	RW	RW	RW
28	Stetson Av. (S.)	e/o California Av.	Residential	46.9	RW	RW	RW
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	46.9	RW	RW	RW
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	46.9	RW	RW	RW
31	Stetson Av. (S.)	e/o Fisher St.	Residential	46.9	RW	RW	RW
32	Stetson Av.	e/o New Stetson Av.	Business Park	46.9	RW	RW	RW
33	Stetson Av.	e/o Cawston Av.	Airport	68.8	RW	125	269
34	Stetson Av.	e/o Sanderson Av.	Residential	71.6	90	193	416
35	9th St.	w/o Winchester Rd.	Residential	54.7	RW	RW	RW
36	9th St.	e/o Winchester Rd.	Residential	44.3	RW	RW	RW
37	Simpson Rd.	e/o Warren Rd.	Residential	69.7	RW	145	312

¹ Source: City of Hemet General Plan Land Use Element, Figure 2.1.

² "RW" = Location of the respective noise contour falls within the right-of-way of the road.

"n/a" = Roadway segment does not exist under the given traffic scenario.

TABLE 7-8: HORIZON YEAR 2040 WITHOUT PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned Land Use ¹	dBA CNEL			
				@ Adj. Land Use	70	65	60
					CL to Contour Distance (Feet) ²		
1	Winchester Rd.	s/o Florida Av.	Residential	71.2	57	122	263
2	Winchester Rd.	n/o 9th St.	Residential	72.0	64	137	296
3	Patterson Av.	s/o Grand Av.	Business Park	72.0	30	64	139
4	California Av.	n/o Stowe Rd.	Residential	67.0	RW	64	137
5	California Av.	s/o Stowe Rd.	Residential	68.4	RW	79	170
6	California Av.	n/o Simpson Rd.	Residential	63.8	RW	RW	84
7	California Av.	s/o Simpson Rd.	Residential	58.1	RW	RW	RW
8	Warren Rd.	s/o Esplanade Av.	Residential	73.3	116	249	537
9	Warren Rd.	n/o Devonshire Av.	Residential	73.4	118	253	546
10	Warren Rd.	n/o Florida Av.	Mixed Use	72.1	97	208	448
11	Warren Rd.	s/o Florida Av.	Mixed Use	73.5	120	258	555
12	Warren Rd.	n/o Whittier Av.	Mixed Use	72.4	101	218	471
13	Warren Rd.	s/o Whittier Av.	Industrial	72.0	96	206	445
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	71.1	83	178	383
15	Warren Rd.	s/o Mustang Wy.	Residential	68.6	RW	122	263
16	Warren Rd.	s/o Simpson Rd.	Residential	67.9	RW	109	234
17	Sanderson Av.	s/o Florida Av.	Commercial	67.7	RW	82	177
18	Sanderson Av.	n/o Stetson Av.	Commercial	72.0	74	159	342
19	Florida Av.	w/o Winchester Rd.	Residential	74.3	147	316	680
20	Florida Av.	e/o Warren Rd.	Mixed Use	75.1	152	328	707
21	Stowe Rd.	w/o California Av.	Residential	65.4	RW	50	108
22	Grand Av.	e/o Patterson Av.	Residential	69.6	RW	143	307
23	Grand Av.	w/o Calvert Av.	Residential	69.7	RW	144	311
24	Grand Av.	e/o Calvert Av.	Business Park	68.2	RW	114	246
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	71.6	89	192	413
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	71.6	90	193	417
27	Stetson Av. (S.)	w/o California Av.	Residential	71.6	90	193	417
28	Stetson Av. (S.)	e/o California Av.	Residential	72.6	105	226	486
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	72.1	97	209	450
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	71.6	90	194	418
31	Stetson Av. (S.)	e/o Fisher St.	Residential	71.7	90	195	419
32	Stetson Av.	e/o New Stetson Av.	Business Park	72.4	101	218	470
33	Stetson Av.	e/o Cawston Av.	Airport	72.0	96	206	444
34	Stetson Av.	e/o Sanderson Av.	Residential	70.6	77	166	357
35	9th St.	w/o Winchester Rd.	Residential	62.7	RW	RW	105
36	9th St.	e/o Winchester Rd.	Residential	60.2	RW	RW	72
37	Simpson Rd.	e/o Warren Rd.	Residential	67.4	RW	100	216

¹ Source: City of Hemet General Plan Land Use Element, Figure 2.1.

² "RW" = Location of the respective noise contour falls within the right-of-way of the road.

"n/a" = Roadway segment does not exist under the given traffic scenario.

TABLE 7-9: HORIZON YEAR 2040 WITH PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned Land Use ¹	dBA CNEL			
				@ Adj. Land Use	70	65	60
					CL to Contour Distance (Feet) ²		
1	Winchester Rd.	s/o Florida Av.	Residential	71.3	58	124	268
2	Winchester Rd.	n/o 9th St.	Residential	72.0	64	138	296
3	Patterson Av.	s/o Grand Av.	Business Park	72.0	30	64	139
4	California Av.	n/o Stowe Rd.	Residential	67.2	RW	65	141
5	California Av.	s/o Stowe Rd.	Residential	68.6	RW	81	175
6	California Av.	n/o Simpson Rd.	Residential	63.9	RW	RW	85
7	California Av.	s/o Simpson Rd.	Residential	58.5	RW	RW	RW
8	Warren Rd.	s/o Esplanade Av.	Residential	73.3	117	252	543
9	Warren Rd.	n/o Devonshire Av.	Residential	73.5	119	257	553
10	Warren Rd.	n/o Florida Av.	Mixed Use	72.2	99	213	458
11	Warren Rd.	s/o Florida Av.	Mixed Use	73.8	125	269	579
12	Warren Rd.	n/o Whittier Av.	Mixed Use	72.8	108	232	500
13	Warren Rd.	s/o Whittier Av.	Industrial	72.5	102	221	475
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	71.6	90	193	416
15	Warren Rd.	s/o Mustang Wy.	Residential	68.7	RW	124	267
16	Warren Rd.	s/o Simpson Rd.	Residential	67.9	RW	110	237
17	Sanderson Av.	s/o Florida Av.	Commercial	67.8	RW	82	178
18	Sanderson Av.	n/o Stetson Av.	Commercial	72.1	74	159	344
19	Florida Av.	w/o Winchester Rd.	Residential	74.3	147	317	682
20	Florida Av.	e/o Warren Rd.	Mixed Use	75.1	153	330	711
21	Stowe Rd.	w/o California Av.	Residential	65.6	RW	52	112
22	Grand Av.	e/o Patterson Av.	Residential	69.8	RW	146	315
23	Grand Av.	w/o Calvert Av.	Residential	69.9	RW	148	318
24	Grand Av.	e/o Calvert Av.	Business Park	68.5	RW	119	256
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	71.8	92	199	429
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	71.9	94	202	435
27	Stetson Av. (S.)	w/o California Av.	Residential	71.9	94	202	435
28	Stetson Av. (S.)	e/o California Av.	Residential	73.0	111	239	515
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	72.4	101	217	468
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	71.8	92	199	429
31	Stetson Av. (S.)	e/o Fisher St.	Residential	71.8	92	199	429
32	Stetson Av.	e/o New Stetson Av.	Business Park	72.5	103	222	478
33	Stetson Av.	e/o Cawston Av.	Airport	72.1	97	209	450
34	Stetson Av.	e/o Sanderson Av.	Residential	70.7	78	167	360
35	9th St.	w/o Winchester Rd.	Residential	62.8	RW	RW	107
36	9th St.	e/o Winchester Rd.	Residential	60.5	RW	RW	75
37	Simpson Rd.	e/o Warren Rd.	Residential	67.5	RW	102	220

¹ Source: City of Hemet General Plan Land Use Element, Figure 2.1.² "RW" = Location of the respective noise contour falls within the right-of-way of the road.

"n/a" = Roadway segment does not exist under the given traffic scenario.

7.2 EXISTING CONDITION PROJECT TRAFFIC NOISE LEVELS

Tables 7-10 and 7-11 show the Existing without and with Phase 1 and Project Buildout conditions, respectively.

7.2.1 WITH PHASE 1 PROJECT CONDITIONS

Table 7-10 presents a comparison of the Existing without and with Phase 1 Project conditions CNEL noise levels. Table 7-1 shows that the unmitigated exterior noise levels are expected to range from 39.6 to 70.9 dBA CNEL for Existing without Project conditions. Table 7-2 presents the Existing with Phase 1 Project conditions noise level contours that are expected to range from 39.6 to 71.0 dBA CNEL. As shown on Table 7-10 the Project is expected to generate an exterior noise level increase of up to 1.3 dBA CNEL, which is below the significance thresholds identified in Section 4. Therefore, the Phase 1 Project-related off-site traffic noise level increases are considered *less than significant* for Existing with Project Phase 1 conditions.

7.2.2 WITH PROJECT BUILDOUT CONDITIONS

Table 7-11 presents a comparison of the Existing without and with Project Buildout conditions CNEL noise levels. Table 7-3 presents the Existing with Project Buildout conditions noise level contours that are expected to range from 41.6 to 71.0 dBA CNEL. As shown on Table 7-11 the Project is expected to generate an exterior noise level increase of up to 3.0 dBA CNEL, which is below the significance thresholds identified in Section 4. Therefore, the Project Buildout-related off-site traffic noise level increases are considered *less than significant* for Existing with Project Buildout conditions.

7.3 YEAR 2024 PHASE 1 PROJECT TRAFFIC NOISE LEVELS

Table 7-12 presents a comparison of the Year 2024 without and with Phase 1 Project conditions CNEL noise levels. Table 7-4 shows that the unmitigated exterior noise levels are expected to range from 41.2 to 73.0 dBA CNEL for Year 2024 without Project conditions. Table 7-5 presents the Year 2019 with Phase 1 Project conditions noise level contours that are expected to range from 41.2 to 73.1 dBA CNEL. As shown on Table 7-12 the Project is expected to generate an exterior noise level increase of up to 1.3 dBA CNEL, which is below the significance thresholds identified in Section 4. Therefore, the Phase 1 Project-related off-site traffic noise level increases are considered *less than significant* for Year 2024 conditions.

7.4 YEAR 2026 PROJECT BUILDOUT TRAFFIC NOISE LEVELS

Table 7-13 presents a comparison of the Year 2026 without and with Project Buildout conditions CNEL noise levels. Table 7-6 shows that the unmitigated exterior noise levels are expected to range from 41.2 to 73.8 dBA CNEL for Year 2026 without Project conditions. Table 7-7 presents the Year 2026 with Project Buildout conditions noise level contours that are expected to range from 41.2 to 73.8 dBA CNEL. As shown on Table 7-13 the Project is expected to generate an exterior noise level increase of up to 1.7 dBA CNEL, which is below the significance thresholds identified in Section 4. Therefore, the Project-related off-site traffic noise level increases are considered *less than significant* for Year 2026 conditions.

7.5 YEAR 2040 PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-14 presents a comparison of the Year 2040 without and with Project conditions CNEL noise levels. Table 7-8 shows that the unmitigated exterior noise levels are expected to range from 58.1 to 75.1 dBA CNEL for Year 2040 without Project conditions. Table 7-9 presents the Year 2040 with Project conditions noise level contours that are expected to range from 58.5 to 75.1 dBA CNEL. As shown on Table 7-14 the Project is expected to generate an exterior noise level increase of up to 0.5 dBA CNEL, which is below the significance thresholds identified in Section 4. Therefore, the Project-related off-site traffic noise level increases are considered *less than significant* for Year 2040 conditions.

TABLE 7-10: EXISTING OFF-SITE PHASE 1 PROJECT-RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	Adjacent Planned Land Use ¹	CNEL at Adjacent Land Use (dBA) ²			Noise-Sensitive?	Threshold Exceeded? ³
				No Project	With Project	Project Addition		
1	Winchester Rd.	s/o Florida Av.	Residential	68.3	68.3	0.0	Yes	No
2	Winchester Rd.	n/o 9th St.	Residential	68.9	68.9	0.0	Yes	No
3	Patterson Av.	s/o Grand Av.	Business Park	50.7	50.7	0.0	No	No
4	California Av.	n/o Stowe Rd.	Residential	60.7	60.7	0.0	Yes	No
5	California Av.	s/o Stowe Rd.	Residential	50.9	50.9	0.0	Yes	No
6	California Av.	n/o Simpson Rd.	Residential	41.2	41.2	0.0	Yes	No
7	California Av.	s/o Simpson Rd.	Residential	41.2	41.2	0.0	Yes	No
8	Warren Rd.	s/o Esplanade Av.	Residential	69.3	69.5	0.2	Yes	No
9	Warren Rd.	n/o Devonshire Av.	Residential	69.3	69.5	0.2	Yes	No
10	Warren Rd.	n/o Florida Av.	Mixed Use	68.1	68.4	0.3	Yes	No
11	Warren Rd.	s/o Florida Av.	Mixed Use	70.0	70.6	0.6	Yes	No
12	Warren Rd.	n/o Whittier Av.	Mixed Use	69.5	70.2	0.7	Yes	No
13	Warren Rd.	s/o Whittier Av.	Industrial	69.5	70.2	0.7	No	No
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	68.0	69.3	1.3	No	No
15	Warren Rd.	s/o Mustang Wy.	Residential	66.7	67.2	0.5	Yes	No
16	Warren Rd.	s/o Simpson Rd.	Residential	65.4	66.0	0.6	Yes	No
17	Sanderson Av.	s/o Florida Av.	Commercial	66.7	66.7	0.0	No	No
18	Sanderson Av.	n/o Stetson Av.	Commercial	70.9	71.0	0.1	No	No
19	Florida Av.	w/o Winchester Rd.	Residential	69.8	69.9	0.1	Yes	No
20	Florida Av.	e/o Warren Rd.	Mixed Use	69.5	69.7	0.2	Yes	No
21	Stowe Rd.	w/o California Av.	Residential	60.6	60.6	0.0	Yes	No
22	Grand Av.	e/o Patterson Av.	Residential	n/a	n/a	n/a	n/a	n/a
23	Grand Av.	w/o Calvert Av.	Residential	n/a	n/a	n/a	n/a	n/a
24	Grand Av.	e/o Calvert Av.	Business Park	n/a	n/a	n/a	n/a	n/a
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	n/a	n/a	n/a	n/a	n/a
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	n/a	n/a	n/a	n/a	n/a
27	Stetson Av. (S.)	w/o California Av.	Residential	n/a	n/a	n/a	n/a	n/a
28	Stetson Av. (S.)	e/o California Av.	Residential	n/a	n/a	n/a	n/a	n/a
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	n/a	n/a	n/a	n/a	n/a
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	n/a	n/a	n/a	n/a	n/a
31	Stetson Av. (S.)	e/o Fisher St.	Residential	n/a	n/a	n/a	n/a	n/a
32	Stetson Av.	e/o New Stetson Av.	Business Park	n/a	n/a	n/a	n/a	n/a
33	Stetson Av.	e/o Cawston Av.	Airport	67.3	67.7	0.4	No	No
34	Stetson Av.	e/o Sanderson Av.	Residential	70.0	70.0	0.0	Yes	No
35	9th St.	w/o Winchester Rd.	Residential	51.6	51.6	0.0	Yes	No
36	9th St.	e/o Winchester Rd.	Residential	39.6	39.6	0.0	Yes	No
37	Simpson Rd.	e/o Warren Rd.	Residential	66.7	67.2	0.5	Yes	No

¹ Source: City of Hemet General Plan Land Use Element, Figure 2.1.² The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.³ Significance Criteria (Section 4).

"n/a" = Roadway segment does not exist under the given traffic scenario.

TABLE 7-11: EXISTING OFF-SITE PROJECT BUILDOUT-RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	Adjacent Planned Land Use ¹	CNEL at Adjacent Land Use (dBA) ²			Noise- Sensitive?	Threshold Exceeded? ³
				No Project	With Project	Project Addition		
1	Winchester Rd.	s/o Florida Av.	Residential	68.3	68.4	0.1	Yes	No
2	Winchester Rd.	n/o 9th St.	Residential	68.9	68.9	0.0	Yes	No
3	Patterson Av.	s/o Grand Av.	Business Park	50.7	50.7	0.0	No	No
4	California Av.	n/o Stowe Rd.	Residential	60.7	60.7	0.0	Yes	No
5	California Av.	s/o Stowe Rd.	Residential	50.9	50.9	0.0	Yes	No
6	California Av.	n/o Simpson Rd.	Residential	41.2	41.2	0.0	Yes	No
7	California Av.	s/o Simpson Rd.	Residential	41.2	41.2	0.0	Yes	No
8	Warren Rd.	s/o Esplanade Av.	Residential	69.3	69.6	0.3	Yes	No
9	Warren Rd.	n/o Devonshire Av.	Residential	69.3	69.6	0.3	Yes	No
10	Warren Rd.	n/o Florida Av.	Mixed Use	68.1	68.6	0.5	Yes	No
11	Warren Rd.	s/o Florida Av.	Mixed Use	70.0	71.0	1.0	Yes	No
12	Warren Rd.	n/o Whittier Av.	Mixed Use	69.5	70.6	1.1	Yes	No
13	Warren Rd.	s/o Whittier Av.	Industrial	69.5	70.6	1.1	No	No
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	68.0	70.0	2.0	No	No
15	Warren Rd.	s/o Mustang Wy.	Residential	66.7	67.3	0.6	Yes	No
16	Warren Rd.	s/o Simpson Rd.	Residential	65.4	65.9	0.5	Yes	No
17	Sanderson Av.	s/o Florida Av.	Commercial	66.7	66.7	0.0	No	No
18	Sanderson Av.	n/o Stetson Av.	Commercial	70.9	71.0	0.1	No	No
19	Florida Av.	w/o Winchester Rd.	Residential	69.8	69.9	0.1	Yes	No
20	Florida Av.	e/o Warren Rd.	Mixed Use	69.5	69.8	0.3	Yes	No
21	Stowe Rd.	w/o California Av.	Residential	60.6	60.6	0.0	Yes	No
22	Grand Av.	e/o Patterson Av.	Residential	n/a	n/a	n/a	n/a	n/a
23	Grand Av.	w/o Calvert Av.	Residential	n/a	n/a	n/a	n/a	n/a
24	Grand Av.	e/o Calvert Av.	Business Park	n/a	n/a	n/a	n/a	n/a
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	n/a	n/a	n/a	n/a	n/a
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	n/a	n/a	n/a	n/a	n/a
27	Stetson Av. (S.)	w/o California Av.	Residential	n/a	n/a	n/a	n/a	n/a
28	Stetson Av. (S.)	e/o California Av.	Residential	n/a	n/a	n/a	n/a	n/a
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	n/a	n/a	n/a	n/a	n/a
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	n/a	n/a	n/a	n/a	n/a
31	Stetson Av. (S.)	e/o Fisher St.	Residential	n/a	n/a	n/a	n/a	n/a
32	Stetson Av.	e/o New Stetson Av.	Business Park	n/a	n/a	n/a	n/a	n/a
33	Stetson Av.	e/o Cawston Av.	Airport	67.3	67.8	0.5	No	No
34	Stetson Av.	e/o Sanderson Av.	Residential	70.0	70.1	0.1	Yes	No
35	9th St.	w/o Winchester Rd.	Residential	51.6	51.6	0.0	Yes	No
36	9th St.	e/o Winchester Rd.	Residential	39.6	42.6	3.0	Yes	No
37	Simpson Rd.	e/o Warren Rd.	Residential	66.7	67.3	0.6	Yes	No

¹ Source: City of Hemet General Plan Land Use Element, Figure 2.1.² The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.³ Significance Criteria (Section 4).

"n/a" = Roadway segment does not exist under the given traffic scenario.

TABLE 7-12: YEAR 2024 PHASE 1 PROJECT RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	Adjacent Planned Land Use ¹	CNEL at Adjacent Land Use (dBA) ²			Noise-Sensitive?	Threshold Exceeded? ³
				No Project	With Project	Project Addition		
1	Winchester Rd.	s/o Florida Av.	Residential	70.0	70.1	0.1	Yes	No
2	Winchester Rd.	n/o 9th St.	Residential	70.0	70.0	0.0	Yes	No
3	Patterson Av.	s/o Grand Av.	Business Park	50.7	50.7	0.0	No	No
4	California Av.	n/o Stowe Rd.	Residential	60.7	62.0	1.3	Yes	No
5	California Av.	s/o Stowe Rd.	Residential	50.9	52.1	1.2	Yes	No
6	California Av.	n/o Simpson Rd.	Residential	41.2	41.2	0.0	Yes	No
7	California Av.	s/o Simpson Rd.	Residential	44.2	44.2	0.0	Yes	No
8	Warren Rd.	s/o Esplanade Av.	Residential	71.7	71.8	0.1	Yes	No
9	Warren Rd.	n/o Devonshire Av.	Residential	71.5	71.7	0.2	Yes	No
10	Warren Rd.	n/o Florida Av.	Mixed Use	70.8	71.0	0.2	Yes	No
11	Warren Rd.	s/o Florida Av.	Mixed Use	72.2	72.6	0.4	Yes	No
12	Warren Rd.	n/o Whittier Av.	Mixed Use	71.7	72.1	0.4	Yes	No
13	Warren Rd.	s/o Whittier Av.	Industrial	70.2	70.8	0.6	No	No
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	70.7	71.5	0.8	No	No
15	Warren Rd.	s/o Mustang Wy.	Residential	68.8	69.2	0.4	Yes	No
16	Warren Rd.	s/o Simpson Rd.	Residential	67.7	68.0	0.3	Yes	No
17	Sanderson Av.	s/o Florida Av.	Commercial	68.3	68.3	0.0	No	No
18	Sanderson Av.	n/o Stetson Av.	Commercial	73.0	73.1	0.1	No	No
19	Florida Av.	w/o Winchester Rd.	Residential	71.6	71.7	0.1	Yes	No
20	Florida Av.	e/o Warren Rd.	Mixed Use	72.2	72.3	0.1	Yes	No
21	Stowe Rd.	w/o California Av.	Residential	60.6	61.8	1.2	Yes	No
22	Grand Av.	e/o Patterson Av.	Residential	n/a	n/a	n/a	n/a	n/a
23	Grand Av.	w/o Calvert Av.	Residential	n/a	n/a	n/a	n/a	n/a
24	Grand Av.	e/o Calvert Av.	Business Park	n/a	n/a	n/a	n/a	n/a
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	n/a	n/a	n/a	n/a	n/a
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	n/a	n/a	n/a	n/a	n/a
27	Stetson Av. (S.)	w/o California Av.	Residential	n/a	n/a	n/a	n/a	n/a
28	Stetson Av. (S.)	e/o California Av.	Residential	n/a	n/a	n/a	n/a	n/a
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	n/a	n/a	n/a	n/a	n/a
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	n/a	n/a	n/a	n/a	n/a
31	Stetson Av. (S.)	e/o Fisher St.	Residential	n/a	n/a	n/a	n/a	n/a
32	Stetson Av.	e/o New Stetson Av.	Business Park	n/a	n/a	n/a	n/a	n/a
33	Stetson Av.	e/o Cawston Av.	Airport	68.1	68.4	0.3	No	No
34	Stetson Av.	e/o Sanderson Av.	Residential	71.2	71.2	0.0	Yes	No
35	9th St.	w/o Winchester Rd.	Residential	53.4	53.4	0.0	Yes	No
36	9th St.	e/o Winchester Rd.	Residential	42.6	42.6	0.0	Yes	No
37	Simpson Rd.	e/o Warren Rd.	Residential	68.8	69.2	0.4	Yes	No

¹ Source: City of Hemet General Plan Land Use Element, Figure 2.1.² The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.³ Significance Criteria (Section 4).

"n/a" = Roadway segment does not exist under the given traffic scenario.

TABLE 7-13: YEAR 2026 PROJECT BUILDOUT RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	Adjacent Planned Land Use ¹	CNEL at Adjacent Land Use (dBA) ²			Noise- Sensitive?	Threshold Exceeded? ³
				No Project	With Project	Project Addition		
1	Winchester Rd.	s/o Florida Av.	Residential	70.8	70.8	0.0	Yes	No
2	Winchester Rd.	n/o 9th St.	Residential	70.7	70.7	0.0	Yes	No
3	Patterson Av.	s/o Grand Av.	Business Park	50.7	50.7	0.0	No	No
4	California Av.	n/o Stowe Rd.	Residential	62.8	62.8	0.0	Yes	No
5	California Av.	s/o Stowe Rd.	Residential	52.1	52.1	0.0	Yes	No
6	California Av.	n/o Simpson Rd.	Residential	41.2	41.2	0.0	Yes	No
7	California Av.	s/o Simpson Rd.	Residential	44.2	44.2	0.0	Yes	No
8	Warren Rd.	s/o Esplanade Av.	Residential	72.4	72.5	0.1	Yes	No
9	Warren Rd.	n/o Devonshire Av.	Residential	72.4	72.5	0.1	Yes	No
10	Warren Rd.	n/o Florida Av.	Mixed Use	71.6	71.9	0.3	Yes	No
11	Warren Rd.	s/o Florida Av.	Mixed Use	72.9	73.4	0.5	Yes	No
12	Warren Rd.	n/o Whittier Av.	Mixed Use	70.5	71.4	0.9	Yes	No
13	Warren Rd.	s/o Whittier Av.	Industrial	70.5	71.4	0.9	No	No
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	71.5	72.5	1.0	No	No
15	Warren Rd.	s/o Mustang Wy.	Residential	69.4	69.7	0.3	Yes	No
16	Warren Rd.	s/o Simpson Rd.	Residential	68.2	68.5	0.3	Yes	No
17	Sanderson Av.	s/o Florida Av.	Commercial	69.0	69.0	0.0	No	No
18	Sanderson Av.	n/o Stetson Av.	Commercial	73.8	73.8	0.0	No	No
19	Florida Av.	w/o Winchester Rd.	Residential	72.2	72.3	0.1	Yes	No
20	Florida Av.	e/o Warren Rd.	Mixed Use	72.8	73.0	0.2	Yes	No
21	Stowe Rd.	w/o California Av.	Residential	62.6	62.6	0.0	Yes	No
22	Grand Av.	e/o Patterson Av.	Residential	n/a	n/a	n/a	n/a	n/a
23	Grand Av.	w/o Calvert Av.	Residential	n/a	n/a	n/a	n/a	n/a
24	Grand Av.	e/o Calvert Av.	Business Park	n/a	n/a	n/a	n/a	n/a
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	n/a	n/a	n/a	n/a	n/a
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	n/a	n/a	n/a	n/a	n/a
27	Stetson Av. (S.)	w/o California Av.	Residential	n/a	n/a	n/a	n/a	n/a
28	Stetson Av. (S.)	e/o California Av.	Residential	n/a	n/a	n/a	n/a	n/a
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	n/a	n/a	n/a	n/a	n/a
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	n/a	n/a	n/a	n/a	n/a
31	Stetson Av. (S.)	e/o Fisher St.	Residential	n/a	n/a	n/a	n/a	n/a
32	Stetson Av.	e/o New Stetson Av.	Business Park	n/a	n/a	n/a	n/a	n/a
33	Stetson Av.	e/o Cawston Av.	Airport	68.4	68.8	0.4	No	No
34	Stetson Av.	e/o Sanderson Av.	Residential	71.6	71.6	0.0	Yes	No
35	9th St.	w/o Winchester Rd.	Residential	54.6	54.7	0.1	Yes	No
36	9th St.	e/o Winchester Rd.	Residential	42.6	44.3	1.7	Yes	No
37	Simpson Rd.	e/o Warren Rd.	Residential	69.4	69.7	0.3	Yes	No

¹ Source: City of Hemet General Plan Land Use Element, Figure 2.1.² The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.³ Significance Criteria (Section 4).

"n/a" = Roadway segment does not exist under the given traffic scenario.

TABLE 7-14: HORIZON YEAR 2040 PROJECT RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	Adjacent Planned Land Use ¹	CNEL at Adjacent Land Use (dBA) ²			Noise- Sensitive?	Threshold Exceeded? ³
				No Project	With Project	Project Addition		
1	Winchester Rd.	s/o Florida Av.	Residential	71.2	71.3	0.1	Yes	No
2	Winchester Rd.	n/o 9th St.	Residential	72.0	72.0	0.0	Yes	No
3	Patterson Av.	s/o Grand Av.	Business Park	72.0	72.0	0.0	No	No
4	California Av.	n/o Stowe Rd.	Residential	67.0	67.2	0.2	Yes	No
5	California Av.	s/o Stowe Rd.	Residential	68.4	68.6	0.2	Yes	No
6	California Av.	n/o Simpson Rd.	Residential	63.8	63.9	0.1	Yes	No
7	California Av.	s/o Simpson Rd.	Residential	58.1	58.5	0.4	Yes	No
8	Warren Rd.	s/o Esplanade Av.	Residential	73.3	73.3	0.0	Yes	No
9	Warren Rd.	n/o Devonshire Av.	Residential	73.4	73.5	0.1	Yes	No
10	Warren Rd.	n/o Florida Av.	Mixed Use	72.1	72.2	0.1	Yes	No
11	Warren Rd.	s/o Florida Av.	Mixed Use	73.5	73.8	0.3	Yes	No
12	Warren Rd.	n/o Whittier Av.	Mixed Use	72.4	72.8	0.4	Yes	No
13	Warren Rd.	s/o Whittier Av.	Industrial	72.0	72.5	0.5	No	No
14	Warren Rd.	s/o Stetson Av. (N.)	Industrial	71.1	71.6	0.5	No	No
15	Warren Rd.	s/o Mustang Wy.	Residential	68.6	68.7	0.1	Yes	No
16	Warren Rd.	s/o Simpson Rd.	Residential	67.9	67.9	0.0	Yes	No
17	Sanderson Av.	s/o Florida Av.	Commercial	67.7	67.8	0.1	No	No
18	Sanderson Av.	n/o Stetson Av.	Commercial	72.0	72.1	0.1	No	No
19	Florida Av.	w/o Winchester Rd.	Residential	74.3	74.3	0.0	Yes	No
20	Florida Av.	e/o Warren Rd.	Mixed Use	75.1	75.1	0.0	Yes	No
21	Stowe Rd.	w/o California Av.	Residential	65.4	65.6	0.2	Yes	No
22	Grand Av.	e/o Patterson Av.	Residential	69.6	69.8	0.2	Yes	No
23	Grand Av.	w/o Calvert Av.	Residential	69.7	69.9	0.2	Yes	No
24	Grand Av.	e/o Calvert Av.	Business Park	68.2	68.5	0.3	No	No
25	Stetson Av. (S.)	e/o SR-79 SB Ramps	Mixed Use	71.6	71.8	0.2	Yes	No
26	Stetson Av. (S.)	e/o SR-79 NB Ramps	Mixed Use	71.6	71.9	0.3	Yes	No
27	Stetson Av. (S.)	w/o California Av.	Residential	71.6	71.9	0.3	Yes	No
28	Stetson Av. (S.)	e/o California Av.	Residential	72.6	73.0	0.4	Yes	No
29	Stetson Av. (S.)	w/o Warren Rd.	Residential	72.1	72.4	0.3	Yes	No
30	Stetson Av. (S.)	e/o Warren Rd.	Residential	71.6	71.8	0.2	Yes	No
31	Stetson Av. (S.)	e/o Fisher St.	Residential	71.7	71.8	0.1	Yes	No
32	Stetson Av.	e/o New Stetson Av.	Business Park	72.4	72.5	0.1	No	No
33	Stetson Av.	e/o Cawston Av.	Airport	72.0	72.1	0.1	No	No
34	Stetson Av.	e/o Sanderson Av.	Residential	70.6	70.7	0.1	Yes	No
35	9th St.	w/o Winchester Rd.	Residential	62.7	62.8	0.1	Yes	No
36	9th St.	e/o Winchester Rd.	Residential	60.2	60.5	0.3	Yes	No
37	Simpson Rd.	e/o Warren Rd.	Residential	67.4	67.5	0.1	Yes	No

¹ Source: City of Hemet General Plan Land Use Element, Figure 2.1.² The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.³ Significance Criteria (Section 4).

8 ON-SITE TRANSPORTATION NOISE IMPACTS

An on-site exterior noise impact analysis has been completed to determine the transportation noise exposure and to identify potential necessary noise mitigation measures for the proposed Rancho Diamante (TTM No. 36841) Project. It is expected that the primary source of traffic noise impacts to the Project site will be traffic noise from Stetson Avenue, Warren Road, and Mustang Way. The Project will also experience some background traffic noise impacts from the Project's internal streets, however, due to the distance, topography and low traffic volume/speed, traffic noise from these roads will not make a significant contribution to the noise environment. Additional potential on-site noise impacts are expected from the Burlington Northern Santa Fe (BNSF) rail lines north of the Project site. The BNSF rail lines are currently used for freight transportation, however, an extension of the Metrolink 91 Line in the City of Perris is proposed to extend to the rail lines north of the Project site.

8.1 ON-SITE EXTERIOR TRAFFIC NOISE ANALYSIS

Using the FHWA traffic noise prediction model and the parameters outlined in Tables 6-4 to 6-6, the expected future exterior noise levels for the single-family residential lots and commercial uses were calculated. Table 8-1 presents a summary of future exterior noise level impacts in the outdoor living areas (backyards) of lots facing Stetson Avenue, Warren Road, and Mustang Way. The on-site traffic noise level impacts indicate that the lots facing Stetson Avenue, Warren Road, and Mustang Way will experience unmitigated exterior noise levels ranging from 59.9 to 68.5 dBA CNEL. The on-site traffic noise analysis calculations are provided in Appendix 8.1.

To satisfy the City of Hemet 65 dBA CNEL exterior noise level standards for residential land use, the planned 6-foot high noise barriers are required for the outdoor living areas (backyards) of lots 303 to 305, 306, 315, 316, 322, 362, 363, 371 to 379, 393, 394, 398 to 402, 412, 414 to 422 adjacent to Stetson Avenue, and lots 1 to 17, 512, 519, 520, 522, 540, 541, 574, 585, 586 adjacent to Warren Road. With the planned noise barriers shown on Exhibit ES-A, the mitigated future exterior noise levels will range from 58.0 to 64.8 dBA CNEL. This noise analysis shows that the planned noise barriers will satisfy the City of Hemet 65 dBA CNEL exterior noise level standards for residential development. The planned noise barriers used in this analysis are consistent with the October 16th, 2015 fence and wall plans for the Project prepared by Gillespie Moody Patterson, Inc. In addition, the future unmitigated exterior noise levels approaching 68.5 dBA CNEL will satisfy the 70 dBA CNEL exterior noise level standard for commercial uses.

TABLE 8-1: EXTERIOR TRAFFIC NOISE LEVELS (CNEL)

Lot Number	Roadway	Unmitigated Noise Level (dBA CNEL)	Mitigated Noise Level (dBA CNEL)	Planned Barrier Height (Feet)	Top Of Barrier Elevation (Feet)
374	Stetson Av. e/o "C Street"	68.5	62.5	6.0'	1,505.9'
363	Stetson Av. e/o "C Street"	68.2	61.9	6.0'	1,507.9'
306	Stetson Av. e/o "C Street"	64.8	— ¹	— ¹	— ¹
379	Stetson Av. e/o Mustang Wy.	66.3	60.5	6.0'	1,508.4'
399	Stetson Av. e/o Mustang Wy.	65.9	60.1	6.0'	1,509.8'
418	Stetson Av. e/o Mustang Wy.	66.3	60.4	6.0'	1,510.3'
520	Warren Rd. s/o Stetson Av.	68.4	60.5	6.0'	1,518.7'
541	Warren Rd. s/o Stetson Av.	68.2	58.0	6.0'	1,516.2'
3	Warren Rd. s/o Mustang Wy.	67.4	61.4	6.0'	1,513.3'
376	Mustang Wy. s/o Stetson Av.	64.4	— ¹	— ¹	— ¹
299	Mustang Wy. s/o Stetson Av.	64.4	— ¹	— ¹	— ¹
584	Mustang Wy. w/o Warren rd.	60.4	— ¹	— ¹	— ¹
87	Mustang Wy. w/o Warren rd.	59.9	— ¹	— ¹	— ¹

¹ Unmitigated exterior noise level satisfies the exterior noise level standard. No exterior noise mitigation is required.

8.2 ON-SITE INTERIOR TRAFFIC NOISE ANALYSIS

To ensure that the interior noise levels comply with the City of Hemet 45 dBA CNEL interior noise standards, future noise levels were calculated at the first and second floor building façades.

8.2.1 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." 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 assemblies free of cut outs or openings.

8.2.2 INTERIOR NOISE LEVEL ASSESSMENT

Tables 8-2 and 8-3 show the exterior noise levels at the first and second floor building façades, respectively, of the residential homes adjacent to Stetson Avenue, Warren Road, and Mustang Way. Based on the interior noise analysis, all lots adjacent to Stetson Avenue, Warren Road, and Mustang Way will require a windows closed condition and a means of mechanical ventilation (e.g. air conditioning).

Table 8-2 shows that the future unmitigated noise levels at the first-floor building façade are expected to range from 58.4 to 64.4 dBA CNEL. The first-floor interior noise level analysis shows that the City of Hemet 45 dBA CNEL interior noise level standards can be satisfied using standard first floor windows with a minimum STC rating of 27. Table 8-3 shows that the future noise levels at the second-floor building façade are expected to range from 59.0 to 67.9 dBA CNEL. The second-floor interior noise level analysis shows that the City of Hemet 45 dBA CNEL interior noise level standards can be satisfied using standard second floor windows with a minimum STC rating of 27. The interior noise analysis shows that with the recommended interior noise mitigation measures described in the Executive Summary the Project will satisfy the City of Hemet 45 dBA CNEL interior noise level standards for residential development. While a minimum STC rating of 27 will satisfy the City of Hemet requirements, upgraded windows with STC ratings of 30 to 32 for all lots are recommended to further reduce the interior noise levels and to minimize the potential noise impacts associated with peak pass-by events.

TABLE 8-2: FIRST FLOOR INTERIOR NOISE IMPACTS (CNEL)

Lot Number	Noise Level at Façade ¹	Required Interior Noise Reduction ²	Estimated Interior Noise Reduction ³	Upgraded Windows ⁴	Interior Noise Level ⁵
374	62.1	17.1	25.0	No	37.1
363	61.5	16.5	25.0	No	36.5
306	64.4	19.4	25.0	No	39.4
379	60.2	15.2	25.0	No	35.2
399	59.9	14.9	25.0	No	34.9
418	60.1	15.1	25.0	No	35.1
520	60.2	15.2	25.0	No	35.2
541	58.4	13.4	25.0	No	33.4
3	60.4	15.4	25.0	No	35.4
376	63.5	18.5	25.0	No	38.5
299	63.5	18.5	25.0	No	38.5
584	59.5	14.5	25.0	No	34.5
87	59.1	14.1	25.0	No	34.1

¹ Exterior noise level at the facade with a windows closed condition requiring a means of mechanical ventilation (e.g. air conditioning).

² Noise reduction required to satisfy the 45 dBA CNEL interior noise standards.

³ A minimum of 25 dBA noise reduction is assumed with standard building construction.

⁴ Does the required interior noise reduction trigger upgraded with a minimum STC rating of greater than 27?

⁵ Estimated interior noise level with minimum STC rating for all windows.

TABLE 8-3: SECOND FLOOR INTERIOR NOISE IMPACTS (CNEL)

Lot Number	Noise Level at Façade ¹	Required Interior Noise Reduction ²	Estimated Interior Noise Reduction ³	Upgraded Windows ⁴	Interior Noise Level ⁵
374	67.9	22.9	25.0	No	42.9
363	67.6	22.6	25.0	No	42.6
306	64.4	19.4	25.0	No	39.4
379	65.8	20.8	25.0	No	40.8
399	65.4	20.4	25.0	No	40.4
418	65.8	20.8	25.0	No	40.8
520	67.3	22.3	25.0	No	42.3
541	67.1	22.1	25.0	No	42.1
3	66.1	21.1	25.0	No	41.1
376	63.4	18.4	25.0	No	38.4
299	63.4	18.4	25.0	No	38.4
584	59.4	14.4	25.0	No	34.4
87	59.0	14.0	25.0	No	34.0

¹ Exterior noise level at the facade with a windows closed condition requiring a means of mechanical ventilation (e.g. air conditioning).

² Noise reduction required to satisfy the 45 dBA CNEL interior noise standards.

³ A minimum of 25 dBA noise reduction is assumed with standard building construction.

⁴ Does the required interior noise reduction trigger upgraded with a minimum STC rating of greater than 27?

⁵ Estimated interior noise level with minimum STC rating for all windows.

8.3 ON-SITE EXTERIOR RAIL NOISE ANALYSIS

The FTA model, previously discussed in Section 6.4, is used to calculate the noise levels at the closest single-family residential lot due to rail activity on the BNSF rail lines north of the Project site. Table 8-4 shows the results of the FTA model for railroad noise which indicates that the single-family residential homes closest to the BNSF rail lines will experience unmitigated average daily noise levels approaching 51.7 dBA CNEL due to freight and future Metrolink commuter rail activities. The average daily railroad noise analysis indicates that no exterior rail noise mitigation is required to satisfy the City of Hemet 65 dBA CNEL residential use and 70 dBA CNEL commercial use exterior noise level standards. The rail activity noise levels shown on Table 8-4 do not include the additional attenuation provided by the 6-foot high planned barriers, shown on Exhibit ES-A, for single-family residential lots facing the BNSF rail lines. In addition, since the exterior noise levels due to rail activity will result in interior noise levels which are lower than the on-site traffic-related interior noise levels, previously discussed in Section 8.2, the recommended interior traffic noise mitigation measures will satisfy the City of Hemet 45 dBA CNEL interior noise level standards for residential development. The on-site rail noise level calculations are provided in Appendix 8.2.

It is important to note that this analysis represents the average of all rail activity over a 24-hour period using future rail volumes to evaluate the potential impacts at the Project site based on the City of Hemet 65 dBA CNEL residential use and 70 dBA CNEL commercial use exterior noise level standards. While the average daily railroad noise activities are not expected to exceed the City of Hemet 65 dBA CNEL residential use and 70 dBA CNEL commercial use exterior noise level standards, peak rail pass-by events may negatively impact the nearby residential homes. The City of Hemet General Plan *Final Environmental Impact Report* indicates that the noise sources associated with the BNSF rail line pass-by events include warning horns/wayside horns, at-grade crossing bells, and locomotive engine and rail car noise. (2) However, due to the planned 6-foot high barriers, residential lots with higher pad elevations than the rail centerline, and setback distances to the residential lots, the infrequent peak rail pass-by event noise levels will be further reduced at the outdoor living areas (backyards). To ensure that residents within the Rancho Diamante (TTM No. 36841) community understand the potential for short-term noise events, occupancy disclosure notices shall be required for all future homeowners. The occupancy disclosures shall indicate that rail pass-by and aircraft flyover noise will be clearly noticeable due to the location of the Project site in relation to the BNSF/Metrolink extension rail lines, and the Hemet-Ryan Airport. The on-site rail noise mitigation measures are outlined on Exhibit ES-A.

While this analysis considers the potential future noise activity associated with the planned Metrolink rail line extension, any planned extension will require additional CEQA analysis and approval by the lead agency.

TABLE 8-4: EXTERIOR RAIL NOISE LEVELS (CNEL)

Lot Number	Railroad	Unmitigated Noise Level (dBA CNEL)	
		Individual	Combined
374	BNSF Diesel Locomotives	51.4	51.7
	Future Metrolink Extension	40.2	

8.4 ON-SITE EXTERIOR RAIL VIBRATION LEVELS

The FTA *Transit Noise and Vibration Impact Assessment* contains reference vibration levels for rapid transit and light rail systems which can approach 85 VdB at a distance of 50 feet. (4) At the distance to the closest residential lot from the BNSF rail line of approximately 279 feet, the FTA, Figure 10-1 *Generalized Ground Surface Vibration Curves*, reference vibration level is shown to range from 60 VdB for rapid transit or light rail to 72 VdB for locomotive powered passenger or freight rail. Since the City of Hemet does not identify specific vibration level standards, the threshold used in this analysis is obtained from the County of Riverside General Plan. The County of Riverside General Plan, Policy 16.3, motion velocity perception threshold for vibration due to passing trains is 0.01 in/sec (RMS) over the range of one to 100 Hz. (23) Therefore, in order to

assess the potential vibration impacts using the County of Riverside threshold, the FTA reference vibration levels in VdB must be converted to RMS vibration levels.

Using the Caltrans *Transportation and Construction Vibration Guidance Manual* guidelines for converting vibration levels from VdB to PPV, the 85 VdB reference vibration level at 50 feet results in a PPV vibration level of roughly 0.018 in/sec at 50 feet from the source. (5) As previously discussed in Section 3.5, for vibration levels expressed in velocity, the human body responds to the average vibration amplitude often described as the root-mean-square (RMS) or the average of the squared amplitude of the signal, typically calculated over a one-second period. For the reference 0.018 in/sec PPV level, the RMS vibration level would approach 0.013 in/sec RMS at 50 feet from the source. Based on the distance to the nearest residential receiver of roughly 279 feet, the RMS vibration levels would approach 0.001 in/sec and will not exceed the County of Riverside vibration level threshold of 0.01 in/sec RMS. Therefore, the on-site vibration impacts due to the BNSF and potential Metrolink rail line extension would be *less than significant* at the residential lots within the Project site. Further, the vibration levels at the closest sensitive receiver locations would only occur during rail pass-by events, which will be infrequent in nature and unlikely to be sustained for long periods of time.

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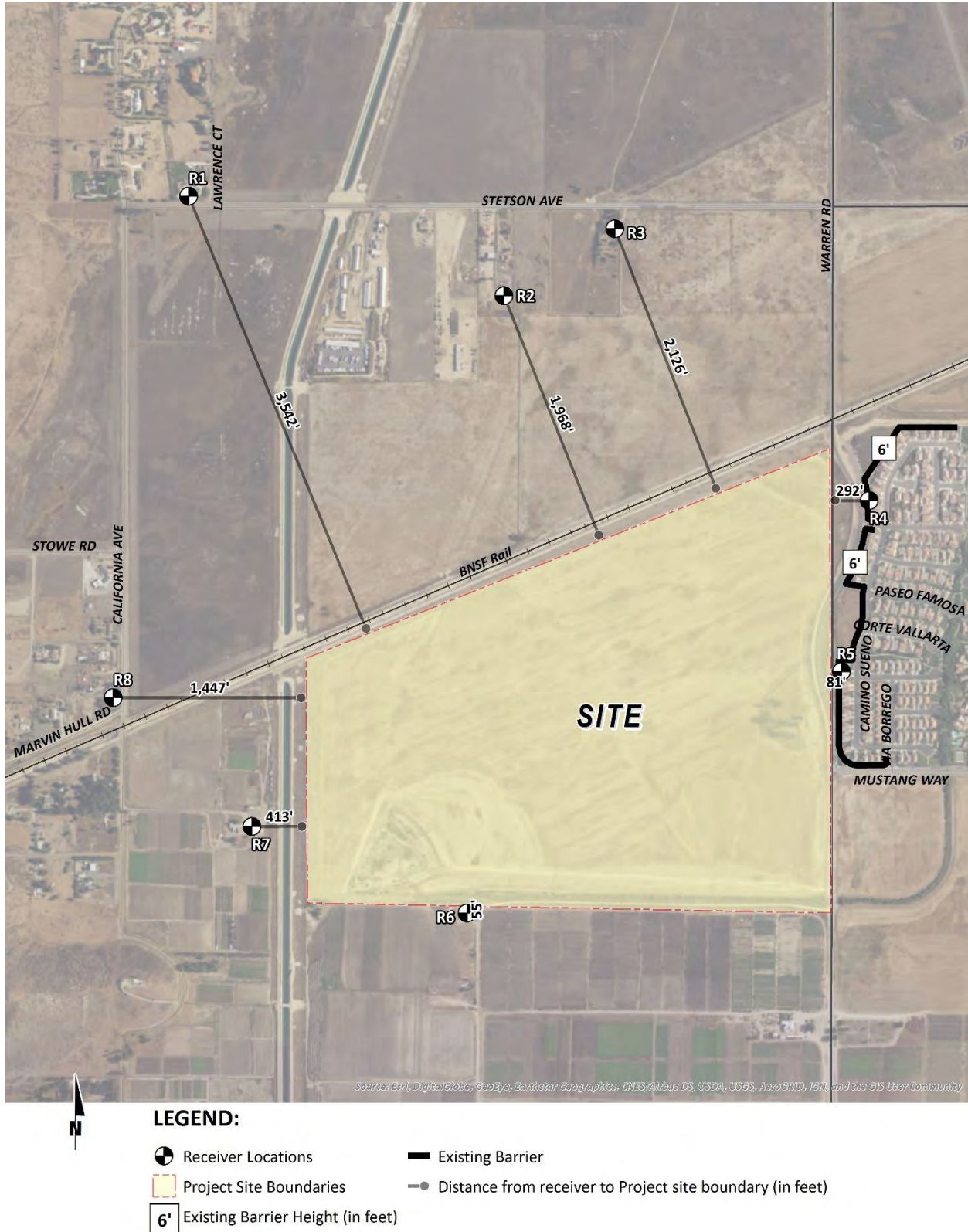
9 RECEIVER LOCATIONS

To assess the potential for short-term construction noise impacts, the following eight receiver locations as shown on Exhibit 9-A were identified as representative locations for analysis. Sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include: schools, hospitals, single-family dwellings, mobile home parks, churches, libraries, and recreation areas. Moderately noise-sensitive land uses typically include: multi-family dwellings, hotels, motels, dormitories, 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, natural open space, undeveloped land, parking lots, warehousing, liquid and solid waste facilities, salvage yards, and transit terminals.

Sensitive receivers in the vicinity of the Project site include the single-family residential dwellings located at receiver locations R1 to R8. The closest sensitive receiver is represented by location R6 at a distance of approximately 55 feet south of the Project site. 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.

- R1: Located approximately 3,542 feet northwest of the Project site, R1 represents the existing residential homes north of Stetson Avenue. A 24-hour noise level measurement was taken near this location, L1, to describe the existing ambient noise environment.
- R2: Location R2 represents existing single-family residential homes located approximately 1,968 feet north of the Project site on Stetson Avenue.
- R3: Location R3 represents the existing single-family residential home located roughly 2,126 feet north of the Project Site on Stetson Avenue. A 24-hour noise level measurement was taken near this location, L2, to describe the existing ambient noise environment.
- R4: Location R4 represents the single-family residential homes located approximately 292 feet east of the Project site on Camino Sueno. A 24-hour noise level measurement was taken at this location, L3, to describe the existing ambient noise environment.
- R5: Location R5 represents existing single-family residential homes situated approximately 81 feet east of the Project site boundary on Camino Sueno.
- R6: At the time of this analysis, receiver location R6 represents an existing noise-sensitive residential home and agricultural land use at a distance of approximately 55 feet south of the Project site. However, this location may represent a vacant structure which is not considered to be a noise-sensitive land use.
- R7: At a distance of 413 feet from the Project site boundary, R7 represents single-family residential homes located west of the Project site on California Avenue.
- R8: Location R8 represents the residential home located approximately 1,447 feet west of the Project site across California Avenue.

EXHIBIT 9-A: RECEIVER LOCATIONS



10 OPERATIONAL NOISE IMPACTS

This section analyzes the potential stationary-source operational noise impacts at the nearby receiver locations, identified in Section 9, with a line-of-sight to the Project noise sources, and analyzes the resulting noise levels from operation of the proposed Rancho Diamante (TTM No. 36841) Project. Exhibit 10-A identifies the representative receiver locations and noise source locations used to assess the operational noise levels.

10.1 OPERATIONAL NOISE STANDARDS

To analyze noise impacts originating from a designated fixed location or private property such as the Rancho Diamante (TTM No. 36841) Project, stationary-source (operational) noise such as the expected roof-top air conditioning units, parking lot vehicle movements, and drive-through speakerphones are typically evaluated against standards established under a jurisdiction's Municipal Code or General Plan.

The City of Hemet has set exterior noise limits to control community noise impacts from non-transportation noise sources (such as roof-top air conditioning units, parking lot vehicle movements, and drive-through speakerphones, etc.). Table 6.5 *Noise Level Performance Standards for Non-Transportation Noise Sources*, previously shown on Exhibit 3-C, from the City of Hemet General Plan Public Safety Element, identifies exterior noise level limits of 60 dBA Leq and 75 dBA Lmax during the daytime hours (7:00 a.m. to 10:00 p.m.) and 45 dBA Leq and 65 dBA Lmax during the nighttime hours (10:00 p.m. to 7:00 p.m.) (12)

10.2 OPERATIONAL NOISE SOURCES

At the time this noise analysis was prepared the future tenants of the proposed Project were unknown. To present the potential worst-case noise conditions, this analysis assumes the Project would be operational 24 hours per day, seven days per week. The on-site Project-related noise sources are expected to include: roof-top air conditioning units, parking lot vehicle movements, and drive-through speakerphones.

10.3 REFERENCE NOISE LEVELS

To estimate the Project operational noise impacts, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with the development of the proposed Project. This section provides a detailed description of the reference noise level measurements shown on Table 10-1 used to estimate the Project operational noise impacts associated with roof-top air conditioning units, parking lot vehicle movements, and drive-through speakerphones.

10.3.1 ROOF-TOP AIR CONDITIONING UNITS

To assess the impacts created by the roof-top air conditioning units at the Project buildings, reference noise levels measurements were taken at the Santee Walmart on July 27th, 2015. Located at 170 Town Center Parkway in the City of Santee, the noise level measurements

describe a single mechanical roof-top air conditioning unit on the roof of an existing Walmart store. The reference noise level represents a Lennox SCA120 series 10-ton model packaged air conditioning unit. Using the uniform reference distance of 50 feet, the noise level is 57.2 dBA Leq. The operating conditions of the reference noise level measurement reflect peak summer cooling requirements with measured temperatures approaching 96 degrees Fahrenheit (°F) with average daytime temperatures of 82°F. The noise attenuation provided by a parapet wall is not reflected in this reference noise level measurement. The roof-top air condition units were observed to operate the most during the daytime hours for a total of 39 minutes per hour.

10.3.2 PARKING LOT VEHICLE MOVEMENTS (AUTOS)

To determine the noise levels associated with commercial parking lot vehicle movements, Urban Crossroads collected reference noise level measurements at the Laguna Niguel Walmart located at 27470 Alicia Parkway on May 30th, 2012. The 15-minute noise level measurement indicates that the parking lot vehicle movements generates noise levels of 45.1 dBA Leq at a normalized distance of 50 feet. The parking lot noise levels are mainly due to cars pulling in and out of spaces, car alarms sounding, and customers moving shopping carts. Noise associated with parking lot vehicle movements is expected during the typical daytime, and nighttime conditions for the entire hour (60 minutes).

10.3.3 DRIVE-THRU SPEAKERPHONE

To describe the potential noise level impacts associated with potential drive-thru speakerphones and vehicle activities, a reference noise level measurement was collected on Friday, December 19th, 2014 at a Panera Bread restaurant located at 423 South Associated Road in the City of Brea. The reference noise levels collected at the Panera Bread restaurant are expected to reflect potential drive-thru speakerphone noise level activities at the Project site, since the reference measurement includes both drive-thru speakerphone and vehicle activity noise. The noise sources included in the reference noise level measurement consist of voices of the Panera Bread employees over the speakerphone, customers' voices ordering food, car engines idling, car radios playing music, and cars queuing in the drive-thru lane. At 50 feet from the speakerphone, a reference noise level of 51.5 dBA Leq was measured. This reference noise level measurement overstates the actual average noise levels since it represents the average of 28 speakerphone menu board ordering events observed over a two-hour period. In other words, the Panera Bread speakerphone menu board reference noise level describes continuous drive-thru operations and does not include any periods of inactivity.

TABLE 10-1: REFERENCE NOISE LEVEL MEASUREMENTS

Noise Source	Duration (hh:mm:ss)	Ref. Dist. (Feet)	Noise Source Height (Feet)	Hourly Activity (Min.) ⁴	Noise Level (dBA Leq)	
					@ Ref. Distance	@ 50 Feet
Roof-Top Air Conditioning Units ¹	96:00:00	5'	25'	39	77.2	57.2
Parking Lot Vehicle Movements ²	01:00:00	5'	5'	60	60.1	45.1
Drive-Thru Speakerphone ⁴	02:00:00	15'	3'	60	62.0	51.5

¹ As measured by Urban Crossroads, Inc. on 7/27/2015 at the Santee Walmart located at 170 Town Center Parkway.

² As measured by Urban Crossroads, Inc. on 5/30/2012 at the Laguna Niguel Walmart located at 27470 Alicia Parkway.

³ As measured by Urban Crossroads, Inc. on 12/19/2014 at a Panera Bread in Brea located at 423 South Associated Road.

⁴ Duration (minutes within the hour) of noise activity during peak hourly conditions.

EXHIBIT 10-A: OPERATIONAL NOISE SOURCE LOCATIONS



LEGEND:

- +
 Receiver Locations
- Roof-Top Air Conditioning Unit
- Drive-Thru Speakerphone
- 6' Barrier Height (in feet)
- Existing Barrier
- Parking Lot Vehicle Movements
- Distance from receiver to center of noise source (in feet)

10.4 PROJECT OPERATIONAL NOISE LEVELS

Based upon the reference noise levels, it is possible to estimate the Project operational stationary-source noise levels at each of the sensitive receiver locations. The operational noise level calculations shown on Table 10-2 account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. Hard site conditions are used in the operational noise analysis which result in noise levels that attenuate (or decrease) at a rate of 6 dBA for each doubling of distance from a point source. The basic noise attenuation equation shown below is used to calculate the distance attenuation based on a reference noise level (SPL_1):

$$SPL_2 = SPL_1 - 20\log(D_2/D_1)$$

Where SPL_2 is the resulting noise level after attenuation, SPL_1 is the source noise level, D_2 is the distance to the reference sound pressure level (SPL_1), and D_1 is the distance to the receiver location. Table 10-2 shows the individual operational noise levels of each noise source at each of the nearby sensitive receiver locations. As indicated on Table 10-2, the Project-only operational noise levels will range from 9.8 to 34.8 dBA Leq and 25.2 to 47.1 dBA Lmax at the sensitive receiver locations closest to the Project commercial use. The noise levels calculated in this analysis include the barrier attenuation provided by the existing barriers in the Project study area, as shown on Exhibit 10-A. Appendix 10.1 shows the operational noise level calculations for each receiver location by noise source.

TABLE 10-2: PROJECT-ONLY OPERATIONAL NOISE LEVELS

Receiver Location ¹	Noise Source ²	Project Operational Noise Levels (dBA) ³	
		Leq (Energy Avg.)	L _{max} (Anytime)
R1	Roof-Top Air Conditioning Units	6.1	7.1
	Parking Lot Vehicle Movements	5.7	25.1
	Drive-Through Speakerphone	2.4	6.8
	Combined Noise Level:	9.8	25.2
R2	Roof-Top Air Conditioning Units	12.4	13.4
	Parking Lot Vehicle Movements	10.4	29.8
	Drive-Through Speakerphone	8.7	13.1
	Combined Noise Level:	15.5	30.0
R3	Roof-Top Air Conditioning Units	12.3	13.3
	Parking Lot Vehicle Movements	10.3	29.7
	Drive-Through Speakerphone	8.5	12.9
	Combined Noise Level:	15.4	29.9
R4	Roof-Top Air Conditioning Units	32.5	33.5
	Parking Lot Vehicle Movements	27.3	46.7
	Drive-Through Speakerphone	28.3	32.7
	Combined Noise Level:	34.8	47.1
R5	Roof-Top Air Conditioning Units	29.5	30.5
	Parking Lot Vehicle Movements	24.1	43.5
	Drive-Through Speakerphone	25.4	29.8
	Combined Noise Level:	31.7	43.9

¹ See Exhibit 10-A for the receiver and noise source locations.² Reference noise sources as shown on Table 10-1.³ Operational noise level calculations are provided in Appendix 10.1.

Table 10-3 presents a summary of the combined total Project-only operational noise level projections at the nearby sensitive receiver locations for a comparison with City of Hemet exterior noise level standards. The Project operational noise levels at the nearby sensitive receiver locations are shown to range from 9.8 to 34.8 dBA Leq and 25.2 to 47.1 dBA L_{max}. Based on the results of this analysis, the Project operational noise levels associated with the Rancho Diamante (TTM No. 36841) will satisfy City of Hemet daytime 60 dBA Leq and 75 dBA L_{max}, and nighttime 45 dBA Leq and 65 dBA L_{max} exterior noise level standards, previously shown on Exhibit 3-C.

TABLE 10-3: OPERATIONAL NOISE LEVEL COMPLIANCE

Receiver Location ¹	Noise Level at Receiver Locations (dBA) ²		Thresholds				Threshold Exceeded? ³	
			Daytime		Nighttime			
	Leq (E. Avg.)	L _{max} (Anytime)	Leq (E. Avg.)	L _{max} (Anytime)	Leq (E. Avg.)	L _{max} (Anytime)	Daytime	Nighttime
R1	9.8	25.2	60	75	45	65	No	No
R2	15.5	30.0	60	75	45	65	No	No
R3	15.4	29.9	60	75	45	65	No	No
R4	34.8	47.1	60	75	45	65	No	No
R4	31.7	43.9	60	75	45	65	No	No

¹ See Exhibit 10-A for the receiver and noise source locations.

² Estimated Project operational noise levels as shown on Table 10-2.

³ Do the estimated Project operational noise levels meet the operational noise level standards?

"E. Avg." = logarithmic (energy) average;

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

10.5 PROJECT OPERATIONAL NOISE LEVEL CONTRIBUTION

To describe the Project operational noise level contributions, the Project operational noise levels are combined with the existing ambient noise levels measurements for the nearby receiver locations potentially impacted by Project operational noise sources. Since the units used to measure noise, decibels (dB), are logarithmic units, the Project-operational and existing ambient noise levels cannot be combined using standard arithmetic equations. (19) Instead, they must be logarithmically added using the following base equation:

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

Where "SPL1," "SPL2," etc. are equal to the sound pressure levels being combined, or in this case, the Project-operational and existing ambient noise levels. The difference between the combined Project and ambient noise levels describe the Project noise level contributions to the existing ambient noise environment. Noise levels that would be experienced at receiver locations when Project-source noise is added to the ambient conditions are presented on Tables 10-4 and 10-5 for the daytime and nighttime hours, respectively.

As indicated on Tables 10-4 and 10-5, the Project will not generate a daytime or nighttime operational noise level increase at any of the nearby receiver locations. Since the Project-related operational noise level contributions will satisfy the significance criteria discussed in Section 4, the increases at the sensitive receiver locations will be *less than significant*. On this basis, Project operational stationary-source noise would not result in a substantial temporary/periodic, or permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project, and impacts in these regards will be *less than significant*.

TABLE 10-4: PROJECT DAYTIME NOISE LEVEL CONTRIBUTIONS

Receiver Location ¹	Total Project Operational Noise Level ²	Measurement Location ³	Reference Ambient Noise Levels ⁴	Combined Project and Ambient ⁵	Project Contribution ⁶	Threshold Exceeded? ⁷
R1	9.8	L1	58.5	58.5	0.0	No
R2	15.5	L2	60.6	60.6	0.0	No
R3	15.4	L2	60.6	60.6	0.0	No
R4	34.8	L3	59.3	59.3	0.0	No
R5	31.7	L3	59.3	59.3	0.0	No

¹ See Exhibit 10-A for the sensitive receiver locations.

² Total Project operational noise levels as shown on Table 10-3.

³ Ambient noise level measurement locations as shown on Exhibit 5-A as measured by Urban Crossroads, Inc.

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

⁵ Represents the combined ambient conditions plus the Project activities.

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

⁷ FICON criteria described in Section 4.

TABLE 10-5: PROJECT NIGHTTIME NOISE LEVEL CONTRIBUTIONS

Receiver Location ¹	Total Project Operational Noise Level ²	Measurement Location ³	Reference Ambient Noise Levels ⁴	Combined Project and Ambient ⁵	Project Contribution ⁶	Threshold Exceeded? ⁷
R1	9.8	L1	53.4	53.4	0.0	No
R2	15.5	L2	56.8	56.8	0.0	No
R3	15.4	L2	56.8	56.8	0.0	No
R4	34.8	L3	57.0	57.0	0.0	No
R5	31.7	L3	57.0	57.0	0.0	No

¹ See Exhibit 10-A for the sensitive receiver locations.

² Total Project operational noise levels as shown on Table 10-3.

³ Ambient noise level measurement locations as shown on Exhibit 5-A as measured by Urban Crossroads, Inc.

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

⁵ Represents the combined ambient conditions plus the Project activities.

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

⁷ FICON criteria described in Section 4.

11 CONSTRUCTION IMPACTS

This section analyzes potential impacts resulting from the short-term construction activities associated with the development of the Project.

11.1 CONSTRUCTION NOISE STANDARDS

The City of Hemet has set restrictions to control noise impacts associated with the construction of the proposed Project. Section 67-10 of the City's Municipal Code states: *Grading is allowed Monday through Friday between the hours of 6:00 a.m. and 6:00 p.m. from June 1 through September 30, and between the hours of 7:00 a.m. and 6:00 p.m. from October 1 through May 31. Grading is allowed on Saturdays between the hours of 7:00 a.m. and 6:00 p.m. year-round. Grading on Sundays is prohibited.* (13) For the purposes of this analysis, Project construction activities shall be limited to the hours specified for grading on Monday through Friday between 6:00 a.m. to 6:00 p.m. from June 1st through September 30th, and 7:00 a.m. to 6:00 p.m. from October 1st through May 31st; Saturday activity is limited to between 7:00 a.m. to 6:00 p.m. with no activity allowed on Sundays. 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. Therefore an acceptable construction noise level threshold is used based on the Table 6.5 *Noise Level Performance Standards for Non-Transportation Noise Sources*, previously shown on Exhibit 3-C, from the City of Hemet General Plan Public Safety Element of 75 dBA Lmax during the daytime hours of 7:00 a.m. to 10:00 p.m. (12) The Lmax noise level threshold is used to evaluate the maximum noise levels due to construction activity at the Project site.

11.2 CONSTRUCTION NOISE LEVELS

Noise generated by the Project construction equipment will include a combination of trucks, power tools, concrete mixers, and portable generators that when combined can reach high levels. The number and mix of construction equipment is expected to occur in the following stages:

- Grading
- Building Construction
- Architectural Coating
- Paving
- Off-Site Improvements

This construction noise analysis was prepared using reference noise level measurements taken by Urban Crossroads, Inc. to describe the typical construction activity noise levels for each stage of Project construction. The construction reference noise level measurements, provided in Appendix 11.1, represent a list of typical construction activity noise levels. Noise levels generated by heavy construction equipment can range from approximately 72 dBA to in excess of 86 dBA when measured at 50 feet. However, these noise levels diminish with distance from the construction site at a rate of 6 dBA per doubling of distance. For example, a noise level of 86 dBA measured at 50 feet from the noise source to the receiver would be reduced to 80 dBA at 100 feet from the source to the receiver, and would be further reduced to 74 dBA at 200 feet from

the source to the receiver. The construction phases used in this analysis are consistent with the data used to support the construction emissions in the *Rancho Diamante (TTM No. 36841) Air Quality Impact Analysis* prepared by Urban Crossroads Inc. (24) It is important to note that the stages used in this analysis for Project construction represent worst-case construction activities for each stage, based on equipment assumptions in the *Air Quality Impact Analysis* for both Phases 1 and 2 of Project construction. Therefore, the noise levels shown in this report for Project construction represent worst-case construction noise levels, by stage, during both Phases 1 and 2. Exhibit 11-A shows the receiver locations and the construction activity boundaries of the Project site. The construction activity boundaries are based on the limits of grading activity as shown on the Tentative Tract Map (TTM) for the Project, TTM Number 36841, prepared by Pangaea Land Consultants, Inc.

11.3 CONSTRUCTION REFERENCE NOISE LEVELS

To describe the Project construction noise levels, measurements were collected for similar activities at several construction sites. Table 11-1 provides a summary of the 16-construction reference noise level measurements. Since the reference noise levels were collected at varying distances, all construction noise level measurements presented on Table 11-1 have been adjusted to describe a common reference distance of 50 feet. Appendix 11.1 includes a detailed construction reference noise level memo and reference noise source photos for each type of construction activity.

11.4 CONSTRUCTION NOISE ANALYSIS

Tables 11-2 to 11-6 show the Project construction stages and the reference construction noise levels used for each stage. Table 11-7 provides a summary of the noise levels from each stage of construction at each of the sensitive receiver locations. Based on the reference construction noise levels, the Project-related construction noise levels when the peak reference noise level is operating at a single point nearest the sensitive receiver location will range from 48.5 to 76.5 dBA L_{max}.

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TABLE 11-1: CONSTRUCTION REFERERNE NOISE LEVELS

ID	Noise Source	Reference Distance From Source (Feet)	Reference Noise Levels @ Reference Distance		Reference Noise Levels @ 50 Feet ⁶	
			dBA Leq	dBA Lmax	dBA Leq	dBA Lmax
1	Truck Pass-Bys & Dozer Activity ¹	30'	63.6	68.1	59.2	63.7
2	Dozer Activity ¹	30'	68.6	76.4	64.2	72.0
3	Construction Vehicle Maintenance Activities ²	30'	71.9	74.8	67.5	70.4
4	Foundation Trenching ²	30'	72.6	74.9	68.2	70.5
5	Rough Grading Activities ²	30'	77.9	84.8	73.5	80.4
6	Residential Framing ³	30'	66.7	76.7	62.3	72.3
7	Water Truck Pass-By & Backup Alarm ⁴	30'	76.3	82.3	71.9	77.9
8	Dozer Pass-By ⁴	30'	84.0	89.9	79.6	85.5
9	Two Scrapers & Water Truck Pass-By ⁴	30'	83.4	89.0	79.0	84.6
10	Two Scrapers Pass-By ⁴	30'	83.7	86.9	79.3	82.5
11	Scraper, Water Truck, & Dozer Activity ⁴	30'	79.7	87.7	75.3	83.3
12	Concrete Mixer Truck Movements ⁵	50'	71.2	73.1	71.2	73.1
13	Concrete Paver Activities ⁵	30'	70.0	75.7	65.6	71.3
14	Concrete Mixer Pour & Paving Activities ⁵	30'	70.3	76.3	65.9	71.9
15	Concrete Mixer Backup Alarms & Air Brakes ⁵	50'	71.6	78.8	71.6	78.8
16	Concrete Mixer Pour Activities ⁵	50'	67.7	79.2	67.7	79.2

¹ As measured by Urban Crossroads, Inc. on 10/14/15 at a business park construction site located at the northwest corner of Barranca Parkway and Alton Parkway in the City of Irvine.

² As measured by Urban Crossroads, Inc. on 10/20/15 at a construction site located in Rancho Mission Viejo.

³ As measured by Urban Crossroads, Inc. on 10/20/15 at a residential construction site located in Rancho Mission Viejo.

⁴ As measured by Urban Crossroads, Inc. on 10/30/15 during grading operations within an industrial construction site located in the City of Ontario.

⁵ Reference noise level measurements were collected from a nighttime concrete pour at an industrial construction site, located at 27334 San Bernardino Avenue in the City of Redlands, between 1:00 a.m. to 2:00 a.m. on 7/1/15.

⁶ Reference noise levels are calculated at 50 feet using a drop off rate of 6 dBA per doubling of distance (point source).

TABLE 11-2: GRADING EQUIPMENT NOISE LEVELS

Reference Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA Lmax)
Truck Pass-Bys & Dozer Activity	63.7
Dozer Activity	72.0
Rough Grading Activities	80.4
Dozer Pass-By	85.5
Peak Reference Noise Level at 50 Feet:	85.5

Receiver Location	Distance To Construction Activity (Feet) ²	Distance Attenuation (dBA) ³	Estimated Noise Barrier Attenuation (dBA) ⁴	Construction Noise Level (dBA Lmax)
R1	3,536'	-37.0	0.0	48.5
R2	1,899'	-31.6	0.0	53.9
R3	2,026'	-32.2	0.0	53.3
R4	125'	-8.0	-5.0	72.5
R5	205'	-12.3	-5.0	68.2
R6	140'	-8.9	0.0	76.5
R7	472'	-19.5	0.0	66.0
R8	1,455'	-29.3	0.0	56.2

¹ Reference construction noise level measurements taken by Urban Crossroads, Inc. (Appendix 11.1).

² Distance from the nearest point of construction activity to the nearest receiver.

³ Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

⁴ Estimated barrier attenuation from existing barriers in the Project study area.

TABLE 11-3: BUILDING CONSTRUCTION EQUIPMENT NOISE LEVELS

Reference Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA Lmax)
Truck Pass-Bys & Dozer Activity	63.7
Construction Vehicle Maintenance Activities	70.4
Foundation Trenching	70.5
Residential Framing	72.3
Peak Reference Noise Level at 50 Feet:	72.3

Receiver Location	Distance To Construction Activity (Feet) ²	Distance Attenuation (dBA) ³	Estimated Noise Barrier Attenuation (dBA) ⁴	Construction Noise Level (dBA Lmax)
R1	3,536'	-37.0	0.0	35.3
R2	1,899'	-31.6	0.0	40.7
R3	2,026'	-32.2	0.0	40.1
R4	125'	-8.0	-5.0	59.3
R5	205'	-12.3	-5.0	55.0
R6	140'	-8.9	0.0	63.3
R7	472'	-19.5	0.0	52.8
R8	1,455'	-29.3	0.0	43.0

¹ Reference construction noise level measurements taken by Urban Crossroads, Inc. (Appendix 11.1).

² Distance from the nearest point of construction activity to the nearest receiver.

³ Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

⁴ Estimated barrier attenuation from existing barriers in the Project study area.

TABLE 11-4: ARCHITECTURAL COATING EQUIPMENT NOISE LEVELS

Reference Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA Lmax)
Residential Framing	72.3
Peak Reference Noise Level at 50 Feet:	72.3

Receiver Location	Distance To Construction Activity (Feet) ²	Distance Attenuation (dBA) ³	Estimated Noise Barrier Attenuation (dBA) ⁴	Construction Noise Level (dBA Lmax)
R1	3,536'	-37.0	0.0	35.3
R2	1,899'	-31.6	0.0	40.7
R3	2,026'	-32.2	0.0	40.1
R4	125'	-8.0	-5.0	59.3
R5	205'	-12.3	-5.0	55.0
R6	140'	-8.9	0.0	63.3
R7	472'	-19.5	0.0	52.8
R8	1,455'	-29.3	0.0	43.0

¹ Reference construction noise level measurements taken by Urban Crossroads, Inc. (Appendix 11.1).

² Distance from the nearest point of construction activity to the nearest receiver.

³ Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

⁴ Estimated barrier attenuation from existing barriers in the Project study area.

TABLE 11-5: PAVING EQUIPMENT NOISE LEVELS

Reference Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA Lmax)
Concrete Mixer Truck Movements	73.1
Concrete Paver Activities	71.3
Concrete Mixer Pour & Paving Activities	71.9
Concrete Mixer Backup Alarms & Air Brakes	78.8
Concrete Mixer Pour Activities	79.2
Peak Reference Noise Level at 50 Feet:	79.2

Receiver Location	Distance To Construction Activity (Feet) ²	Distance Attenuation (dBA) ³	Estimated Noise Barrier Attenuation (dBA) ⁴	Construction Noise Level (dBA Lmax)
R1	3,536'	-37.0	0.0	42.2
R2	1,899'	-31.6	0.0	47.6
R3	2,026'	-32.2	0.0	47.0
R4	125'	-8.0	-5.0	66.2
R5	205'	-12.3	-5.0	61.9
R6	140'	-8.9	0.0	70.3
R7	472'	-19.5	0.0	59.7
R8	1,455'	-29.3	0.0	49.9

¹ Reference construction noise level measurements taken by Urban Crossroads, Inc. (Appendix 11.1).

² Distance from the nearest point of construction activity to the nearest receiver.

³ Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

⁴ Estimated barrier attenuation from existing barriers in the Project study area.

TABLE 11-6: OFF-SITE IMPROVEMENT EQUIPMENT NOISE LEVELS

Reference Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA Lmax)
Foundation Trenching	70.5
Concrete Mixer Pour & Paving Activities	71.9
Peak Reference Noise Level at 50 Feet:	71.9

Receiver Location	Distance To Construction Activity (Feet) ²	Distance Attenuation (dBA) ³	Estimated Noise Barrier Attenuation (dBA) ⁴	Construction Noise Level (dBA Lmax)
R1	3,536'	-37.0	0.0	34.9
R2	1,899'	-31.6	0.0	40.3
R3	2,026'	-32.2	0.0	39.7
R4	125'	-8.0	-5.0	58.9

¹ Reference construction noise level measurements taken by Urban Crossroads, Inc. (Appendix 11.1).

² Distance from the nearest point of construction activity to the nearest receiver.

³ Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

⁴ Estimated barrier attenuation from existing barriers in the Project study area.

11.5 CONSTRUCTION NOISE THRESHOLDS OF SIGNIFICANCE

The construction noise analysis shows that the highest construction noise levels will occur when construction activities occur at the edge of the Project site. As shown on Table 11-7, the unmitigated peak construction noise levels are expected to range from 48.5 to 76.5 dBA Lmax. To control noise impacts associated with the construction of the proposed Project, the City of Hemet has established limits to the hours of operation. The City's Municipal Code indicates that construction activities are limited to Monday through Friday between 6:00 a.m. to 6:00 p.m. from June 1st through September 30th, and 7:00 a.m. to 6:00 p.m. from October 1st through May 31st; Saturday activity is limited to between 7:00 a.m. to 6:00 p.m. with no activity allowed on Sundays. Since the City does not identify specific noise level limits for construction noise levels, an acceptable construction noise level threshold is used based on the Table 6.5 *Noise Level Performance Standards for Non-Transportation Noise Sources*, previously shown on Exhibit 3-C, from the City of Hemet General Plan Public Safety Element of 75 dBA Lmax during the daytime hours of 7:00 a.m. to 10:00 p.m. (12)

TABLE 11-7: UNMITIGATED CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY

Receiver Location ¹	Construction Phase Hourly Noise Level (dBA Lmax)					
	Grading	Building Construction	Architectural Coating	Paving	Off-Site Improvements	Peak Activity ²
R1	48.5	35.3	35.3	42.2	34.9	48.5
R2	53.9	40.7	40.7	47.6	40.3	53.9
R3	53.3	40.1	40.1	47.0	39.7	53.3
R4	72.5	59.3	59.3	66.2	58.9	72.5
R5	68.2	55.0	55.0	61.9	_ ³	68.2
R6	76.5	63.3	63.3	70.3	_ ³	76.5
R7	66.0	52.8	52.8	59.7	_ ³	66.0
R8	56.2	43.0	43.0	49.9	_ ³	56.2

¹ Noise receiver locations are shown on Exhibit 11-A.

² Estimated construction noise levels during peak operating conditions.

³ Project construction is closer to the given receiver location and represents more intensive activity than off-site improvements.

Based on the construction noise standards described in Section 3.5, the potential short-term unmitigated construction noise level impacts are expected to exceed the acceptable construction noise level threshold of 75 dBA Lmax at one of the sensitive residential receiver locations, R6, as shown on Table 11-8. Therefore, a 6-foot high temporary construction noise barrier is required at the construction boundaries near receiver location R6 where Project construction noise levels could potentially exceed the noise level thresholds, as shown on Exhibit 11-A. With the installation of temporary exterior noise control barriers with a minimum height of 6-feet, construction noise levels at the nearby residential receivers would be reduced. However, it is important to note that this receiver location may represent a vacant structure which is not considered to be a noise-sensitive land use, and therefore, would not require the noise mitigation measures identified in this analysis during construction activities.

This analysis does not evaluate the feasibility of temporary noise barrier installation. If it is not feasible to install temporary barriers, construction noise levels would not be reduced, because no other measures exist to reasonably reduce construction noise levels. The noise attenuation provided through temporary noise barriers depends on many factors including cost, wind loading, the location of the receiver, and the ability to place barriers such that the line-of-sight of the receiver is blocked to the noise source, among others. This analysis assumes a temporary noise barrier constructed using frame-mounted materials such as vinyl acoustic curtains or quilted blankets.

Table 11-8 shows the peak construction noise levels are expected to range from 48.5 to 71.6 dBA Lmax with the attenuation provided by the 6-foot high temporary construction noise barrier for receiver location R6. With the 6-foot high temporary noise control barrier shown on Exhibit 11-A, the construction noise levels will satisfy the construction noise level thresholds for each land use category at the nearby sensitive receiver locations. Therefore, the construction of the Project will result in a *less than significant* noise impact at the nearby sensitive receiver locations during peak construction activity. The temporary noise barrier attenuation calculations are provided in

Appendix 11.2. Should receiver location R6 be uninhabited at the time of Project construction, the temporary noise barrier mitigation measures identified in this analysis during construction activities would no longer be required.

TABLE 11-8: MITIGATED CONSTRUCTION NOISE LEVELS WITH TEMPORARY BARRIERS

Receiver Location ¹	Construction Noise Levels (dBA Lmax)			With Temporary Noise Barriers (dBA Lmax)		
	Peak Activity ²	Threshold ³	Threshold Exceeded? ⁴	Attenuation	Construction Noise Levels ⁵	Threshold Exceeded? ⁴
R1	48.5	75	No	-	-	No
R2	53.9	75	No	-	-	No
R3	53.3	75	No	-	-	No
R4	72.5	75	No	-	-	No
R5	68.2	75	No	-	-	No
R6	76.5	75	Yes	-4.9	71.6	No
R7	66.0	75	No	-	-	No
R8	56.2	75	No	-	-	No

¹ Noise receiver locations are shown on Exhibit 11-A.

² Estimated construction noise levels during peak operating conditions, as shown on Table 11-7.

³ Construction noise standards as shown on Table 3-1.

⁴ Do the estimated Project construction noise levels meet the construction noise level thresholds?

⁵ Peak construction noise levels with the minimum 6-foot high temporary construction noise barrier as shown on Exhibit 11-A. Temporary barrier attenuation calculations are provided in Appendix 11.2.

11.6 CONSTRUCTION NOISE MITIGATION MEASURES

Though construction noise is temporary, intermittent and of short duration, and will not present any long-term impacts, the following mitigation measures would reduce any noise level increases produced by the construction equipment to the nearby noise-sensitive residential land uses:

- Prior to approval of grading plans and/or issuance of building permits, plans shall include a note indicating that noise-generating Project construction activities shall only occur between the permitted hours on Monday through Friday between 6:00 a.m. to 6:00 p.m. from June 1st through September 30th, and 7:00 a.m. to 6:00 p.m. from October 1st through May 31st; Saturday activity is limited to between 7:00 a.m. to 6:00 p.m. with no activity allowed on Sundays. The Project construction supervisor shall ensure compliance with the note and the City shall conduct periodic inspection at its discretion.
- If receiver location R6 is an inhabited noise-sensitive residential home at the time of Project construction, the installation of a minimum 6-foot high temporary noise control barrier, as shown on Exhibit 11-A, at the Project site boundaries when construction activities occur within 140 feet is required. The noise control barrier must present a solid face from top to bottom. The noise control barrier must be a minimum height of 6-feet.
 - The temporary noise barriers shall provide a minimum transmission loss of 20 dBA (Federal Highway Administration, Noise Barrier Design Handbook). The noise barrier may be constructed using an acoustical blanket (e.g. vinyl acoustic curtains or quilted

- blankets) attached to the construction site perimeter fence or equivalent temporary fence posts.
- The noise barriers must be maintained, and any damage promptly repaired. Gaps, holes, or weaknesses in the barrier or openings between the barrier and the ground shall be promptly repaired.
- The noise control barriers and associated elements shall be completely removed, and the site appropriately restored upon the conclusion of the construction activity.
- During all Project site construction, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the Project site.
- The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receivers nearest the Project site (i.e., at the center) during all Project construction.
- The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment (Monday through Friday between 6:00 a.m. to 6:00 p.m. from June 1st through September 30th, and 7:00 a.m. to 6:00 p.m. from October 1st through May 31st; Saturday activity is limited to between 7:00 a.m. to 6:00 p.m. with no activity allowed on Sundays). The Project Applicant shall prepare a haul route exhibit to design delivery routes to minimize the exposure of sensitive land uses or residential dwellings to delivery truck-related noise.

11.7 CONSTRUCTION VIBRATION IMPACTS

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures and soil type. It is expected that ground-borne vibration from Project construction activities would cause only intermittent, localized intrusion. The proposed Project's construction activities most likely to cause vibration impacts are:

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

Ground-borne vibration levels resulting from construction activities occurring within the Project site were estimated by data published by the Federal Transit Administration. Construction activities that would have the potential to generate low levels of ground-borne vibration within the Project site include grading. Using the vibration source level of construction equipment provided on Table 6-8 and the construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts.

Table 11-9 presents the expected Project related vibration levels at each of the sensitive receiver locations based on the FTA 80 VdB threshold for human annoyance. At distances ranging from 125 to 3,536 feet from Project construction activity, construction vibration velocity levels are expected to range from 22.5 to 66.0 VdB, as shown on Table 11-9. Project construction-source vibration levels would remain below the FTA 80 VdB threshold for human annoyance at all receiver locations.

Table 11-10 shows the vibration levels in relation to the Caltrans building damage threshold of 0.2 in/sec PPV. The Project construction-source vibration levels would approach to 0.01 in/sec PPV at potentially affected sensitive receiver locations, and will not exceed the Caltrans 0.2 in/sec PPV building damage threshold.

The proposed Project construction activities will not include or require equipment, facilities, or activities that would exceed the vibration threshold, and therefore, the construction-related vibration impacts are considered *less than significant*. Further, vibration levels at the site of the closest sensitive receiver are unlikely to be sustained during the entire construction period but will occur rather only during the times that heavy construction equipment is operating along the Project site perimeter. Moreover, construction at the Project site will be restricted to daytime hours consistent with City of Hemet requirements thereby eliminating potential vibration impacts during the sensitive nighttime hours.

TABLE 11-9: CONSTRUCTION EQUIPMENT VIBRATION LEVELS (HUMAN ANNOYANCE)

Receiver Location ¹	Distance to Construction Activity (Feet)	Receiver Vibration Levels (VdB) ²					Threshold Exceeded? ³
		Small Bulldozer	Jackhammer	Loaded Trucks	Large Bulldozer	Highest Vibration Levels	
R1	3,536'	0.0	14.5	21.5	22.5	22.5	No
R2	1,899'	1.6	22.6	29.6	30.6	30.6	No
R3	2,026'	0.7	21.7	28.7	29.7	29.7	No
R4	125'	37.0	58.0	65.0	66.0	66.0	No
R5	205'	30.6	51.6	58.6	59.6	59.6	No
R6	140'	35.6	56.6	63.6	64.6	64.6	No
R7	472'	19.7	40.7	47.7	48.7	48.7	No
R8	1,455'	5.1	26.1	33.1	34.1	34.1	No

¹ Noise receiver locations are shown on Exhibit 11-A.

² Based on the Vibration Source Levels of Construction Equipment included on Table 6-8.

³ Does the peak vibration exceed the FTA maximum acceptable vibration standard of 80 VdB?

TABLE 11-10: CONSTRUCTION EQUIPMENT VIBRATION LEVELS (BUILDING DAMAGE)

Receiver Location ¹	Distance To Const. Activity (Feet)	Receiver PPV Levels (in/sec) ²					Threshold Exceeded? ⁴
		Small Bulldozer	Jack-hammer	Loaded Trucks	Large Bulldozer	Highest PPV Levels	
R1	3,536'	0.00	0.00	0.00	0.00	0.00	No
R2	1,899'	0.00	0.00	0.00	0.00	0.00	No
R3	2,026'	0.00	0.00	0.00	0.00	0.00	No
R4	125'	0.00	0.00	0.01	0.01	0.01	No
R5	205'	0.00	0.00	0.00	0.00	0.00	No
R6	140'	0.00	0.00	0.01	0.01	0.01	No
R7	472'	0.00	0.00	0.00	0.00	0.00	No
R8	1,455'	0.00	0.00	0.00	0.00	0.00	No

¹ Receiver locations are shown on Exhibit 11-A.

² Based on the Vibration Source Levels of Construction Equipment included on Table 6-8.

³ Does the peak vibration exceed the building damage threshold of 0.2 in/sec PPV?

12 REFERENCES

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24. **Urban Crossroads, Inc.** *Rancho Diamante (TTM No. 36841) Air Quality Impact Analysis.* May 2018.

13 CERTIFICATION

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed Rancho Diamante (TTM No. 36841) Project. The information contained in this noise study report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 336-5979.

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EDUCATION

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

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

PROFESSIONAL REGISTRATIONS

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

PROFESSIONAL AFFILIATIONS

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

PROFESSIONAL CERTIFICATIONS

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

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APPENDIX 3.1:

CITY OF HEMET MUNICIPAL CODE

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Sec. 67-10. - Time of grading operations.

Grading is allowed Monday through Friday between the hours of 6:00 a.m. and 6:00 p.m. from June 1 through September 30, and between the hours of 7:00 a.m. and 6:00 p.m. from October 1 through May 31. Grading is allowed on Saturdays between the hours of 7:00 a.m. and 6:00 p.m. yearround. Grading on Sundays is prohibited.

The city engineer may extend the hours allowed for grading if he or she determines that such operations are not detrimental to the health, safety or welfare of the occupants of nearby structures, or the quiet enjoyment of nearby residential property.

(Ord. No. 1862, § 1(Exh. A), 6-25-13)

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APPENDIX 5.1:

STUDY AREA PHOTOS

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JN:09792 Rancho Diamante



L1
33, 43' 43.617500", 117, 3' 1.082100"



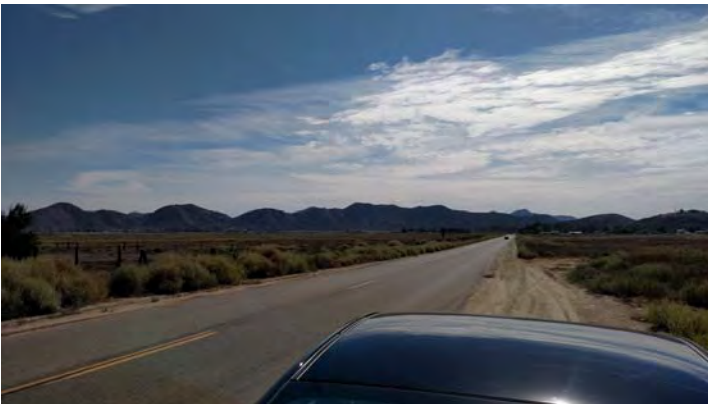
L1_E
33, 43' 43.617500", 117, 3' 1.082100"



L1_N
33, 43' 43.617500", 117, 3' 1.082100"



L1_NE
33, 43' 43.617500", 117, 3' 1.082100"



L1_S
33, 43' 43.617500", 117, 3' 1.082100"



L1_W
33, 43' 43.617500", 117, 3' 1.082100"

JN:09792 Rancho Diamante



L2
33, 43' 22.688500", 117, 1' 52.060500"



L2_N
33, 43' 45.498900", 117, 2' 13.209200"



L2_NE
33, 43' 50.099400", 117, 1' 55.026800"



L2_NW
33, 43' 45.498900", 117, 2' 13.209200"



L2_S
33, 43' 45.498900", 117, 2' 13.209200"



L2_SW
33, 43' 45.498900", 117, 2' 13.209200"

JN:09792 Rancho Diamante



L3
33, 43' 23.677300", 117, 1' 54.422600"



L3_N
33, 43' 23.677300", 117, 1' 54.422600"



L3_N2
33, 43' 23.677300", 117, 1' 54.422600"



L3_NW
33, 43' 23.677300", 117, 1' 54.422600"



L3_SE
33, 43' 23.677300", 117, 1' 54.422600"



L3_W
33, 43' 23.677300", 117, 1' 54.422600"

JN:09792 Rancho Diamante



L3_W2
33, 43' 23.677300", 117, 1' 54.422600"



L4
33, 42' 54.275200", 117, 1' 57.031800"



L4_E
33, 42' 54.275200", 117, 1' 57.031800"



L4_N
33, 42' 54.275200", 117, 1' 57.031800"



L4_NW
33, 42' 54.275200", 117, 1' 57.031800"



L4_SE
33, 42' 54.275200", 117, 1' 57.031800"

JN:09792 Rancho Diamante



L4_SW
33, 42' 54.275200", 117, 1' 57.031800"



L4_W
33, 42' 54.275200", 117, 1' 57.031800"

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APPENDIX 5.2:

NOISE LEVEL MEASUREMENT WORKSHEETS

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24-Hour Noise Level Measurement Summary

Project Name: Rancho Diamante

JN: 9792

Location: L1 - Located northwest of the Project site at the intersection of Stetson Avenue and California Avenue, south of existing residential homes.

Analyst: A. Wolfe

Date: 9/27/2017

Energy Average Leq

24-Hour

Day

Night

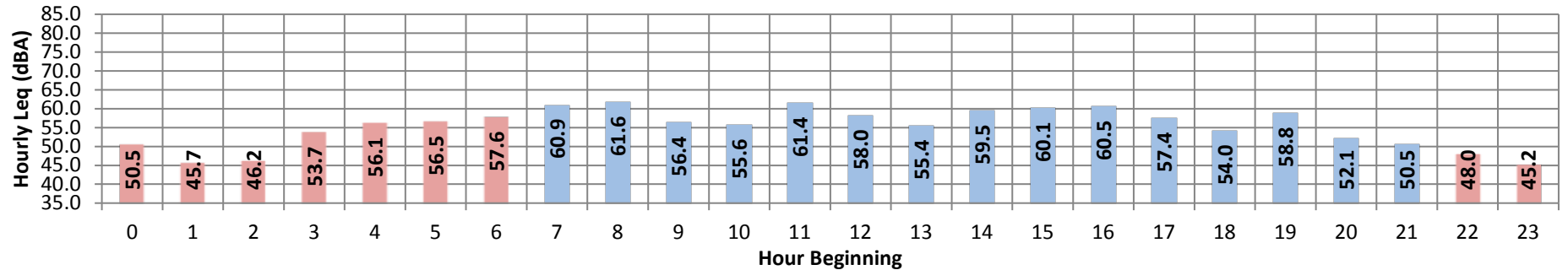
CNEL

58.5

53.4

61.3

Hourly Leq dBA Readings (unadjusted)



Time Period	Hour	Leq	Lmax	Lmin	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	50.5	75.9	36.6	61.0	58.0	53.0	50.0	43.0	39.0	36.0	36.0	36.0
	Max	61.6	91.9	40.8	73.0	69.0	64.0	61.0	55.0	49.0	43.0	42.0	41.0
Energy Average:		58.5	Average:		68.3	64.5	60.0	57.5	51.1	44.7	37.5	36.7	36.5
Night	Min	45.2	67.2	36.6	57.0	52.0	46.0	44.0	40.0	36.0	36.0	36.0	36.0
	Max	57.6	82.9	42.7	69.0	65.0	60.0	59.0	53.0	49.0	45.0	44.0	43.0
Energy Average:		53.4	Average:		61.8	57.8	52.4	49.8	43.8	40.4	38.6	38.2	37.7
Hourly Summary													
Night	0	50.5	79.4	36.6	61.0	55.0	51.0	49.0	41.0	37.0	36.0	36.0	36.0
	1	45.7	68.4	36.6	58.0	55.0	48.0	46.0	40.0	36.0	36.0	36.0	36.0
	2	46.2	72.9	36.6	57.0	52.0	46.0	44.0	40.0	39.0	36.0	36.0	36.0
	3	53.7	82.3	36.6	60.0	56.0	49.0	46.0	42.0	39.0	39.0	39.0	36.0
	4	56.1	82.0	39.5	68.0	62.0	57.0	54.0	47.0	44.0	41.0	40.0	39.0
	5	56.5	80.7	39.6	69.0	65.0	60.0	56.0	48.0	45.0	42.0	41.0	41.0
Day	6	57.6	82.9	42.7	66.0	63.0	60.0	59.0	53.0	49.0	45.0	44.0	43.0
	7	60.9	88.5	40.8	71.0	67.0	62.0	59.0	54.0	48.0	43.0	42.0	41.0
	8	61.6	88.1	36.6	71.0	67.0	62.0	59.0	52.0	45.0	39.0	36.0	36.0
	9	56.4	78.9	36.6	68.0	64.0	61.0	59.0	52.0	44.0	36.0	36.0	36.0
	10	55.6	78.7	36.6	66.0	63.0	60.0	58.0	51.0	45.0	36.0	36.0	36.0
	11	61.4	91.9	36.6	70.0	66.0	60.0	58.0	52.0	45.0	36.0	36.0	36.0
	12	58.0	81.3	36.6	70.0	65.0	60.0	57.0	52.0	44.0	36.0	36.0	36.0
	13	55.4	76.4	36.6	66.0	64.0	60.0	58.0	52.0	45.0	36.0	36.0	36.0
	14	59.5	82.4	36.6	73.0	67.0	60.0	58.0	51.0	43.0	36.0	36.0	36.0
	15	60.1	85.3	36.6	71.0	66.0	61.0	59.0	54.0	47.0	38.0	36.0	36.0
	16	60.5	86.3	38.9	72.0	69.0	64.0	61.0	55.0	49.0	42.0	41.0	39.0
	17	57.4	81.8	36.6	69.0	65.0	61.0	59.0	53.0	46.0	39.0	36.0	36.0
	18	54.0	76.3	36.6	65.0	63.0	59.0	57.0	50.0	44.0	36.0	36.0	36.0
	19	58.8	84.1	36.6	69.0	63.0	59.0	56.0	50.0	45.0	38.0	36.0	36.0
	20	52.1	75.9	36.6	63.0	61.0	58.0	55.0	45.0	41.0	36.0	36.0	36.0
	21	50.5	76.8	36.6	61.0	58.0	53.0	50.0	43.0	39.0	36.0	36.0	36.0
Night	22	48.0	70.0	36.6	60.0	58.0	53.0	48.0	42.0	39.0	36.0	36.0	36.0
	23	45.2	67.2	36.6	57.0	54.0	48.0	46.0	41.0	36.0	36.0	36.0	36.0

24-Hour Noise Level Measurement Summary

Project Name: Rancho Diamante

JN: 9792

Energy Average Leq

24-Hour

Location: L2 - Located north of the Project site on Stetson Avenue, west of the Hemet-Ryan Airport runway and east of existing residential homes.

Analyst: A. Wolfe

Day

Night

CNEL

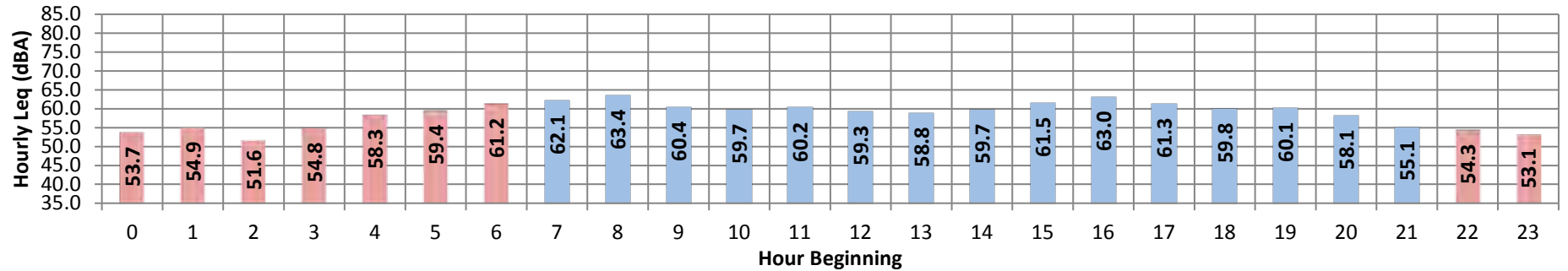
Date: 9/27/2017

60.6

56.8

64.3

Hourly Leq dBA Readings (unadjusted)



Time Period	Hour	Leq	Lmax	Lmin	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	55.1	76.7	34.9	69.0	66.0	58.0	54.0	45.0	41.0	37.0	36.0	35.0
	Max	63.4	89.6	41.8	74.0	72.0	69.0	67.0	59.0	49.0	44.0	44.0	42.0
Energy Average:		60.6	Average:		71.4	69.3	65.9	63.7	53.7	45.1	38.6	38.0	37.3
Night	Min	51.6	77.1	34.9	64.0	58.0	49.0	46.0	41.0	39.0	37.0	37.0	36.0
	Max	61.2	84.7	44.6	72.0	71.0	68.0	66.0	55.0	50.0	47.0	46.0	45.0
Energy Average:		56.8	Average:		67.9	63.9	57.0	53.4	45.1	42.1	39.7	39.6	38.9
Hourly Summary													
Night	0	53.7	79.2	34.9	66.0	60.0	54.0	52.0	42.0	39.0	37.0	37.0	36.0
	1	54.9	81.8	34.9	67.0	60.0	50.0	47.0	41.0	39.0	37.0	37.0	37.0
	2	51.6	77.9	37.8	64.0	58.0	49.0	46.0	41.0	39.0	37.0	37.0	37.0
	3	54.8	84.7	37.9	65.0	60.0	52.0	48.0	43.0	41.0	39.0	39.0	38.0
	4	58.3	84.0	40.7	71.0	69.0	63.0	58.0	49.0	46.0	42.0	42.0	41.0
	5	59.4	81.5	42.6	71.0	70.0	66.0	62.0	51.0	47.0	44.0	44.0	43.0
	6	61.2	81.0	44.6	72.0	71.0	68.0	66.0	55.0	50.0	47.0	46.0	45.0
Day	7	62.1	83.7	41.8	73.0	71.0	68.0	67.0	56.0	49.0	44.0	44.0	42.0
	8	63.4	89.6	37.8	72.0	70.0	67.0	65.0	54.0	45.0	38.0	37.0	37.0
	9	60.4	80.7	34.9	72.0	70.0	67.0	65.0	54.0	44.0	37.0	36.0	35.0
	10	59.7	81.6	37.1	71.0	69.0	66.0	64.0	55.0	47.0	39.0	37.0	37.0
	11	60.2	84.3	37.8	71.0	69.0	66.0	64.0	54.0	44.0	38.0	37.0	37.0
	12	59.3	81.3	37.8	71.0	68.0	66.0	64.0	53.0	43.0	37.0	37.0	37.0
	13	58.8	76.7	37.8	70.0	68.0	66.0	64.0	54.0	44.0	38.0	37.0	37.0
	14	59.7	81.2	37.8	71.0	69.0	66.0	64.0	54.0	43.0	37.0	37.0	37.0
	15	61.5	86.0	37.8	72.0	70.0	67.0	66.0	58.0	47.0	38.0	37.0	37.0
	16	63.0	87.8	37.9	74.0	72.0	69.0	67.0	59.0	49.0	40.0	39.0	38.0
	17	61.3	80.4	37.8	72.0	70.0	68.0	66.0	56.0	46.0	39.0	39.0	37.0
	18	59.8	80.1	37.9	71.0	69.0	66.0	64.0	54.0	46.0	39.0	39.0	37.0
	19	60.1	84.1	37.8	71.0	69.0	65.0	62.0	52.0	46.0	39.0	39.0	37.0
	20	58.1	80.5	37.4	71.0	69.0	64.0	60.0	48.0	42.0	37.0	37.0	37.0
	21	55.1	78.5	37.8	69.0	66.0	58.0	54.0	45.0	41.0	39.0	38.0	37.0
Night	22	54.3	77.1	34.9	68.0	65.0	58.0	53.0	42.0	39.0	37.0	37.0	36.0
	23	53.1	78.2	37.5	67.0	62.0	53.0	49.0	42.0	39.0	37.0	37.0	37.0

24-Hour Noise Level Measurement Summary

Project Name: Rancho Diamante

JN: 9792

Energy Average Leq

24-Hour

Location: L3 - Located east of the Project site across Warren Road adjacent to the existing 6-foot high barrier for residential homes.

Analyst: A. Wolfe

Day

Night

CNEL

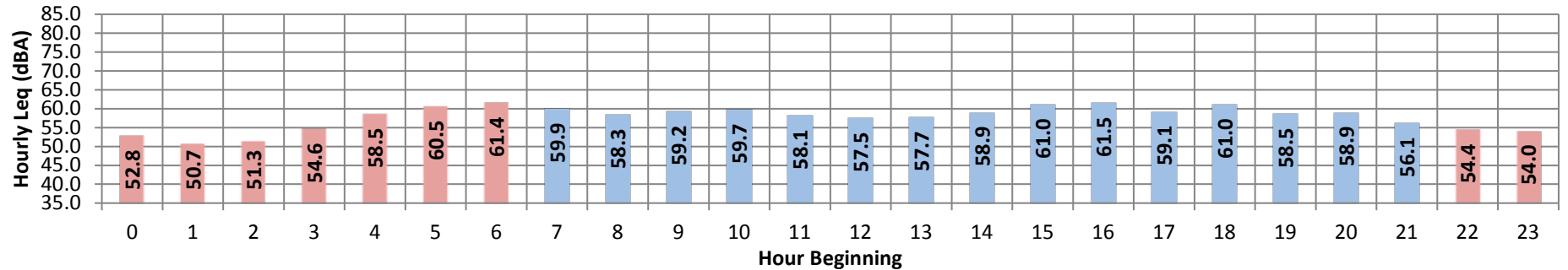
Date: 9/27/2017

59.3

57.0

64.1

Hourly Leq dBA Readings (unadjusted)



Time Period	Hour	Leq	Lmax	Lmin	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	56.1	73.7	37.7	66.0	63.0	61.0	60.0	56.0	50.0	41.0	39.0	37.0
	Max	61.5	89.1	45.2	70.0	68.0	65.0	64.0	61.0	58.0	51.0	49.0	47.0
Energy Average:		59.3	Average:		68.4	66.1	63.1	61.7	58.3	54.4	45.5	43.7	41.4
Night	Min	50.7	69.5	34.8	62.0	59.0	56.0	54.0	45.0	40.0	37.0	37.0	35.0
	Max	61.4	82.9	47.6	70.0	69.0	66.0	64.0	62.0	59.0	50.0	49.0	48.0
Energy Average:		57.0	Average:		65.4	63.4	60.9	59.2	53.1	47.2	41.1	40.4	39.4
Hourly Summary													
Night	0	52.8	70.0	34.8	64.0	62.0	60.0	58.0	47.0	40.0	37.0	37.0	35.0
	1	50.7	74.5	37.6	62.0	59.0	56.0	54.0	45.0	40.0	37.0	37.0	37.0
	2	51.3	71.8	37.4	63.0	61.0	58.0	55.0	45.0	40.0	37.0	37.0	37.0
	3	54.6	70.0	37.8	64.0	63.0	60.0	59.0	54.0	48.0	41.0	39.0	37.0
	4	58.5	78.5	41.8	68.0	66.0	63.0	62.0	58.0	52.0	44.0	43.0	42.0
	5	60.5	82.9	41.7	69.0	67.0	65.0	64.0	61.0	57.0	47.0	46.0	44.0
Day	6	61.4	75.7	47.6	70.0	69.0	66.0	64.0	62.0	59.0	50.0	49.0	48.0
	7	59.9	75.7	43.4	69.0	67.0	65.0	64.0	60.0	57.0	49.0	48.0	45.0
	8	58.3	76.1	39.2	67.0	66.0	63.0	62.0	58.0	54.0	45.0	42.0	40.0
	9	59.2	77.6	37.7	68.0	66.0	64.0	63.0	59.0	55.0	44.0	42.0	38.0
	10	59.7	77.4	37.7	70.0	68.0	65.0	63.0	59.0	55.0	44.0	41.0	38.0
	11	58.1	75.7	37.8	69.0	67.0	63.0	62.0	57.0	53.0	41.0	39.0	37.0
	12	57.5	78.6	37.8	68.0	66.0	62.0	60.0	56.0	51.0	41.0	39.0	38.0
	13	57.7	74.6	37.8	68.0	66.0	63.0	61.0	57.0	53.0	42.0	40.0	39.0
	14	58.9	83.9	39.3	68.0	65.0	62.0	60.0	57.0	54.0	44.0	42.0	40.0
	15	61.0	84.3	37.7	70.0	66.0	63.0	62.0	60.0	57.0	46.0	42.0	38.0
	16	61.5	89.1	43.7	69.0	66.0	64.0	63.0	61.0	58.0	50.0	49.0	45.0
	17	59.1	76.2	42.4	67.0	65.0	63.0	62.0	60.0	57.0	47.0	46.0	44.0
	18	61.0	86.5	44.7	70.0	68.0	64.0	63.0	60.0	57.0	51.0	49.0	47.0
	19	58.5	77.3	45.2	69.0	67.0	63.0	61.0	58.0	53.0	48.0	47.0	46.0
	20	58.9	84.9	44.5	68.0	65.0	62.0	60.0	57.0	52.0	47.0	46.0	45.0
	21	56.1	73.7	40.2	66.0	63.0	61.0	60.0	56.0	50.0	44.0	43.0	41.0
Night	22	54.4	69.5	37.8	65.0	62.0	60.0	59.0	54.0	46.0	40.0	39.0	38.0
	23	54.0	73.8	37.5	64.0	62.0	60.0	58.0	52.0	43.0	37.0	37.0	37.0

24-Hour Noise Level Measurement Summary

Project Name: Rancho Diamante

JN: 9792

Energy Average Leq

24-Hour

Location: L4 - Located east of the Project site across Warren Road, north of existing agricultural land uses.

Analyst: A. Wolfe

Day

Night

CNEL

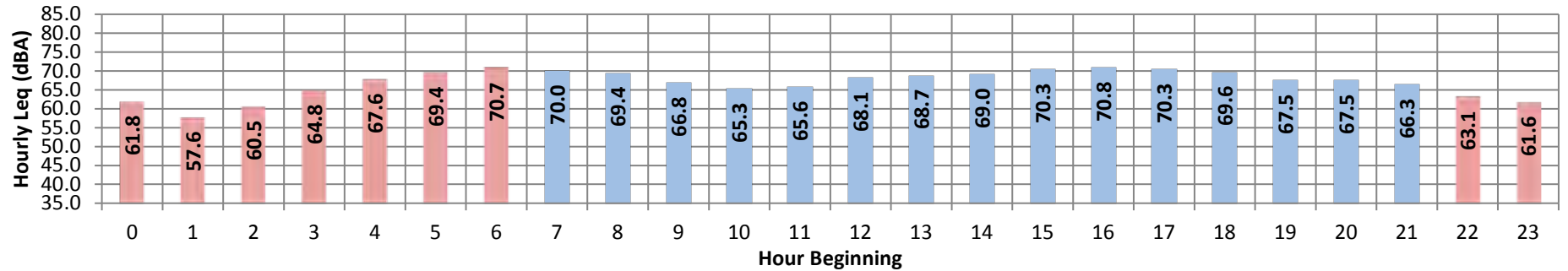
Date: 9/27/2017

68.7

66.0

73.2

Hourly Leq dBA Readings (unadjusted)



Time Period	Hour	Leq	Lmax	Lmin	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	65.3	82.5	36.2	76.0	74.0	70.0	68.0	63.0	53.0	44.0	42.0	39.0
	Max	70.8	93.3	46.5	79.0	77.0	75.0	74.0	72.0	69.0	55.0	52.0	49.0
Energy Average:		68.7	Average:		76.9	75.3	73.3	72.1	68.3	62.3	48.3	46.0	42.8
Night	Min	57.6	82.3	36.2	70.0	66.0	57.0	53.0	45.0	40.0	36.0	36.0	36.0
	Max	70.7	91.2	49.3	79.0	77.0	76.0	75.0	71.0	67.0	53.0	52.0	50.0
Energy Average:		66.0	Average:		74.9	73.1	69.7	67.3	57.2	50.1	42.9	42.1	40.9
Hourly Summary													
Night	0	61.8	82.3	36.2	74.0	72.0	69.0	66.0	51.0	42.0	39.0	39.0	36.0
	1	57.6	86.1	36.2	70.0	66.0	57.0	53.0	45.0	40.0	36.0	36.0	36.0
	2	60.5	83.8	36.2	73.0	71.0	66.0	62.0	48.0	43.0	38.0	36.0	36.0
	3	64.8	87.3	40.6	75.0	74.0	71.0	70.0	60.0	51.0	43.0	42.0	41.0
	4	67.6	91.2	42.5	77.0	76.0	73.0	72.0	66.0	56.0	46.0	45.0	43.0
	5	69.4	86.8	45.9	78.0	77.0	75.0	74.0	70.0	63.0	52.0	51.0	48.0
Day	6	70.7	87.0	49.3	79.0	77.0	76.0	75.0	71.0	67.0	53.0	52.0	50.0
	7	70.0	84.3	46.5	78.0	77.0	75.0	74.0	71.0	67.0	52.0	50.0	47.0
	8	69.4	91.1	39.1	79.0	76.0	74.0	73.0	70.0	64.0	47.0	44.0	41.0
	9	66.8	86.3	40.7	77.0	75.0	72.0	71.0	66.0	60.0	48.0	46.0	42.0
	10	65.3	87.9	41.6	76.0	74.0	70.0	68.0	63.0	59.0	49.0	47.0	44.0
	11	65.6	86.9	42.5	76.0	74.0	70.0	68.0	64.0	60.0	52.0	50.0	46.0
	12	68.1	88.5	36.2	78.0	75.0	73.0	72.0	68.0	61.0	45.0	42.0	39.0
	13	68.7	88.6	36.2	77.0	75.0	74.0	73.0	69.0	63.0	46.0	42.0	39.0
	14	69.0	88.0	39.2	76.0	75.0	74.0	73.0	70.0	65.0	47.0	44.0	41.0
	15	70.3	93.3	36.2	77.0	76.0	74.0	74.0	71.0	67.0	49.0	46.0	40.0
	16	70.8	84.6	46.5	77.0	76.0	75.0	74.0	72.0	69.0	55.0	52.0	49.0
	17	70.3	82.5	42.9	77.0	76.0	75.0	74.0	72.0	67.0	53.0	51.0	47.0
	18	69.6	93.3	40.4	77.0	76.0	74.0	73.0	70.0	64.0	49.0	46.0	43.0
	19	67.5	87.3	39.2	76.0	75.0	73.0	72.0	68.0	58.0	45.0	44.0	41.0
	20	67.5	86.5	39.2	77.0	75.0	73.0	72.0	67.0	57.0	44.0	43.0	41.0
	21	66.3	87.1	40.7	76.0	75.0	73.0	71.0	63.0	53.0	44.0	43.0	42.0
Night	22	63.1	84.0	38.9	74.0	73.0	71.0	68.0	54.0	46.0	40.0	39.0	39.0
	23	61.6	82.8	38.4	74.0	72.0	69.0	66.0	50.0	43.0	39.0	39.0	39.0

24-Hour Noise Level Measurement Summary

Project Name: Rancho Diamante

JN: 9792

Location: L5 - Located southwest of the Project site near existing residential homes on California Avenue.

Analyst: A. Wolfe

Date: 9/27/2017

Energy Average Leq

24-Hour

Day

Night

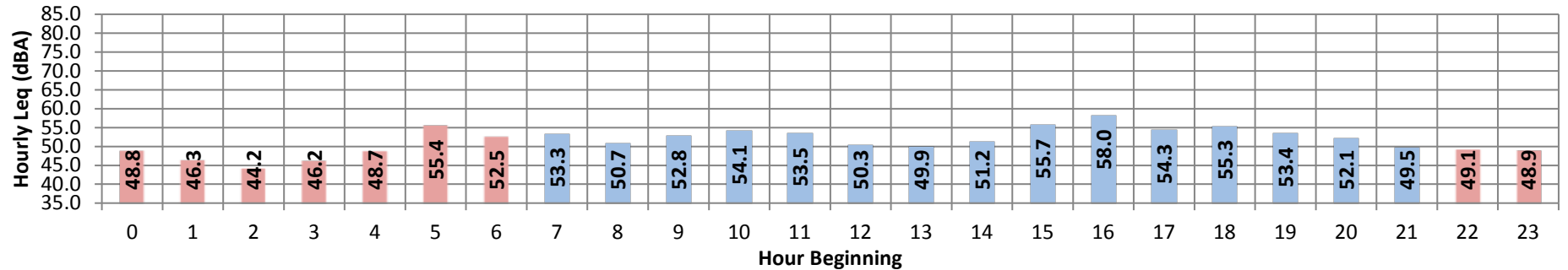
CNEL

53.6

50.2

57.6

Hourly Leq dBA Readings (unadjusted)



Time Period	Hour	Leq	Lmax	Lmin	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	49.5	69.9	35.3	58.0	52.0	48.0	46.0	41.0	38.0	35.0	35.0	35.0
	Max	58.0	82.0	43.1	69.0	66.0	61.0	56.0	52.0	50.0	47.0	45.0	44.0
Energy Average:		53.6	Average:		64.3	61.0	55.4	52.4	46.0	42.7	39.3	38.5	37.9
Night	Min	44.2	62.7	35.3	50.0	48.0	46.0	44.0	41.0	38.0	35.0	35.0	35.0
	Max	55.4	86.1	47.1	62.0	57.0	55.0	54.0	53.0	51.0	49.0	48.0	47.0
Energy Average:		50.2	Average:		57.2	53.8	50.2	48.4	45.2	43.0	40.7	40.1	39.3
Hourly Summary													
Night	0	48.8	69.4	35.3	60.0	56.0	53.0	49.0	42.0	40.0	38.0	38.0	37.0
	1	46.3	67.8	35.3	57.0	53.0	48.0	46.0	41.0	38.0	36.0	35.0	35.0
	2	44.2	71.6	35.3	50.0	48.0	46.0	44.0	41.0	38.0	35.0	35.0	35.0
	3	46.2	62.7	40.1	54.0	51.0	49.0	48.0	46.0	44.0	42.0	41.0	41.0
	4	48.7	67.9	41.3	56.0	54.0	52.0	51.0	48.0	46.0	43.0	43.0	42.0
	5	55.4	86.1	44.1	58.0	57.0	55.0	54.0	53.0	50.0	47.0	46.0	45.0
Day	6	52.5	69.3	47.1	59.0	57.0	55.0	54.0	52.0	51.0	49.0	48.0	47.0
	7	53.3	71.8	43.1	63.0	60.0	56.0	55.0	52.0	50.0	47.0	45.0	44.0
	8	50.7	70.1	38.3	63.0	60.0	55.0	52.0	45.0	43.0	40.0	38.0	38.0
	9	52.8	76.8	35.3	65.0	63.0	57.0	54.0	44.0	39.0	35.0	35.0	35.0
	10	54.1	81.5	35.3	66.0	63.0	59.0	55.0	46.0	41.0	37.0	35.0	35.0
	11	53.5	76.5	35.3	65.0	63.0	59.0	55.0	46.0	40.0	37.0	35.0	35.0
	12	50.3	76.3	35.3	62.0	59.0	54.0	51.0	43.0	39.0	35.0	35.0	35.0
	13	49.9	69.9	35.3	63.0	59.0	52.0	50.0	44.0	40.0	38.0	38.0	35.0
	14	51.2	76.2	35.3	63.0	58.0	50.0	46.0	41.0	38.0	35.0	35.0	35.0
	15	55.7	80.6	35.3	67.0	64.0	60.0	56.0	46.0	42.0	36.0	35.0	35.0
	16	58.0	81.9	43.0	69.0	66.0	61.0	56.0	49.0	47.0	45.0	45.0	44.0
	17	54.3	79.6	41.3	64.0	60.0	54.0	51.0	48.0	47.0	44.0	43.0	42.0
	18	55.3	82.0	40.4	68.0	64.0	58.0	55.0	49.0	46.0	43.0	42.0	41.0
	19	53.4	72.7	38.3	67.0	64.0	55.0	53.0	47.0	43.0	40.0	40.0	38.0
	20	52.1	75.4	35.3	62.0	60.0	53.0	50.0	46.0	43.0	40.0	39.0	38.0
	Night	21	49.5	78.5	37.7	58.0	52.0	48.0	47.0	44.0	42.0	38.0	38.0
22		49.1	71.9	35.3	62.0	57.0	47.0	45.0	43.0	41.0	38.0	38.0	37.0
23		48.9	72.7	35.3	59.0	51.0	47.0	45.0	41.0	39.0	38.0	37.0	35.0

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APPENDIX 6.1:

SITE PLAN

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LEGEND:

■ PHASE 1 (2024)

■ PHASE 2 (2026)

PROPOSED
COMMERCIAL
DEVELOPMENT
20.4 GROSS AC

STETSON AV.

ST. C

MUSTANG WY.

WARREN RD.

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APPENDIX 7.1:

OFF-SITE TRAFFIC NOISE CONTOURS

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Winchester Rd. Road Segment: s/o Florida Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 10,600 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,060 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					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%				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 43.704				
					Medium Trucks: 43.501				
					Heavy Trucks: 43.521				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	-2.57	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	82.40	-19.81	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	86.40	-23.76	0.80	-1.20	-5.46	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.8	66.9	65.1	59.1	67.7	68.3			
Medium Trucks:	62.2	60.7	54.3	52.8	61.2	61.5			
Heavy Trucks:	62.2	60.8	51.8	53.0	61.4	61.5			
Vehicle Noise:	70.4	68.6	65.6	60.8	69.3	69.8			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				42	91	197	424		
CNEL:				46	98	212	456		

Monday, January 25, 2016

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Existing Without Project Road Name: Winchester Rd. Road Segment: n/o 9th St.				Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 12,200 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,220 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data				Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				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: 0.000				
				Medium Trucks: 2.297				
				Heavy Trucks: 8.006 Grade Adjustment: 0.0				
				Lane Equivalent Distance (in feet)				
				Autos: 43.704				
				Medium Trucks: 43.501				
				Heavy Trucks: 43.521				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	68.46	-1.09	0.77	-1.20	-4.63	0.000	0.000	
Medium Trucks:	79.45	-18.33	0.80	-1.20	-4.87	0.000	0.000	
Heavy Trucks:	84.25	-22.28	0.80	-1.20	-5.46	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	66.9	65.0	63.3	57.2	65.8	66.5		
Medium Trucks:	60.7	59.2	52.9	51.3	59.8	60.0		
Heavy Trucks:	61.6	60.2	51.1	52.4	60.7	60.8		
Vehicle Noise:	68.8	67.0	63.9	59.2	67.8	68.2		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			33	72	155	333		
CNEL:			36	77	166	358		

Monday, January 25, 2016

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL														
Scenario: Existing Without Project Road Name: Patterson Av. Road Segment: s/o Grand Av.					Project Name: Rancho Diamante Job Number: 9792									
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS									
Highway Data					Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt):		100 vehicles			Autos:		15							
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15							
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15							
Vehicle Speed:		40 mph			Vehicle Mix									
Near/Far Lane Distance:		12 feet												
Site Data					VehicleType					Day	Evening	Night	Daily	
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%		9.6%		97.42%	
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%		10.3%		1.84%	
Centerline Dist. to Barrier:		22.0 feet			Heavy Trucks:		86.5%		2.7%		10.8%		0.74%	
Centerline Dist. to Observer:		22.0 feet			Noise Source Elevations (in feet)									
Barrier Distance to Observer:		0.0 feet												
Observer Height (Above Pad):		5.0 feet			Autos:		0.000							
Pad Elevation:		0.0 feet			Medium Trucks:		2.297							
Road Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment:		0.0			
Road Grade:		0.0%			Lane Equivalent Distance (in feet)									
Left View:		-90.0 degrees												
Right View:		90.0 degrees			Autos:		21.749							
					Medium Trucks:		21.338							
					Heavy Trucks:		21.378							
FHWA Noise Model Calculations														
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten							
Autos:	66.51	-21.44	5.32	-1.20	-4.34	0.000	0.000							
Medium Trucks:	77.72	-38.68	5.44	-1.20	-4.85	0.000	0.000							
Heavy Trucks:	82.99	-42.63	5.43	-1.20	-6.07	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:	49.2	47.3	45.5	39.5	48.1	48.7								
Medium Trucks:	43.3	41.8	35.4	33.9	42.3	42.6								
Heavy Trucks:	44.6	43.2	34.1	35.4	43.7	43.9								
Vehicle Noise:	51.2	49.5	46.2	41.7	50.2	50.7								
Centerline Distance to Noise Contour (in feet)														
				70 dBA	65 dBA	60 dBA	55 dBA							
Ldn:				1	2	5	11							
CNEL:				1	2	5	11							

Monday, January 25, 2016

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing Without Project Road Name: California Av. Road Segment: n/o Stowe Rd.				Project Name: Rancho Diamante Job Number: 9792						
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): 2,800 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 280 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 36 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15						
Site Data				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:	0.000			
						Medium Trucks:	2.297			
						Heavy Trucks:	8.006	Grade Adjustment: 0.0		
								Lane Equivalent Distance (in feet)		
		Autos:	43.704							
		Medium Trucks:	43.501							
		Heavy Trucks:	43.521							
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	-6.97	0.77	-1.20	-4.63	0.000	0.000			
Medium Trucks:	77.72	-24.21	0.80	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-28.16	0.80	-1.20	-5.46	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	59.1	57.2	55.5	49.4	58.0	58.6				
Medium Trucks:	53.1	51.6	45.2	43.7	52.2	52.4				
Heavy Trucks:	54.4	53.0	44.0	45.2	53.6	53.7				
Vehicle Noise:	61.1	59.4	56.1	51.6	60.1	60.6				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				10	22	48	103			
CNEL:				11	24	51	110			

Monday, January 25, 2016

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: California Av. Road Segment: s/o Stowe Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		400 vehicles			Autos: 15				
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15				
Peak Hour Volume:		40 vehicles			Heavy Trucks (3+ Axles): 15				
Vehicle Speed:		40 mph							
Near/Far Lane Distance:		36 feet							
Site Data					Vehicle Mix				
Barrier Height:		0.0 feet			Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Centerline Dist. to Barrier:		47.0 feet			Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Observer:		47.0 feet							
Barrier Distance to Observer:		0.0 feet							
Observer Height (Above Pad):		5.0 feet							
Pad Elevation:		0.0 feet							
Road Elevation:		0.0 feet							
Road Grade:		0.0%							
Left View:		-90.0 degrees							
Right View:		90.0 degrees							
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 43.704				
					Medium Trucks: 43.501				
					Heavy Trucks: 43.521				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-15.42	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	77.72	-32.66	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-36.61	0.80	-1.20	-5.46	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	47.0	40.9	49.6	50.2			
Medium Trucks:	44.7	43.2	36.8	35.2	43.7	43.9			
Heavy Trucks:	46.0	44.6	35.5	36.8	45.1	45.3			
Vehicle Noise:	52.7	51.0	47.7	43.1	51.7	52.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			3	6	13	28			
CNEL:			3	6	14	30			

Monday, January 25, 2016

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: California Av. Road Segment: s/o Stetson Av. (S.)					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 100 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 10 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 43.704 Medium Trucks: 43.501 Heavy Trucks: 43.521				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-21.44	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	77.72	-38.68	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-42.63	0.80	-1.20	-5.46	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:	44.6	42.7	41.0	34.9	43.5	44.2			
Medium Trucks:	38.6	37.1	30.8	29.2	37.7	37.9			
Heavy Trucks:	40.0	38.5	29.5	30.8	39.1	39.2			
Vehicle Noise:	46.7	44.9	41.6	37.1	45.6	46.1			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				1	2	5	11		
CNEL:				1	3	6	12		

Monday, January 25, 2016

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing Without Project Road Name: California Av. Road Segment: n/o Simpson Rd.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		25 mph								
Near/Far Lane Distance:		36 feet								
Site Data					Vehicle Mix					
Barrier Height:		0.0 feet			Autos:		77.5%	12.9%	9.6%	97.42%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Barrier:		47.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Observer:		47.0 feet								
Barrier Distance to Observer:		0.0 feet								
Observer Height (Above Pad):		5.0 feet								
Pad Elevation:		0.0 feet								
Road Elevation:		0.0 feet								
Road Grade:		0.0%								
Left View:		-90.0 degrees								
Right View:		90.0 degrees								
					Noise Source Elevations (in feet)					
					Autos:		0.000			
					Medium Trucks:		2.297			
					Heavy Trucks:		8.006	Grade Adjustment: 0.0		
					Lane Equivalent Distance (in feet)					
					Autos:		43.704			
					Medium Trucks:		43.501			
					Heavy Trucks:		43.521			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	58.73	-19.40	0.77	-1.20	-4.63	0.000	0.000			
Medium Trucks:	70.80	-36.64	0.80	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	77.97	-40.59	0.80	-1.20	-5.46	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:	38.9	37.0	35.2	29.2	37.8	38.4				
Medium Trucks:	33.8	32.3	25.9	24.3	32.8	33.0				
Heavy Trucks:	37.0	35.6	26.5	27.8	36.1	36.3				
Vehicle Noise:	41.8	40.1	36.2	32.3	40.8	41.2				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				1	1	2	5			
CNEL:				1	1	3	6			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: California Av. Road Segment: s/o Simpson Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 100 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 10 vehicles Vehicle Speed: 25 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 43.704 Medium Trucks: 43.501 Heavy Trucks: 43.521				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	58.73	-19.40	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	70.80	-36.64	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	77.97	-40.59	0.80	-1.20	-5.46	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:	38.9	37.0	35.2	29.2	37.8	38.4			
Medium Trucks:	33.8	32.3	25.9	24.3	32.8	33.0			
Heavy Trucks:	37.0	35.6	26.5	27.8	36.1	36.3			
Vehicle Noise:	41.8	40.1	36.2	32.3	40.8	41.2			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				1	1	2	5		
CNEL:				1	1	3	6		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Existing Without Project Road Name: Warren Rd. Road Segment: s/o Esplanade Av.				Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 13,400 vehicles				Autos: 15				
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,340 vehicles				Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 55 mph								
Near/Far Lane Distance: 84 feet				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%				
Site Data								
Barrier Height: 0.0 feet								
Barrier Type (0-Wall, 1-Berm): 0.0								
Centerline Dist. to Barrier: 70.0 feet								
Centerline Dist. to Observer: 70.0 feet								
Barrier Distance to Observer: 0.0 feet								
Observer Height (Above Pad): 5.0 feet								
Pad Elevation: 0.0 feet								
Road Elevation: 0.0 feet								
Road Grade: 0.0%								
Left View: -90.0 degrees								
Right View: 90.0 degrees								
				Noise Source Elevations (in feet)				
				Autos: 0.000				
				Medium Trucks: 2.297				
				Heavy Trucks: 8.006				
				Grade Adjustment: 0.0				
				Lane Equivalent Distance (in feet)				
				Autos: 56.223				
				Medium Trucks: 56.065				
				Heavy Trucks: 56.081				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	71.78	-1.55	-0.87	-1.20	-4.72	0.000	0.000	
Medium Trucks:	82.40	-18.79	-0.85	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	86.40	-22.75	-0.85	-1.20	-5.28	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	68.2	66.3	64.5	58.4	67.1	67.7		
Medium Trucks:	61.6	60.1	53.7	52.2	60.6	60.8		
Heavy Trucks:	61.6	60.2	51.1	52.4	60.7	60.9		
Vehicle Noise:	69.7	68.0	65.0	60.2	68.7	69.2		
Centerline Distance to Noise Contour (in feet)								
				70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:				57	124	266	574	
CNEL:				62	133	287	617	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Existing Without Project Road Name: Warren Rd. Road Segment: n/o Tres Cerritos Av.				Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 13,400 vehicles				Autos: 15				
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,340 vehicles				Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 55 mph								
Near/Far Lane Distance: 84 feet				Vehicle Mix				
				VehicleType	Day	Evening	Night	Daily
Site Data				Autos: 77.5% 12.9% 9.6% 97.42%				
				Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
				Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
				Noise Source Elevations (in feet)				
				Autos: 0.000				
Barrier Height: 0.0 feet				Medium Trucks: 2.297				
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 8.006				
Centerline Dist. to Barrier: 70.0 feet				Grade Adjustment: 0.0				
Centerline Dist. to Observer: 70.0 feet								
Barrier Distance to Observer: 0.0 feet								
Observer Height (Above Pad): 5.0 feet								
Pad Elevation: 0.0 feet								
Road Elevation: 0.0 feet								
Road Grade: 0.0%								
Left View: -90.0 degrees								
Right View: 90.0 degrees								

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Warren Rd. Road Segment: n/o Devonshire Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 13,400 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,340 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 55 mph									
Near/Far Lane Distance: 84 feet					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%				
					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
Barrier Height: 0.0 feet					Medium Trucks: 2.297				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Centerline Dist. to Barrier: 70.0 feet									
Centerline Dist. to Observer: 70.0 feet									
Barrier Distance to Observer: 0.0 feet									
Observer Height (Above Pad): 5.0 feet									
Pad Elevation: 0.0 feet									
Road Elevation: 0.0 feet									
Road Grade: 0.0%									
Left View: -90.0 degrees									
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	-1.55	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	82.40	-18.79	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	86.40	-22.75	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.2	66.3	64.5	58.4	67.1	67.7			
Medium Trucks:	61.6	60.1	53.7	52.2	60.6	60.8			
Heavy Trucks:	61.6	60.2	51.1	52.4	60.7	60.9			
Vehicle Noise:	69.7	68.0	65.0	60.2	68.7	69.2			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				57	124	266	574		
CNEL:				62	133	287	617		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Warren Rd. Road Segment: n/o Florida Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 10,200 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,020 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 55 mph									
Near/Far Lane Distance: 84 feet					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height: 0.0 feet					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Barrier: 70.0 feet									
Centerline Dist. to Observer: 70.0 feet					Noise Source Elevations (in feet)				
Barrier Distance to Observer: 0.0 feet					Autos: 0.000				
Observer Height (Above Pad): 5.0 feet					Medium Trucks: 2.297				
Pad Elevation: 0.0 feet					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Road Elevation: 0.0 feet									
Road Grade: 0.0%					Lane Equivalent Distance (in feet)				
Left View: -90.0 degrees					Autos: 56.223				
Right View: 90.0 degrees					Medium Trucks: 56.065				
					Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	-2.74	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	82.40	-19.97	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	86.40	-23.93	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.0	65.1	63.3	57.3	65.9	66.5			
Medium Trucks:	60.4	58.9	52.5	51.0	59.4	59.7			
Heavy Trucks:	60.4	59.0	50.0	51.2	59.6	59.7			
Vehicle Noise:	68.6	66.8	63.8	59.0	67.5	68.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			48	103	222	479			
CNEL:			51	111	239	515			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Warren Rd. Road Segment: s/o Stetson Av. (S.)					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 9,700 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 970 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph									
Near/Far Lane Distance: 84 feet					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%				
Site Data					Noise Source Elevations (in feet)				
Barrier Height: 0.0 feet					Autos: 0.000				
Barrier Type (0-Wall, 1-Berm): 0.0					Medium Trucks: 2.297				
Centerline Dist. to Barrier: 70.0 feet					Heavy Trucks: 8.006				
Centerline Dist. to Observer: 70.0 feet					Grade Adjustment: 0.0				
Barrier Distance to Observer: 0.0 feet									
Observer Height (Above Pad): 5.0 feet									
Pad Elevation: 0.0 feet									
Road Elevation: 0.0 feet									
Road Grade: 0.0%									
Left View: -90.0 degrees									
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-2.08	-0.87	-1.20	-4.72	0.000		0.000	
Medium Trucks:	79.45	-19.32	-0.85	-1.20	-4.88	0.000		0.000	
Heavy Trucks:	84.25	-23.28	-0.85	-1.20	-5.28	0.000		0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	64.3	62.4	60.6	54.6	63.2	63.8			
Medium Trucks:	58.1	56.6	50.2	48.7	57.1	57.4			
Heavy Trucks:	58.9	57.5	48.5	49.7	58.1	58.2			
Vehicle Noise:	66.1	64.4	61.3	56.6	65.1	65.6			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			33	71	154	331			
CNEL:			36	77	165	355			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Warren Rd. Road Segment: s/o Mustang Wy.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 12,300 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,230 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-0.54	-0.87	-1.20	-4.72	0.000		0.000	
Medium Trucks:	77.72	-17.78	-0.85	-1.20	-4.88	0.000		0.000	
Heavy Trucks:	82.99	-21.73	-0.85	-1.20	-5.28	0.000		0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	63.9	62.0	60.2	54.2	62.8	63.4			
Medium Trucks:	57.9	56.4	50.0	48.5	56.9	57.2			
Heavy Trucks:	59.2	57.8	48.8	50.0	58.4	58.5			
Vehicle Noise:	65.9	64.2	60.9	56.4	64.9	65.3			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			32	69	148	320			
CNEL:			34	74	159	342			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Warren Rd. Road Segment: s/o Simpson Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 8,500 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 850 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph									
Near/Far Lane Distance: 84 feet									
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet					VehicleType				
Barrier Type (0-Wall, 1-Berm): 0.0					Day				
Centerline Dist. to Barrier: 70.0 feet					Evening				
Centerline Dist. to Observer: 70.0 feet					Night				
Barrier Distance to Observer: 0.0 feet					Daily				
Observer Height (Above Pad): 5.0 feet					Autos: 77.5% 12.9% 9.6% 97.42%				
Pad Elevation: 0.0 feet					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Road Elevation: 0.0 feet					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Road Grade: 0.0%									
Left View: -90.0 degrees					Noise Source Elevations (in feet)				
Right View: 90.0 degrees					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223				
					Medium Trucks: 56.065				
					Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-2.15	-0.87	-1.20	-4.72	0.000		0.000	
Medium Trucks:	77.72	-19.38	-0.85	-1.20	-4.88	0.000		0.000	
Heavy Trucks:	82.99	-23.34	-0.85	-1.20	-5.28	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:	62.3	60.4	58.6	52.6	61.2	61.8			
Medium Trucks:	56.3	54.8	48.4	46.9	55.3	55.6			
Heavy Trucks:	57.6	56.2	47.1	48.4	56.8	56.9			
Vehicle Noise:	64.3	62.6	59.3	54.8	63.3	63.7			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				25	54	116	250		
CNEL:				27	58	124	268		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Sanderson Av. Road Segment: s/o Florida Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 23,600 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,360 vehicles Vehicle Speed: 30 mph Near/Far Lane Distance: 50 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 54.0 feet Centerline Dist. to Observer: 54.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 48.125 Medium Trucks: 47.941 Heavy Trucks: 47.959				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	61.75	3.54	0.15	-1.20	-4.67	0.000		0.000	
Medium Trucks:	73.48	-13.70	0.17	-1.20	-4.87	0.000		0.000	
Heavy Trucks:	79.92	-17.66	0.17	-1.20	-5.39	0.000		0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	64.2	62.3	60.6	54.5	63.1	63.7			
Medium Trucks:	58.8	57.2	50.9	49.3	57.8	58.0			
Heavy Trucks:	61.2	59.8	50.8	52.0	60.4	60.5			
Vehicle Noise:	66.7	65.1	61.4	57.2	65.7	66.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			28	61	130	281			
CNEL:			30	64	139	299			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Sanderson Av. Road Segment: n/o Stetson Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 26,500 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,650 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph									
Near/Far Lane Distance: 50 feet					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%				
Site Data									
Barrier Height: 0.0 feet									
Barrier Type (0-Wall, 1-Berm): 0.0									
Centerline Dist. to Barrier: 54.0 feet									
Centerline Dist. to Observer: 54.0 feet									
Barrier Distance to Observer: 0.0 feet									
Observer Height (Above Pad): 5.0 feet									
Pad Elevation: 0.0 feet									
Road Elevation: 0.0 feet									
Road Grade: 0.0%									
Left View: -90.0 degrees									
Right View: 90.0 degrees									
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 48.125				
					Medium Trucks: 47.941				
					Heavy Trucks: 47.959				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	2.28	0.15	-1.20	-4.67	0.000	0.000		
Medium Trucks:	79.45	-14.96	0.17	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-18.91	0.17	-1.20	-5.39	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	69.7	67.8	66.0	60.0	68.6	69.2			
Medium Trucks:	63.5	62.0	55.6	54.0	62.5	62.7			
Heavy Trucks:	64.3	62.9	53.9	55.1	63.5	63.6			
Vehicle Noise:	71.5	69.8	66.6	62.0	70.5	71.0			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				58	126	271	583		
CNEL:				63	135	290	626		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Existing Without Project Road Name: Florida Av. Road Segment: w/o Winchester Rd.				Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 23,300 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,330 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 78 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data				Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 76.0 feet Centerline Dist. to Observer: 76.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
				Lane Equivalent Distance (in feet)				
				Autos: 65.422 Medium Trucks: 65.286 Heavy Trucks: 65.300				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	70.20	1.26	-1.85	-1.20	-4.73	0.000	0.000	
Medium Trucks:	81.00	-15.97	-1.84	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	85.38	-19.93	-1.84	-1.20	-5.25	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	68.4	66.5	64.7	58.7	67.3	67.9		
Medium Trucks:	62.0	60.5	54.1	52.6	61.0	61.3		
Heavy Trucks:	62.4	61.0	51.9	53.2	61.6	61.7		
Vehicle Noise:	70.1	68.4	65.3	60.5	69.1	69.5		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			66	142	306	660		
CNEL:			71	153	329	709		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing Without Project Road Name: Florida Av. Road Segment: e/o Warren Rd.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 23,500 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,350 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0					
					Lane Equivalent Distance (in feet)					
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081					
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	1.30	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-15.94	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-19.89	-0.85	-1.20	-5.28	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	69.4	67.5	65.8	59.7	68.3	68.9				
Medium Trucks:	63.0	61.5	55.1	53.6	62.1	62.3				
Heavy Trucks:	63.4	62.0	53.0	54.2	62.6	62.7				
Vehicle Noise:	71.1	69.4	66.3	61.6	70.1	70.6				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				71	153	330	711			
CNEL:				76	165	355	764			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Existing Without Project Road Name: Florida Av. Road Segment: e/o Myers St.				Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 21,100 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,110 vehicles Vehicle Speed: 35 mph Near/Far Lane Distance: 84 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data				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)				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
				Lane Equivalent Distance (in feet)				
				Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	64.30	2.38	-0.87	-1.20	-4.72	0.000	0.000	
Medium Trucks:	75.75	-14.86	-0.85	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	81.57	-18.81	-0.85	-1.20	-5.28	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	64.6	62.7	61.0	54.9	63.5	64.1		
Medium Trucks:	58.8	57.3	51.0	49.4	57.9	58.1		
Heavy Trucks:	60.7	59.3	50.2	51.5	59.9	60.0		
Vehicle Noise:	66.8	65.1	61.7	57.3	65.8	66.3		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			37	80	171	369		
CNEL:			39	85	183	394		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Stowe Rd. Road Segment: w/o California Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 2,700 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 270 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph									
Near/Far Lane Distance: 36 feet					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%				
Site Data					Noise Source Elevations (in feet)				
Barrier Height: 0.0 feet					Autos: 0.000				
Barrier Type (0-Wall, 1-Berm): 0.0					Medium Trucks: 2.297				
Centerline Dist. to Barrier: 47.0 feet					Heavy Trucks: 8.006				
Centerline Dist. to Observer: 47.0 feet					Grade Adjustment: 0.0				
Barrier Distance to Observer: 0.0 feet									
Observer Height (Above Pad): 5.0 feet									
Pad Elevation: 0.0 feet									
Road Elevation: 0.0 feet									
Road Grade: 0.0%									
Left View: -90.0 degrees									
Right View: 90.0 degrees									
					Lane Equivalent Distance (in feet)				
					Autos: 43.704				
					Medium Trucks: 43.501				
					Heavy Trucks: 43.521				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-7.13	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	77.72	-24.36	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-28.32	0.80	-1.20	-5.46	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	59.0	57.1	55.3	49.2	57.9	58.5			
Medium Trucks:	53.0	51.4	45.1	43.5	52.0	52.2			
Heavy Trucks:	54.3	52.9	43.8	45.1	53.4	53.5			
Vehicle Noise:	61.0	59.2	56.0	51.4	60.0	60.4			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				10	22	47	101		
CNEL:				11	23	50	108		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Grand Av. Road Segment: e/o Patterson Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 100 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 10 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-21.44	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	77.72	-38.68	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	82.99	-42.63	-0.85	-1.20	-5.28	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:	43.0	41.1	39.3	33.3	41.9	42.5			
Medium Trucks:	37.0	35.5	29.1	27.6	36.0	36.3			
Heavy Trucks:	38.3	36.9	27.9	29.1	37.5	37.6			
Vehicle Noise:	45.0	43.3	40.0	35.5	44.0	44.4			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				1	3	6	13		
CNEL:				1	3	6	14		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL														
Scenario: Existing Without Project Road Name: Grand Av. Road Segment: w/o Calvert Av.					Project Name: Rancho Diamante Job Number: 9792									
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS									
Highway Data					Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt):		100 vehicles			Autos:		15							
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15							
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15							
Vehicle Speed:		40 mph			Vehicle Mix									
Near/Far Lane Distance:		84 feet												
Site Data					VehicleType					Day	Evening	Night	Daily	
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%		9.6%		97.42%	
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%		10.3%		1.84%	
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%		2.7%		10.8%		0.74%	
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)									
Barrier Distance to Observer:		0.0 feet												
Observer Height (Above Pad):		5.0 feet			Autos:		0.000							
Pad Elevation:		0.0 feet			Medium Trucks:		2.297							
Road Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment:		0.0			
Road Grade:		0.0%			Lane Equivalent Distance (in feet)									
Left View:		-90.0 degrees												
Right View:		90.0 degrees			Autos:		56.223							
					Medium Trucks:		56.065							
					Heavy Trucks:		56.081							
FHWA Noise Model Calculations														
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten							
Autos:	66.51	-21.44	-0.87	-1.20	-4.72	0.000	0.000							
Medium Trucks:	77.72	-38.68	-0.85	-1.20	-4.88	0.000	0.000							
Heavy Trucks:	82.99	-42.63	-0.85	-1.20	-5.28	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:	43.0	41.1	39.3	33.3	41.9	42.5								
Medium Trucks:	37.0	35.5	29.1	27.6	36.0	36.3								
Heavy Trucks:	38.3	36.9	27.9	29.1	37.5	37.6								
Vehicle Noise:	45.0	43.3	40.0	35.5	44.0	44.4								
Centerline Distance to Noise Contour (in feet)														
					70 dBA	65 dBA	60 dBA	55 dBA						
Ldn:					1	3	6	13						
CNEL:					1	3	6	14						

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing Without Project Road Name: Grand Av. Road Segment: e/o Calvert Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		40 mph								
Near/Far Lane Distance:		84 feet								
Site Data					Vehicle Mix					
Barrier Height:		0.0 feet			Autos:		77.5%	12.9%	9.6%	97.42%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet			Autos:		0.000			
Observer Height (Above Pad):		5.0 feet			Medium Trucks:		2.297			
Pad Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment: 0.0	
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Grade:		0.0%			Autos:		56.223			
Left View:		-90.0 degrees			Medium Trucks:		56.065			
Right View:		90.0 degrees			Heavy Trucks:		56.081			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	-21.44	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	77.72	-38.68	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	82.99	-42.63	-0.85	-1.20	-5.28	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:	43.0	41.1	39.3	33.3	41.9	42.5				
Medium Trucks:	37.0	35.5	29.1	27.6	36.0	36.3				
Heavy Trucks:	38.3	36.9	27.9	29.1	37.5	37.6				
Vehicle Noise:	45.0	43.3	40.0	35.5	44.0	44.4				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			1	3	6	13				
CNEL:			1	3	6	14				

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL														
Scenario: Existing Without Project Road Name: Stetson Av. (S.) Road Segment: e/o SR-79 SB Ramps					Project Name: Rancho Diamante Job Number: 9792									
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS									
Highway Data					Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt):		100 vehicles			Autos:		15							
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15							
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15							
Vehicle Speed:		50 mph			Vehicle Mix									
Near/Far Lane Distance:		84 feet												
Site Data					VehicleType					Day	Evening	Night	Daily	
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%		9.6%		97.42%	
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%		10.3%		1.84%	
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%		2.7%		10.8%		0.74%	
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)									
Barrier Distance to Observer:		0.0 feet												
Observer Height (Above Pad):		5.0 feet			Autos:		0.000							
Pad Elevation:		0.0 feet			Medium Trucks:		2.297							
Road Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment:		0.0			
Road Grade:		0.0%			Lane Equivalent Distance (in feet)									
Left View:		-90.0 degrees												
Right View:		90.0 degrees			Autos:		56.223							
					Medium Trucks:		56.065							
					Heavy Trucks:		56.081							
FHWA Noise Model Calculations														
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten							
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000							
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000							
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2								
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6								
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0								
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9								
Centerline Distance to Noise Contour (in feet)														
				70 dBA	65 dBA	60 dBA	55 dBA							
Ldn:				2	4	9	19							
CNEL:				2	4	9	20							

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Stetson Av. (S.) Road Segment: e/o SR-79 NB Ramps					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		100 vehicles			Autos: 15				
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15				
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles): 15				
Vehicle Speed:		50 mph							
Near/Far Lane Distance:		84 feet							
Site Data					Vehicle Mix				
Barrier Height:		0.0 feet			VehicleType	Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm):		0.0			Autos: 77.5% 12.9% 9.6% 97.42%				
Centerline Dist. to Barrier:		70.0 feet			Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Centerline Dist. to Observer:		70.0 feet			Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Barrier Distance to Observer:		0.0 feet			Noise Source Elevations (in feet)				
Observer Height (Above Pad):		5.0 feet			Autos: 0.000				
Pad Elevation:		0.0 feet			Medium Trucks: 2.297				
Road Elevation:		0.0 feet			Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Road Grade:		0.0%			Lane Equivalent Distance (in feet)				
Left View:		-90.0 degrees			Autos: 56.223				
Right View:		90.0 degrees			Medium Trucks: 56.065				
					Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2			
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6			
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0			
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			2	4	9	19			
CNEL:			2	4	9	20			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL														
Scenario: Existing Without Project Road Name: Stetson Av. (S.) Road Segment: w/o California Av.					Project Name: Rancho Diamante Job Number: 9792									
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS									
Highway Data					Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt):		100 vehicles			Autos:		15							
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15							
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15							
Vehicle Speed:		50 mph			Vehicle Mix									
Near/Far Lane Distance:		84 feet												
Site Data					VehicleType					Day	Evening	Night	Daily	
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%		9.6%		97.42%	
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%		10.3%		1.84%	
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%		2.7%		10.8%		0.74%	
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)									
Barrier Distance to Observer:		0.0 feet												
Observer Height (Above Pad):		5.0 feet			Autos:		0.000							
Pad Elevation:		0.0 feet			Medium Trucks:		2.297							
Road Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment:		0.0			
Road Grade:		0.0%			Lane Equivalent Distance (in feet)									
Left View:		-90.0 degrees												
Right View:		90.0 degrees			Autos:		56.223							
					Medium Trucks:		56.065							
					Heavy Trucks:		56.081							
FHWA Noise Model Calculations														
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten							
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000							
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000							
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6					45.2				
Medium Trucks:	39.3	37.8	31.4	29.9	38.4					38.6				
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9					39.0				
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4					46.9				
Centerline Distance to Noise Contour (in feet)														
				70 dBA	65 dBA	60 dBA	55 dBA							
Ldn:				2	4	9	19							
CNEL:				2	4	9	20							

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Stetson Av. (S.) Road Segment: e/o California Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		100 vehicles			Autos: 15				
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15				
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles): 15				
Vehicle Speed:		50 mph							
Near/Far Lane Distance:		84 feet							
Site Data					Vehicle Mix				
Barrier Height:		0.0 feet			VehicleType	Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm):		0.0			Autos: 77.5% 12.9% 9.6% 97.42%				
Centerline Dist. to Barrier:		70.0 feet			Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Centerline Dist. to Observer:		70.0 feet			Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Barrier Distance to Observer:		0.0 feet			Noise Source Elevations (in feet)				
Observer Height (Above Pad):		5.0 feet			Autos: 0.000				
Pad Elevation:		0.0 feet			Medium Trucks: 2.297				
Road Elevation:		0.0 feet			Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Road Grade:		0.0%			Lane Equivalent Distance (in feet)				
Left View:		-90.0 degrees			Autos: 56.223				
Right View:		90.0 degrees			Medium Trucks: 56.065				
					Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2			
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6			
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0			
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			2	4	9	19			
CNEL:			2	4	9	20			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL														
Scenario: Existing Without Project Road Name: Stetson Av. (S.) Road Segment: e/o Street "C"					Project Name: Rancho Diamante Job Number: 9792									
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS									
Highway Data					Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt):		100 vehicles			Autos:		15							
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15							
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15							
Vehicle Speed:		50 mph			Vehicle Mix									
Near/Far Lane Distance:		84 feet												
Site Data					VehicleType					Day	Evening	Night	Daily	
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%		9.6%		97.42%	
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%		10.3%		1.84%	
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%		2.7%		10.8%		0.74%	
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)									
Barrier Distance to Observer:		0.0 feet												
Observer Height (Above Pad):		5.0 feet			Autos:		0.000							
Pad Elevation:		0.0 feet			Medium Trucks:		2.297							
Road Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment:		0.0			
Road Grade:		0.0%			Lane Equivalent Distance (in feet)									
Left View:		-90.0 degrees												
Right View:		90.0 degrees			Autos:		56.223							
FHWA Noise Model Calculations					Medium Trucks:		56.065							
					Heavy Trucks:		56.081							
Unmitigated Noise Levels (without Topo and barrier attenuation)														
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten							
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000							
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000							
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2								
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6								
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0								
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9								
Centerline Distance to Noise Contour (in feet)														
				70 dBA	65 dBA	60 dBA	55 dBA							
Ldn:				2	4	9	19							
CNEL:				2	4	9	20							

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing Without Project Road Name: Stetson Av. (S.) Road Segment: e/o Mustang Wy.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		50 mph								
Near/Far Lane Distance:		84 feet								
Site Data					Vehicle Mix					
Barrier Height:		0.0 feet			VehicleType		Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm):		0.0			Autos:		77.5%	12.9%	9.6%	97.42%
Centerline Dist. to Barrier:		70.0 feet			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Observer:		70.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Barrier Distance to Observer:		0.0 feet								
Observer Height (Above Pad):		5.0 feet								
Pad Elevation:		0.0 feet								
Road Elevation:		0.0 feet								
Road Grade:		0.0%								
Left View:		-90.0 degrees								
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2				
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6				
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0				
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			2	4	9	19				
CNEL:			2	4	9	20				

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL														
Scenario: Existing Without Project Road Name: Stetson Av. (S.) Road Segment: w/o Warren Rd.					Project Name: Rancho Diamante Job Number: 9792									
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS									
Highway Data					Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt):		100 vehicles			Autos:		15							
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15							
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15							
Vehicle Speed:		50 mph			Vehicle Mix									
Near/Far Lane Distance:		84 feet												
Site Data					VehicleType					Day	Evening	Night	Daily	
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%		9.6%		97.42%	
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%		10.3%		1.84%	
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%		2.7%		10.8%		0.74%	
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)									
Barrier Distance to Observer:		0.0 feet												
Observer Height (Above Pad):		5.0 feet			Autos:		0.000							
Pad Elevation:		0.0 feet			Medium Trucks:		2.297							
Road Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment:		0.0			
Road Grade:		0.0%			Lane Equivalent Distance (in feet)									
Left View:		-90.0 degrees												
Right View:		90.0 degrees			Autos:		56.223							
					Medium Trucks:		56.065							
					Heavy Trucks:		56.081							
FHWA Noise Model Calculations														
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten							
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000							
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000							
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6			45.2						
Medium Trucks:	39.3	37.8	31.4	29.9	38.4			38.6						
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9			39.0						
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4			46.9						
Centerline Distance to Noise Contour (in feet)														
				70 dBA	65 dBA	60 dBA	55 dBA							
Ldn:				2	4	9	19							
CNEL:				2	4	9	20							

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing Without Project Road Name: Stetson Av. (S.) Road Segment: e/o Warren Rd.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		50 mph								
Near/Far Lane Distance:		84 feet								
Site Data					Vehicle Mix					
Barrier Height:		0.0 feet			VehicleType		Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm):		0.0			Autos:		77.5%	12.9%	9.6%	97.42%
Centerline Dist. to Barrier:		70.0 feet			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Observer:		70.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Barrier Distance to Observer:		0.0 feet								
Observer Height (Above Pad):		5.0 feet								
Pad Elevation:		0.0 feet								
Road Elevation:		0.0 feet								
Road Grade:		0.0%								
Left View:		-90.0 degrees								
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2				
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6				
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0				
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			2	4	9	19				
CNEL:			2	4	9	20				

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing Without Project Road Name: Stetson Av. (S.) Road Segment: e/o Fisher St.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		50 mph			Vehicle Mix					
Near/Far Lane Distance:		84 feet								
Site Data					VehicleType					
Barrier Height:		0.0 feet			Autos:		77.5%	12.9%	9.6%	97.42%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet			Autos:		0.000			
Observer Height (Above Pad):		5.0 feet			Medium Trucks:		2.297			
Pad Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment: 0.0	
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Grade:		0.0%			Autos:		56.223			
Left View:		-90.0 degrees			Medium Trucks:		56.065			
Right View:		90.0 degrees			Heavy Trucks:		56.081			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2				
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6				
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0				
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				2	4	9	19			
CNEL:				2	4	9	20			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Stetson Av. Road Segment: e/o New Stetson Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 8,200 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 820 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 84 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height: 0.0 feet					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Barrier: 70.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 70.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 56.223				
Road Grade: 0.0%					Medium Trucks: 56.065				
Left View: -90.0 degrees					Heavy Trucks: 56.081				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-3.27	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-20.51	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-24.46	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	64.9	63.0	61.2	55.1	63.8	64.4			
Medium Trucks:	58.4	56.9	50.6	49.0	57.5	57.7			
Heavy Trucks:	58.9	57.4	48.4	49.7	58.0	58.1			
Vehicle Noise:	66.6	64.8	61.8	57.0	65.5	66.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			35	76	164	353			
CNEL:			38	82	176	379			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing Without Project Road Name: Stetson Av. Road Segment: e/o Cawston Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 11,000 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,100 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0					
					Lane Equivalent Distance (in feet)					
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081					
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-1.99	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-19.23	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-23.19	-0.85	-1.20	-5.28	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	66.1	64.2	62.5	56.4	65.0	65.6				
Medium Trucks:	59.7	58.2	51.8	50.3	58.8	59.0				
Heavy Trucks:	60.1	58.7	49.7	50.9	59.3	59.4				
Vehicle Noise:	67.8	66.1	63.0	58.3	66.8	67.3				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				43	92	199	429			
CNEL:				46	99	214	461			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Stetson Av. Road Segment: e/o Sanderson Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 32,800 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,280 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	3.21	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	79.45	-14.03	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	84.25	-17.99	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	69.6	67.7	65.9	59.9	68.5	69.1			
Medium Trucks:	63.4	61.9	55.5	54.0	62.4	62.6			
Heavy Trucks:	64.2	62.8	53.8	55.0	63.4	63.5			
Vehicle Noise:	71.4	69.7	66.5	61.9	70.4	70.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			75	161	346	746			
CNEL:			80	172	371	800			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing Without Project Road Name: 9th St. Road Segment: w/o Winchester Rd.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		500 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		50 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		25 mph								
Near/Far Lane Distance:		84 feet								
Site Data					Vehicle Mix					
Barrier Height:		0.0 feet			VehicleType		Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm):		0.0			Autos:		77.5%	12.9%	9.6%	97.42%
Centerline Dist. to Barrier:		70.0 feet			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Observer:		70.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Barrier Distance to Observer:		0.0 feet								
Observer Height (Above Pad):		5.0 feet								
Pad Elevation:		0.0 feet								
Road Elevation:		0.0 feet								
Road Grade:		0.0%								
Left View:		-90.0 degrees								
Right View:		90.0 degrees								
					Noise Source Elevations (in feet)					
					Autos:		0.000			
					Medium Trucks:		2.297			
					Heavy Trucks:		8.006		Grade Adjustment: 0.0	
					Lane Equivalent Distance (in feet)					
					Autos:		56.223			
					Medium Trucks:		56.065			
					Heavy Trucks:		56.081			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	58.73	-12.41	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	70.80	-29.65	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	77.97	-33.60	-0.85	-1.20	-5.28	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:	44.3	42.4	40.6	34.5	43.2	43.8				
Medium Trucks:	39.1	37.6	31.2	29.7	38.1	38.4				
Heavy Trucks:	42.3	40.9	31.9	33.1	41.5	41.6				
Vehicle Noise:	47.1	45.5	41.6	37.6	46.2	46.5				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			2	4	8	18				
CNEL:			2	4	9	19				

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: 9th St. Road Segment: e/o Winchester Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 400 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 40 vehicles Vehicle Speed: 25 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	58.73	-13.38	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	70.80	-30.62	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	77.97	-34.57	-0.85	-1.20	-5.28	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:	43.3	41.4	39.6	33.6	42.2	42.8			
Medium Trucks:	38.1	36.6	30.3	28.7	37.2	37.4			
Heavy Trucks:	41.3	39.9	30.9	32.1	40.5	40.6			
Vehicle Noise:	46.2	44.5	40.6	36.7	45.2	45.6			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				2	3	7	16		
CNEL:				2	4	8	16		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing With Project Road Name: Winchester Rd. Road Segment: s/o Florida Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 10,700 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,070 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0					
					Lane Equivalent Distance (in feet)					
					Autos: 43.704 Medium Trucks: 43.501 Heavy Trucks: 43.521					
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	71.78	-2.53	0.77	-1.20	-4.63	0.000	0.000			
Medium Trucks:	82.40	-19.77	0.80	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	86.40	-23.72	0.80	-1.20	-5.46	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	68.8	66.9	65.2	59.1	67.7	68.3				
Medium Trucks:	62.2	60.7	54.4	52.8	61.3	61.5				
Heavy Trucks:	62.3	60.9	51.8	53.1	61.4	61.5				
Vehicle Noise:	70.4	68.7	65.7	60.8	69.4	69.9				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				43	92	198	427			
CNEL:				46	99	213	459			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Winchester Rd. Road Segment: n/o 9th St.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 12,300 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,230 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 43.704 Medium Trucks: 43.501 Heavy Trucks: 43.521				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-1.05	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	79.45	-18.29	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-22.25	0.80	-1.20	-5.46	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.0	65.1	63.3	57.3	65.9	66.5			
Medium Trucks:	60.8	59.3	52.9	51.3	59.8	60.0			
Heavy Trucks:	61.6	60.2	51.1	52.4	60.8	60.9			
Vehicle Noise:	68.8	67.1	63.9	59.3	67.8	68.3			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			34	72	156	335			
CNEL:			36	77	167	360			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Patterson Av. Road Segment: s/o Grand Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		100 vehicles			Autos:		15		
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15		
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		40 mph			Vehicle Mix				
Near/Far Lane Distance:		12 feet							
Site Data					VehicleType				
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%
Centerline Dist. to Barrier:		22.0 feet			Heavy Trucks:		86.5%		2.7%
Centerline Dist. to Observer:		22.0 feet					10.8%		0.74%
Barrier Distance to Observer:		0.0 feet			Noise Source Elevations (in feet)				
Observer Height (Above Pad):		5.0 feet							
Pad Elevation:		0.0 feet			Autos:		0.000		Grade Adjustment: 0.0
Road Elevation:		0.0 feet			Medium Trucks:		2.297		
Road Grade:		0.0%			Heavy Trucks:		8.006		
Left View:		-90.0 degrees			Lane Equivalent Distance (in feet)				
Right View:		90.0 degrees							
					Autos:		21.749		Medium Trucks: 21.338 Heavy Trucks: 21.378
					Medium Trucks:		21.338		
					Heavy Trucks:		21.378		
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-21.44	5.32	-1.20	-4.34	0.000	0.000		
Medium Trucks:	77.72	-38.68	5.44	-1.20	-4.85	0.000	0.000		
Heavy Trucks:	82.99	-42.63	5.43	-1.20	-6.07	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:	49.2	47.3	45.5	39.5	48.1	48.7			
Medium Trucks:	43.3	41.8	35.4	33.9	42.3	42.6			
Heavy Trucks:	44.6	43.2	34.1	35.4	43.7	43.9			
Vehicle Noise:	51.2	49.5	46.2	41.7	50.2	50.7			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				1	2	5	11		
CNEL:				1	2	5	11		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: California Av. Road Segment: n/o Stowe Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 2,800 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 280 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph									
Near/Far Lane Distance: 36 feet					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%				
					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 43.704				
					Medium Trucks: 43.501				
					Heavy Trucks: 43.521				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-6.97	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	77.72	-24.21	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-28.16	0.80	-1.20	-5.46	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos:	59.1	57.2	55.5	49.4	58.0		58.6		
Medium Trucks:	53.1	51.6	45.2	43.7	52.2		52.4		
Heavy Trucks:	54.4	53.0	44.0	45.2	53.6		53.7		
Vehicle Noise:	61.1	59.4	56.1	51.6	60.1		60.6		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				10	22	48	103		
CNEL:				11	24	51	110		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: California Av. Road Segment: s/o Stowe Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		400 vehicles			Autos: 15				
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15				
Peak Hour Volume:		40 vehicles			Heavy Trucks (3+ Axles): 15				
Vehicle Speed:		40 mph							
Near/Far Lane Distance:		36 feet							
Site Data					Vehicle Mix				
Barrier Height:		0.0 feet			VehicleType	Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm):		0.0			Autos: 77.5% 12.9% 9.6% 97.42%				
Centerline Dist. to Barrier:		47.0 feet			Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Centerline Dist. to Observer:		47.0 feet			Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Barrier Distance to Observer:		0.0 feet							
Observer Height (Above Pad):		5.0 feet							
Pad Elevation:		0.0 feet							
Road Elevation:		0.0 feet							
Road Grade:		0.0%							
Left View:		-90.0 degrees							
Right View:		90.0 degrees							
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 43.704				
					Medium Trucks: 43.501				
					Heavy Trucks: 43.521				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-15.42	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	77.72	-32.66	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-36.61	0.80	-1.20	-5.46	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	47.0	40.9	49.6	50.2			
Medium Trucks:	44.7	43.2	36.8	35.2	43.7	43.9			
Heavy Trucks:	46.0	44.6	35.5	36.8	45.1	45.3			
Vehicle Noise:	52.7	51.0	47.7	43.1	51.7	52.1			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				3	6	13	28		
CNEL:				3	6	14	30		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: California Av. Road Segment: s/o Stetson Av. (S.)					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 100 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 10 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					Vehicle Type	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 43.704 Medium Trucks: 43.501 Heavy Trucks: 43.521				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-21.44	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	77.72	-38.68	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-42.63	0.80	-1.20	-5.46	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	44.6	42.7	41.0	34.9	43.5	44.2			
Medium Trucks:	38.6	37.1	30.8	29.2	37.7	37.9			
Heavy Trucks:	40.0	38.5	29.5	30.8	39.1	39.2			
Vehicle Noise:	46.7	44.9	41.6	37.1	45.6	46.1			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				1	2	5	11		
CNEL:				1	3	6	12		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing With Project Road Name: California Av. Road Segment: n/o Simpson Rd.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		25 mph			Vehicle Mix					
Near/Far Lane Distance:		36 feet								
Site Data					VehicleType	Day	Evening	Night	Daily	
Barrier Height:		0.0 feet			Autos:		77.5%	12.9%	9.6%	97.42%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Barrier:		47.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Observer:		47.0 feet			Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet								
Observer Height (Above Pad):		5.0 feet			Autos:		0.000			
Pad Elevation:		0.0 feet			Medium Trucks:		2.297			
Road Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment: 0.0	
Road Grade:		0.0%			Lane Equivalent Distance (in feet)					
Left View:		-90.0 degrees								
Right View:		90.0 degrees			Autos:		43.704			
					Medium Trucks:		43.501			
					Heavy Trucks:		43.521			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	58.73	-19.40	0.77	-1.20	-4.63	0.000	0.000			
Medium Trucks:	70.80	-36.64	0.80	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	77.97	-40.59	0.80	-1.20	-5.46	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:	38.9	37.0	35.2	29.2	37.8	38.4				
Medium Trucks:	33.8	32.3	25.9	24.3	32.8	33.0				
Heavy Trucks:	37.0	35.6	26.5	27.8	36.1	36.3				
Vehicle Noise:	41.8	40.1	36.2	32.3	40.8	41.2				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				1	1	2	5			
CNEL:				1	1	3	6			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing With Project Road Name: California Av. Road Segment: s/o Simpson Rd.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		25 mph								
Near/Far Lane Distance:		36 feet								
Site Data					Vehicle Mix					
Barrier Height:		0.0 feet			VehicleType		Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm):		0.0			Autos:		77.5%	12.9%	9.6%	97.42%
Centerline Dist. to Barrier:		47.0 feet			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Observer:		47.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Barrier Distance to Observer:		0.0 feet			Noise Source Elevations (in feet)					
Observer Height (Above Pad):		5.0 feet			Autos:		0.000			
Pad Elevation:		0.0 feet			Medium Trucks:		2.297			
Road Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment: 0.0	
Road Grade:		0.0%			Lane Equivalent Distance (in feet)					
Left View:		-90.0 degrees			Autos:		43.704			
Right View:		90.0 degrees			Medium Trucks:		43.501			
					Heavy Trucks:		43.521			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	58.73	-19.40	0.77	-1.20	-4.63	0.000	0.000			
Medium Trucks:	70.80	-36.64	0.80	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	77.97	-40.59	0.80	-1.20	-5.46	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:	38.9	37.0	35.2	29.2	37.8		38.4			
Medium Trucks:	33.8	32.3	25.9	24.3	32.8		33.0			
Heavy Trucks:	37.0	35.6	26.5	27.8	36.1		36.3			
Vehicle Noise:	41.8	40.1	36.2	32.3	40.8		41.2			
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA		55 dBA			
Ldn:	1		1		2		5			
CNEL:	1		1		3		6			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Warren Rd. Road Segment: s/o Esplanade Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 13,900 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,390 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	-1.39	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	82.40	-18.63	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	86.40	-22.59	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.3	66.4	64.7	58.6	67.2	67.8			
Medium Trucks:	61.7	60.2	53.9	52.3	60.8	61.0			
Heavy Trucks:	61.8	60.3	51.3	52.6	60.9	61.0			
Vehicle Noise:	69.9	68.1	65.2	60.3	68.9	69.3			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			59	127	273	588			
CNEL:			63	136	294	633			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Warren Rd. Road Segment: n/o Tres Cerritos Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 13,900 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,390 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Vehicle Type	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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	-1.39	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	82.40	-18.63	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	86.40	-22.59	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.3	66.4	64.7	58.6	67.2	67.8			
Medium Trucks:	61.7	60.2	53.9	52.3	60.8	61.0			
Heavy Trucks:	61.8	60.3	51.3	52.6	60.9	61.0			
Vehicle Noise:	69.9	68.1	65.2	60.3	68.9	69.3			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			59	127	273	588			
CNEL:			63	136	294	633			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing With Project Road Name: Warren Rd. Road Segment: n/o Florida Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 10,700 vehicles					Autos: 15					
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,070 vehicles					Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 55 mph										
Near/Far Lane Distance: 84 feet					Vehicle Mix					
Site Data					Vehicle Type		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%
Barrier Height: 0.0 feet					Noise Source Elevations (in feet)					
Barrier Type (0-Wall, 1-Berm): 0.0					Autos:		0.000			
Centerline Dist. to Barrier: 70.0 feet					Medium Trucks:		2.297			
Centerline Dist. to Observer: 70.0 feet					Heavy Trucks:		8.006		Grade Adjustment: 0.0	
Barrier Distance to Observer: 0.0 feet					Lane Equivalent Distance (in feet)					
Observer Height (Above Pad): 5.0 feet					Autos:		56.223			
Pad Elevation: 0.0 feet					Medium Trucks:		56.065			
Road Elevation: 0.0 feet					Heavy Trucks:		56.081			
Road Grade: 0.0%										
Left View: -90.0 degrees										
Right View: 90.0 degrees										
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	71.78	-2.53	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	82.40	-19.77	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	86.40	-23.72	-0.85	-1.20	-5.28	0.000	0.000			

Unmitigated Noise Levels (without Topo and barrier attenuation)						
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.2	65.3	63.5	57.5	66.1	66.7
Medium Trucks:	60.6	59.1	52.7	51.2	59.6	59.9
Heavy Trucks:	60.6	59.2	50.2	51.4	59.8	59.9
Vehicle Noise:	68.8	67.0	64.0	59.2	67.7	68.2

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	49	106	229	494
CNEL:	53	115	247	531

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Warren Rd. Road Segment: n/o Whittier Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 15,000 vehicles				Autos: 15					
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,500 vehicles				Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 55 mph				Vehicle Mix					
Near/Far Lane Distance: 84 feet				Vehicle Type		Day	Evening	Night	Daily
Site Data				Autos: 77.5% 12.9% 9.6% 97.42%					
				Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
				Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
				Noise Source Elevations (in feet)					
				Autos: 0.000					
Barrier Height: 0.0 feet				Medium Trucks: 2.297		Grade Adjustment: 0.0			
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 8.006					
Centerline Dist. to Barrier: 70.0 feet				Lane Equivalent Distance (in feet)					
Centerline Dist. to Observer: 70.0 feet				Autos: 56.223					
Barrier Distance to Observer: 0.0 feet				Medium Trucks: 56.065					
Observer Height (Above Pad): 5.0 feet				Heavy Trucks: 56.081					
Pad Elevation: 0.0 feet									
Road Elevation: 0.0 feet									
Road Grade: 0.0%									
Left View: -90.0 degrees									
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
Vehicle Type	REMED	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	-1.06	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	82.40	-18.30	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	86.40	-22.26	-0.85	-1.20	-5.28	0.000	0.000		

Unmitigated Noise Levels (without Topo and barrier attenuation)						
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.7	66.8	65.0	58.9	67.6	68.2
Medium Trucks:	62.1	60.5	54.2	52.6	61.1	61.3
Heavy Trucks:	62.1	60.7	51.6	52.9	61.2	61.4
Vehicle Noise:	70.2	68.5	65.5	60.6	69.2	69.7

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	62	133	287	619
CNEL:	67	143	309	666

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Warren Rd. Road Segment: s/o Simpson Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 9,200 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 920 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph									
Near/Far Lane Distance: 84 feet					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%				
Site Data									
Barrier Height: 0.0 feet									
Barrier Type (0-Wall, 1-Berm): 0.0									
Centerline Dist. to Barrier: 70.0 feet									
Centerline Dist. to Observer: 70.0 feet									
Barrier Distance to Observer: 0.0 feet									
Observer Height (Above Pad): 5.0 feet									
Pad Elevation: 0.0 feet									
Road Elevation: 0.0 feet									
Road Grade: 0.0%									
Left View: -90.0 degrees									
Right View: 90.0 degrees									
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223				
					Medium Trucks: 56.065				
					Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-1.80	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	77.72	-19.04	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	82.99	-23.00	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	62.6	60.7	59.0	52.9	61.5	62.2			
Medium Trucks:	56.6	55.1	48.8	47.2	55.7	55.9			
Heavy Trucks:	57.9	56.5	47.5	48.7	57.1	57.2			
Vehicle Noise:	64.7	62.9	59.6	55.1	63.6	64.1			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				26	57	122	263		
CNEL:				28	61	131	282		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Sanderson Av. Road Segment: s/o Florida Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 23,800 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,380 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 30 mph					Vehicle Mix				
Near/Far Lane Distance: 50 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height: 0.0 feet					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Barrier: 54.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 54.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 48.125				
Road Grade: 0.0%					Medium Trucks: 47.941				
Left View: -90.0 degrees					Heavy Trucks: 47.959				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	61.75	3.58	0.15	-1.20	-4.67	0.000	0.000		
Medium Trucks:	73.48	-13.66	0.17	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	79.92	-17.62	0.17	-1.20	-5.39	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	64.3	62.4	60.6	54.6	63.2	63.8			
Medium Trucks:	58.8	57.3	50.9	49.4	57.8	58.1			
Heavy Trucks:	61.3	59.8	50.8	52.1	60.4	60.5			
Vehicle Noise:	66.8	65.1	61.4	57.3	65.8	66.2			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				28	61	131	283		
CNEL:				30	65	140	301		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Sanderson Av. Road Segment: n/o Stetson Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 26,700 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,670 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 50 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 54.0 feet Centerline Dist. to Observer: 54.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 48.125 Medium Trucks: 47.941 Heavy Trucks: 47.959				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	2.31	0.15	-1.20	-4.67	0.000	0.000		
Medium Trucks:	79.45	-14.92	0.17	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-18.88	0.17	-1.20	-5.39	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	69.7	67.8	66.1	60.0	68.6	69.2			
Medium Trucks:	63.5	62.0	55.6	54.1	62.5	62.8			
Heavy Trucks:	64.3	62.9	53.9	55.1	63.5	63.6			
Vehicle Noise:	71.6	69.8	66.7	62.0	70.5	71.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			59	126	272	586			
CNEL:			63	135	292	629			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Florida Av. Road Segment: w/o Winchester Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 23,500 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,350 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 78 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					Vehicle Type	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 76.0 feet Centerline Dist. to Observer: 76.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 65.422 Medium Trucks: 65.286 Heavy Trucks: 65.300				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	1.30	-1.85	-1.20	-4.73	0.000	0.000		
Medium Trucks:	81.00	-15.94	-1.84	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-19.89	-1.84	-1.20	-5.25	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.5	66.6	64.8	58.7	67.4	68.0			
Medium Trucks:	62.0	60.5	54.2	52.6	61.1	61.3			
Heavy Trucks:	62.4	61.0	52.0	53.2	61.6	61.7			
Vehicle Noise:	70.1	68.4	65.4	60.6	69.1	69.6			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				66	143	308	664		
CNEL:				71	154	331	713		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Grand Av. Road Segment: w/o Calvert Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		100 vehicles			Autos: 15				
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15				
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles): 15				
Vehicle Speed:		40 mph							
Near/Far Lane Distance:		84 feet							
Site Data					Vehicle Mix				
Barrier Height:		0.0 feet							
Barrier Type (0-Wall, 1-Berm):		0.0							
Centerline Dist. to Barrier:		70.0 feet			Autos: 77.5% 12.9% 9.6% 97.42%				
Centerline Dist. to Observer:		70.0 feet			Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Barrier Distance to Observer:		0.0 feet			Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Observer Height (Above Pad):		5.0 feet							
Pad Elevation:		0.0 feet							
Road Elevation:		0.0 feet							
Road Grade:		0.0%							
Left View:		-90.0 degrees							
Right View:		90.0 degrees							
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223				
					Medium Trucks: 56.065				
					Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-21.44	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	77.72	-38.68	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	82.99	-42.63	-0.85	-1.20	-5.28	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:	43.0	41.1	39.3	33.3	41.9	42.5			
Medium Trucks:	37.0	35.5	29.1	27.6	36.0	36.3			
Heavy Trucks:	38.3	36.9	27.9	29.1	37.5	37.6			
Vehicle Noise:	45.0	43.3	40.0	35.5	44.0	44.4			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				1	3	6	13		
CNEL:				1	3	6	14		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Grand Av. Road Segment: e/o Calvert Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		100 vehicles			Autos: 15				
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15				
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles): 15				
Vehicle Speed:		40 mph							
Near/Far Lane Distance:		84 feet			Vehicle Mix				
Site Data					VehicleType	Day	Evening	Night	Daily
Barrier Height:		0.0 feet			Autos:	77.5%	12.9%	9.6%	97.42%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:	86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)				
Barrier Distance to Observer:		0.0 feet			Autos:	0.000			
Observer Height (Above Pad):		5.0 feet			Medium Trucks:	2.297			
Pad Elevation:		0.0 feet			Heavy Trucks:	8.006	Grade Adjustment:	0.0	
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)				
Road Grade:		0.0%			Autos:	56.223			
Left View:		-90.0 degrees			Medium Trucks:	56.065			
Right View:		90.0 degrees			Heavy Trucks:	56.081			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-21.44	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	77.72	-38.68	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	82.99	-42.63	-0.85	-1.20	-5.28	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:	43.0	41.1	39.3	33.3	41.9	42.5			
Medium Trucks:	37.0	35.5	29.1	27.6	36.0	36.3			
Heavy Trucks:	38.3	36.9	27.9	29.1	37.5	37.6			
Vehicle Noise:	45.0	43.3	40.0	35.5	44.0	44.4			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				1	3	6	13		
CNEL:				1	3	6	14		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL														
Scenario: Existing With Project Road Name: Stetson Av. (S.) Road Segment: e/o SR-79 SB Ramps					Project Name: Rancho Diamante Job Number: 9792									
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS									
Highway Data					Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt):		100 vehicles			Autos:		15							
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15							
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15							
Vehicle Speed:		50 mph			Vehicle Mix									
Near/Far Lane Distance:		84 feet												
Site Data					VehicleType					Day	Evening	Night	Daily	
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%		9.6%		97.42%	
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%		10.3%		1.84%	
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%		2.7%		10.8%		0.74%	
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)									
Barrier Distance to Observer:		0.0 feet												
Observer Height (Above Pad):		5.0 feet			Autos:		0.000							
Pad Elevation:		0.0 feet			Medium Trucks:		2.297							
Road Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment:		0.0			
Road Grade:		0.0%			Lane Equivalent Distance (in feet)									
Left View:		-90.0 degrees												
Right View:		90.0 degrees			Autos:		56.223							
					Medium Trucks:		56.065							
					Heavy Trucks:		56.081							
FHWA Noise Model Calculations														
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten							
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000							
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000							
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2								
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6								
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0								
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9								
Centerline Distance to Noise Contour (in feet)														
					70 dBA	65 dBA	60 dBA	55 dBA						
Ldn:					2	4	9	19						
CNEL:					2	4	9	20						

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing With Project Road Name: Stetson Av. (S.) Road Segment: e/o SR-79 NB Ramps					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		50 mph								
Near/Far Lane Distance:		84 feet								
Site Data					Vehicle Mix					
Barrier Height:		0.0 feet			VehicleType		Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm):		0.0			Autos:		77.5%	12.9%	9.6%	97.42%
Centerline Dist. to Barrier:		70.0 feet			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Observer:		70.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Barrier Distance to Observer:		0.0 feet			Noise Source Elevations (in feet)					
Observer Height (Above Pad):		5.0 feet			Autos:		0.000			
Pad Elevation:		0.0 feet			Medium Trucks:		2.297			
Road Elevation:		0.0 feet			Heavy Trucks:		8.006	Grade Adjustment: 0.0		
Road Grade:		0.0%			Lane Equivalent Distance (in feet)					
Left View:		-90.0 degrees			Autos:		56.223			
Right View:		90.0 degrees			Medium Trucks:		56.065			
					Heavy Trucks:		56.081			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6		45.2			
Medium Trucks:	39.3	37.8	31.4	29.9	38.4		38.6			
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9		39.0			
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4		46.9			
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				2	4	9	19			
CNEL:				2	4	9	20			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL														
Scenario: Existing With Project Road Name: Stetson Av. (S.) Road Segment: w/o California Av.					Project Name: Rancho Diamante Job Number: 9792									
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS									
Highway Data					Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt):		100 vehicles			Autos:		15							
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15							
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15							
Vehicle Speed:		50 mph			Vehicle Mix									
Near/Far Lane Distance:		84 feet												
Site Data					VehicleType					Day	Evening	Night	Daily	
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%		9.6%		97.42%	
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%		10.3%		1.84%	
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%		2.7%		10.8%		0.74%	
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)									
Barrier Distance to Observer:		0.0 feet			Autos:		0.000							
Observer Height (Above Pad):		5.0 feet			Medium Trucks:		2.297							
Pad Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment:		0.0			
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)									
Road Grade:		0.0%			Autos:		56.223							
Left View:		-90.0 degrees			Medium Trucks:		56.065							
Right View:		90.0 degrees			Heavy Trucks:		56.081							
FHWA Noise Model Calculations														
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten							
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000							
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000							
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2								
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6								
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0								
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9								
Centerline Distance to Noise Contour (in feet)														
				70 dBA	65 dBA	60 dBA	55 dBA							
Ldn:				2	4	9	19							
CNEL:				2	4	9	20							

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing With Project Road Name: Stetson Av. (S.) Road Segment: e/o California Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		50 mph								
Near/Far Lane Distance:		84 feet			Vehicle Mix					
Site Data					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)					
Barrier Height:					Autos: 0.000					
Barrier Type (0-Wall, 1-Berm):					Medium Trucks: 2.297					
Centerline Dist. to Barrier:					Heavy Trucks: 8.006					
Centerline Dist. to Observer:					Grade Adjustment: 0.0					
Barrier Distance to Observer:										
Observer Height (Above Pad):										
Pad Elevation:										
Road Elevation:										
Road Grade:										
Left View:										
Right View:										
					Lane Equivalent Distance (in feet)					
					Autos: 56.223					
					Medium Trucks: 56.065					
					Heavy Trucks: 56.081					
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2				
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6				
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0				
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			2	4	9	19				
CNEL:			2	4	9	20				

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL														
Scenario: Existing With Project Road Name: Stetson Av. (S.) Road Segment: e/o Street "C"					Project Name: Rancho Diamante Job Number: 9792									
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS									
Highway Data					Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt):		100 vehicles			Autos:		15							
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15							
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15							
Vehicle Speed:		50 mph			Vehicle Mix									
Near/Far Lane Distance:		84 feet												
Site Data					VehicleType					Day	Evening	Night	Daily	
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%		9.6%		97.42%	
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%		10.3%		1.84%	
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%		2.7%		10.8%		0.74%	
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)									
Barrier Distance to Observer:		0.0 feet												
Observer Height (Above Pad):		5.0 feet			Autos:		0.000							
Pad Elevation:		0.0 feet			Medium Trucks:		2.297							
Road Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment:		0.0			
Road Grade:		0.0%			Lane Equivalent Distance (in feet)									
Left View:		-90.0 degrees												
Right View:		90.0 degrees			Autos:		56.223							
					Medium Trucks:		56.065							
					Heavy Trucks:		56.081							
FHWA Noise Model Calculations														
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten							
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000							
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000							
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6			45.2						
Medium Trucks:	39.3	37.8	31.4	29.9	38.4			38.6						
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9			39.0						
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4			46.9						
Centerline Distance to Noise Contour (in feet)														
				70 dBA	65 dBA	60 dBA	55 dBA							
Ldn:				2	4	9	19							
CNEL:				2	4	9	20							

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing With Project Road Name: Stetson Av. (S.) Road Segment: e/o Mustang Wy.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		600 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		60 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		50 mph								
Near/Far Lane Distance:		84 feet								
Site Data					Vehicle Mix					
Barrier Height:		0.0 feet			VehicleType		Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm):		0.0			Autos:		77.5%	12.9%	9.6%	97.42%
Centerline Dist. to Barrier:		70.0 feet			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Observer:		70.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Barrier Distance to Observer:		0.0 feet								
Observer Height (Above Pad):		5.0 feet								
Pad Elevation:		0.0 feet								
Road Elevation:		0.0 feet								
Road Grade:		0.0%								
Left View:		-90.0 degrees								
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-14.63	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-31.87	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-35.82	-0.85	-1.20	-5.28	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:	53.5	51.6	49.8	43.8	52.4	53.0				
Medium Trucks:	47.1	45.6	39.2	37.7	46.1	46.4				
Heavy Trucks:	47.5	46.1	37.0	38.3	46.7	46.8				
Vehicle Noise:	55.2	53.5	50.4	45.6	54.2	54.6				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			6	13	29	62				
CNEL:			7	14	31	66				

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Stetson Av. (S.) Road Segment: w/o Warren Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 1,300 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 130 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					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%				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223				
					Medium Trucks: 56.065				
					Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-11.27	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-28.51	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-32.46	-0.85	-1.20	-5.28	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:	56.9	55.0	53.2	47.1	55.8	56.4			
Medium Trucks:	50.4	48.9	42.6	41.0	49.5	49.7			
Heavy Trucks:	50.9	49.4	40.4	41.7	50.0	50.1			
Vehicle Noise:	58.6	56.8	53.8	49.0	57.5	58.0			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				10	22	48	103		
CNEL:				11	24	52	111		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Stetson Av. (S.) Road Segment: e/o Warren Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		100 vehicles			Autos: 15				
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15				
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles): 15				
Vehicle Speed:		50 mph							
Near/Far Lane Distance:		84 feet			Vehicle Mix				
Site Data					VehicleType	Day	Evening	Night	Daily
Barrier Height:		0.0 feet			Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)				
Barrier Distance to Observer:		0.0 feet			Autos: 0.000				
Observer Height (Above Pad):		5.0 feet			Medium Trucks: 2.297				
Pad Elevation:		0.0 feet			Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)				
Road Grade:		0.0%			Autos: 56.223				
Left View:		-90.0 degrees			Medium Trucks: 56.065				
Right View:		90.0 degrees			Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2			
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6			
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0			
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				2	4	9	19		
CNEL:				2	4	9	20		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL														
Scenario: Existing With Project Road Name: Stetson Av. (S.) Road Segment: e/o Fisher St.					Project Name: Rancho Diamante Job Number: 9792									
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS									
Highway Data					Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt):		100 vehicles			Autos:		15							
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15							
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15							
Vehicle Speed:		50 mph			Vehicle Mix									
Near/Far Lane Distance:		84 feet												
Site Data					VehicleType					Day	Evening	Night	Daily	
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%		9.6%		97.42%	
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%		10.3%		1.84%	
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%		2.7%		10.8%		0.74%	
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)									
Barrier Distance to Observer:		0.0 feet												
Observer Height (Above Pad):		5.0 feet			Autos:		0.000							
Pad Elevation:		0.0 feet			Medium Trucks:		2.297							
Road Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment:		0.0			
Road Grade:		0.0%			Lane Equivalent Distance (in feet)									
Left View:		-90.0 degrees												
Right View:		90.0 degrees			Autos:		56.223							
					Medium Trucks:		56.065							
					Heavy Trucks:		56.081							
FHWA Noise Model Calculations														
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten							
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000							
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000							
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2								
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6								
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0								
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9								
Centerline Distance to Noise Contour (in feet)														
				70 dBA	65 dBA	60 dBA	55 dBA							
Ldn:				2	4	9	19							
CNEL:				2	4	9	20							

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing With Project Road Name: Stetson Av. Road Segment: e/o New Stetson Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 8,900 vehicles					Autos: 15					
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15					
Peak Hour Volume: 890 vehicles					Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph					Vehicle Mix					
Near/Far Lane Distance: 84 feet					VehicleType		Day	Evening	Night	Daily
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%					
Barrier Height: 0.0 feet					Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
Centerline Dist. to Barrier: 70.0 feet					Noise Source Elevations (in feet)					
Centerline Dist. to Observer: 70.0 feet					Autos: 0.000					
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297					
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.006 Grade Adjustment: 0.0					
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)					
Road Elevation: 0.0 feet					Autos: 56.223					
Road Grade: 0.0%					Medium Trucks: 56.065					
Left View: -90.0 degrees					Heavy Trucks: 56.081					
Right View: 90.0 degrees										
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-2.91	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-20.15	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-24.11	-0.85	-1.20	-5.28	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL			
Autos:	65.2	63.3	61.6	55.5	64.1		64.7			
Medium Trucks:	58.8	57.3	50.9	49.4	57.8		58.1			
Heavy Trucks:	59.2	57.8	48.8	50.0	58.4		58.5			
Vehicle Noise:	66.9	65.2	62.1	57.3	65.9		66.4			
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			37	80	173	372				
CNEL:			40	86	186	400				

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Stetson Av. Road Segment: e/o Cawston Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 11,600 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,160 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph									
Near/Far Lane Distance: 84 feet					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%				
Site Data									
Barrier Height: 0.0 feet									
Barrier Type (0-Wall, 1-Berm): 0.0									
Centerline Dist. to Barrier: 70.0 feet									
Centerline Dist. to Observer: 70.0 feet									
Barrier Distance to Observer: 0.0 feet									
Observer Height (Above Pad): 5.0 feet									
Pad Elevation: 0.0 feet									
Road Elevation: 0.0 feet									
Road Grade: 0.0%									
Left View: -90.0 degrees									
Right View: 90.0 degrees									
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223				
					Medium Trucks: 56.065				
					Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-1.76	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-19.00	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-22.96	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	66.4	64.5	62.7	56.7	65.3	65.9			
Medium Trucks:	59.9	58.4	52.1	50.5	59.0	59.2			
Heavy Trucks:	60.4	58.9	49.9	51.2	59.5	59.6			
Vehicle Noise:	68.1	66.3	63.3	58.5	67.0	67.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			44	96	206	444			
CNEL:			48	103	222	477			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Stetson Av. Road Segment: e/o Sanderson Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 33,000 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,300 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	3.23	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	79.45	-14.00	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	84.25	-17.96	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	69.6	67.7	66.0	59.9	68.5	69.1			
Medium Trucks:	63.4	61.9	55.5	54.0	62.4	62.7			
Heavy Trucks:	64.2	62.8	53.8	55.0	63.4	63.5			
Vehicle Noise:	71.5	69.7	66.6	61.9	70.4	70.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			75	161	348	749			
CNEL:			80	173	373	803			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL														
Scenario: Existing With Project Road Name: 9th St. Road Segment: w/o Winchester Rd.					Project Name: Rancho Diamante Job Number: 9792									
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS									
Highway Data					Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt):		500 vehicles			Autos:		15							
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15							
Peak Hour Volume:		50 vehicles			Heavy Trucks (3+ Axles):		15							
Vehicle Speed:		25 mph			Vehicle Mix									
Near/Far Lane Distance:		84 feet												
Site Data					VehicleType					Day	Evening	Night	Daily	
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%		9.6%		97.42%	
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%		10.3%		1.84%	
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%		2.7%		10.8%		0.74%	
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)									
Barrier Distance to Observer:		0.0 feet												
Observer Height (Above Pad):		5.0 feet			Autos:		0.000							
Pad Elevation:		0.0 feet			Medium Trucks:		2.297							
Road Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment:		0.0			
Road Grade:		0.0%			Lane Equivalent Distance (in feet)									
Left View:		-90.0 degrees												
Right View:		90.0 degrees			Autos:		56.223							
					Medium Trucks:		56.065							
					Heavy Trucks:		56.081							
FHWA Noise Model Calculations														
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten							
Autos:	58.73	-12.41	-0.87	-1.20	-4.72	0.000	0.000							
Medium Trucks:	70.80	-29.65	-0.85	-1.20	-4.88	0.000	0.000							
Heavy Trucks:	77.97	-33.60	-0.85	-1.20	-5.28	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:	44.3	42.4	40.6	34.5	43.2	43.8								
Medium Trucks:	39.1	37.6	31.2	29.7	38.1	38.4								
Heavy Trucks:	42.3	40.9	31.9	33.1	41.5	41.6								
Vehicle Noise:	47.1	45.5	41.6	37.6	46.2	46.5								
Centerline Distance to Noise Contour (in feet)														
				70 dBA	65 dBA	60 dBA	55 dBA							
Ldn:				2	4	8	18							
CNEL:				2	4	9	19							

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing With Project Road Name: 9th St. Road Segment: e/o Winchester Rd.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		400 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		40 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		25 mph								
Near/Far Lane Distance:		84 feet								
Site Data					Vehicle Mix					
Barrier Height:		0.0 feet			Autos:		77.5%	12.9%	9.6%	97.42%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet			Autos:		0.000			
Observer Height (Above Pad):		5.0 feet			Medium Trucks:		2.297			
Pad Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment: 0.0	
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Grade:		0.0%			Autos:		56.223			
Left View:		-90.0 degrees			Medium Trucks:		56.065			
Right View:		90.0 degrees			Heavy Trucks:		56.081			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	58.73	-13.38	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	70.80	-30.62	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	77.97	-34.57	-0.85	-1.20	-5.28	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:	43.3	41.4	39.6	33.6	42.2	42.8				
Medium Trucks:	38.1	36.6	30.3	28.7	37.2	37.4				
Heavy Trucks:	41.3	39.9	30.9	32.1	40.5	40.6				
Vehicle Noise:	46.2	44.5	40.6	36.7	45.2	45.6				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			2	3	7	16				
CNEL:			2	4	8	16				

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Winchester Rd. Road Segment: s/o Florida Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 10,800 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,080 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					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%				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 43.704 Medium Trucks: 43.501 Heavy Trucks: 43.521				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	-2.49	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	82.40	-19.73	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	86.40	-23.68	0.80	-1.20	-5.46	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.9	67.0	65.2	59.1	67.8	68.4			
Medium Trucks:	62.3	60.8	54.4	52.9	61.3	61.6			
Heavy Trucks:	62.3	60.9	51.9	53.1	61.5	61.6			
Vehicle Noise:	70.5	68.7	65.7	60.9	69.4	69.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			43	93	199	430			
CNEL:			46	100	215	462			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Winchester Rd. Road Segment: n/o 9th St.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 12,400 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,240 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 43.704 Medium Trucks: 43.501 Heavy Trucks: 43.521				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-1.02	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	79.45	-18.26	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-22.21	0.80	-1.20	-5.46	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.0	65.1	63.4	57.3	65.9	66.5			
Medium Trucks:	60.8	59.3	52.9	51.4	59.8	60.1			
Heavy Trucks:	61.6	60.2	51.2	52.4	60.8	60.9			
Vehicle Noise:	68.9	67.1	64.0	59.3	67.8	68.3			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			34	73	156	337			
CNEL:			36	78	168	362			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Patterson Av. Road Segment: s/o Grand Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 100 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 10 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 12 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 22.0 feet Centerline Dist. to Observer: 22.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 21.749 Medium Trucks: 21.338 Heavy Trucks: 21.378				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-21.44	5.32	-1.20	-4.34	0.000	0.000		
Medium Trucks:	77.72	-38.68	5.44	-1.20	-4.85	0.000	0.000		
Heavy Trucks:	82.99	-42.63	5.43	-1.20	-6.07	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:	49.2	47.3	45.5	39.5	48.1	48.7			
Medium Trucks:	43.3	41.8	35.4	33.9	42.3	42.6			
Heavy Trucks:	44.6	43.2	34.1	35.4	43.7	43.9			
Vehicle Noise:	51.2	49.5	46.2	41.7	50.2	50.7			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			1	2	5	11			
CNEL:			1	2	5	11			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: California Av. Road Segment: n/o Stowe Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 2,800 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 280 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Vehicle Type	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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 43.704 Medium Trucks: 43.501 Heavy Trucks: 43.521				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-6.97	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	77.72	-24.21	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-28.16	0.80	-1.20	-5.46	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	59.1	57.2	55.5	49.4	58.0	58.6			
Medium Trucks:	53.1	51.6	45.2	43.7	52.2	52.4			
Heavy Trucks:	54.4	53.0	44.0	45.2	53.6	53.7			
Vehicle Noise:	61.1	59.4	56.1	51.6	60.1	60.6			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			10	22	48	103			
CNEL:			11	24	51	110			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2019 Without Project Road Name: California Av. Road Segment: s/o Stowe Rd.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		400 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		40 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		40 mph								
Near/Far Lane Distance:		36 feet								
Site Data					Vehicle Mix					
Barrier Height:		0.0 feet			VehicleType		Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm):		0.0			Autos:		77.5%	12.9%	9.6%	97.42%
Centerline Dist. to Barrier:		47.0 feet			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Observer:		47.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Barrier Distance to Observer:		0.0 feet								
Observer Height (Above Pad):		5.0 feet								
Pad Elevation:		0.0 feet								
Road Elevation:		0.0 feet								
Road Grade:		0.0%								
Left View:		-90.0 degrees								
Right View:		90.0 degrees								
					Noise Source Elevations (in feet)					
					Autos:		0.000			
					Medium Trucks:		2.297			
					Heavy Trucks:		8.006		Grade Adjustment: 0.0	
					Lane Equivalent Distance (in feet)					
					Autos:		43.704			
					Medium Trucks:		43.501			
					Heavy Trucks:		43.521			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	-15.42	0.77	-1.20	-4.63	0.000	0.000			
Medium Trucks:	77.72	-32.66	0.80	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-36.61	0.80	-1.20	-5.46	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	47.0	40.9	49.6	50.2				
Medium Trucks:	44.7	43.2	36.8	35.2	43.7	43.9				
Heavy Trucks:	46.0	44.6	35.5	36.8	45.1	45.3				
Vehicle Noise:	52.7	51.0	47.7	43.1	51.7	52.1				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				3	6	13	28			
CNEL:				3	6	14	30			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2019 Without Project Road Name: California Av. Road Segment: s/o Stetson Av. (S.)					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph			Vehicle Mix					
Near/Far Lane Distance:		36 feet								
Site Data					VehicleType		Day	Evening	Night	Daily
Barrier Height:		0.0 feet			Autos:		77.5%	12.9%	9.6%	97.42%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Barrier:		47.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Observer:		47.0 feet			Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet			Autos:		0.000			
Observer Height (Above Pad):		5.0 feet			Medium Trucks:		2.297			
Pad Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment: 0.0	
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Grade:		0.0%			Autos:		43.704			
Left View:		-90.0 degrees			Medium Trucks:		43.501			
Right View:		90.0 degrees			Heavy Trucks:		43.521			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	-21.44	0.77	-1.20	-4.63	0.000	0.000			
Medium Trucks:	77.72	-38.68	0.80	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-42.63	0.80	-1.20	-5.46	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:	44.6	42.7	41.0	34.9	43.5	44.2				
Medium Trucks:	38.6	37.1	30.8	29.2	37.7	37.9				
Heavy Trucks:	40.0	38.5	29.5	30.8	39.1	39.2				
Vehicle Noise:	46.7	44.9	41.6	37.1	45.6	46.1				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				1	2	5	11			
CNEL:				1	3	6	12			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2019 Without Project Road Name: California Av. Road Segment: n/o Simpson Rd.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		25 mph								
Near/Far Lane Distance:		36 feet								
Site Data					Vehicle Mix					
Barrier Height:		0.0 feet			Autos:		77.5%	12.9%	9.6%	97.42%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Barrier:		47.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Observer:		47.0 feet								
Barrier Distance to Observer:		0.0 feet								
Observer Height (Above Pad):		5.0 feet								
Pad Elevation:		0.0 feet								
Road Elevation:		0.0 feet								
Road Grade:		0.0%								
Left View:		-90.0 degrees								
Right View:		90.0 degrees								
					Noise Source Elevations (in feet)					
					Autos:		0.000			
					Medium Trucks:		2.297			
					Heavy Trucks:		8.006	Grade Adjustment: 0.0		
					Lane Equivalent Distance (in feet)					
					Autos:		43.704			
					Medium Trucks:		43.501			
					Heavy Trucks:		43.521			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	58.73	-19.40	0.77	-1.20	-4.63	0.000	0.000			
Medium Trucks:	70.80	-36.64	0.80	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	77.97	-40.59	0.80	-1.20	-5.46	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:	38.9	37.0	35.2	29.2	37.8	38.4				
Medium Trucks:	33.8	32.3	25.9	24.3	32.8	33.0				
Heavy Trucks:	37.0	35.6	26.5	27.8	36.1	36.3				
Vehicle Noise:	41.8	40.1	36.2	32.3	40.8	41.2				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				1	1	2	5			
CNEL:				1	1	3	6			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2019 Without Project Road Name: California Av. Road Segment: s/o Simpson Rd.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		25 mph								
Near/Far Lane Distance:		36 feet								
Site Data					Vehicle Mix					
Barrier Height:		0.0 feet			Autos:		77.5%	12.9%	9.6%	97.42%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Barrier:		47.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Observer:		47.0 feet			Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet			Autos:		0.000			
Observer Height (Above Pad):		5.0 feet			Medium Trucks:		2.297			
Pad Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment: 0.0	
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Grade:		0.0%			Autos:		43.704			
Left View:		-90.0 degrees			Medium Trucks:		43.501			
Right View:		90.0 degrees			Heavy Trucks:		43.521			
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	58.73	-19.40	0.77	-1.20	-4.63	0.000	0.000			
Medium Trucks:	70.80	-36.64	0.80	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	77.97	-40.59	0.80	-1.20	-5.46	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	38.9	37.0	35.2	29.2	37.8	38.4				
Medium Trucks:	33.8	32.3	25.9	24.3	32.8	33.0				
Heavy Trucks:	37.0	35.6	26.5	27.8	36.1	36.3				
Vehicle Noise:	41.8	40.1	36.2	32.3	40.8	41.2				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:	1	1	2	5						
CNEL:	1	1	3	6						

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Warren Rd. Road Segment: s/o Esplanade Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 14,200 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,420 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 55 mph									
Near/Far Lane Distance: 84 feet									
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet					VehicleType	Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm): 0.0					Autos: 77.5% 12.9% 9.6% 97.42%				
Centerline Dist. to Barrier: 70.0 feet					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Centerline Dist. to Observer: 70.0 feet					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Barrier Distance to Observer: 0.0 feet									
Observer Height (Above Pad): 5.0 feet									
Pad Elevation: 0.0 feet									
Road Elevation: 0.0 feet									
Road Grade: 0.0%									
Left View: -90.0 degrees									
Right View: 90.0 degrees									
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223				
					Medium Trucks: 56.065				
					Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	-1.30	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	82.40	-18.54	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	86.40	-22.49	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.4	66.5	64.7	58.7	67.3	67.9			
Medium Trucks:	61.8	60.3	53.9	52.4	60.9	61.1			
Heavy Trucks:	61.9	60.4	51.4	52.6	61.0	61.1			
Vehicle Noise:	70.0	68.2	65.3	60.4	69.0	69.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			60	129	277	597			
CNEL:			64	138	298	642			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Warren Rd. Road Segment: n/o Devonshire Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 14,200 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,420 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 55 mph									
Near/Far Lane Distance: 84 feet					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223				
					Medium Trucks: 56.065				
Heavy Trucks: 56.081									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	-1.30	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	82.40	-18.54	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	86.40	-22.49	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.4	66.5	64.7	58.7	67.3	67.9			
Medium Trucks:	61.8	60.3	53.9	52.4	60.9	61.1			
Heavy Trucks:	61.9	60.4	51.4	52.6	61.0	61.1			
Vehicle Noise:	70.0	68.2	65.3	60.4	69.0	69.4			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				60	129	277	597		
CNEL:				64	138	298	642		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Warren Rd. Road Segment: n/o Tres Cerritos Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 14,200 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,420 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	-1.30	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	82.40	-18.54	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	86.40	-22.49	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.4	66.5	64.7	58.7	67.3	67.9			
Medium Trucks:	61.8	60.3	53.9	52.4	60.9	61.1			
Heavy Trucks:	61.9	60.4	51.4	52.6	61.0	61.1			
Vehicle Noise:	70.0	68.2	65.3	60.4	69.0	69.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			60	129	277	597			
CNEL:			64	138	298	642			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Warren Rd. Road Segment: n/o Florida Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 10,700 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,070 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	-2.53	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	82.40	-19.77	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	86.40	-23.72	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.2	65.3	63.5	57.5	66.1	66.7			
Medium Trucks:	60.6	59.1	52.7	51.2	59.6	59.9			
Heavy Trucks:	60.6	59.2	50.2	51.4	59.8	59.9			
Vehicle Noise:	68.8	67.0	64.0	59.2	67.7	68.2			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				49	106	229	494		
CNEL:				53	115	247	531		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Warren Rd. Road Segment: s/o Florida Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 17,700 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,770 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 55 mph									
Near/Far Lane Distance: 84 feet					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: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223				
					Medium Trucks: 56.065				
					Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	-0.34	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	82.40	-17.58	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	86.40	-21.54	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	69.4	67.5	65.7	59.7	68.3	68.9			
Medium Trucks:	62.8	61.3	54.9	53.4	61.8	62.1			
Heavy Trucks:	62.8	61.4	52.4	53.6	62.0	62.1			
Vehicle Noise:	71.0	69.2	66.2	61.4	69.9	70.4			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				69	149	321	691		
CNEL:				74	160	345	743		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Warren Rd. Road Segment: n/o Whittier Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 16,200 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,620 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 55 mph					Vehicle Mix				
Near/Far Lane Distance: 84 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height: 0.0 feet					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Barrier: 70.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 70.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 56.223				
Road Grade: 0.0%					Medium Trucks: 56.065				
Left View: -90.0 degrees					Heavy Trucks: 56.081				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	-0.73	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	82.40	-17.97	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	86.40	-21.92	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	69.0	67.1	65.3	59.3	67.9	68.5			
Medium Trucks:	62.4	60.9	54.5	53.0	61.4	61.7			
Heavy Trucks:	62.4	61.0	52.0	53.2	61.6	61.7			
Vehicle Noise:	70.6	68.8	65.8	61.0	69.5	70.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:	65	140	302	651					
CNEL:	70	151	325	701					

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Warren Rd. Road Segment: s/o Whittier Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 16,000 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,600 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 55 mph									
Near/Far Lane Distance: 84 feet					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%				
					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223				
					Medium Trucks: 56.065				
					Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	-0.78	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	82.40	-18.02	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	86.40	-21.98	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.9	67.0	65.3	59.2	67.8	68.4			
Medium Trucks:	62.3	60.8	54.5	52.9	61.4	61.6			
Heavy Trucks:	62.4	60.9	51.9	53.2	61.5	61.6			
Vehicle Noise:	70.5	68.8	65.8	60.9	69.5	70.0			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				65	139	300	646		
CNEL:				69	150	323	695		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Warren Rd. Road Segment: s/o Stetson Av. (N.)					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 12,700 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,270 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	-0.91	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	79.45	-18.15	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	84.25	-22.11	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	65.5	63.6	61.8	55.8	64.4	65.0			
Medium Trucks:	59.2	57.7	51.4	49.8	58.3	58.5			
Heavy Trucks:	60.1	58.7	49.6	50.9	59.2	59.4			
Vehicle Noise:	67.3	65.6	62.4	57.7	66.3	66.7			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			40	85	184	396			
CNEL:			42	92	197	425			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2019 Without Project Road Name: Sanderson Av. Road Segment: n/o Stetson Av.				Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 26,900 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,690 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 50 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data				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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
				Lane Equivalent Distance (in feet)				
				Autos: 48.125 Medium Trucks: 47.941 Heavy Trucks: 47.959				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	68.46	2.35	0.15	-1.20	-4.67	0.000	0.000	
Medium Trucks:	79.45	-14.89	0.17	-1.20	-4.87	0.000	0.000	
Heavy Trucks:	84.25	-18.85	0.17	-1.20	-5.39	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	69.8	67.9	66.1	60.0	68.7	69.3		
Medium Trucks:	63.5	62.0	55.7	54.1	62.6	62.8		
Heavy Trucks:	64.4	63.0	53.9	55.2	63.5	63.6		
Vehicle Noise:	71.6	69.9	66.7	62.0	70.6	71.0		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			59	127	273	589		
CNEL:			63	136	293	632		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Florida Av. Road Segment: w/o Winchester Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 23,700 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,370 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 78 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 76.0 feet Centerline Dist. to Observer: 76.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 65.422 Medium Trucks: 65.286 Heavy Trucks: 65.300				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	1.34	-1.85	-1.20	-4.73	0.000	0.000		
Medium Trucks:	81.00	-15.90	-1.84	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-19.86	-1.84	-1.20	-5.25	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.5	66.6	64.8	58.8	67.4	68.0			
Medium Trucks:	62.1	60.6	54.2	52.6	61.1	61.3			
Heavy Trucks:	62.5	61.1	52.0	53.3	61.6	61.8			
Vehicle Noise:	70.2	68.4	65.4	60.6	69.2	69.6			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			67	144	310	667			
CNEL:			72	154	333	717			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2019 Without Project Road Name: Florida Av. Road Segment: e/o Warren Rd.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 24,800 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,480 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0					
					Lane Equivalent Distance (in feet)					
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081					
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	1.54	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-15.70	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-19.66	-0.85	-1.20	-5.28	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	69.7	67.8	66.0	60.0	68.6	69.2				
Medium Trucks:	63.2	61.7	55.4	53.8	62.3	62.5				
Heavy Trucks:	63.7	62.2	53.2	54.5	62.8	62.9				
Vehicle Noise:	71.4	69.6	66.6	61.8	70.3	70.8				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				74	159	342	737			
CNEL:				79	171	368	792			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Florida Av. Road Segment: e/o Myers St.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 22,200 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,220 vehicles Vehicle Speed: 35 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	64.30	2.60	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	75.75	-14.63	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	81.57	-18.59	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	64.8	62.9	61.2	55.1	63.7			64.3	
Medium Trucks:	59.1	57.6	51.2	49.7	58.1			58.3	
Heavy Trucks:	60.9	59.5	50.5	51.7	60.1			60.2	
Vehicle Noise:	67.1	65.4	61.9	57.5	66.1			66.5	
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			38	82	177	382			
CNEL:			41	88	189	408			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2019 Without Project Road Name: Stowe Rd. Road Segment: w/o California Av.				Project Name: Rancho Diamante Job Number: 9792			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		2,700 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		270 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		40 mph					
Near/Far Lane Distance:		36 feet					
Site Data				Vehicle Mix			
Barrier Height:		0.0 feet		Autos:		77.5% 12.9% 9.6% 97.42%	
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		84.8% 4.9% 10.3% 1.84%	
Centerline Dist. to Barrier:		47.0 feet		Heavy Trucks:		86.5% 2.7% 10.8% 0.74%	
Centerline Dist. to Observer:		47.0 feet					
Barrier Distance to Observer:		0.0 feet					
Observer Height (Above Pad):		5.0 feet					
Pad Elevation:		0.0 feet					
Road Elevation:		0.0 feet					
Road Grade:		0.0%					
Left View:		-90.0 degrees					
Right View:		90.0 degrees					
				Noise Source Elevations (in feet)			
				Autos:		0.000	
				Medium Trucks:		2.297	
				Heavy Trucks:		8.006	
				Grade Adjustment: 0.0			
				Lane Equivalent Distance (in feet)			
				Autos:		43.704	
				Medium Trucks:		43.501	
				Heavy Trucks:		43.521	
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-7.13	0.77	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-24.36	0.80	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-28.32	0.80	-1.20	-5.46	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	59.0	57.1	55.3	49.2	57.9	58.5	
Medium Trucks:	53.0	51.4	45.1	43.5	52.0	52.2	
Heavy Trucks:	54.3	52.9	43.8	45.1	53.4	53.5	
Vehicle Noise:	61.0	59.2	56.0	51.4	60.0	60.4	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			10	22	47	101	
CNEL:			11	23	50	108	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2019 Without Project Road Name: Grand Av. Road Segment: e/o Patterson Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		40 mph								
Near/Far Lane Distance:		84 feet			Vehicle Mix					
Site Data										
Barrier Height:		0.0 feet			VehicleType		Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm):		0.0			Autos:		77.5%	12.9%	9.6%	97.42%
Centerline Dist. to Barrier:		70.0 feet			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Observer:		70.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Barrier Distance to Observer:		0.0 feet			Noise Source Elevations (in feet)					
Observer Height (Above Pad):		5.0 feet			Autos:		0.000			
Pad Elevation:		0.0 feet			Medium Trucks:		2.297			
Road Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment: 0.0	
Road Grade:		0.0%			Lane Equivalent Distance (in feet)					
Left View:		-90.0 degrees			Autos:		56.223			
Right View:		90.0 degrees			Medium Trucks:		56.065			
					Heavy Trucks:		56.081			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	-21.44	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	77.72	-38.68	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	82.99	-42.63	-0.85	-1.20	-5.28	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:	43.0	41.1	39.3	33.3	41.9	42.5				
Medium Trucks:	37.0	35.5	29.1	27.6	36.0	36.3				
Heavy Trucks:	38.3	36.9	27.9	29.1	37.5	37.6				
Vehicle Noise:	45.0	43.3	40.0	35.5	44.0	44.4				
Centerline Distance to Noise Contour (in feet)										
					70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:					1	3	6	13		
CNEL:					1	3	6	14		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL													
Scenario: Year 2019 Without Project Road Name: Grand Av. Road Segment: w/o Calvert Av.					Project Name: Rancho Diamante Job Number: 9792								
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS								
Highway Data					Site Conditions (Hard = 10, Soft = 15)								
Average Daily Traffic (Adt):		100 vehicles			Autos:		15						
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15						
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15						
Vehicle Speed:		40 mph			Vehicle Mix								
Near/Far Lane Distance:		84 feet											
Site Data					VehicleType					Day	Evening	Night	Daily
Barrier Height:		0.0 feet			Autos:		77.5%	12.9%	9.6%	97.42%			
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%	4.9%	10.3%	1.84%			
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%			
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)								
Barrier Distance to Observer:		0.0 feet											
Observer Height (Above Pad):		5.0 feet			Autos:		0.000						
Pad Elevation:		0.0 feet			Medium Trucks:		2.297						
Road Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment: 0.0				
Road Grade:		0.0%			Lane Equivalent Distance (in feet)								
Left View:		-90.0 degrees											
Right View:		90.0 degrees			Autos:		56.223						
FHWA Noise Model Calculations					Medium Trucks:		56.065						
					Heavy Trucks:		56.081						
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten						
Autos:	66.51	-21.44	-0.87	-1.20	-4.72	0.000	0.000						
Medium Trucks:	77.72	-38.68	-0.85	-1.20	-4.88	0.000	0.000						
Heavy Trucks:	82.99	-42.63	-0.85	-1.20	-5.28	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:	43.0	41.1	39.3	33.3	41.9	42.5							
Medium Trucks:	37.0	35.5	29.1	27.6	36.0	36.3							
Heavy Trucks:	38.3	36.9	27.9	29.1	37.5	37.6							
Vehicle Noise:	45.0	43.3	40.0	35.5	44.0	44.4							
Centerline Distance to Noise Contour (in feet)													
				70 dBA	65 dBA	60 dBA	55 dBA						
Ldn:				1	3	6	13						
CNEL:				1	3	6	14						

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Grand Av. Road Segment: e/o Calvert Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		100 vehicles			Autos: 15				
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15				
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles): 15				
Vehicle Speed:		40 mph							
Near/Far Lane Distance:		84 feet							
Site Data					Vehicle Mix				
Barrier Height:		0.0 feet			VehicleType	Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm):		0.0			Autos: 77.5% 12.9% 9.6% 97.42%				
Centerline Dist. to Barrier:		70.0 feet			Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Centerline Dist. to Observer:		70.0 feet			Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Barrier Distance to Observer:		0.0 feet			Noise Source Elevations (in feet)				
Observer Height (Above Pad):		5.0 feet			Autos: 0.000				
Pad Elevation:		0.0 feet			Medium Trucks: 2.297				
Road Elevation:		0.0 feet			Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Road Grade:		0.0%			Lane Equivalent Distance (in feet)				
Left View:		-90.0 degrees			Autos: 56.223				
Right View:		90.0 degrees			Medium Trucks: 56.065				
					Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-21.44	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	77.72	-38.68	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	82.99	-42.63	-0.85	-1.20	-5.28	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:	43.0	41.1	39.3	33.3	41.9	42.5			
Medium Trucks:	37.0	35.5	29.1	27.6	36.0	36.3			
Heavy Trucks:	38.3	36.9	27.9	29.1	37.5	37.6			
Vehicle Noise:	45.0	43.3	40.0	35.5	44.0	44.4			
Centerline Distance to Noise Contour (in feet)									
					70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:					1	3	6	13	
CNEL:					1	3	6	14	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2019 Without Project Road Name: Stetson Av. (S.) Road Segment: e/o SR-79 SB Ramps				Project Name: Rancho Diamante Job Number: 9792			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		100 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		10 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		50 mph		Vehicle Mix			
Near/Far Lane Distance:		84 feet					
Site Data				VehicleType			
Barrier Height:		0.0 feet		Autos:		77.5% 12.9% 9.6% 97.42%	
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		84.8% 4.9% 10.3% 1.84%	
Centerline Dist. to Barrier:		70.0 feet		Heavy Trucks:		86.5% 2.7% 10.8% 0.74%	
Centerline Dist. to Observer:		70.0 feet		Noise Source Elevations (in feet)			
Barrier Distance to Observer:		0.0 feet					
Observer Height (Above Pad):		5.0 feet		Autos:		0.000	
Pad Elevation:		0.0 feet		Medium Trucks:		2.297	
Road Elevation:		0.0 feet		Heavy Trucks:		8.006 Grade Adjustment: 0.0	
Road Grade:		0.0%		Lane Equivalent Distance (in feet)			
Left View:		-90.0 degrees					
Right View:		90.0 degrees		Autos:		56.223	
				Medium Trucks:		56.065	
				Heavy Trucks:		56.081	
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	2	4	9	19
CNEL:	2	4	9	20

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL												
Scenario: Year 2019 Without Project Road Name: Stetson Av. (S.) Road Segment: e/o SR-79 NB Ramps					Project Name: Rancho Diamante Job Number: 9792							
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS							
Highway Data					Site Conditions (Hard = 10, Soft = 15)							
Average Daily Traffic (Adt):		100 vehicles			Autos: 15							
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15							
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles): 15							
Vehicle Speed:		50 mph			Vehicle Mix							
Near/Far Lane Distance:		84 feet										
Site Data					Vehicle Type							
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000							
					Medium Trucks: 2.297							
					Heavy Trucks: 8.006		Grade Adjustment: 0.0					
					Lane Equivalent Distance (in feet)							
					Autos: 56.223							
					Medium Trucks: 56.065							
					Heavy Trucks: 56.081							
FHWA Noise Model Calculations												
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten					
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000					
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000					
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	2	4	9	19
CNEL:	2	4	9	20

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2019 Without Project Road Name: Stetson Av. (S.) Road Segment: w/o California Av.				Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		100 vehicles		Autos:		15		
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15		
Peak Hour Volume:		10 vehicles		Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		50 mph		Vehicle Mix				
Near/Far Lane Distance:		84 feet		VehicleType	Day	Evening	Night	Daily
Site Data				Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height:		0.0 feet		Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Barrier:		70.0 feet		Noise Source Elevations (in feet)				
Centerline Dist. to Observer:		70.0 feet		Autos:		0.000		
Barrier Distance to Observer:		0.0 feet		Medium Trucks:		2.297		
Observer Height (Above Pad):		5.0 feet		Heavy Trucks:		8.006		
Pad Elevation:		0.0 feet		Grade Adjustment: 0.0				
Road Elevation:		0.0 feet		Lane Equivalent Distance (in feet)				
Road Grade:		0.0%		Autos:		56.223		
Left View:		-90.0 degrees		Medium Trucks:		56.065		
Right View:		90.0 degrees		Heavy Trucks:		56.081		
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000	
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	2	4	9	19
CNEL:	2	4	9	20

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2019 Without Project Road Name: Stetson Av. (S.) Road Segment: e/o California Av.				Project Name: Rancho Diamante Job Number: 9792			
SITE SPECIFIC INPUT DATA			NOISE MODEL INPUTS				
Highway Data			Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 100 vehicles			Autos: 15				
Peak Hour Percentage: 10%			Medium Trucks (2 Axles): 15				
Peak Hour Volume: 10 vehicles			Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph							
Near/Far Lane Distance: 84 feet			Vehicle Mix				
			Vehicle Type	Day	Evening	Night	Daily
Site Data			Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height: 0.0 feet			Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Barrier Type (0-Wall, 1-Berm): 0.0			Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Barrier: 70.0 feet			Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 70.0 feet			Autos: 0.000				
Barrier Distance to Observer: 0.0 feet			Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet			Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet			Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet			Autos: 56.223				
Road Grade: 0.0%			Medium Trucks: 56.065				
Left View: -90.0 degrees			Heavy Trucks: 56.081				
Right View: 90.0 degrees							
FHWA Noise Model Calculations							
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	2	4	9	19
CNEL:	2	4	9	20

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2019 Without Project Road Name: Stetson Av. (S.) Road Segment: e/o Mustang Wy.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 1,800 vehicles					Autos: 15					
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15					
Peak Hour Volume: 180 vehicles					Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph										
Near/Far Lane Distance: 84 feet					Vehicle Mix					
Site Data					Vehicle Type		Day	Evening	Night	Daily
					Autos:		77.5%	12.9%	9.6%	97.42%
					Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Barrier Height: 0.0 feet					Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Barrier Type (0-Wall, 1-Berm): 0.0					Noise Source Elevations (in feet)					
Centerline Dist. to Barrier: 70.0 feet					Autos:		0.000			
Centerline Dist. to Observer: 70.0 feet					Medium Trucks:		2.297			
Barrier Distance to Observer: 0.0 feet					Heavy Trucks:		8.006		Grade Adjustment: 0.0	
Observer Height (Above Pad): 5.0 feet					Lane Equivalent Distance (in feet)					
Pad Elevation: 0.0 feet					Autos:		56.223			
Road Elevation: 0.0 feet					Medium Trucks:		56.065			
Road Grade: 0.0%					Heavy Trucks:		56.081			
Left View: -90.0 degrees										
Right View: 90.0 degrees										
FHWA Noise Model Calculations										
Vehicle Type	REML	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-9.86	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-27.09	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-31.05	-0.85	-1.20	-5.28	0.000	0.000			

Unmitigated Noise Levels (without Topo and barrier attenuation)						
Vehicle Type	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:	51.9	50.3	44.0	42.4	50.9	51.1
Heavy Trucks:	52.3	50.9	41.8	43.1	51.4	51.6
Vehicle Noise:	60.0	58.2	55.2	50.4	58.9	59.4

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	13	28	60	128
CNEL:	14	30	64	138

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL												
Scenario: Year 2019 Without Project Road Name: Stetson Av. (S.) Road Segment: e/o Warren Rd.					Project Name: Rancho Diamante Job Number: 9792							
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS							
Highway Data					Site Conditions (Hard = 10, Soft = 15)							
Average Daily Traffic (Adt):		100 vehicles			Autos:		15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15					
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15					
Vehicle Speed:		50 mph			Vehicle Mix							
Near/Far Lane Distance:		84 feet										
Site Data					Vehicle Type							
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%		9.6%	
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%		10.3%	
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%		2.7%		10.8%	
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)							
Barrier Distance to Observer:		0.0 feet										
Observer Height (Above Pad):		5.0 feet			Autos:		0.000		Medium Trucks:		2.297	
Pad Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment:		0.0	
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)							
Road Grade:		0.0%										
Left View:		-90.0 degrees			Autos:		56.223		Medium Trucks:		56.065	
Right View:		90.0 degrees			Heavy Trucks:		56.081		Medium Trucks:		56.065	
					Heavy Trucks:		56.081					
FHWA Noise Model Calculations												
Vehicle Type		REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten				
Autos:		70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000				
Medium Trucks:		81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000				
Heavy Trucks:		85.38	-43.60	-0.85	-1.20	-5.28	0.000	0.000				

Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	45.7	43.8	42.1	36.0	44.6	45.25
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.65
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.05
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.95

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	2	4	9	19
CNEL:	2	4	9	20

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2019 Without Project Road Name: Stetson Av. (S.) Road Segment: e/o Fisher St.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		50 mph			Vehicle Mix					
Near/Far Lane Distance:		84 feet								
Site Data					VehicleType	Day	Evening	Night	Daily	
Barrier Height:		0.0 feet			Autos:		77.5%	12.9%	9.6%	97.42%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet								
Observer Height (Above Pad):		5.0 feet			Autos:		0.000			
Pad Elevation:		0.0 feet			Medium Trucks:		2.297			
Road Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment: 0.0	
Road Grade:		0.0%			Lane Equivalent Distance (in feet)					
Left View:		-90.0 degrees								
Right View:		90.0 degrees			Autos:		56.223			
FHWA Noise Model Calculations					Medium Trucks:		56.065			
					Heavy Trucks:		56.081			
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:		70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:		81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:		85.38	-43.60	-0.85	-1.20	-5.28	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:		45.7	43.8	42.1	36.0	44.6	45.2			
Medium Trucks:		39.3	37.8	31.4	29.9	38.4	38.6			
Heavy Trucks:		39.7	38.3	29.3	30.5	38.9	39.0			
Vehicle Noise:		47.4	45.7	42.6	37.8	46.4	46.9			
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				2	4	9	19			
CNEL:				2	4	9	20			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Stetson Av. Road Segment: e/o New Stetson Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 9,500 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 950 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-2.63	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-19.87	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-23.83	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	65.5	63.6	61.8	55.8	64.4	65.0			
Medium Trucks:	59.1	57.6	51.2	49.7	58.1	58.4			
Heavy Trucks:	59.5	58.1	49.0	50.3	58.6	58.8			
Vehicle Noise:	67.2	65.5	62.4	57.6	66.2	66.6			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				39	84	181	389		
CNEL:				42	90	194	418		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2019 Without Project Road Name: Stetson Av. Road Segment: e/o Cawston Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 12,200 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,220 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0					
					Lane Equivalent Distance (in feet)					
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081					
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-1.54	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-18.78	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-22.74	-0.85	-1.20	-5.28	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	66.6	64.7	62.9	56.9	65.5	66.1				
Medium Trucks:	60.2	58.7	52.3	50.8	59.2	59.4				
Heavy Trucks:	60.6	59.2	50.1	51.4	59.7	59.9				
Vehicle Noise:	68.3	66.5	63.5	58.7	67.3	67.7				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				46	99	213	460			
CNEL:				49	106	229	494			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Stetson Av. Road Segment: e/o Sanderson Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 33,200 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,320 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	3.26	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	79.45	-13.98	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	84.25	-17.93	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	69.7	67.8	66.0	59.9	68.6	69.2			
Medium Trucks:	63.4	61.9	55.6	54.0	62.5	62.7			
Heavy Trucks:	64.3	62.8	53.8	55.1	63.4	63.5			
Vehicle Noise:	71.5	69.8	66.6	61.9	70.5	70.9			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				75	162	349	752		
CNEL:				81	174	374	807		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2019 Without Project Road Name: 9th St. Road Segment: w/o Winchester Rd.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		500 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		50 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		25 mph								
Near/Far Lane Distance:		84 feet								
Site Data					Vehicle Mix					
Barrier Height:		0.0 feet			VehicleType		Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm):		0.0			Autos:		77.5%	12.9%	9.6%	97.42%
Centerline Dist. to Barrier:		70.0 feet			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Observer:		70.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Barrier Distance to Observer:		0.0 feet								
Observer Height (Above Pad):		5.0 feet								
Pad Elevation:		0.0 feet								
Road Elevation:		0.0 feet								
Road Grade:		0.0%								
Left View:		-90.0 degrees								
Right View:		90.0 degrees								
					Noise Source Elevations (in feet)					
					Autos:		0.000			
					Medium Trucks:		2.297			
					Heavy Trucks:		8.006		Grade Adjustment: 0.0	
					Lane Equivalent Distance (in feet)					
					Autos:		56.223			
					Medium Trucks:		56.065			
					Heavy Trucks:		56.081			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	58.73	-12.41	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	70.80	-29.65	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	77.97	-33.60	-0.85	-1.20	-5.28	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:	44.3	42.4	40.6	34.5	43.2	43.8				
Medium Trucks:	39.1	37.6	31.2	29.7	38.1	38.4				
Heavy Trucks:	42.3	40.9	31.9	33.1	41.5	41.6				
Vehicle Noise:	47.1	45.5	41.6	37.6	46.2	46.5				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				2	4	8	18			
CNEL:				2	4	9	19			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2019 Without Project Road Name: 9th St. Road Segment: e/o Winchester Rd.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		400 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		40 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		25 mph								
Near/Far Lane Distance:		84 feet								
Site Data					Vehicle Mix					
Barrier Height:		0.0 feet			Autos:		77.5%	12.9%	9.6%	97.42%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Observer:		70.0 feet								
Barrier Distance to Observer:		0.0 feet			Noise Source Elevations (in feet)					
Observer Height (Above Pad):		5.0 feet			Autos:		0.000			
Pad Elevation:		0.0 feet			Medium Trucks:		2.297			
Road Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment: 0.0	
Road Grade:		0.0%			Lane Equivalent Distance (in feet)					
Left View:		-90.0 degrees			Autos:		56.223			
Right View:		90.0 degrees			Medium Trucks:		56.065			
					Heavy Trucks:		56.081			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	58.73	-13.38	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	70.80	-30.62	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	77.97	-34.57	-0.85	-1.20	-5.28	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:	43.3	41.4	39.6	33.6	42.2	42.8				
Medium Trucks:	38.1	36.6	30.3	28.7	37.2	37.4				
Heavy Trucks:	41.3	39.9	30.9	32.1	40.5	40.6				
Vehicle Noise:	46.2	44.5	40.6	36.7	45.2	45.6				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				2	3	7	16			
CNEL:				2	4	8	16			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2019 With Project Road Name: Winchester Rd. Road Segment: s/o Florida Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 16,200 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,620 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0					
					Lane Equivalent Distance (in feet)					
					Autos: 43.704 Medium Trucks: 43.501 Heavy Trucks: 43.521					
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	71.78	-0.73	0.77	-1.20	-4.63	0.000	0.000			
Medium Trucks:	82.40	-17.97	0.80	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	86.40	-21.92	0.80	-1.20	-5.46	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	70.6	68.7	67.0	60.9	69.5	70.1				
Medium Trucks:	64.0	62.5	56.2	54.6	63.1	63.3				
Heavy Trucks:	64.1	62.7	53.6	54.9	63.2	63.3				
Vehicle Noise:	72.2	70.5	67.5	62.6	71.2	71.7				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				56	121	261	563			
CNEL:				61	130	281	606			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 With Project Road Name: Winchester Rd. Road Segment: n/o 9th St.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 18,100 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,810 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 43.704 Medium Trucks: 43.501 Heavy Trucks: 43.521				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	0.63	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	79.45	-16.61	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-20.57	0.80	-1.20	-5.46	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.7	66.8	65.0	58.9	67.6	68.2			
Medium Trucks:	62.4	60.9	54.6	53.0	61.5	61.7			
Heavy Trucks:	63.3	61.9	52.8	54.1	62.4	62.6			
Vehicle Noise:	70.5	68.8	65.6	60.9	69.5	69.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			43	93	201	434			
CNEL:			47	100	216	465			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL													
Scenario: Year 2019 With Project Road Name: Patterson Av. Road Segment: s/o Grand Av.					Project Name: Rancho Diamante Job Number: 9792								
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS								
Highway Data					Site Conditions (Hard = 10, Soft = 15)								
Average Daily Traffic (Adt):		100 vehicles			Autos:		15						
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15						
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15						
Vehicle Speed:		40 mph			Vehicle Mix								
Near/Far Lane Distance:		12 feet											
Site Data					VehicleType					Day	Evening	Night	Daily
Barrier Height:		0.0 feet			Autos:		77.5%	12.9%	9.6%	97.42%			
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%	4.9%	10.3%	1.84%			
Centerline Dist. to Barrier:		22.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%			
Centerline Dist. to Observer:		22.0 feet			Noise Source Elevations (in feet)								
Barrier Distance to Observer:		0.0 feet											
Observer Height (Above Pad):		5.0 feet			Autos:		0.000						
Pad Elevation:		0.0 feet			Medium Trucks:		2.297						
Road Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment: 0.0				
Road Grade:		0.0%			Lane Equivalent Distance (in feet)								
Left View:		-90.0 degrees											
Right View:		90.0 degrees			Autos:		21.749						
FHWA Noise Model Calculations					Medium Trucks:		21.338						
					Heavy Trucks:		21.378						
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten						
Autos:		66.51	-21.44	5.32	-1.20	-4.34	0.000	0.000					
Medium Trucks:		77.72	-38.68	5.44	-1.20	-4.85	0.000	0.000					
Heavy Trucks:		82.99	-42.63	5.43	-1.20	-6.07	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:		49.2	47.3	45.5	39.5	48.1	48.7						
Medium Trucks:		43.3	41.8	35.4	33.9	42.3	42.6						
Heavy Trucks:		44.6	43.2	34.1	35.4	43.7	43.9						
Vehicle Noise:		51.2	49.5	46.2	41.7	50.2	50.7						
Centerline Distance to Noise Contour (in feet)													
				70 dBA	65 dBA	60 dBA	55 dBA						
Ldn:				1	2	5	11						
CNEL:				1	2	5	11						

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 With Project Road Name: California Av. Road Segment: n/o Stowe Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 4,100 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 410 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph					Vehicle Mix				
Near/Far Lane Distance: 36 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height: 0.0 feet					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Barrier: 47.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 47.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 43.704				
Road Grade: 0.0%					Medium Trucks: 43.501				
Left View: -90.0 degrees					Heavy Trucks: 43.521				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-5.31	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	77.72	-22.55	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-26.51	0.80	-1.20	-5.46	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:	54.8	53.3	46.9	45.4	53.8		54.0		
Heavy Trucks:	56.1	54.7	45.6	46.9	55.2		55.4		
Vehicle Noise:	62.8	61.1	57.8	53.2	61.8		62.2		
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			13	29	62	133			
CNEL:			14	31	66	142			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 With Project Road Name: California Av. Road Segment: s/o Stowe Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		400 vehicles			Autos: 15				
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15				
Peak Hour Volume:		40 vehicles			Heavy Trucks (3+ Axles): 15				
Vehicle Speed:		40 mph							
Near/Far Lane Distance:		36 feet							
Site Data					Vehicle Mix				
Barrier Height:		0.0 feet			VehicleType	Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm):		0.0			Autos: 77.5% 12.9% 9.6% 97.42%				
Centerline Dist. to Barrier:		47.0 feet			Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Centerline Dist. to Observer:		47.0 feet			Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Barrier Distance to Observer:		0.0 feet							
Observer Height (Above Pad):		5.0 feet							
Pad Elevation:		0.0 feet							
Road Elevation:		0.0 feet							
Road Grade:		0.0%							
Left View:		-90.0 degrees							
Right View:		90.0 degrees							
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 43.704				
					Medium Trucks: 43.501				
					Heavy Trucks: 43.521				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-15.42	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	77.72	-32.66	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-36.61	0.80	-1.20	-5.46	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	47.0	40.9	49.6		50.2		
Medium Trucks:	44.7	43.2	36.8	35.2	43.7		43.9		
Heavy Trucks:	46.0	44.6	35.5	36.8	45.1		45.3		
Vehicle Noise:	52.7	51.0	47.7	43.1	51.7		52.1		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				3	6	13	28		
CNEL:				3	6	14	30		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 With Project Road Name: California Av. Road Segment: s/o Stetson Av. (S.)					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 200 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 20 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					Vehicle Type	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)				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 43.704 Medium Trucks: 43.501 Heavy Trucks: 43.521				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-18.43	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	77.72	-35.67	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-39.62	0.80	-1.20	-5.46	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	47.7	45.8	44.0	37.9	46.6	47.2			
Medium Trucks:	41.7	40.1	33.8	32.2	40.7	40.9			
Heavy Trucks:	43.0	41.5	32.5	33.8	42.1	42.2			
Vehicle Noise:	49.7	47.9	44.7	40.1	48.7	49.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			2	4	8	18			
CNEL:			2	4	9	19			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2019 With Project Road Name: California Av. Road Segment: n/o Simpson Rd.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		200 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		20 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		25 mph								
Near/Far Lane Distance:		36 feet			Vehicle Mix					
Site Data					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)					
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Autos:		0.000			
					Medium Trucks:		2.297			
					Heavy Trucks:		8.006 Grade Adjustment: 0.0			
					Lane Equivalent Distance (in feet)					
					Autos: 43.704					
					Medium Trucks:		43.501			
					Heavy Trucks:		43.521			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	58.73	-16.39	0.77	-1.20	-4.63	0.000	0.000			
Medium Trucks:	70.80	-33.63	0.80	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	77.97	-37.58	0.80	-1.20	-5.46	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:	41.9	40.0	38.3	32.2	40.8	41.4				
Medium Trucks:	36.8	35.3	28.9	27.4	35.8	36.1				
Heavy Trucks:	40.0	38.6	29.5	30.8	39.1	39.3				
Vehicle Noise:	44.8	43.1	39.2	35.3	43.8	44.2				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				1	2	4	8			
CNEL:				1	2	4	9			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 With Project Road Name: California Av. Road Segment: s/o Simpson Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		100 vehicles			Autos: 15				
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15				
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles): 15				
Vehicle Speed:		25 mph							
Near/Far Lane Distance:		36 feet							
Site Data					Vehicle Mix				
Barrier Height:		0.0 feet			VehicleType	Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm):		0.0			Autos: 77.5% 12.9% 9.6% 97.42%				
Centerline Dist. to Barrier:		47.0 feet			Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Centerline Dist. to Observer:		47.0 feet			Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Barrier Distance to Observer:		0.0 feet			Noise Source Elevations (in feet)				
Observer Height (Above Pad):		5.0 feet			Autos: 0.000				
Pad Elevation:		0.0 feet			Medium Trucks: 2.297				
Road Elevation:		0.0 feet			Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Road Grade:		0.0%			Lane Equivalent Distance (in feet)				
Left View:		-90.0 degrees			Autos: 43.704				
Right View:		90.0 degrees			Medium Trucks: 43.501				
					Heavy Trucks: 43.521				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	58.73	-19.40	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	70.80	-36.64	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	77.97	-40.59	0.80	-1.20	-5.46	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:	38.9	37.0	35.2	29.2	37.8	38.4			
Medium Trucks:	33.8	32.3	25.9	24.3	32.8	33.0			
Heavy Trucks:	37.0	35.6	26.5	27.8	36.1	36.3			
Vehicle Noise:	41.8	40.1	36.2	32.3	40.8	41.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:	1	1	2	5					
CNEL:	1	1	3	6					

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 With Project Road Name: Warren Rd. Road Segment: s/o Esplanade Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 22,800 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,280 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					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%				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223				
					Medium Trucks: 56.065				
					Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	0.76	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	82.40	-16.48	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	86.40	-20.44	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.5	68.6	66.8	60.8	69.4	70.0			
Medium Trucks:	63.9	62.4	56.0	54.5	62.9	63.2			
Heavy Trucks:	63.9	62.5	53.5	54.7	63.1	63.2			
Vehicle Noise:	72.1	70.3	67.3	62.5	71.0	71.5			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				82	176	380	818		
CNEL:				88	190	408	880		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2019 With Project Road Name: Warren Rd. Road Segment: n/o Tres Cerritos Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 22,800 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,280 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
					Vehicle Mix					
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0					
					Lane Equivalent Distance (in feet)					
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081					
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	71.78	0.76	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	82.40	-16.48	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	86.40	-20.44	-0.85	-1.20	-5.28	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	70.5	68.6	66.8	60.8	69.4	70.0				
Medium Trucks:	63.9	62.4	56.0	54.5	62.9	63.2				
Heavy Trucks:	63.9	62.5	53.5	54.7	63.1	63.2				
Vehicle Noise:	72.1	70.3	67.3	62.5	71.0	71.5				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			82	176	380	818				
CNEL:			88	190	408	880				

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2019 With Project Road Name: Warren Rd. Road Segment: n/o Devonshire Av.				Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 22,800 vehicles				Autos: 15				
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,280 vehicles				Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 55 mph								
Near/Far Lane Distance: 84 feet								
Site Data				Vehicle Mix				
Barrier Height: 0.0 feet				VehicleType	Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm): 0.0				Autos: 77.5% 12.9% 9.6% 97.42%				
Centerline Dist. to Barrier: 70.0 feet				Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Centerline Dist. to Observer: 70.0 feet				Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Barrier Distance to Observer: 0.0 feet				Noise Source Elevations (in feet)				
Observer Height (Above Pad): 5.0 feet				Autos: 0.000				
Pad Elevation: 0.0 feet				Medium Trucks: 2.297				
Road Elevation: 0.0 feet				Heavy Trucks: 8.006				
Road Grade: 0.0%				Grade Adjustment: 0.0				
Left View: -90.0 degrees				Lane Equivalent Distance (in feet)				
Right View: 90.0 degrees				Autos: 56.223				
				Medium Trucks: 56.065				
				Heavy Trucks: 56.081				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	71.78	0.76	-0.87	-1.20	-4.72	0.000	0.000	
Medium Trucks:	82.40	-16.48	-0.85	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	86.40	-20.44	-0.85	-1.20	-5.28	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	70.5	68.6	66.8	60.8	69.4	70.0		
Medium Trucks:	63.9	62.4	56.0	54.5	62.9	63.2		
Heavy Trucks:	63.9	62.5	53.5	54.7	63.1	63.2		
Vehicle Noise:	72.1	70.3	67.3	62.5	71.0	71.5		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			82	176	380	818		
CNEL:			88	190	408	880		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2019 With Project Road Name: Warren Rd. Road Segment: n/o Florida Av.				Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 19,100 vehicles				Autos: 15				
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,910 vehicles				Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 55 mph								
Near/Far Lane Distance: 84 feet				Vehicle Mix				
				VehicleType	Day	Evening	Night	Daily
Site Data				Autos: 77.5% 12.9% 9.6% 97.42%				
				Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
				Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
				Noise Source Elevations (in feet)				
				Autos: 0.000				
Barrier Height: 0.0 feet				Medium Trucks: 2.297				
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 8.006				
Centerline Dist. to Barrier: 70.0 feet				Grade Adjustment: 0.0				
Centerline Dist. to Observer: 70.0 feet								
Barrier Distance to Observer: 0.0 feet								
Observer Height (Above Pad): 5.0 feet								
Pad Elevation: 0.0 feet								
Road Elevation: 0.0 feet								
Road Grade: 0.0%								
Left View: -90.0 degrees								
Right View: 90.0 degrees								
				Lane Equivalent Distance (in feet)				
				Autos: 56.223				
				Medium Trucks: 56.065				
				Heavy Trucks: 56.081				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	71.78	-0.01	-0.87	-1.20	-4.72	0.000	0.000	
Medium Trucks:	82.40	-17.25	-0.85	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	86.40	-21.21	-0.85	-1.20	-5.28	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	69.7	67.8	66.0	60.0	68.6	69.2		
Medium Trucks:	63.1	61.6	55.2	53.7	62.2	62.4		
Heavy Trucks:	63.1	61.7	52.7	53.9	62.3	62.4		
Vehicle Noise:	71.3	69.5	66.6	61.7	70.2	70.7		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			73	157	337	727		
CNEL:			78	168	363	782		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 With Project Road Name: Warren Rd. Road Segment: s/o Florida Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 24,800 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,480 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					Vehicle Type	Day	Evening	Night	Daily
					Autos: 77.5% 12.9% 9.6% 97.42%				
					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006				
					Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	1.12	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	82.40	-16.12	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	86.40	-20.07	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.8	68.9	67.2	61.1	69.7	70.3			
Medium Trucks:	64.2	62.7	56.4	54.8	63.3	63.5			
Heavy Trucks:	64.3	62.9	53.8	55.1	63.4	63.5			
Vehicle Noise:	72.4	70.7	67.7	62.8	71.4	71.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			87	186	402	865			
CNEL:			93	201	432	931			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 With Project Road Name: Warren Rd. Road Segment: n/o Whittier Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 22,800 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,280 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 55 mph									
Near/Far Lane Distance: 84 feet					Vehicle Mix				
					Vehicle Type	Day	Evening	Night	Daily
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%				
					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
Barrier Height: 0.0 feet					Medium Trucks: 2.297				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 8.006				
Centerline Dist. to Barrier: 70.0 feet					Grade Adjustment: 0.0				
Centerline Dist. to Observer: 70.0 feet									
Barrier Distance to Observer: 0.0 feet									
Observer Height (Above Pad): 5.0 feet									
Pad Elevation: 0.0 feet									
Road Elevation: 0.0 feet									
Road Grade: 0.0%									
Left View: -90.0 degrees									
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	0.76	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	82.40	-16.48	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	86.40	-20.44	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.5	68.6	66.8	60.8	69.4	70.0			
Medium Trucks:	63.9	62.4	56.0	54.5	62.9	63.2			
Heavy Trucks:	63.9	62.5	53.5	54.7	63.1	63.2			
Vehicle Noise:	72.1	70.3	67.3	62.5	71.0	71.5			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				82	176	380	818		
CNEL:				88	190	408	880		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 With Project Road Name: Warren Rd. Road Segment: s/o Simpson Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 14,000 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,400 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph									
Near/Far Lane Distance: 84 feet					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%				
Site Data									
Barrier Height: 0.0 feet									
Barrier Type (0-Wall, 1-Berm): 0.0									
Centerline Dist. to Barrier: 70.0 feet									
Centerline Dist. to Observer: 70.0 feet									
Barrier Distance to Observer: 0.0 feet									
Observer Height (Above Pad): 5.0 feet									
Pad Elevation: 0.0 feet									
Road Elevation: 0.0 feet									
Road Grade: 0.0%									
Left View: -90.0 degrees									
Right View: 90.0 degrees									
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223				
					Medium Trucks: 56.065				
					Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	0.02	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	77.72	-17.22	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	82.99	-21.17	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	64.5	62.6	60.8	54.7	63.4	64.0			
Medium Trucks:	58.4	56.9	50.6	49.0	57.5	57.7			
Heavy Trucks:	59.8	58.3	49.3	50.6	58.9	59.0			
Vehicle Noise:	66.5	64.7	61.5	56.9	65.5	65.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			35	75	162	349			
CNEL:			37	80	173	373			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 With Project Road Name: Sanderson Av. Road Segment: s/o Florida Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 34,400 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,440 vehicles Vehicle Speed: 30 mph Near/Far Lane Distance: 50 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 54.0 feet Centerline Dist. to Observer: 54.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 48.125 Medium Trucks: 47.941 Heavy Trucks: 47.959				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	61.75	5.18	0.15	-1.20	-4.67	0.000	0.000		
Medium Trucks:	73.48	-12.06	0.17	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	79.92	-16.02	0.17	-1.20	-5.39	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	65.9	64.0	62.2	56.2	64.8	65.4			
Medium Trucks:	60.4	58.9	52.5	51.0	59.4	59.7			
Heavy Trucks:	62.9	61.4	52.4	53.7	62.0	62.1			
Vehicle Noise:	68.4	66.7	63.0	58.9	67.4	67.8			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				36	78	168	361		
CNEL:				38	83	179	385		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 With Project Road Name: Sanderson Av. Road Segment: n/o Stetson Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 41,700 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 4,170 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph									
Near/Far Lane Distance: 50 feet									
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet					VehicleType				
Barrier Type (0-Wall, 1-Berm): 0.0					Day				
Centerline Dist. to Barrier: 54.0 feet					Evening				
Centerline Dist. to Observer: 54.0 feet					Night				
Barrier Distance to Observer: 0.0 feet					Daily				
Observer Height (Above Pad): 5.0 feet					Autos: 77.5% 12.9% 9.6% 97.42%				
Pad Elevation: 0.0 feet					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Road Elevation: 0.0 feet					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Road Grade: 0.0%									
Left View: -90.0 degrees					Noise Source Elevations (in feet)				
Right View: 90.0 degrees					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 48.125				
					Medium Trucks: 47.941				
					Heavy Trucks: 47.959				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	4.25	0.15	-1.20	-4.67	0.000	0.000		
Medium Trucks:	79.45	-12.99	0.17	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-16.94	0.17	-1.20	-5.39	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	71.7	69.8	68.0	61.9	70.6	71.2			
Medium Trucks:	65.4	63.9	57.6	56.0	64.5	64.7			
Heavy Trucks:	66.3	64.9	55.8	57.1	65.4	65.6			
Vehicle Noise:	73.5	71.8	68.6	63.9	72.5	72.9			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				79	170	366	789		
CNEL:				85	182	393	846		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2019 With Project Road Name: Florida Av. Road Segment: w/o Winchester Rd.				Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 35,800 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,580 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 78 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data				Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 76.0 feet Centerline Dist. to Observer: 76.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
				Lane Equivalent Distance (in feet)				
Autos: 65.422 Medium Trucks: 65.286 Heavy Trucks: 65.300								
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	70.20	3.13	-1.85	-1.20	-4.73	0.000	0.000	
Medium Trucks:	81.00	-14.11	-1.84	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	85.38	-18.06	-1.84	-1.20	-5.25	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	70.3	68.4	66.6	60.6	69.2	69.8		
Medium Trucks:	63.9	62.3	56.0	54.4	62.9	63.1		
Heavy Trucks:	64.3	62.9	53.8	55.1	63.4	63.5		
Vehicle Noise:	72.0	70.2	67.2	62.4	70.9	71.4		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			88	189	408	879		
CNEL:			94	203	438	944		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2019 With Project Road Name: Grand Av. Road Segment: w/o Calvert Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		40 mph								
Near/Far Lane Distance:		84 feet								
Site Data					Vehicle Mix					
Barrier Height:		0.0 feet			VehicleType		Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm):		0.0			Autos:		77.5%	12.9%	9.6%	97.42%
Centerline Dist. to Barrier:		70.0 feet			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Observer:		70.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Barrier Distance to Observer:		0.0 feet								
Observer Height (Above Pad):		5.0 feet								
Pad Elevation:		0.0 feet								
Road Elevation:		0.0 feet								
Road Grade:		0.0%								
Left View:		-90.0 degrees								
Right View:		90.0 degrees								
					Noise Source Elevations (in feet)					
					Autos:		0.000			
					Medium Trucks:		2.297			
					Heavy Trucks:		8.006		Grade Adjustment: 0.0	
					Lane Equivalent Distance (in feet)					
					Autos:		56.223			
					Medium Trucks:		56.065			
					Heavy Trucks:		56.081			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	-21.44	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	77.72	-38.68	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	82.99	-42.63	-0.85	-1.20	-5.28	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:	43.0	41.1	39.3	33.3	41.9	42.5				
Medium Trucks:	37.0	35.5	29.1	27.6	36.0	36.3				
Heavy Trucks:	38.3	36.9	27.9	29.1	37.5	37.6				
Vehicle Noise:	45.0	43.3	40.0	35.5	44.0	44.4				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			1	3	6	13				
CNEL:			1	3	6	14				

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2019 With Project Road Name: Grand Av. Road Segment: e/o Calvert Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		40 mph			Vehicle Mix					
Near/Far Lane Distance:		84 feet								
Site Data					VehicleType					
Barrier Height:		0.0 feet			Autos:		77.5%	12.9%	9.6%	97.42%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet			Autos:		0.000			
Observer Height (Above Pad):		5.0 feet			Medium Trucks:		2.297			
Pad Elevation:		0.0 feet			Heavy Trucks:		8.006	Grade Adjustment: 0.0		
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Grade:		0.0%			Autos:		56.223			
Left View:		-90.0 degrees			Medium Trucks:		56.065			
Right View:		90.0 degrees			Heavy Trucks:		56.081			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	-21.44	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	77.72	-38.68	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	82.99	-42.63	-0.85	-1.20	-5.28	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:	43.0	41.1	39.3	33.3	41.9	42.5				
Medium Trucks:	37.0	35.5	29.1	27.6	36.0	36.3				
Heavy Trucks:	38.3	36.9	27.9	29.1	37.5	37.6				
Vehicle Noise:	45.0	43.3	40.0	35.5	44.0	44.4				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				1	3	6	13			
CNEL:				1	3	6	14			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 With Project Road Name: Stetson Av. (S.) Road Segment: e/o SR-79 SB Ramps					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		100 vehicles			Autos:		15		
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15		
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		50 mph							
Near/Far Lane Distance:		84 feet							
Site Data					Vehicle Mix				
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%
Centerline Dist. to Barrier:		70.0 feet					10.3%		1.84%
Centerline Dist. to Observer:		70.0 feet			Heavy Trucks:		86.5%		2.7%
Barrier Distance to Observer:		0.0 feet					10.8%		0.74%
Observer Height (Above Pad):		5.0 feet							
Pad Elevation:		0.0 feet							
Road Elevation:		0.0 feet							
Road Grade:		0.0%							
Left View:		-90.0 degrees							
Right View:		90.0 degrees							
					Noise Source Elevations (in feet)				
					Autos:		0.000		
					Medium Trucks:		2.297		
					Heavy Trucks:		8.006		Grade Adjustment: 0.0
					Lane Equivalent Distance (in feet)				
					Autos:		56.223		
					Medium Trucks:		56.065		
					Heavy Trucks:		56.081		
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2			
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6			
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0			
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				2	4	9	19		
CNEL:				2	4	9	20		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2019 With Project Road Name: Stetson Av. (S.) Road Segment: e/o SR-79 NB Ramps					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		50 mph								
Near/Far Lane Distance:		84 feet								
Site Data					Vehicle Mix					
Barrier Height:		0.0 feet			VehicleType		Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm):		0.0			Autos:		77.5%	12.9%	9.6%	97.42%
Centerline Dist. to Barrier:		70.0 feet			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Observer:		70.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Barrier Distance to Observer:		0.0 feet			Noise Source Elevations (in feet)					
Observer Height (Above Pad):		5.0 feet			Autos:		0.000			
Pad Elevation:		0.0 feet			Medium Trucks:		2.297			
Road Elevation:		0.0 feet			Heavy Trucks:		8.006	Grade Adjustment: 0.0		
Road Grade:		0.0%			Lane Equivalent Distance (in feet)					
Left View:		-90.0 degrees			Autos:		56.223			
Right View:		90.0 degrees			Medium Trucks:		56.065			
					Heavy Trucks:		56.081			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6		45.2			
Medium Trucks:	39.3	37.8	31.4	29.9	38.4		38.6			
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9		39.0			
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4		46.9			
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			2	4	9	19				
CNEL:			2	4	9	20				

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2019 With Project Road Name: Stetson Av. (S.) Road Segment: w/o California Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		50 mph			Vehicle Mix					
Near/Far Lane Distance:		84 feet								
Site Data					VehicleType	Day	Evening	Night	Daily	
Barrier Height:		0.0 feet			Autos:		77.5%	12.9%	9.6%	97.42%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet								
Observer Height (Above Pad):		5.0 feet			Autos:		0.000			
Pad Elevation:		0.0 feet			Medium Trucks:		2.297			
Road Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment: 0.0	
Road Grade:		0.0%			Lane Equivalent Distance (in feet)					
Left View:		-90.0 degrees								
Right View:		90.0 degrees			Autos:		56.223			
					Medium Trucks:		56.065			
					Heavy Trucks:		56.081			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2				
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6				
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0				
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				2	4	9	19			
CNEL:				2	4	9	20			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 With Project Road Name: Stetson Av. (S.) Road Segment: e/o California Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		100 vehicles			Autos: 15				
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15				
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles): 15				
Vehicle Speed:		50 mph							
Near/Far Lane Distance:		84 feet			Vehicle Mix				
Site Data					VehicleType	Day	Evening	Night	Daily
Barrier Height:		0.0 feet			Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)				
Barrier Distance to Observer:		0.0 feet			Autos: 0.000				
Observer Height (Above Pad):		5.0 feet			Medium Trucks: 2.297				
Pad Elevation:		0.0 feet			Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)				
Road Grade:		0.0%			Autos: 56.223				
Left View:		-90.0 degrees			Medium Trucks: 56.065				
Right View:		90.0 degrees			Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2			
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6			
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0			
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			2	4	9	19			
CNEL:			2	4	9	20			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 With Project Road Name: Stetson Av. (S.) Road Segment: e/o Street "C"					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		100 vehicles			Autos:		15		
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15		
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		50 mph							
Near/Far Lane Distance:		84 feet							
Site Data					Vehicle Mix				
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%		2.7%
Centerline Dist. to Observer:		70.0 feet					10.8%		97.42%
Barrier Distance to Observer:		0.0 feet							
Observer Height (Above Pad):		5.0 feet							
Pad Elevation:		0.0 feet							
Road Elevation:		0.0 feet							
Road Grade:		0.0%							
Left View:		-90.0 degrees							
Right View:		90.0 degrees							
					Noise Source Elevations (in feet)				
					Autos:		0.000		
					Medium Trucks:		2.297		
					Heavy Trucks:		8.006		Grade Adjustment: 0.0
					Lane Equivalent Distance (in feet)				
					Autos:		56.223		
					Medium Trucks:		56.065		
					Heavy Trucks:		56.081		
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2			
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6			
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0			
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				2	4	9	19		
CNEL:				2	4	9	20		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2019 With Project Road Name: Stetson Av. (S.) Road Segment: e/o Mustang Wy.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		50 mph								
Near/Far Lane Distance:		84 feet								
Site Data					Vehicle Mix					
Barrier Height:		0.0 feet			VehicleType		Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm):		0.0			Autos:		77.5%	12.9%	9.6%	97.42%
Centerline Dist. to Barrier:		70.0 feet			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Observer:		70.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Barrier Distance to Observer:		0.0 feet			Noise Source Elevations (in feet)					
Observer Height (Above Pad):		5.0 feet			Autos:		0.000			
Pad Elevation:		0.0 feet			Medium Trucks:		2.297			
Road Elevation:		0.0 feet			Heavy Trucks:		8.006	Grade Adjustment: 0.0		
Road Grade:		0.0%			Lane Equivalent Distance (in feet)					
Left View:		-90.0 degrees			Autos:		56.223			
Right View:		90.0 degrees			Medium Trucks:		56.065			
					Heavy Trucks:		56.081			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6		45.2			
Medium Trucks:	39.3	37.8	31.4	29.9	38.4		38.6			
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9		39.0			
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4		46.9			
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			2	4	9	19				
CNEL:			2	4	9	20				

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2019 With Project Road Name: Stetson Av. (S.) Road Segment: w/o Warren Rd.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		50 mph			Vehicle Mix					
Near/Far Lane Distance:		84 feet								
Site Data					VehicleType					
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%	
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%	
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%		2.7%	
Centerline Dist. to Observer:		70.0 feet					10.8%		0.74%	
Barrier Distance to Observer:		0.0 feet			Noise Source Elevations (in feet)					
Observer Height (Above Pad):		5.0 feet								
Pad Elevation:		0.0 feet			Autos:		0.000			
Road Elevation:		0.0 feet			Medium Trucks:		2.297			
Road Grade:		0.0%			Heavy Trucks:		8.006		Grade Adjustment: 0.0	
Left View:		-90.0 degrees			Lane Equivalent Distance (in feet)					
Right View:		90.0 degrees								
					Autos:		56.223			
					Medium Trucks:		56.065			
					Heavy Trucks:		56.081			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2				
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6				
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0				
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				2	4	9	19			
CNEL:				2	4	9	20			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2019 With Project Road Name: Stetson Av. (S.) Road Segment: e/o Warren Rd.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		50 mph								
Near/Far Lane Distance:		84 feet								
Site Data					Vehicle Mix					
Barrier Height:		0.0 feet			VehicleType		Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm):		0.0			Autos:		77.5%	12.9%	9.6%	97.42%
Centerline Dist. to Barrier:		70.0 feet			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Observer:		70.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Barrier Distance to Observer:		0.0 feet								
Observer Height (Above Pad):		5.0 feet								
Pad Elevation:		0.0 feet								
Road Elevation:		0.0 feet								
Road Grade:		0.0%								
Left View:		-90.0 degrees								
Right View:		90.0 degrees								
					Noise Source Elevations (in feet)					
					Autos: 0.000					
					Medium Trucks: 2.297					
					Heavy Trucks: 8.006 Grade Adjustment: 0.0					
					Lane Equivalent Distance (in feet)					
					Autos: 56.223					
					Medium Trucks: 56.065					
					Heavy Trucks: 56.081					
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2				
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6				
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0				
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				2	4	9	19			
CNEL:				2	4	9	20			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL														
Scenario: Year 2019 With Project Road Name: Stetson Av. (S.) Road Segment: e/o Fisher St.					Project Name: Rancho Diamante Job Number: 9792									
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS									
Highway Data					Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt):		100 vehicles			Autos:		15							
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15							
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15							
Vehicle Speed:		50 mph			Vehicle Mix									
Near/Far Lane Distance:		84 feet												
Site Data					VehicleType					Day	Evening	Night	Daily	
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%		9.6%		97.42%	
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%		10.3%		1.84%	
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%		2.7%		10.8%		0.74%	
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)									
Barrier Distance to Observer:		0.0 feet												
Observer Height (Above Pad):		5.0 feet			Autos:		0.000							
Pad Elevation:		0.0 feet			Medium Trucks:		2.297							
Road Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment:		0.0			
Road Grade:		0.0%			Lane Equivalent Distance (in feet)									
Left View:		-90.0 degrees												
Right View:		90.0 degrees			Autos:		56.223							
					Medium Trucks:		56.065							
					Heavy Trucks:		56.081							
FHWA Noise Model Calculations														
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten							
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000							
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000							
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2								
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6								
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0								
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9								
Centerline Distance to Noise Contour (in feet)														
				70 dBA	65 dBA	60 dBA	55 dBA							
Ldn:				2	4	9	19							
CNEL:				2	4	9	20							

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 With Project Road Name: Stetson Av. Road Segment: e/o New Stetson Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 9,900 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 990 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-2.45	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-19.69	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-23.65	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	65.7	63.8	62.0	56.0	64.6	65.2			
Medium Trucks:	59.3	57.8	51.4	49.8	58.3	58.5			
Heavy Trucks:	59.7	58.3	49.2	50.5	58.8	59.0			
Vehicle Noise:	67.4	65.6	62.6	57.8	66.4	66.8			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				40	86	186	400		
CNEL:				43	93	199	429		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 With Project Road Name: Stetson Av. Road Segment: e/o Cawston Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 12,900 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,290 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					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: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223				
					Medium Trucks: 56.065				
					Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-1.30	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-18.54	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-22.50	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	66.8	64.9	63.2	57.1	65.7	66.3			
Medium Trucks:	60.4	58.9	52.5	51.0	59.5	59.7			
Heavy Trucks:	60.8	59.4	50.4	51.6	60.0	60.1			
Vehicle Noise:	68.5	66.8	63.7	59.0	67.5	68.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			48	103	221	477			
CNEL:			51	110	238	512			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 With Project Road Name: Stetson Av. Road Segment: e/o Sanderson Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 40,100 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 4,010 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	4.08	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	79.45	-13.16	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	84.25	-17.11	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.5	68.6	66.8	60.8	69.4	70.0			
Medium Trucks:	64.2	62.7	56.4	54.8	63.3	63.5			
Heavy Trucks:	65.1	63.7	54.6	55.9	64.2	64.4			
Vehicle Noise:	72.3	70.6	67.4	62.7	71.3	71.7			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			85	184	396	853			
CNEL:			91	197	425	915			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2019 With Project Road Name: 9th St. Road Segment: w/o Winchester Rd.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 1,600 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 160 vehicles Vehicle Speed: 25 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0					
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Lane Equivalent Distance (in feet)					
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081					
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	58.73	-7.36	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	70.80	-24.60	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	77.97	-28.55	-0.85	-1.20	-5.28	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:	49.3	47.4	45.6	39.6	48.2	48.8				
Medium Trucks:	44.2	42.6	36.3	34.7	43.2	43.4				
Heavy Trucks:	47.4	45.9	36.9	38.2	46.5	46.6				
Vehicle Noise:	52.2	50.5	46.6	42.7	51.2	51.6				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				4	8	18	39			
CNEL:				4	9	19	42			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2019 With Project Road Name: 9th St. Road Segment: e/o Winchester Rd.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		500 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		50 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		25 mph								
Near/Far Lane Distance:		84 feet								
Site Data					Vehicle Mix					
Barrier Height:		0.0 feet			VehicleType		Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm):		0.0			Autos:		77.5%	12.9%	9.6%	97.42%
Centerline Dist. to Barrier:		70.0 feet			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Observer:		70.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Barrier Distance to Observer:		0.0 feet			Noise Source Elevations (in feet)					
Observer Height (Above Pad):		5.0 feet			Autos:		0.000			
Pad Elevation:		0.0 feet			Medium Trucks:		2.297			
Road Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment: 0.0	
Road Grade:		0.0%			Lane Equivalent Distance (in feet)					
Left View:		-90.0 degrees			Autos:		56.223			
Right View:		90.0 degrees			Medium Trucks:		56.065			
					Heavy Trucks:		56.081			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	58.73	-12.41	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	70.80	-29.65	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	77.97	-33.60	-0.85	-1.20	-5.28	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:	44.3	42.4	40.6	34.5	43.2		43.8			
Medium Trucks:	39.1	37.6	31.2	29.7	38.1		38.4			
Heavy Trucks:	42.3	40.9	31.9	33.1	41.5		41.6			
Vehicle Noise:	47.1	45.5	41.6	37.6	46.2		46.5			
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			2	4	8	18				
CNEL:			2	4	9	19				

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2023 Without Project Road Name: Winchester Rd. Road Segment: s/o Florida Av.				Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 16,300 vehicles				Autos: 15				
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,630 vehicles				Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 55 mph								
Near/Far Lane Distance: 36 feet				Vehicle Mix				
				VehicleType	Day	Evening	Night	Daily
Site Data				Autos: 77.5% 12.9% 9.6% 97.42%				
				Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
				Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
				Noise Source Elevations (in feet)				
				Autos: 0.000				
Barrier Height: 0.0 feet				Medium Trucks: 2.297				
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 8.006				
Centerline Dist. to Barrier: 47.0 feet				Grade Adjustment: 0.0				
Centerline Dist. to Observer: 47.0 feet				Lane Equivalent Distance (in feet)				
Barrier Distance to Observer: 0.0 feet				Autos: 43.704				
Observer Height (Above Pad): 5.0 feet				Medium Trucks: 43.501				
Pad Elevation: 0.0 feet				Heavy Trucks: 43.521				
Road Elevation: 0.0 feet								
Road Grade: 0.0%								
Left View: -90.0 degrees								
Right View: 90.0 degrees								
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	71.78	-0.70	0.77	-1.20	-4.63	0.000	0.000	
Medium Trucks:	82.40	-17.94	0.80	-1.20	-4.87	0.000	0.000	
Heavy Trucks:	86.40	-21.89	0.80	-1.20	-5.46	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	70.7	68.8	67.0	60.9	69.6	70.2		
Medium Trucks:	64.1	62.6	56.2	54.7	63.1	63.3		
Heavy Trucks:	64.1	62.7	53.6	54.9	63.2	63.4		
Vehicle Noise:	72.2	70.5	67.5	62.6	71.2	71.7		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			57	122	262	565		
CNEL:			61	131	282	608		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2023 Without Project Road Name: Patterson Av. Road Segment: s/o Grand Av.				Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		10 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		12 feet		VehicleType		Day	Evening	Night	Daily
Site Data				Autos:		77.5%	12.9%	9.6%	97.42%
Barrier Height:		0.0 feet		Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier:		22.0 feet		Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		22.0 feet		Autos:		0.000			
Barrier Distance to Observer:		0.0 feet		Medium Trucks:		2.297			
Observer Height (Above Pad):		5.0 feet		Heavy Trucks:		8.006		Grade Adjustment: 0.0	
Pad Elevation:		0.0 feet		Lane Equivalent Distance (in feet)					
Road Elevation:		0.0 feet		Autos:		21.749			
Road Grade:		0.0%		Medium Trucks:		21.338			
Left View:		-90.0 degrees		Heavy Trucks:		21.378			
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-21.44	5.32	-1.20	-4.34	0.000	0.000		
Medium Trucks:	77.72	-38.68	5.44	-1.20	-4.85	0.000	0.000		
Heavy Trucks:	82.99	-42.63	5.43	-1.20	-6.07	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:	49.2	47.3	45.5	39.5	48.1	48.7			
Medium Trucks:	43.3	41.8	35.4	33.9	42.3	42.6			
Heavy Trucks:	44.6	43.2	34.1	35.4	43.7	43.9			
Vehicle Noise:	51.2	49.5	46.2	41.7	50.2	50.7			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			1	2	5	11			
CNEL:			1	2	5	11			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2023 Without Project Road Name: Winchester Rd. Road Segment: n/o 9th St.				Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 18,200 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,820 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data				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: 0.000				
				Medium Trucks: 2.297				
				Heavy Trucks: 8.006 Grade Adjustment: 0.0				
				Lane Equivalent Distance (in feet)				
				Autos: 43.704				
				Medium Trucks: 43.501				
				Heavy Trucks: 43.521				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	68.46	0.65	0.77	-1.20	-4.63	0.000	0.000	
Medium Trucks:	79.45	-16.59	0.80	-1.20	-4.87	0.000	0.000	
Heavy Trucks:	84.25	-20.54	0.80	-1.20	-5.46	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	68.7	66.8	65.0	59.0	67.6	68.2		
Medium Trucks:	62.5	61.0	54.6	53.1	61.5	61.7		
Heavy Trucks:	63.3	61.9	52.9	54.1	62.5	62.6		
Vehicle Noise:	70.5	68.8	65.6	61.0	69.5	70.0		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			44	94	202	435		
CNEL:			47	101	217	467		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2023 Without Project Road Name: California Av. Road Segment: n/o Stowe Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 4,100 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 410 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					Vehicle Type	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%				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Noise Source Elevations (in feet)				
					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 43.704 Medium Trucks: 43.501 Heavy Trucks: 43.521				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-5.31	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	77.72	-22.55	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-26.51	0.80	-1.20	-5.46	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	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:	54.8	53.3	46.9	45.4	53.8	54.0			
Heavy Trucks:	56.1	54.7	45.6	46.9	55.2	55.4			
Vehicle Noise:	62.8	61.1	57.8	53.2	61.8	62.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			13	29	62	133			
CNEL:			14	31	66	142			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2023 Without Project Road Name: California Av. Road Segment: s/o Stowe Rd.				Project Name: Rancho Diamante Job Number: 9792			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		400 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		40 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		40 mph		Vehicle Mix			
Near/Far Lane Distance:		36 feet		VehicleType			
Site Data				Day			
Barrier Height:		0.0 feet		Evening			
Barrier Type (0-Wall, 1-Berm):		0.0		Night			
Centerline Dist. to Barrier:		47.0 feet		97.42%			
Centerline Dist. to Observer:		47.0 feet		Medium Trucks: 84.8%			
Barrier Distance to Observer:		0.0 feet		4.9%			
Observer Height (Above Pad):		5.0 feet		10.3%			
Pad Elevation:		0.0 feet		1.84%			
Road Elevation:		0.0 feet		Heavy Trucks: 86.5%			
Road Grade:		0.0%		2.7%			
Left View:		-90.0 degrees		10.8%			
Right View:		90.0 degrees		0.74%			
				Noise Source Elevations (in feet)			
				Autos: 0.000			
				Medium Trucks: 2.297			
				Heavy Trucks: 8.006			
				Grade Adjustment: 0.0			
				Lane Equivalent Distance (in feet)			
				Autos: 43.704			
				Medium Trucks: 43.501			
				Heavy Trucks: 43.521			
FHWA Noise Model Calculations							
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-15.42	0.77	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-32.66	0.80	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-36.61	0.80	-1.20	-5.46	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	50.7	48.8	47.0	40.9	49.6	50.2	
Medium Trucks:	44.7	43.2	36.8	35.2	43.7	43.9	
Heavy Trucks:	46.0	44.6	35.5	36.8	45.1	45.3	
Vehicle Noise:	52.7	51.0	47.7	43.1	51.7	52.1	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			3	6	13	28	
CNEL:			3	6	14	30	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2023 Without Project Road Name: California Av. Road Segment: n/o Simpson Rd.				Project Name: Rancho Diamante Job Number: 9792			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		200 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		20 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		25 mph					
Near/Far Lane Distance:		36 feet		Vehicle Mix			
				VehicleType	Day	Evening	Night
							Daily
Site Data							
Barrier Height:		0.0 feet		Autos:		77.5%	12.9%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		84.8%	4.9%
Centerline Dist. to Barrier:		47.0 feet		Heavy Trucks:		86.5%	2.7%
Centerline Dist. to Observer:		47.0 feet				10.8%	0.74%
Barrier Distance to Observer:		0.0 feet		Noise Source Elevations (in feet)			
Observer Height (Above Pad):		5.0 feet		Autos:		0.000	
Pad Elevation:		0.0 feet		Medium Trucks:		2.297	
Road Elevation:		0.0 feet		Heavy Trucks:		8.006	
Road Grade:		0.0%				Grade Adjustment: 0.0	
Left View:		-90.0 degrees		Lane Equivalent Distance (in feet)			
Right View:		90.0 degrees		Autos:		43.704	
				Medium Trucks:		43.501	
				Heavy Trucks:		43.521	
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	58.73	-16.39	0.77	-1.20	-4.63	0.000	0.000
Medium Trucks:	70.80	-33.63	0.80	-1.20	-4.87	0.000	0.000
Heavy Trucks:	77.97	-37.58	0.80	-1.20	-5.46	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:	41.9	40.0	38.3	32.2	40.8	41.4	
Medium Trucks:	36.8	35.3	28.9	27.4	35.8	36.1	
Heavy Trucks:	40.0	38.6	29.5	30.8	39.1	39.3	
Vehicle Noise:	44.8	43.1	39.2	35.3	43.8	44.2	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			1	2	4	8	
CNEL:			1	2	4	9	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL													
Scenario: Year 2023 Without Project Road Name: California Av. Road Segment: s/o Stetson Av. (S.)					Project Name: Rancho Diamante Job Number: 9792								
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS								
Highway Data					Site Conditions (Hard = 10, Soft = 15)								
Average Daily Traffic (Adt):		200 vehicles			Autos:		15						
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15						
Peak Hour Volume:		20 vehicles			Heavy Trucks (3+ Axles):		15						
Vehicle Speed:		40 mph			Vehicle Mix								
Near/Far Lane Distance:		36 feet											
Site Data					VehicleType					Day	Evening	Night	Daily
Barrier Height:		0.0 feet			Autos:		77.5%	12.9%	9.6%	97.42%			
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%	4.9%	10.3%	1.84%			
Centerline Dist. to Barrier:		47.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%			
Centerline Dist. to Observer:		47.0 feet			Noise Source Elevations (in feet)								
Barrier Distance to Observer:		0.0 feet											
Observer Height (Above Pad):		5.0 feet			Autos:		0.000						
Pad Elevation:		0.0 feet			Medium Trucks:		2.297						
Road Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment: 0.0				
Road Grade:		0.0%			Lane Equivalent Distance (in feet)								
Left View:		-90.0 degrees											
Right View:		90.0 degrees			Autos:		43.704						
					Medium Trucks:		43.501						
					Heavy Trucks:		43.521						
FHWA Noise Model Calculations													
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten						
Autos:	66.51	-18.43	0.77	-1.20	-4.63	0.000	0.000						
Medium Trucks:	77.72	-35.67	0.80	-1.20	-4.87	0.000	0.000						
Heavy Trucks:	82.99	-39.62	0.80	-1.20	-5.46	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:	47.7	45.8	44.0	37.9	46.6	47.2							
Medium Trucks:	41.7	40.1	33.8	32.2	40.7	40.9							
Heavy Trucks:	43.0	41.5	32.5	33.8	42.1	42.2							
Vehicle Noise:	49.7	47.9	44.7	40.1	48.7	49.1							
Centerline Distance to Noise Contour (in feet)													
				70 dBA	65 dBA	60 dBA	55 dBA						
Ldn:				2	4	8	18						
CNEL:				2	4	9	19						

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2023 Without Project Road Name: California Av. Road Segment: s/o Simpson Rd.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		25 mph								
Near/Far Lane Distance:		36 feet			Vehicle Mix					
Site Data					Vehicle Type		Day	Evening	Night	Daily
Barrier Height:		0.0 feet			Autos:		77.5%	12.9%	9.6%	97.42%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Barrier:		47.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Observer:		47.0 feet			Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet			Autos:		0.000			
Observer Height (Above Pad):		5.0 feet			Medium Trucks:		2.297			
Pad Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment: 0.0	
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Grade:		0.0%			Autos:		43.704			
Left View:		-90.0 degrees			Medium Trucks:		43.501			
Right View:		90.0 degrees			Heavy Trucks:		43.521			
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	58.73	-19.40	0.77	-1.20	-4.63	0.000	0.000			
Medium Trucks:	70.80	-36.64	0.80	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	77.97	-40.59	0.80	-1.20	-5.46	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	38.9	37.0	35.2	29.2	37.8	38.4				
Medium Trucks:	33.8	32.3	25.9	24.3	32.8	33.0				
Heavy Trucks:	37.0	35.6	26.5	27.8	36.1	36.3				
Vehicle Noise:	41.8	40.1	36.2	32.3	40.8	41.2				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				1	1	2	5			
CNEL:				1	1	3	6			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2023 Without Project Road Name: Warren Rd. Road Segment: s/o Esplanade Av.			Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA			NOISE MODEL INPUTS				
Highway Data			Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 23,200 vehicles			Autos: 15				
Peak Hour Percentage: 10%			Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,320 vehicles			Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 55 mph			Vehicle Mix				
Near/Far Lane Distance: 84 feet			VehicleType				
Site Data			Day	Evening	Night	Daily	
Barrier Height: 0.0 feet			Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Type (0-Wall, 1-Berm): 0.0			Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Centerline Dist. to Barrier: 70.0 feet			Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Observer: 70.0 feet			Noise Source Elevations (in feet)				
Barrier Distance to Observer: 0.0 feet			Autos: 0.000				
Observer Height (Above Pad): 5.0 feet			Medium Trucks: 2.297				
Pad Elevation: 0.0 feet			Heavy Trucks: 8.006				
Road Elevation: 0.0 feet			Grade Adjustment: 0.0				
Road Grade: 0.0%			Lane Equivalent Distance (in feet)				
Left View: -90.0 degrees			Autos: 56.223				
Right View: 90.0 degrees			Medium Trucks: 56.065				
			Heavy Trucks: 56.081				
FHWA Noise Model Calculations							
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	0.83	-0.87	-1.20	-4.72	0.000	0.000
Medium Trucks:	82.40	-16.41	-0.85	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-20.36	-0.85	-1.20	-5.28	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	70.5	68.6	66.9	60.8	69.4	70.1	
Medium Trucks:	63.9	62.4	56.1	54.5	63.0	63.2	
Heavy Trucks:	64.0	62.6	53.5	54.8	63.1	63.3	
Vehicle Noise:	72.1	70.4	67.4	62.5	71.1	71.6	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			83	178	384	828	
CNEL:			89	192	413	890	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2023 Without Project Road Name: Warren Rd. Road Segment: n/o Devonshire Av.				Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 23,200 vehicles				Autos: 15				
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,320 vehicles				Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 55 mph								
Near/Far Lane Distance: 84 feet				Vehicle Mix				
				VehicleType	Day	Evening	Night	Daily
Site Data				Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height: 0.0 feet				Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Barrier: 70.0 feet								
Centerline Dist. to Observer: 70.0 feet				Noise Source Elevations (in feet)				
Barrier Distance to Observer: 0.0 feet				Autos: 0.000				
Observer Height (Above Pad): 5.0 feet				Medium Trucks: 2.297				
Pad Elevation: 0.0 feet				Heavy Trucks: 8.006				
Road Elevation: 0.0 feet				Grade Adjustment: 0.0				
Road Grade: 0.0%				Lane Equivalent Distance (in feet)				
Left View: -90.0 degrees				Autos: 56.223				
Right View: 90.0 degrees				Medium Trucks: 56.065				
				Heavy Trucks: 56.081				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	71.78	0.83	-0.87	-1.20	-4.72	0.000	0.000	
Medium Trucks:	82.40	-16.41	-0.85	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	86.40	-20.36	-0.85	-1.20	-5.28	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	70.5	68.6	66.9	60.8	69.4	70.1		
Medium Trucks:	63.9	62.4	56.1	54.5	63.0	63.2		
Heavy Trucks:	64.0	62.6	53.5	54.8	63.1	63.3		
Vehicle Noise:	72.1	70.4	67.4	62.5	71.1	71.6		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			83	178	384	828		
CNEL:			89	192	413	890		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2023 Without Project Road Name: Warren Rd. Road Segment: n/o Tres Cerritos Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 23,200 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,320 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 55 mph					Vehicle Mix				
Near/Far Lane Distance: 84 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height: 0.0 feet					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Barrier: 70.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 70.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 56.223				
Road Grade: 0.0%					Medium Trucks: 56.065				
Left View: -90.0 degrees					Heavy Trucks: 56.081				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	0.83	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	82.40	-16.41	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	86.40	-20.36	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.5	68.6	66.9	60.8	69.4	70.1			
Medium Trucks:	63.9	62.4	56.1	54.5	63.0	63.2			
Heavy Trucks:	64.0	62.6	53.5	54.8	63.1	63.3			
Vehicle Noise:	72.1	70.4	67.4	62.5	71.1	71.6			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			83	178	384	828			
CNEL:			89	192	413	890			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2023 Without Project Road Name: Warren Rd. Road Segment: n/o Florida Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 19,600 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,960 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 55 mph					Vehicle Mix				
Near/Far Lane Distance: 84 feet					Vehicle Type				
Site Data					Day				
Barrier Height: 0.0 feet					Evening				
Barrier Type (0-Wall, 1-Berm): 0.0					Night				
Centerline Dist. to Barrier: 70.0 feet					Daily				
Centerline Dist. to Observer: 70.0 feet					Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Pad Elevation: 0.0 feet					Noise Source Elevations (in feet)				
Road Elevation: 0.0 feet					Autos: 0.000				
Road Grade: 0.0%					Medium Trucks: 2.297				
Left View: -90.0 degrees					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Right View: 90.0 degrees					Lane Equivalent Distance (in feet)				
					Autos: 56.223				
					Medium Trucks: 56.065				
					Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	0.10	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	82.40	-17.14	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	86.40	-21.09	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	69.8	67.9	66.1	60.1	68.7	69.3			
Medium Trucks:	63.2	61.7	55.3	53.8	62.3	62.5			
Heavy Trucks:	63.3	61.8	52.8	54.0	62.4	62.5			
Vehicle Noise:	71.4	69.6	66.7	61.8	70.4	70.8			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				74	159	343	740		
CNEL:				80	171	369	796		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2023 Without Project Road Name: Warren Rd. Road Segment: s/o Stetson Av. (S.)				Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 19,100 vehicles				Autos: 15				
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,910 vehicles				Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph								
Near/Far Lane Distance: 84 feet				Vehicle Mix				
				VehicleType	Day	Evening	Night	Daily
Site Data				Autos: 77.5% 12.9% 9.6% 97.42%				
				Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
				Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
				Noise Source Elevations (in feet)				
				Autos: 0.000				
				Medium Trucks: 2.297				
				Heavy Trucks: 8.006 Grade Adjustment: 0.0				
				Lane Equivalent Distance (in feet)				
Barrier Height: 0.0 feet				Autos: 56.223				
Barrier Type (0-Wall, 1-Berm): 0.0				Medium Trucks: 56.065				
Centerline Dist. to Barrier: 70.0 feet				Heavy Trucks: 56.081				
Centerline Dist. to Observer: 70.0 feet								
Barrier Distance to Observer: 0.0 feet								
Observer Height (Above Pad): 5.0 feet								
Pad Elevation: 0.0 feet								
Road Elevation: 0.0 feet								
Road Grade: 0.0%								
Left View: -90.0 degrees								
Right View: 90.0 degrees								
FHWA Noise Model Calculations								
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	68.46	0.86	-0.87	-1.20	-4.72	0.000	0.000	
Medium Trucks:	79.45	-16.38	-0.85	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	84.25	-20.33	-0.85	-1.20	-5.28	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	67.3	65.4	63.6	57.5	66.2	66.8		
Medium Trucks:	61.0	59.5	53.2	51.6	60.1	60.3		
Heavy Trucks:	61.9	60.4	51.4	52.7	61.0	61.1		
Vehicle Noise:	69.1	67.3	64.2	59.5	68.1	68.5		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			52	112	241	520		
CNEL:			56	120	259	558		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2023 Without Project Road Name: Warren Rd. Road Segment: s/o Simpson Rd.				Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 14,600 vehicles				Autos: 15				
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,460 vehicles				Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph								
Near/Far Lane Distance: 84 feet				Vehicle Mix				
				VehicleType	Day	Evening	Night	Daily
Site Data				Autos: 77.5% 12.9% 9.6% 97.42%				
				Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
				Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
				Noise Source Elevations (in feet)				
				Autos: 0.000				
				Medium Trucks: 2.297				
				Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Lane Equivalent Distance (in feet)				
				Autos: 56.223				
				Medium Trucks: 56.065				
				Heavy Trucks: 56.081				
FHWA Noise Model Calculations								
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	66.51	0.20	-0.87	-1.20	-4.72	0.000	0.000	
Medium Trucks:	77.72	-17.03	-0.85	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	82.99	-20.99	-0.85	-1.20	-5.28	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	64.6	62.7	61.0	54.9	63.6	64.2		
Medium Trucks:	58.6	57.1	50.8	49.2	57.7	57.9		
Heavy Trucks:	60.0	58.5	49.5	50.7	59.1	59.2		
Vehicle Noise:	66.7	64.9	61.7	57.1	65.6	66.1		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			36	77	166	358		
CNEL:			38	83	178	384		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2023 Without Project Road Name: Warren Rd. Road Segment: s/o Mustang Wy.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 20,400 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,040 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph					Vehicle Mix				
Near/Far Lane Distance: 84 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height: 0.0 feet					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Barrier: 70.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 70.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 56.223				
Road Grade: 0.0%					Medium Trucks: 56.065				
Left View: -90.0 degrees					Heavy Trucks: 56.081				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.66	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	77.72	-15.58	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	82.99	-19.54	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	66.1	64.2	62.4	56.4	65.0	65.6			
Medium Trucks:	60.1	58.6	52.2	50.7	59.1	59.4			
Heavy Trucks:	61.4	60.0	50.9	52.2	60.6	60.7			
Vehicle Noise:	68.1	66.4	63.1	58.6	67.1	67.5			
Centerline Distance to Noise Contour (in feet)									
	70 dBA		65 dBA		60 dBA		55 dBA		
Ldn:	45		97		208		448		
CNEL:	48		103		223		480		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2023 Without Project Road Name: Sanderson Av. Road Segment: s/o Florida Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 34,500 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,450 vehicles Vehicle Speed: 30 mph Near/Far Lane Distance: 50 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data					Vehicle Mix					
					Vehicle Type		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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0					
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 54.0 feet Centerline Dist. to Observer: 54.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Lane Equivalent Distance (in feet)					
					Autos: 48.125 Medium Trucks: 47.941 Heavy Trucks: 47.959					
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	61.75	5.19	0.15	-1.20	-4.67	0.000	0.000			
Medium Trucks:	73.48	-12.05	0.17	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	79.92	-16.01	0.17	-1.20	-5.39	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	65.9	64.0	62.2	56.2	64.8	65.4				
Medium Trucks:	60.4	58.9	52.5	51.0	59.4	59.7				
Heavy Trucks:	62.9	61.5	52.4	53.7	62.0	62.2				
Vehicle Noise:	68.4	66.7	63.1	58.9	67.4	67.8				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			36	78	168	362				
CNEL:			39	83	179	386				

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2023 Without Project Road Name: Sanderson Av. Road Segment: n/o Stetson Av.				Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 41,900 vehicles				Autos: 15				
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15				
Peak Hour Volume: 4,190 vehicles				Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph				Vehicle Mix				
Near/Far Lane Distance: 50 feet				VehicleType	Day	Evening	Night	Daily
Site Data				Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height: 0.0 feet				Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Barrier: 54.0 feet				Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 54.0 feet				Autos: 0.000				
Barrier Distance to Observer: 0.0 feet				Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet				Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet				Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet				Autos: 48.125				
Road Grade: 0.0%				Medium Trucks: 47.941				
Left View: -90.0 degrees				Heavy Trucks: 47.959				
Right View: 90.0 degrees								
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	68.46	4.27	0.15	-1.20	-4.67	0.000	0.000	
Medium Trucks:	79.45	-12.97	0.17	-1.20	-4.87	0.000	0.000	
Heavy Trucks:	84.25	-16.92	0.17	-1.20	-5.39	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	71.7	69.8	68.0	62.0	70.6	71.2		
Medium Trucks:	65.5	63.9	57.6	56.0	64.5	64.7		
Heavy Trucks:	66.3	64.9	55.8	57.1	65.4	65.6		
Vehicle Noise:	73.5	71.8	68.6	63.9	72.5	72.9		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			79	171	367	792		
CNEL:			85	183	394	849		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2023 Without Project Road Name: Florida Av. Road Segment: e/o Warren Rd.				Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 44,400 vehicles				Autos: 15				
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15				
Peak Hour Volume: 4,440 vehicles				Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph								
Near/Far Lane Distance: 84 feet				Vehicle Mix				
				VehicleType	Day	Evening	Night	Daily
Site Data				Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height: 0.0 feet				Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Barrier: 70.0 feet								
Centerline Dist. to Observer: 70.0 feet				Noise Source Elevations (in feet)				
Barrier Distance to Observer: 0.0 feet				Autos: 0.000				
Observer Height (Above Pad): 5.0 feet				Medium Trucks: 2.297				
Pad Elevation: 0.0 feet				Heavy Trucks: 8.006				
Road Elevation: 0.0 feet				Grade Adjustment: 0.0				
Road Grade: 0.0%				Lane Equivalent Distance (in feet)				
Left View: -90.0 degrees				Autos: 56.223				
Right View: 90.0 degrees				Medium Trucks: 56.065				
				Heavy Trucks: 56.081				
FHWA Noise Model Calculations								
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	70.20	4.07	-0.87	-1.20	-4.72	0.000	0.000	
Medium Trucks:	81.00	-13.17	-0.85	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	85.38	-17.13	-0.85	-1.20	-5.28	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	72.2	70.3	68.5	62.5	71.1	71.7		
Medium Trucks:	65.8	64.3	57.9	56.4	64.8	65.1		
Heavy Trucks:	66.2	64.8	55.7	57.0	65.3	65.5		
Vehicle Noise:	73.9	72.1	69.1	64.3	72.9	73.3		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			109	234	505	1,087		
CNEL:			117	252	542	1,168		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2023 Without Project Road Name: Florida Av. Road Segment: w/o Winchester Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 36,000 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 3,600 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 78 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%				
					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
Barrier Height: 0.0 feet					Medium Trucks: 2.297				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Centerline Dist. to Barrier: 76.0 feet					Lane Equivalent Distance (in feet)				
Centerline Dist. to Observer: 76.0 feet					Autos: 65.422				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 65.286				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 65.300				
Pad Elevation: 0.0 feet									
Road Elevation: 0.0 feet									
Road Grade: 0.0%									
Left View: -90.0 degrees									
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	3.15	-1.85	-1.20	-4.73	0.000	0.000		
Medium Trucks:	81.00	-14.08	-1.84	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-18.04	-1.84	-1.20	-5.25	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.3	68.4	66.6	60.6	69.2	69.8			
Medium Trucks:	63.9	62.4	56.0	54.5	62.9	63.2			
Heavy Trucks:	64.3	62.9	53.8	55.1	63.4	63.6			
Vehicle Noise:	72.0	70.2	67.2	62.4	71.0	71.4			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				88	190	409	882		
CNEL:				95	204	440	947		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2023 Without Project Road Name: Florida Av. Road Segment: e/o Myers St.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 40,700 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 4,070 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 35 mph					Vehicle Mix				
Near/Far Lane Distance: 84 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height: 0.0 feet					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Barrier: 70.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 70.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 56.223				
Road Grade: 0.0%					Medium Trucks: 56.065				
Left View: -90.0 degrees					Heavy Trucks: 56.081				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	64.30	5.24	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	75.75	-12.00	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	81.57	-15.96	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.5	65.6	63.8	57.8	66.4	67.0			
Medium Trucks:	61.7	60.2	53.8	52.3	60.7	61.0			
Heavy Trucks:	63.6	62.1	53.1	54.4	62.7	62.8			
Vehicle Noise:	69.7	68.0	64.5	60.2	68.7	69.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			57	123	266	572			
CNEL:			61	132	284	611			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2023 Without Project Road Name: Stowe Rd. Road Segment: w/o California Av.				Project Name: Rancho Diamante Job Number: 9792			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		4,000 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		400 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		40 mph		Vehicle Mix			
Near/Far Lane Distance:		36 feet		VehicleType			
Site Data				Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		77.5% 12.9% 9.6% 97.42%	
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		84.8% 4.9% 10.3% 1.84%	
Centerline Dist. to Barrier:		47.0 feet		Heavy Trucks:		86.5% 2.7% 10.8% 0.74%	
Centerline Dist. to Observer:		47.0 feet		Noise Source Elevations (in feet)			
Barrier Distance to Observer:		0.0 feet		Autos:		0.000	
Observer Height (Above Pad):		5.0 feet		Medium Trucks:		2.297	
Pad Elevation:		0.0 feet		Heavy Trucks:		8.006	
Road Elevation:		0.0 feet		Grade Adjustment: 0.0			
Road Grade:		0.0%		Lane Equivalent Distance (in feet)			
Left View:		-90.0 degrees		Autos:		43.704	
Right View:		90.0 degrees		Medium Trucks:		43.501	
				Heavy Trucks:		43.521	
FHWA Noise Model Calculations							
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-5.42	0.77	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-22.66	0.80	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-26.61	0.80	-1.20	-5.46	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	60.7	58.8	57.0	50.9	59.6	60.2	
Medium Trucks:	54.7	53.2	46.8	45.2	53.7	53.9	
Heavy Trucks:	56.0	54.6	45.5	46.8	55.1	55.3	
Vehicle Noise:	62.7	61.0	57.7	53.1	61.7	62.1	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			13	28	61	131	
CNEL:			14	30	65	140	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2023 Without Project Road Name: Grand Av. Road Segment: w/o Calvert Av.				Project Name: Rancho Diamante Job Number: 9792			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		100 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		10 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		40 mph		Vehicle Mix			
Near/Far Lane Distance:		84 feet		VehicleType			
Site Data				Day			
Barrier Height:		0.0 feet		Evening			
Barrier Type (0-Wall, 1-Berm):		0.0		Night			
Centerline Dist. to Barrier:		70.0 feet		97.42%			
Centerline Dist. to Observer:		70.0 feet		Medium Trucks: 84.8%			
Barrier Distance to Observer:		0.0 feet		4.9%			
Observer Height (Above Pad):		5.0 feet		10.3%			
Pad Elevation:		0.0 feet		1.84%			
Road Elevation:		0.0 feet		Heavy Trucks: 86.5%			
Road Grade:		0.0%		2.7%			
Left View:		-90.0 degrees		10.8%			
Right View:		90.0 degrees		0.74%			
				Noise Source Elevations (in feet)			
				Autos: 0.000			
				Medium Trucks: 2.297			
				Heavy Trucks: 8.006			
				Grade Adjustment: 0.0			
				Lane Equivalent Distance (in feet)			
				Autos: 56.223			
				Medium Trucks: 56.065			
				Heavy Trucks: 56.081			
FHWA Noise Model Calculations							
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-21.44	-0.87	-1.20	-4.72	0.000	0.000
Medium Trucks:	77.72	-38.68	-0.85	-1.20	-4.88	0.000	0.000
Heavy Trucks:	82.99	-42.63	-0.85	-1.20	-5.28	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	43.0	41.1	39.3	33.3	41.9	42.5	
Medium Trucks:	37.0	35.5	29.1	27.6	36.0	36.3	
Heavy Trucks:	38.3	36.9	27.9	29.1	37.5	37.6	
Vehicle Noise:	45.0	43.3	40.0	35.5	44.0	44.4	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			1	3	6	13	
CNEL:			1	3	6	14	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2023 Without Project Road Name: Grand Av. Road Segment: e/o Patterson Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		100 vehicles			Autos:		15		
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15		
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		40 mph			Vehicle Mix				
Near/Far Lane Distance:		84 feet			VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height:		0.0 feet			Medium Trucks:		84.8% 4.9% 10.3% 1.84%		
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks:		86.5% 2.7% 10.8% 0.74%		
Centerline Dist. to Barrier:		70.0 feet			Noise Source Elevations (in feet)				
Centerline Dist. to Observer:		70.0 feet			Autos:		0.000		
Barrier Distance to Observer:		0.0 feet			Medium Trucks:		2.297		
Observer Height (Above Pad):		5.0 feet			Heavy Trucks:		8.006		Grade Adjustment: 0.0
Pad Elevation:		0.0 feet			Lane Equivalent Distance (in feet)				
Road Elevation:		0.0 feet			Autos:		56.223		
Road Grade:		0.0%			Medium Trucks:		56.065		
Left View:		-90.0 degrees			Heavy Trucks:		56.081		
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-21.44	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	77.72	-38.68	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	82.99	-42.63	-0.85	-1.20	-5.28	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:	43.0	41.1	39.3	33.3	41.9	42.5			
Medium Trucks:	37.0	35.5	29.1	27.6	36.0	36.3			
Heavy Trucks:	38.3	36.9	27.9	29.1	37.5	37.6			
Vehicle Noise:	45.0	43.3	40.0	35.5	44.0	44.4			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				1	3	6	13		
CNEL:				1	3	6	14		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL													
Scenario: Year 2023 Without Project Road Name: Grand Av. Road Segment: e/o Calvert Av.					Project Name: Rancho Diamante Job Number: 9792								
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS								
Highway Data					Site Conditions (Hard = 10, Soft = 15)								
Average Daily Traffic (Adt):		100 vehicles			Autos:		15						
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15						
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15						
Vehicle Speed:		40 mph			Vehicle Mix								
Near/Far Lane Distance:		84 feet											
Site Data					VehicleType					Day	Evening	Night	Daily
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%		9.6%		97.42%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%		10.3%		1.84%
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%		2.7%		10.8%		0.74%
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)								
Barrier Distance to Observer:		0.0 feet											
Observer Height (Above Pad):		5.0 feet			Autos:		0.000		Grade Adjustment: 0.0				
Pad Elevation:		0.0 feet			Medium Trucks:		2.297						
Road Elevation:		0.0 feet			Heavy Trucks:		8.006						
Road Grade:		0.0%			Lane Equivalent Distance (in feet)								
Left View:		-90.0 degrees			Autos:		56.223		Medium Trucks: 56.065 Heavy Trucks: 56.081				
Right View:		90.0 degrees			Medium Trucks:		56.065						
					Heavy Trucks:		56.081						
FHWA Noise Model Calculations													
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten						
Autos:	66.51	-21.44	-0.87	-1.20	-4.72	0.000	0.000						
Medium Trucks:	77.72	-38.68	-0.85	-1.20	-4.88	0.000	0.000						
Heavy Trucks:	82.99	-42.63	-0.85	-1.20	-5.28	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:	43.0	41.1	39.3	33.3	41.9	42.5							
Medium Trucks:	37.0	35.5	29.1	27.6	36.0	36.3							
Heavy Trucks:	38.3	36.9	27.9	29.1	37.5	37.6							
Vehicle Noise:	45.0	43.3	40.0	35.5	44.0	44.4							
Centerline Distance to Noise Contour (in feet)													
				70 dBA		65 dBA		60 dBA		55 dBA			
Ldn:				1		3		6		13			
CNEL:				1		3		6		14			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2023 Without Project Road Name: Stetson Av. (S.) Road Segment: e/o SR-79 SB Ramps					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		50 mph			Vehicle Mix					
Near/Far Lane Distance:		84 feet			VehicleType					
Site Data					Day		Evening		Night	
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%	
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%	
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%		2.7%	
Centerline Dist. to Observer:		70.0 feet					10.8%		0.74%	
Barrier Distance to Observer:		0.0 feet			Noise Source Elevations (in feet)					
Observer Height (Above Pad):		5.0 feet			Autos:		0.000			
Pad Elevation:		0.0 feet			Medium Trucks:		2.297			
Road Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment: 0.0	
Road Grade:		0.0%			Lane Equivalent Distance (in feet)					
Left View:		-90.0 degrees			Autos:		56.223			
Right View:		90.0 degrees			Medium Trucks:		56.065			
					Heavy Trucks:		56.081			
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	45.7	43.8	42.1	36.0	44.6	45.2				
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6				
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0				
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				2	4	9	19			
CNEL:				2	4	9	20			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2023 Without Project Road Name: Stetson Av. (S.) Road Segment: w/o California Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		100 vehicles			Autos:		15		
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15		
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		50 mph			Vehicle Mix				
Near/Far Lane Distance:		84 feet							
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height:		0.0 feet			Medium Trucks:		84.8% 4.9% 10.3% 1.84%		
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks:		86.5% 2.7% 10.8% 0.74%		
Centerline Dist. to Barrier:		70.0 feet			Noise Source Elevations (in feet)				
Centerline Dist. to Observer:		70.0 feet							
Barrier Distance to Observer:		0.0 feet			Autos:		0.000		
Observer Height (Above Pad):		5.0 feet			Medium Trucks:		2.297		
Pad Elevation:		0.0 feet			Heavy Trucks:		8.006 Grade Adjustment: 0.0		
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)				
Road Grade:		0.0%							
Left View:		-90.0 degrees			Autos:		56.223		
Right View:		90.0 degrees			Medium Trucks:		56.065		
					Heavy Trucks:		56.081		
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	45.7	43.8	42.1	36.0	44.6	45.2			
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6			
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0			
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			2	4	9	19			
CNEL:			2	4	9	20			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2023 Without Project Road Name: Stetson Av. (S.) Road Segment: e/o SR-79 NB Ramps					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		50 mph			Vehicle Mix					
Near/Far Lane Distance:		84 feet								
Site Data					VehicleType					
Barrier Height:		0.0 feet			Autos:		77.5%	12.9%	9.6%	97.42%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet								
Observer Height (Above Pad):		5.0 feet			Autos:		0.000			
Pad Elevation:		0.0 feet			Medium Trucks:		2.297			
Road Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment: 0.0	
Road Grade:		0.0%			Lane Equivalent Distance (in feet)					
Left View:		-90.0 degrees								
Right View:		90.0 degrees			Autos:		56.223			
					Medium Trucks:		56.065			
					Heavy Trucks:		56.081			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2				
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6				
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0				
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				2	4	9	19			
CNEL:				2	4	9	20			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2023 Without Project Road Name: Stetson Av. (S.) Road Segment: e/o California Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		50 mph			Vehicle Mix					
Near/Far Lane Distance:		84 feet			Vehicle Type		Day	Evening	Night	Daily
Site Data					Autos:		77.5%	12.9%	9.6%	97.42%
Barrier Height:		0.0 feet			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier:		70.0 feet			Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		70.0 feet			Autos:		0.000			
Barrier Distance to Observer:		0.0 feet			Medium Trucks:		2.297			
Observer Height (Above Pad):		5.0 feet			Heavy Trucks:		8.006	Grade Adjustment: 0.0		
Pad Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Elevation:		0.0 feet			Autos:		56.223			
Road Grade:		0.0%			Medium Trucks:		56.065			
Left View:		-90.0 degrees			Heavy Trucks:		56.081			
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	45.7	43.8	42.1	36.0	44.6	45.2				
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6				
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0				
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				2	4	9	19			
CNEL:				2	4	9	20			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2023 Without Project Road Name: Stetson Av. (S.) Road Segment: e/o Street "C"				Project Name: Rancho Diamante Job Number: 9792			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		100 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		10 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		50 mph		Vehicle Mix			
Near/Far Lane Distance:		84 feet		VehicleType			
Site Data				Day	Evening	Night	Daily
Barrier Height:		0.0 feet		Autos:		77.5%	12.9%
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		84.8%	4.9%
Centerline Dist. to Barrier:		70.0 feet		Heavy Trucks:		86.5%	2.7%
Centerline Dist. to Observer:		70.0 feet				10.8%	0.74%
Barrier Distance to Observer:		0.0 feet		Noise Source Elevations (in feet)			
Observer Height (Above Pad):		5.0 feet		Autos:		0.000	
Pad Elevation:		0.0 feet		Medium Trucks:		2.297	
Road Elevation:		0.0 feet		Heavy Trucks:		8.006	
Road Grade:		0.0%				Grade Adjustment: 0.0	
Left View:		-90.0 degrees		Lane Equivalent Distance (in feet)			
Right View:		90.0 degrees		Autos:		56.223	
				Medium Trucks:		56.065	
				Heavy Trucks:		56.081	
FHWA Noise Model Calculations							
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	45.7	43.8	42.1	36.0	44.6	45.2	
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6	
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0	
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			2	4	9	19	
CNEL:			2	4	9	20	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2023 Without Project Road Name: Stetson Av. (S.) Road Segment: w/o Warren Rd.				Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		1,300 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		130 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		50 mph							
Near/Far Lane Distance:		84 feet		Vehicle Mix					
				VehicleType	Day	Evening	Night	Daily	
Site Data				Autos:		77.5%	12.9%	9.6%	97.42%
Barrier Height:		0.0 feet		Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier:		70.0 feet							
Centerline Dist. to Observer:		70.0 feet		Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet		Autos:		0.000			
Observer Height (Above Pad):		5.0 feet		Medium Trucks:		2.297			
Pad Elevation:		0.0 feet		Heavy Trucks:		8.006		Grade Adjustment: 0.0	
Road Elevation:		0.0 feet		Lane Equivalent Distance (in feet)					
Road Grade:		0.0%		Autos:		56.223			
Left View:		-90.0 degrees		Medium Trucks:		56.065			
Right View:		90.0 degrees		Heavy Trucks:		56.081			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-11.27	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-28.51	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-32.46	-0.85	-1.20	-5.28	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:	56.9	55.0	53.2	47.1	55.8	56.4			
Medium Trucks:	50.4	48.9	42.6	41.0	49.5	49.7			
Heavy Trucks:	50.9	49.4	40.4	41.7	50.0	50.1			
Vehicle Noise:	58.6	56.8	53.8	49.0	57.5	58.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			10	22	48	103			
CNEL:			11	24	52	111			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2023 Without Project Road Name: Stetson Av. (S.) Road Segment: e/o Mustang Wy.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		600 vehicles			Autos:		15		
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15		
Peak Hour Volume:		60 vehicles			Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		50 mph			Vehicle Mix				
Near/Far Lane Distance:		84 feet							
Site Data					VehicleType				
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%		2.7%
Centerline Dist. to Observer:		70.0 feet					10.8%		97.42%
Barrier Distance to Observer:		0.0 feet			Noise Source Elevations (in feet)				
Observer Height (Above Pad):		5.0 feet							
Pad Elevation:		0.0 feet			Autos:		0.000		Grade Adjustment: 0.0
Road Elevation:		0.0 feet			Medium Trucks:		2.297		
Road Grade:		0.0%			Heavy Trucks:		8.006		
Left View:		-90.0 degrees			Lane Equivalent Distance (in feet)				
Right View:		90.0 degrees							
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-14.63	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-31.87	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-35.82	-0.85	-1.20	-5.28	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:	53.5	51.6	49.8	43.8	52.4	53.0			
Medium Trucks:	47.1	45.6	39.2	37.7	46.1	46.4			
Heavy Trucks:	47.5	46.1	37.0	38.3	46.7	46.8			
Vehicle Noise:	55.2	53.5	50.4	45.6	54.2	54.6			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				6	13	29	62		
CNEL:				7	14	31	66		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2023 Without Project Road Name: Stetson Av. (S.) Road Segment: e/o Warren Rd.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		50 mph			Vehicle Mix					
Near/Far Lane Distance:		84 feet			Vehicle Type		Day	Evening	Night	Daily
Site Data					Autos:		77.5%	12.9%	9.6%	97.42%
Barrier Height:		0.0 feet			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier:		70.0 feet			Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		70.0 feet			Autos:		0.000			
Barrier Distance to Observer:		0.0 feet			Medium Trucks:		2.297			
Observer Height (Above Pad):		5.0 feet			Heavy Trucks:		8.006		Grade Adjustment: 0.0	
Pad Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Elevation:		0.0 feet			Autos:		56.223			
Road Grade:		0.0%			Medium Trucks:		56.065			
Left View:		-90.0 degrees			Heavy Trucks:		56.081			
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	45.7	43.8	42.1	36.0	44.6	45.2				
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6				
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0				
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				2	4	9	19			
CNEL:				2	4	9	20			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL														
Scenario: Year 2023 Without Project Road Name: Stetson Av. (S.) Road Segment: e/o Fisher St.					Project Name: Rancho Diamante Job Number: 9792									
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS									
Highway Data					Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt):		100 vehicles			Autos:		15							
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15							
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15							
Vehicle Speed:		50 mph			Vehicle Mix									
Near/Far Lane Distance:		84 feet												
Site Data					VehicleType					Day	Evening	Night	Daily	
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%		9.6%		97.42%	
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%		10.3%		1.84%	
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%		2.7%		10.8%		0.74%	
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)									
Barrier Distance to Observer:		0.0 feet			Autos:		0.000							
Observer Height (Above Pad):		5.0 feet			Medium Trucks:		2.297							
Pad Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment:		0.0			
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)									
Road Grade:		0.0%			Autos:		56.223							
Left View:		-90.0 degrees			Medium Trucks:		56.065							
Right View:		90.0 degrees			Heavy Trucks:		56.081							
FHWA Noise Model Calculations														
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten							
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000							
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000							
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	0.000	0.000							
Unmitigated Noise Levels (without Topo and barrier attenuation)														
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL								
Autos:	45.7	43.8	42.1	36.0	44.6					45.2				
Medium Trucks:	39.3	37.8	31.4	29.9	38.4					38.6				
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9					39.0				
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4					46.9				
Centerline Distance to Noise Contour (in feet)														
				70 dBA		65 dBA		60 dBA		55 dBA				
Ldn:				2		4		9		19				
CNEL:				2		4		9		20				

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2023 Without Project Road Name: Stetson Av. Road Segment: e/o Cawston Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 13,500 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,350 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data					Vehicle Mix					
					Vehicle Type		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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0					
					Lane Equivalent Distance (in feet)					
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081					
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-1.11	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-18.34	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-22.30	-0.85	-1.20	-5.28	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	67.0	65.1	63.4	57.3	65.9	66.5				
Medium Trucks:	60.6	59.1	52.7	51.2	59.7	59.9				
Heavy Trucks:	61.0	59.6	50.6	51.8	60.2	60.3				
Vehicle Noise:	68.7	67.0	63.9	59.1	67.7	68.2				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			49	106	228	492				
CNEL:			53	114	245	528				

Monday, January 25, 2016

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2023 Without Project Road Name: Stetson Av. Road Segment: e/o New Stetson Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 10,600 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,060 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 84 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%				
					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223				
					Medium Trucks: 56.065				
					Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-2.16	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-19.39	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-23.35	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	66.0	64.1	62.3	56.3	64.9	65.5			
Medium Trucks:	59.6	58.0	51.7	50.1	58.6	58.8			
Heavy Trucks:	60.0	58.6	49.5	50.8	59.1	59.3			
Vehicle Noise:	67.7	65.9	62.9	58.1	66.6	67.1			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				42	90	194	418		
CNEL:				45	97	209	450		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2023 Without Project Road Name: Stetson Av. Road Segment: e/o Sanderson Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 40,300 vehicles					Autos: 15					
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15					
Peak Hour Volume: 4,030 vehicles					Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 45 mph										
Near/Far Lane Distance: 84 feet					Vehicle Mix					
Site Data					Vehicle Type		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:		0.000			
Medium Trucks:		2.297								
Heavy Trucks:		8.006 Grade Adjustment: 0.0								
					Lane Equivalent Distance (in feet)					
					Autos:		56.223			
					Medium Trucks:		56.065			
					Heavy Trucks:		56.081			
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	68.46	4.10	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	79.45	-13.14	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	84.25	-17.09	-0.85	-1.20	-5.28	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	70.5	68.6	66.8	60.8	69.4	70.0				
Medium Trucks:	64.3	62.8	56.4	54.8	63.3	63.5				
Heavy Trucks:	65.1	63.7	54.7	55.9	64.3	64.4				
Vehicle Noise:	72.3	70.6	67.4	62.8	71.3	71.8				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			86	184	397	856				
CNEL:			92	198	426	918				

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2023 Without Project Road Name: 9th St. Road Segment: w/o Winchester Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 1,600 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 160 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 25 mph					Vehicle Mix				
Near/Far Lane Distance: 84 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height: 0.0 feet					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Barrier: 70.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 70.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 56.223				
Road Grade: 0.0%					Medium Trucks: 56.065				
Left View: -90.0 degrees					Heavy Trucks: 56.081				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	58.73	-7.36	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	70.80	-24.60	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	77.97	-28.55	-0.85	-1.20	-5.28	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:	49.3	47.4	45.6	39.6	48.2		48.8		
Medium Trucks:	44.2	42.6	36.3	34.7	43.2		43.4		
Heavy Trucks:	47.4	45.9	36.9	38.2	46.5		46.6		
Vehicle Noise:	52.2	50.5	46.6	42.7	51.2		51.6		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				4	8	18	39		
CNEL:				4	9	19	42		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2023 With Project Road Name: Winchester Rd. Road Segment: s/o Florida Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 19,400 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,940 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 55 mph									
Near/Far Lane Distance: 36 feet					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height: 0.0 feet					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Barrier: 47.0 feet									
Centerline Dist. to Observer: 47.0 feet					Noise Source Elevations (in feet)				
Barrier Distance to Observer: 0.0 feet					Autos: 0.000				
Observer Height (Above Pad): 5.0 feet					Medium Trucks: 2.297				
Pad Elevation: 0.0 feet					Heavy Trucks: 8.006				
Road Elevation: 0.0 feet					Grade Adjustment: 0.0				
Road Grade: 0.0%					Lane Equivalent Distance (in feet)				
Left View: -90.0 degrees					Autos: 43.704				
Right View: 90.0 degrees					Medium Trucks: 43.501				
					Heavy Trucks: 43.521				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	0.06	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	82.40	-17.18	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	86.40	-21.14	0.80	-1.20	-5.46	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	71.4	69.5	67.7	61.7	70.3	70.9			
Medium Trucks:	64.8	63.3	57.0	55.4	63.9	64.1			
Heavy Trucks:	64.9	63.4	54.4	55.7	64.0	64.1			
Vehicle Noise:	73.0	71.2	68.3	63.4	72.0	72.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			63	137	295	635			
CNEL:			68	147	317	683			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL														
Scenario: Year 2023 Without Project Road Name: 9th St. Road Segment: e/o Winchester Rd.					Project Name: Rancho Diamante Job Number: 9792									
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS									
Highway Data					Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt):		500 vehicles			Autos:		15							
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15							
Peak Hour Volume:		50 vehicles			Heavy Trucks (3+ Axles):		15							
Vehicle Speed:		25 mph			Vehicle Mix									
Near/Far Lane Distance:		84 feet												
Site Data					VehicleType					Day	Evening	Night	Daily	
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%		9.6%		97.42%	
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%		10.3%		1.84%	
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%		2.7%		10.8%		0.74%	
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)									
Barrier Distance to Observer:		0.0 feet			Autos:		0.000							
Observer Height (Above Pad):		5.0 feet			Medium Trucks:		2.297							
Pad Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment:		0.0			
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)									
Road Grade:		0.0%			Autos:		56.223							
Left View:		-90.0 degrees			Medium Trucks:		56.065							
Right View:		90.0 degrees			Heavy Trucks:		56.081							
FHWA Noise Model Calculations														
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten							
Autos:	58.73	-12.41	-0.87	-1.20	-4.72	0.000	0.000							
Medium Trucks:	70.80	-29.65	-0.85	-1.20	-4.88	0.000	0.000							
Heavy Trucks:	77.97	-33.60	-0.85	-1.20	-5.28	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:	44.3	42.4	40.6	34.5	43.2	43.8								
Medium Trucks:	39.1	37.6	31.2	29.7	38.1	38.4								
Heavy Trucks:	42.3	40.9	31.9	33.1	41.5	41.6								
Vehicle Noise:	47.1	45.5	41.6	37.6	46.2	46.5								
Centerline Distance to Noise Contour (in feet)														
				70 dBA		65 dBA		60 dBA		55 dBA				
Ldn:				2		4		8		18				
CNEL:				2		4		9		19				

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2023 With Project Road Name: Winchester Rd. Road Segment: n/o 9th St.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 21,300 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,130 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					Vehicle Type	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 43.704 Medium Trucks: 43.501 Heavy Trucks: 43.521				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	1.33	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	79.45	-15.91	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-19.86	0.80	-1.20	-5.46	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	69.4	67.5	65.7	59.6	68.3	68.9			
Medium Trucks:	63.1	61.6	55.3	53.7	62.2	62.4			
Heavy Trucks:	64.0	62.6	53.5	54.8	63.1	63.3			
Vehicle Noise:	71.2	69.5	66.3	61.6	70.2	70.6			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				48	104	224	483		
CNEL:				52	112	241	519		

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2023 With Project Road Name: Patterson Av. Road Segment: s/o Grand Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		100 vehicles			Autos:		15		
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15		
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		40 mph			Vehicle Mix				
Near/Far Lane Distance:		12 feet							
Site Data									
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%
Centerline Dist. to Barrier:		22.0 feet			Heavy Trucks:		86.5%		2.7%
Centerline Dist. to Observer:		22.0 feet					10.8%		1.84%
Barrier Distance to Observer:		0.0 feet			Noise Source Elevations (in feet)				
Observer Height (Above Pad):		5.0 feet							
Pad Elevation:		0.0 feet							
Road Elevation:		0.0 feet			Autos:		0.000		Grade Adjustment: 0.0
Road Grade:		0.0%			Medium Trucks:		2.297		
Left View:		-90.0 degrees			Heavy Trucks:		8.006		
Right View:		90.0 degrees			Lane Equivalent Distance (in feet)				
					Autos:		21.749		Medium Trucks: 21.338 Heavy Trucks: 21.378
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-21.44	5.32	-1.20	-4.34	0.000	0.000		
Medium Trucks:	77.72	-38.68	5.44	-1.20	-4.85	0.000	0.000		
Heavy Trucks:	82.99	-42.63	5.43	-1.20	-6.07	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos:	49.2	47.3	45.5	39.5	48.1		48.7		
Medium Trucks:	43.3	41.8	35.4	33.9	42.3		42.6		
Heavy Trucks:	44.6	43.2	34.1	35.4	43.7		43.9		
Vehicle Noise:	51.2	49.5	46.2	41.7	50.2		50.7		
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				1	2	5	11		
CNEL:				1	2	5	11		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2023 With Project Road Name: California Av. Road Segment: n/o Stowe Rd.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 5,100 vehicles					Autos: 15					
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15					
Peak Hour Volume: 510 vehicles					Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 40 mph					Vehicle Mix					
Near/Far Lane Distance: 36 feet					Vehicle Type		Day	Evening	Night	Daily
Site Data					Autos:		77.5%	12.9%	9.6%	97.42%
Barrier Height: 0.0 feet					Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier: 47.0 feet					Noise Source Elevations (in feet)					
Centerline Dist. to Observer: 47.0 feet					Autos:		0.000			
Barrier Distance to Observer: 0.0 feet					Medium Trucks:		2.297			
Observer Height (Above Pad): 5.0 feet					Heavy Trucks:		8.006			
Pad Elevation: 0.0 feet					Grade Adjustment: 0.0					
Road Elevation: 0.0 feet					Lane Equivalent Distance (in feet)					
Road Grade: 0.0%					Autos:		43.704			
Left View: -90.0 degrees					Medium Trucks:		43.501			
Right View: 90.0 degrees					Heavy Trucks:		43.521			
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	-4.36	0.77	-1.20	-4.63	0.000	0.000			
Medium Trucks:	77.72	-21.60	0.80	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-25.56	0.80	-1.20	-5.46	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	61.7	59.8	58.1	52.0	60.6	61.2				
Medium Trucks:	55.7	54.2	47.8	46.3	54.8	55.0				
Heavy Trucks:	57.0	55.6	46.6	47.8	56.2	56.3				
Vehicle Noise:	63.7	62.0	58.7	54.2	62.7	63.2				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				15	33	71	154			
CNEL:				16	35	76	165			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2023 With Project Road Name: California Av. Road Segment: s/o Stowe Rd.				Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		400 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		40 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph		Vehicle Mix					
Near/Far Lane Distance:		36 feet		VehicleType					
Site Data				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:		0.000		Grade Adjustment: 0.0	
				Medium Trucks:		2.297			
				Heavy Trucks:		8.006			
Lane Equivalent Distance (in feet)				Autos:		43.704			
				Medium Trucks:		43.501			
				Heavy Trucks:		43.521			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-15.42	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	77.72	-32.66	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-36.61	0.80	-1.20	-5.46	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	47.0	40.9	49.6	50.2			
Medium Trucks:	44.7	43.2	36.8	35.2	43.7	43.9			
Heavy Trucks:	46.0	44.6	35.5	36.8	45.1	45.3			
Vehicle Noise:	52.7	51.0	47.7	43.1	51.7	52.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			3	6	13	28			
CNEL:			3	6	14	30			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2023 With Project Road Name: California Av. Road Segment: s/o Stetson Av. (S.)					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		200 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		20 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		40 mph			Vehicle Mix					
Near/Far Lane Distance:		36 feet			Vehicle Type		Day	Evening	Night	Daily
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%					
Barrier Height:		0.0 feet			Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
Centerline Dist. to Barrier:		47.0 feet			Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		47.0 feet			Autos: 0.000					
Barrier Distance to Observer:		0.0 feet			Medium Trucks: 2.297					
Observer Height (Above Pad):		5.0 feet			Heavy Trucks: 8.006 Grade Adjustment: 0.0					
Pad Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Elevation:		0.0 feet			Autos: 43.704					
Road Grade:		0.0%			Medium Trucks: 43.501					
Left View:		-90.0 degrees			Heavy Trucks: 43.521					
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	-18.43	0.77	-1.20	-4.63	0.000	0.000			
Medium Trucks:	77.72	-35.67	0.80	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-39.62	0.80	-1.20	-5.46	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	47.7	45.8	44.0	37.9	46.6	47.2				
Medium Trucks:	41.7	40.1	33.8	32.2	40.7	40.9				
Heavy Trucks:	43.0	41.5	32.5	33.8	42.1	42.2				
Vehicle Noise:	49.7	47.9	44.7	40.1	48.7	49.1				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				2	4	8	18			
CNEL:				2	4	9	19			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL																		
Scenario: Year 2023 With Project Road Name: California Av. Road Segment: n/o Simpson Rd.					Project Name: Rancho Diamante Job Number: 9792													
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS													
Highway Data					Site Conditions (Hard = 10, Soft = 15)													
Average Daily Traffic (Adt):		200 vehicles			Autos:		15											
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15											
Peak Hour Volume:		20 vehicles			Heavy Trucks (3+ Axles):		15											
Vehicle Speed:		25 mph			Vehicle Mix													
Near/Far Lane Distance:		36 feet																
Site Data					VehicleType					Day	Evening	Night	Daily					
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%		9.6%		97.42%					
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%		10.3%		1.84%					
Centerline Dist. to Barrier:		47.0 feet			Heavy Trucks:		86.5%		2.7%		10.8%		0.74%					
Centerline Dist. to Observer:		47.0 feet			Noise Source Elevations (in feet)													
Barrier Distance to Observer:		0.0 feet								Autos:		0.000						
Observer Height (Above Pad):		5.0 feet								Medium Trucks:		2.297						
Pad Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment:		0.0							
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)													
Road Grade:		0.0%								Autos:		43.704						
Left View:		-90.0 degrees								Medium Trucks:		43.501						
Right View:		90.0 degrees			Heavy Trucks:		43.521											
FHWA Noise Model Calculations																		
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten											
Autos:	58.73	-16.39	0.77	-1.20	-4.63	0.000	0.000											
Medium Trucks:	70.80	-33.63	0.80	-1.20	-4.87	0.000	0.000											
Heavy Trucks:	77.97	-37.58	0.80	-1.20	-5.46	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:	41.9	40.0	38.3	32.2	40.8	41.4												
Medium Trucks:	36.8	35.3	28.9	27.4	35.8	36.1												
Heavy Trucks:	40.0	38.6	29.5	30.8	39.1	39.3												
Vehicle Noise:	44.8	43.1	39.2	35.3	43.8	44.2												
Centerline Distance to Noise Contour (in feet)																		
				70 dBA	65 dBA	60 dBA	55 dBA											
Ldn:				1	2	4	8											
CNEL:				1	2	4	9											

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2023 With Project Road Name: Warren Rd. Road Segment: s/o Esplanade Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 27,400 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,740 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 55 mph									
Near/Far Lane Distance: 84 feet					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height: 0.0 feet					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Barrier: 70.0 feet									
Centerline Dist. to Observer: 70.0 feet					Noise Source Elevations (in feet)				
Barrier Distance to Observer: 0.0 feet					Autos: 0.000				
Observer Height (Above Pad): 5.0 feet					Medium Trucks: 2.297				
Pad Elevation: 0.0 feet					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Road Elevation: 0.0 feet									
Road Grade: 0.0%					Lane Equivalent Distance (in feet)				
Left View: -90.0 degrees					Autos: 56.223				
Right View: 90.0 degrees					Medium Trucks: 56.065				
					Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	1.55	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	82.40	-15.68	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	86.40	-19.64	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	71.3	69.4	67.6	61.5	70.2	70.8			
Medium Trucks:	64.7	63.2	56.8	55.3	63.7	64.0			
Heavy Trucks:	64.7	63.3	54.2	55.5	63.9	64.0			
Vehicle Noise:	72.9	71.1	68.1	63.3	71.8	72.3			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			92	199	429	925			
CNEL:			99	214	462	995			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL														
Scenario: Year 2023 With Project Road Name: California Av. Road Segment: s/o Simpson Rd.					Project Name: Rancho Diamante Job Number: 9792									
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS									
Highway Data					Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt):		100 vehicles			Autos:		15							
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15							
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15							
Vehicle Speed:		25 mph			Vehicle Mix									
Near/Far Lane Distance:		36 feet												
Site Data					VehicleType					Day	Evening	Night	Daily	
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%		9.6%		97.42%	
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%		10.3%		1.84%	
Centerline Dist. to Barrier:		47.0 feet			Heavy Trucks:		86.5%		2.7%		10.8%		0.74%	
Centerline Dist. to Observer:		47.0 feet			Noise Source Elevations (in feet)					Autos: 0.000				
Barrier Distance to Observer:		0.0 feet								Medium Trucks: 2.297				
Observer Height (Above Pad):		5.0 feet			Heavy Trucks: 8.006					Grade Adjustment: 0.0				
Pad Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					Autos: 43.704				
Road Elevation:		0.0 feet								Medium Trucks: 43.501				
Road Grade:		0.0%			Heavy Trucks: 43.521									
Left View:		-90.0 degrees												
Right View:		90.0 degrees												
FHWA Noise Model Calculations														
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten							
Autos:	58.73	-19.40	0.77	-1.20	-4.63	0.000	0.000							
Medium Trucks:	70.80	-36.64	0.80	-1.20	-4.87	0.000	0.000							
Heavy Trucks:	77.97	-40.59	0.80	-1.20	-5.46	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:	38.9	37.0	35.2	29.2	37.8	38.4								
Medium Trucks:	33.8	32.3	25.9	24.3	32.8	33.0								
Heavy Trucks:	37.0	35.6	26.5	27.8	36.1	36.3								
Vehicle Noise:	41.8	40.1	36.2	32.3	40.8	41.2								
Centerline Distance to Noise Contour (in feet)														
				70 dBA		65 dBA		60 dBA		55 dBA				
Ldn:				1		1		2		5				
CNEL:				1		1		3		6				

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2023 With Project Road Name: Warren Rd. Road Segment: n/o Tres Cerritos Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 27,400 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,740 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					Vehicle Type	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	1.55	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	82.40	-15.68	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	86.40	-19.64	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	71.3	69.4	67.6	61.5	70.2	70.8			
Medium Trucks:	64.7	63.2	56.8	55.3	63.7	64.0			
Heavy Trucks:	64.7	63.3	54.2	55.5	63.9	64.0			
Vehicle Noise:	72.9	71.1	68.1	63.3	71.8	72.3			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				92	199	429	925		
CNEL:				99	214	462	995		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2023 With Project Road Name: Florida Av. Road Segment: e/o Warren Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 52,300 vehicles				Autos:		15			
Peak Hour Percentage: 10%				Medium Trucks (2 Axles):		15			
Peak Hour Volume: 5,230 vehicles				Heavy Trucks (3+ Axles):		15			
Vehicle Speed: 50 mph				Vehicle Mix					
Near/Far Lane Distance: 84 feet				Vehicle Type	Day	Evening	Night	Daily	
Site Data				Autos:		77.5%	12.9%	9.6%	97.42%
Barrier Height: 0.0 feet				Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier: 70.0 feet				Noise Source Elevations (in feet)					
Centerline Dist. to Observer: 70.0 feet				Autos:		0.000			
Barrier Distance to Observer: 0.0 feet				Medium Trucks:		2.297			
Observer Height (Above Pad): 5.0 feet				Heavy Trucks:		8.006		Grade Adjustment: 0.0	
Pad Elevation: 0.0 feet				Lane Equivalent Distance (in feet)					
Road Elevation: 0.0 feet				Autos:		56.223			
Road Grade: 0.0%				Medium Trucks:		56.065			
Left View: -90.0 degrees				Heavy Trucks:		56.081			
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	4.78	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-12.46	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-16.42	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	72.9	71.0	69.2	63.2	71.8	72.4			
Medium Trucks:	66.5	65.0	58.6	57.1	65.5	65.8			
Heavy Trucks:	66.9	65.5	56.5	57.7	66.1	66.2			
Vehicle Noise:	74.6	72.9	69.8	65.0	73.6	74.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			121	261	563	1,213			
CNEL:			130	281	605	1,303			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2023 With Project Road Name: Stowe Rd. Road Segment: w/o California Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 5,000 vehicles					Autos: 15					
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15					
Peak Hour Volume: 500 vehicles					Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 40 mph										
Near/Far Lane Distance: 36 feet					Vehicle Mix					
Site Data					Vehicle Type		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:		0.000			
					Medium Trucks:		2.297			
					Heavy Trucks:		8.006			
					Grade Adjustment: 0.0					
					Lane Equivalent Distance (in feet)					
Autos:		43.704								
Medium Trucks:		43.501								
Heavy Trucks:		43.521								
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	-4.45	0.77	-1.20	-4.63	0.000	0.000			
Medium Trucks:	77.72	-21.69	0.80	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-25.64	0.80	-1.20	-5.46	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	61.6	59.7	58.0	51.9	60.5	61.1				
Medium Trucks:	55.6	54.1	47.8	46.2	54.7	54.9				
Heavy Trucks:	57.0	55.5	46.5	47.7	56.1	56.2				
Vehicle Noise:	63.7	61.9	58.6	54.1	62.6	63.1				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			15	33	70	152				
CNEL:			16	35	75	162				

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2023 With Project Road Name: Florida Av. Road Segment: e/o Myers St.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 48,300 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 4,830 vehicles Vehicle Speed: 35 mph Near/Far Lane Distance: 84 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
				Vehicle Type		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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0					
				Lane Equivalent Distance (in feet)					
				Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081					
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	64.30	5.98	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	75.75	-11.26	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	81.57	-15.21	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.2	66.3	64.5	58.5	67.1	67.7			
Medium Trucks:	62.4	60.9	54.6	53.0	61.5	61.7			
Heavy Trucks:	64.3	62.9	53.8	55.1	63.4	63.6			
Vehicle Noise:	70.4	68.7	65.3	60.9	69.4	69.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			64	138	298	641			
CNEL:			69	148	318	685			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2023 With Project Road Name: Grand Av. Road Segment: e/o Patterson Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		40 mph								
Near/Far Lane Distance:		84 feet			Vehicle Mix					
Site Data					Vehicle Type		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:		0.000			
					Medium Trucks:		2.297			
Heavy Trucks:		8.006		Grade Adjustment: 0.0						
					Lane Equivalent Distance (in feet)					
					Autos:		56.223			
					Medium Trucks:		56.065			
					Heavy Trucks:		56.081			
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	-21.44	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	77.72	-38.68	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	82.99	-42.63	-0.85	-1.20	-5.28	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	43.0	41.1	39.3	33.3	41.9	42.5				
Medium Trucks:	37.0	35.5	29.1	27.6	36.0	36.3				
Heavy Trucks:	38.3	36.9	27.9	29.1	37.5	37.6				
Vehicle Noise:	45.0	43.3	40.0	35.5	44.0	44.4				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				1	3	6	13			
CNEL:				1	3	6	14			

Monday, January 25, 2016

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2023 With Project Road Name: Grand Av. Road Segment: w/o Calvert Av.				Project Name: Rancho Diamante Job Number: 9792			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		100 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		10 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		40 mph		Vehicle Mix			
Near/Far Lane Distance:		84 feet					
Site Data				VehicleType			
Barrier Height:		0.0 feet		Autos:		77.5% 12.9% 9.6% 97.42%	
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		84.8% 4.9% 10.3% 1.84%	
Centerline Dist. to Barrier:		70.0 feet		Heavy Trucks:		86.5% 2.7% 10.8% 0.74%	
Centerline Dist. to Observer:		70.0 feet		Noise Source Elevations (in feet)			
Barrier Distance to Observer:		0.0 feet					
Observer Height (Above Pad):		5.0 feet		Autos:		0.000	
Pad Elevation:		0.0 feet		Medium Trucks:		2.297	
Road Elevation:		0.0 feet		Heavy Trucks:		8.006	
Road Grade:		0.0%		Grade Adjustment: 0.0			
Left View:		-90.0 degrees		Lane Equivalent Distance (in feet)			
Right View:		90.0 degrees					
				Autos:		56.223	
				Medium Trucks:		56.065	
				Heavy Trucks:		56.081	
FHWA Noise Model Calculations							
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-21.44	-0.87	-1.20	-4.72	0.000	0.000
Medium Trucks:	77.72	-38.68	-0.85	-1.20	-4.88	0.000	0.000
Heavy Trucks:	82.99	-42.63	-0.85	-1.20	-5.28	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	43.0	41.1	39.3	33.3	41.9	42.5	
Medium Trucks:	37.0	35.5	29.1	27.6	36.0	36.3	
Heavy Trucks:	38.3	36.9	27.9	29.1	37.5	37.6	
Vehicle Noise:	45.0	43.3	40.0	35.5	44.0	44.4	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			1	3	6	13	
CNEL:			1	3	6	14	

Monday, January 25, 2016

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2023 With Project Road Name: Stetson Av. (S.) Road Segment: e/o SR-79 SB Ramps				Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		100 vehicles		Autos:		15		
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15		
Peak Hour Volume:		10 vehicles		Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		50 mph						
Near/Far Lane Distance:		84 feet		Vehicle Mix				
				VehicleType	Day	Evening	Night	Daily
Site Data				Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height:		0.0 feet		Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Barrier:		70.0 feet						
Centerline Dist. to Observer:		70.0 feet		Noise Source Elevations (in feet)				
Barrier Distance to Observer:		0.0 feet		Autos: 0.000				
Observer Height (Above Pad):		5.0 feet		Medium Trucks: 2.297				
Pad Elevation:		0.0 feet		Heavy Trucks: 8.006				
Road Elevation:		0.0 feet		Grade Adjustment: 0.0				
Road Grade:		0.0%		Lane Equivalent Distance (in feet)				
Left View:		-90.0 degrees		Autos: 56.223				
Right View:		90.0 degrees		Medium Trucks: 56.065				
				Heavy Trucks: 56.081				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000	
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2		
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6		
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0		
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			2	4	9	19		
CNEL:			2	4	9	20		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2023 With Project Road Name: Grand Av. Road Segment: e/o Calvert Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		40 mph			Vehicle Mix					
Near/Far Lane Distance:		84 feet								
Site Data					VehicleType					
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%	
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%	
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%		2.7%	
Centerline Dist. to Observer:		70.0 feet					10.8%		0.74%	
Barrier Distance to Observer:		0.0 feet			Noise Source Elevations (in feet)					
Observer Height (Above Pad):		5.0 feet								
Pad Elevation:		0.0 feet			Autos:		0.000			
Road Elevation:		0.0 feet			Medium Trucks:		2.297			
Road Grade:		0.0%			Heavy Trucks:		8.006		Grade Adjustment: 0.0	
Left View:		-90.0 degrees			Lane Equivalent Distance (in feet)					
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	-21.44	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	77.72	-38.68	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	82.99	-42.63	-0.85	-1.20	-5.28	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:	43.0	41.1	39.3	33.3	41.9	42.5				
Medium Trucks:	37.0	35.5	29.1	27.6	36.0	36.3				
Heavy Trucks:	38.3	36.9	27.9	29.1	37.5	37.6				
Vehicle Noise:	45.0	43.3	40.0	35.5	44.0	44.4				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				1	3	6	13			
CNEL:				1	3	6	14			

Monday, January 25, 2016

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2023 With Project Road Name: Stetson Av. (S.) Road Segment: e/o SR-79 NB Ramps				Project Name: Rancho Diamante Job Number: 9792			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		100 vehicles		Autos:		15	
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15	
Peak Hour Volume:		10 vehicles		Heavy Trucks (3+ Axles):		15	
Vehicle Speed:		50 mph					
Near/Far Lane Distance:		84 feet					
Site Data				Vehicle Mix			
Barrier Height:		0.0 feet		Autos:		77.5% 12.9% 9.6% 97.42%	
Barrier Type (0-Wall, 1-Berm):		0.0		Medium Trucks:		84.8% 4.9% 10.3% 1.84%	
Centerline Dist. to Barrier:		70.0 feet		Heavy Trucks:		86.5% 2.7% 10.8% 0.74%	
Centerline Dist. to Observer:		70.0 feet					
Barrier Distance to Observer:		0.0 feet					
Observer Height (Above Pad):		5.0 feet					
Pad Elevation:		0.0 feet					
Road Elevation:		0.0 feet					
Road Grade:		0.0%					
Left View:		-90.0 degrees					
Right View:		90.0 degrees					
				Noise Source Elevations (in feet)			
				Autos:		0.000	
				Medium Trucks:		2.297	
				Heavy Trucks:		8.006 Grade Adjustment: 0.0	
				Lane Equivalent Distance (in feet)			
				Autos:		56.223	
				Medium Trucks:		56.065	
				Heavy Trucks:		56.081	
FHWA Noise Model Calculations							
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	45.7	43.8	42.1	36.0	44.6	45.2	
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6	
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0	
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			2	4	9	19	
CNEL:			2	4	9	20	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2023 With Project Road Name: Stetson Av. (S.) Road Segment: w/o California Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		50 mph			Vehicle Mix					
Near/Far Lane Distance:		84 feet			VehicleType					
Site Data					Day		Evening		Night	
Barrier Height:		0.0 feet			Autos:		77.5%		9.6%	
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		1.84%	
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%		0.74%	
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet			Autos:		0.000			
Observer Height (Above Pad):		5.0 feet			Medium Trucks:		2.297			
Pad Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment: 0.0	
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Grade:		0.0%			Autos:		56.223			
Left View:		-90.0 degrees			Medium Trucks:		56.065			
Right View:		90.0 degrees			Heavy Trucks:		56.081			
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	45.7	43.8	42.1	36.0	44.6	45.2				
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6				
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0				
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			2	4	9	19				
CNEL:			2	4	9	20				

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2023 With Project Road Name: Stetson Av. (S.) Road Segment: e/o Street "C"					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		100 vehicles			Autos:		15		
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15		
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		50 mph			Vehicle Mix				
Near/Far Lane Distance:		84 feet							
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height:		0.0 feet			Medium Trucks:		84.8% 4.9% 10.3% 1.84%		
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks:		86.5% 2.7% 10.8% 0.74%		
Centerline Dist. to Barrier:		70.0 feet			Noise Source Elevations (in feet)				
Centerline Dist. to Observer:		70.0 feet							
Barrier Distance to Observer:		0.0 feet			Autos:		0.000		
Observer Height (Above Pad):		5.0 feet			Medium Trucks:		2.297		
Pad Elevation:		0.0 feet			Heavy Trucks:		8.006		
Road Elevation:		0.0 feet			Grade Adjustment: 0.0				
Road Grade:		0.0%			Lane Equivalent Distance (in feet)				
Left View:		-90.0 degrees							
Right View:		90.0 degrees			Autos:		56.223		
					Medium Trucks:		56.065		
					Heavy Trucks:		56.081		
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	45.7	43.8	42.1	36.0	44.6	45.2			
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6			
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0			
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			2	4	9	19			
CNEL:			2	4	9	20			

Monday, January 25, 2016

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2023 With Project Road Name: Stetson Av. (S.) Road Segment: e/o California Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		50 mph			Vehicle Mix					
Near/Far Lane Distance:		84 feet								
Site Data					VehicleType					
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%	
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%	
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%		2.7%	
Centerline Dist. to Observer:		70.0 feet					10.8%		0.74%	
Barrier Distance to Observer:		0.0 feet			Noise Source Elevations (in feet)					
Observer Height (Above Pad):		5.0 feet								
Pad Elevation:		0.0 feet			Autos:		0.000			
Road Elevation:		0.0 feet			Medium Trucks:		2.297			
Road Grade:		0.0%			Heavy Trucks:		8.006		Grade Adjustment: 0.0	
Left View:		-90.0 degrees			Lane Equivalent Distance (in feet)					
Right View:		90.0 degrees								
					Autos:		56.223			
					Medium Trucks:		56.065			
					Heavy Trucks:		56.081			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2				
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6				
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0				
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				2	4	9	19			
CNEL:				2	4	9	20			

Monday, January 25, 2016

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2023 With Project Road Name: Stetson Av. (S.) Road Segment: e/o Mustang Wy.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		50 mph			Vehicle Mix					
Near/Far Lane Distance:		84 feet			Vehicle Type		Day	Evening	Night	Daily
Site Data					Autos:		77.5%	12.9%	9.6%	97.42%
Barrier Height:		0.0 feet			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Barrier Type (0=Wall, 1=Berm):		0.0			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier:		70.0 feet			Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		70.0 feet			Autos:		0.000			
Barrier Distance to Observer:		0.0 feet			Medium Trucks:		2.297			
Observer Height (Above Pad):		5.0 feet			Heavy Trucks:		8.006	Grade Adjustment: 0.0		
Pad Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Elevation:		0.0 feet			Autos:		56.223			
Road Grade:		0.0%			Medium Trucks:		56.065			
Left View:		-90.0 degrees			Heavy Trucks:		56.081			
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	45.7	43.8	42.1	36.0	44.6	45.2				
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6				
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0				
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				2	4	9	19			
CNEL:				2	4	9	20			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL													
Scenario: Year 2023 With Project Road Name: Stetson Av. (S.) Road Segment: w/o Warren Rd.					Project Name: Rancho Diamante Job Number: 9792								
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS								
Highway Data					Site Conditions (Hard = 10, Soft = 15)								
Average Daily Traffic (Adt):		100 vehicles			Autos:		15						
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15						
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15						
Vehicle Speed:		50 mph			Vehicle Mix								
Near/Far Lane Distance:		84 feet											
Site Data					VehicleType					Day	Evening	Night	Daily
Barrier Height:		0.0 feet			Autos:		77.5%	12.9%	9.6%	97.42%			
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%	4.9%	10.3%	1.84%			
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%			
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)								
Barrier Distance to Observer:		0.0 feet											
Observer Height (Above Pad):		5.0 feet			Autos:		0.000						
Pad Elevation:		0.0 feet			Medium Trucks:		2.297						
Road Elevation:		0.0 feet			Heavy Trucks:		8.006						
Road Grade:		0.0%			Grade Adjustment:		0.0						
Left View:		-90.0 degrees			Lane Equivalent Distance (in feet)								
Right View:		90.0 degrees											
					Autos:		56.223						
					Medium Trucks:		56.065						
					Heavy Trucks:		56.081						
FHWA Noise Model Calculations													
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten						
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000						
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000						
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	0.000	0.000						
Unmitigated Noise Levels (without Topo and barrier attenuation)													
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL							
Autos:	45.7	43.8	42.1	36.0	44.6	45.2							
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6							
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0							
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9							
Centerline Distance to Noise Contour (in feet)													
				70 dBA	65 dBA	60 dBA	55 dBA						
Ldn:				2	4	9	19						
CNEL:				2	4	9	20						

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2023 With Project Road Name: Stetson Av. (S.) Road Segment: e/o Fisher St.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		100 vehicles			Autos:		15		
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15		
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		50 mph			Vehicle Mix				
Near/Far Lane Distance:		84 feet							
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height:		0.0 feet			Medium Trucks:		84.8% 4.9% 10.3% 1.84%		Grade Adjustment: 0.0
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks:		86.5% 2.7% 10.8% 0.74%		
Centerline Dist. to Barrier:		70.0 feet			Noise Source Elevations (in feet)				
Centerline Dist. to Observer:		70.0 feet							
Barrier Distance to Observer:		0.0 feet			Autos:		0.000		
Observer Height (Above Pad):		5.0 feet			Medium Trucks:		2.297		
Pad Elevation:		0.0 feet			Heavy Trucks:		8.006		
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)				
Road Grade:		0.0%							
Left View:		-90.0 degrees			Autos:		56.223		
Right View:		90.0 degrees			Medium Trucks:		56.065		
					Heavy Trucks:		56.081		
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	45.7	43.8	42.1	36.0	44.6	45.2			
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6			
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0			
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			2	4	9	19			
CNEL:			2	4	9	20			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2023 With Project Road Name: Stetson Av. (S.) Road Segment: e/o Warren Rd.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		50 mph			Vehicle Mix					
Near/Far Lane Distance:		84 feet			VehicleType		Day	Evening	Night	Daily
Site Data					Autos:		77.5%	12.9%	9.6%	97.42%
Barrier Height:		0.0 feet			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier:		70.0 feet			Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		70.0 feet			Autos:		0.000			
Barrier Distance to Observer:		0.0 feet			Medium Trucks:		2.297			
Observer Height (Above Pad):		5.0 feet			Heavy Trucks:		8.006	Grade Adjustment: 0.0		
Pad Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Elevation:		0.0 feet			Autos:		56.223			
Road Grade:		0.0%			Medium Trucks:		56.065			
Left View:		-90.0 degrees			Heavy Trucks:		56.081			
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2				
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6				
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0				
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				2	4	9	19			
CNEL:				2	4	9	20			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2023 With Project Road Name: Stetson Av. Road Segment: e/o New Stetson Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 11,300 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,130 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph					Vehicle Mix				
Near/Far Lane Distance: 84 feet					Vehicle Type	Day	Evening	Night	Daily
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height: 0.0 feet					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Barrier: 70.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 70.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 56.223				
Road Grade: 0.0%					Medium Trucks: 56.065				
Left View: -90.0 degrees					Heavy Trucks: 56.081				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-1.88	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-19.12	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-23.07	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	66.3	64.4	62.6	56.5	65.2	65.8			
Medium Trucks:	59.8	58.3	52.0	50.4	58.9	59.1			
Heavy Trucks:	60.3	58.8	49.8	51.0	59.4	59.5			
Vehicle Noise:	68.0	66.2	63.2	58.4	66.9	67.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			44	94	203	437			
CNEL:			47	101	218	469			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2023 With Project Road Name: Stetson Av. Road Segment: e/o Cawston Av.				Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 14,600 vehicles				Autos: 15				
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,460 vehicles				Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph				Vehicle Mix				
Near/Far Lane Distance: 84 feet				VehicleType	Day	Evening	Night	Daily
Site Data				Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height: 0.0 feet				Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Barrier: 70.0 feet				Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 70.0 feet				Autos: 0.000				
Barrier Distance to Observer: 0.0 feet				Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet				Heavy Trucks: 8.006				
Pad Elevation: 0.0 feet				Grade Adjustment: 0.0				
Road Elevation: 0.0 feet				Lane Equivalent Distance (in feet)				
Road Grade: 0.0%				Autos: 56.223				
Left View: -90.0 degrees				Medium Trucks: 56.065				
Right View: 90.0 degrees				Heavy Trucks: 56.081				
FHWA Noise Model Calculations								
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	70.20	-0.77	-0.87	-1.20	-4.72	0.000	0.000	
Medium Trucks:	81.00	-18.00	-0.85	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	85.38	-21.96	-0.85	-1.20	-5.28	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	67.4	65.5	63.7	57.7	66.3	66.9		
Medium Trucks:	60.9	59.4	53.1	51.5	60.0	60.2		
Heavy Trucks:	61.4	59.9	50.9	52.2	60.5	60.6		
Vehicle Noise:	69.1	67.3	64.3	59.5	68.0	68.5		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			52	112	240	518		
CNEL:			56	120	258	556		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2023 With Project Road Name: 9th St. Road Segment: w/o Winchester Rd.				Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		2,500 vehicles		Autos:		15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles):		15			
Peak Hour Volume:		250 vehicles		Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		25 mph							
Near/Far Lane Distance:		84 feet		Vehicle Mix					
				VehicleType	Day	Evening	Night	Daily	
Site Data				Autos:		77.5%	12.9%	9.6%	97.42%
Barrier Height:		0.0 feet		Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm):		0.0		Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier:		70.0 feet							
Centerline Dist. to Observer:		70.0 feet		Noise Source Elevations (in feet)					
Barrier Distance to Observer:		0.0 feet		Autos:		0.000			
Observer Height (Above Pad):		5.0 feet		Medium Trucks:		2.297			
Pad Elevation:		0.0 feet		Heavy Trucks:		8.006		Grade Adjustment: 0.0	
Road Elevation:		0.0 feet		Lane Equivalent Distance (in feet)					
Road Grade:		0.0%		Autos:		56.223			
Left View:		-90.0 degrees		Medium Trucks:		56.065			
Right View:		90.0 degrees		Heavy Trucks:		56.081			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	58.73	-5.42	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	70.80	-22.66	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	77.97	-26.61	-0.85	-1.20	-5.28	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:	51.2	49.3	47.6	41.5	50.2	50.8			
Medium Trucks:	46.1	44.6	38.2	36.7	45.1	45.4			
Heavy Trucks:	49.3	47.9	38.9	40.1	48.5	48.6			
Vehicle Noise:	54.1	52.5	48.6	44.6	53.1	53.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			5	11	24	53			
CNEL:			6	12	26	56			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2023 With Project Road Name: Stetson Av. Road Segment: e/o Sanderson Av.				Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 45,200 vehicles				Autos: 15				
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15				
Peak Hour Volume: 4,520 vehicles				Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph				Vehicle Mix				
Near/Far Lane Distance: 84 feet				VehicleType	Day	Evening	Night	Daily
Site Data				Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height: 0.0 feet				Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Barrier: 70.0 feet				Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 70.0 feet				Autos: 0.000				
Barrier Distance to Observer: 0.0 feet				Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet				Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet				Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet				Autos: 56.223				
Road Grade: 0.0%				Medium Trucks: 56.065				
Left View: -90.0 degrees				Heavy Trucks: 56.081				
Right View: 90.0 degrees								
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	68.46	4.60	-0.87	-1.20	-4.72	0.000	0.000	
Medium Trucks:	79.45	-12.64	-0.85	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	84.25	-16.59	-0.85	-1.20	-5.28	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	71.0	69.1	67.3	61.3	69.9	70.5		
Medium Trucks:	64.8	63.3	56.9	55.3	63.8	64.0		
Heavy Trucks:	65.6	64.2	55.2	56.4	64.8	64.9		
Vehicle Noise:	72.8	71.1	67.9	63.3	71.8	72.3		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			92	199	429	924		
CNEL:			99	213	460	991		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2023 With Project Road Name: 9th St. Road Segment: e/o Winchester Rd.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		600 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		60 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		25 mph			Vehicle Mix					
Near/Far Lane Distance:		84 feet			Vehicle Type		Day	Evening	Night	Daily
Site Data					Autos:		77.5%	12.9%	9.6%	97.42%
Barrier Height:		0.0 feet			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Barrier:		70.0 feet			Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		70.0 feet			Autos:		0.000			
Barrier Distance to Observer:		0.0 feet			Medium Trucks:		2.297			
Observer Height (Above Pad):		5.0 feet			Heavy Trucks:		8.006	Grade Adjustment: 0.0		
Pad Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Elevation:		0.0 feet			Autos:		56.223			
Road Grade:		0.0%			Medium Trucks:		56.065			
Left View:		-90.0 degrees			Heavy Trucks:		56.081			
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	58.73	-11.62	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	70.80	-28.86	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	77.97	-32.81	-0.85	-1.20	-5.28	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	45.1	43.2	41.4	35.3	44.0	44.6				
Medium Trucks:	39.9	38.4	32.0	30.5	38.9	39.2				
Heavy Trucks:	43.1	41.7	32.7	33.9	42.3	42.4				
Vehicle Noise:	47.9	46.3	42.4	38.4	46.9	47.3				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				2	4	9	20			
CNEL:				2	5	10	22			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Existing Without Project Road Name: Winchester Rd. Road Segment: s/o Florida Av.				Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 19,600 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,960 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 36 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data				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: 0.000				
				Medium Trucks: 2.297				
				Heavy Trucks: 8.006 Grade Adjustment: 0.0				
				Lane Equivalent Distance (in feet)				
				Autos: 43.704				
				Medium Trucks: 43.501				
				Heavy Trucks: 43.521				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos: 71.78 0.10 0.77 -1.20 -4.63 0.000 0.000								
Medium Trucks: 82.40 -17.14 0.80 -1.20 -4.87 0.000 0.000								
Heavy Trucks: 86.40 -21.09 0.80 -1.20 -5.46 0.000 0.000								
Unmitigated Noise Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos: 71.5 69.6 67.8 61.7 70.4 71.0								
Medium Trucks: 64.9 63.4 57.0 55.5 63.9 64.1								
Heavy Trucks: 64.9 63.5 54.4 55.7 64.1 64.2								
Vehicle Noise: 73.0 71.3 68.3 63.5 72.0 72.5								
Centerline Distance to Noise Contour (in feet)								
				70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:				64	138	297	639	
CNEL:				69	148	319	688	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Winchester Rd. Road Segment: n/o 9th St.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 21,500 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,150 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
Autos: 43.704 Medium Trucks: 43.501 Heavy Trucks: 43.521									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	1.37	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	79.45	-15.86	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-19.82	0.80	-1.20	-5.46	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	69.4	67.5	65.7	59.7	68.3	68.9			
Medium Trucks:	63.2	61.7	55.3	53.8	62.2	62.5			
Heavy Trucks:	64.0	62.6	53.6	54.8	63.2	63.3			
Vehicle Noise:	71.3	69.5	66.4	61.7	70.2	70.7			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			49	105	226	486			
CNEL:			52	112	242	522			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL														
Scenario: Existing Without Project Road Name: Patterson Av. Road Segment: s/o Grand Av.					Project Name: Rancho Diamante Job Number: 9792									
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS									
Highway Data					Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt):		100 vehicles			Autos:		15							
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15							
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15							
Vehicle Speed:		40 mph			Vehicle Mix									
Near/Far Lane Distance:		12 feet												
Site Data					VehicleType					Day	Evening	Night	Daily	
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%		9.6%		97.42%	
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%		10.3%		1.84%	
Centerline Dist. to Barrier:		22.0 feet			Heavy Trucks:		86.5%		2.7%		10.8%		0.74%	
Centerline Dist. to Observer:		22.0 feet			Noise Source Elevations (in feet)									
Barrier Distance to Observer:		0.0 feet												
Observer Height (Above Pad):		5.0 feet			Autos:		0.000							
Pad Elevation:		0.0 feet			Medium Trucks:		2.297							
Road Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment:		0.0			
Road Grade:		0.0%			Lane Equivalent Distance (in feet)									
Left View:		-90.0 degrees												
Right View:		90.0 degrees			Autos:		21.749							
					Medium Trucks:		21.338							
					Heavy Trucks:		21.378							
FHWA Noise Model Calculations														
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten							
Autos:	66.51	-21.44	5.32	-1.20	-4.34	0.000	0.000							
Medium Trucks:	77.72	-38.68	5.44	-1.20	-4.85	0.000	0.000							
Heavy Trucks:	82.99	-42.63	5.43	-1.20	-6.07	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:	49.2	47.3	45.5	39.5	48.1	48.7								
Medium Trucks:	43.3	41.8	35.4	33.9	42.3	42.6								
Heavy Trucks:	44.6	43.2	34.1	35.4	43.7	43.9								
Vehicle Noise:	51.2	49.5	46.2	41.7	50.2	50.7								
Centerline Distance to Noise Contour (in feet)														
				70 dBA	65 dBA	60 dBA	55 dBA							
Ldn:				1	2	5	11							
CNEL:				1	2	5	11							

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Existing Without Project Road Name: California Av. Road Segment: n/o Stowe Rd.				Project Name: Rancho Diamante Job Number: 9792			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 5,100 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 510 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 36 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0			
				Lane Equivalent Distance (in feet)			
				Autos: 43.704 Medium Trucks: 43.501 Heavy Trucks: 43.521			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-4.36	0.77	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-21.60	0.80	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-25.56	0.80	-1.20	-5.46	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	61.7	59.8	58.1	52.0	60.6	61.2	
Medium Trucks:	55.7	54.2	47.8	46.3	54.8	55.0	
Heavy Trucks:	57.0	55.6	46.6	47.8	56.2	56.3	
Vehicle Noise:	63.7	62.0	58.7	54.2	62.7	63.2	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			15	33	71	154	
CNEL:			16	35	76	165	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: California Av. Road Segment: s/o Stowe Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		400 vehicles			Autos: 15				
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15				
Peak Hour Volume:		40 vehicles			Heavy Trucks (3+ Axles): 15				
Vehicle Speed:		40 mph							
Near/Far Lane Distance:		36 feet							
Site Data					Vehicle Mix				
Barrier Height:		0.0 feet			Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Centerline Dist. to Barrier:		47.0 feet			Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Observer:		47.0 feet							
Barrier Distance to Observer:		0.0 feet							
Observer Height (Above Pad):		5.0 feet							
Pad Elevation:		0.0 feet							
Road Elevation:		0.0 feet							
Road Grade:		0.0%							
Left View:		-90.0 degrees							
Right View:		90.0 degrees							
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 43.704				
					Medium Trucks: 43.501				
					Heavy Trucks: 43.521				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-15.42	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	77.72	-32.66	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-36.61	0.80	-1.20	-5.46	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	47.0	40.9	49.6	50.2			
Medium Trucks:	44.7	43.2	36.8	35.2	43.7	43.9			
Heavy Trucks:	46.0	44.6	35.5	36.8	45.1	45.3			
Vehicle Noise:	52.7	51.0	47.7	43.1	51.7	52.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			3	6	13	28			
CNEL:			3	6	14	30			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: California Av. Road Segment: s/o Stetson Av. (S.)					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 200 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 20 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 43.704 Medium Trucks: 43.501 Heavy Trucks: 43.521				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-18.43	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	77.72	-35.67	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-39.62	0.80	-1.20	-5.46	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:	47.7	45.8	44.0	37.9	46.6	47.2			
Medium Trucks:	41.7	40.1	33.8	32.2	40.7	40.9			
Heavy Trucks:	43.0	41.5	32.5	33.8	42.1	42.2			
Vehicle Noise:	49.7	47.9	44.7	40.1	48.7	49.1			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				2	4	8	18		
CNEL:				2	4	9	19		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: California Av. Road Segment: n/o Simpson Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		200 vehicles			Autos: 15				
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15				
Peak Hour Volume:		20 vehicles			Heavy Trucks (3+ Axles): 15				
Vehicle Speed:		25 mph							
Near/Far Lane Distance:		36 feet							
Site Data					Vehicle Mix				
Barrier Height:		0.0 feet							
Barrier Type (0-Wall, 1-Berm):		0.0							
Centerline Dist. to Barrier:		47.0 feet			Autos: 77.5% 12.9% 9.6% 97.42%				
Centerline Dist. to Observer:		47.0 feet			Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Barrier Distance to Observer:		0.0 feet			Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Observer Height (Above Pad):		5.0 feet							
Pad Elevation:		0.0 feet							
Road Elevation:		0.0 feet							
Road Grade:		0.0%							
Left View:		-90.0 degrees							
Right View:		90.0 degrees							
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 43.704				
					Medium Trucks: 43.501				
					Heavy Trucks: 43.521				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	58.73	-16.39	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	70.80	-33.63	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	77.97	-37.58	0.80	-1.20	-5.46	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:	41.9	40.0	38.3	32.2	40.8	41.4			
Medium Trucks:	36.8	35.3	28.9	27.4	35.8	36.1			
Heavy Trucks:	40.0	38.6	29.5	30.8	39.1	39.3			
Vehicle Noise:	44.8	43.1	39.2	35.3	43.8	44.2			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				1	2	4	8		
CNEL:				1	2	4	9		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: California Av. Road Segment: s/o Simpson Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 100 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 10 vehicles Vehicle Speed: 25 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 43.704 Medium Trucks: 43.501 Heavy Trucks: 43.521				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	58.73	-19.40	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	70.80	-36.64	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	77.97	-40.59	0.80	-1.20	-5.46	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:	38.9	37.0	35.2	29.2	37.8	38.4			
Medium Trucks:	33.8	32.3	25.9	24.3	32.8	33.0			
Heavy Trucks:	37.0	35.6	26.5	27.8	36.1	36.3			
Vehicle Noise:	41.8	40.1	36.2	32.3	40.8	41.2			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				1	1	2	5		
CNEL:				1	1	3	6		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Warren Rd. Road Segment: s/o Florida Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 32,300 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,230 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223				
					Medium Trucks: 56.065				
					Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	2.27	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	82.40	-14.97	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	86.40	-18.92	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	72.0	70.1	68.3	62.3	70.9	71.5			
Medium Trucks:	65.4	63.9	57.5	56.0	64.4	64.7			
Heavy Trucks:	65.4	64.0	55.0	56.2	64.6	64.7			
Vehicle Noise:	73.6	71.8	68.8	64.0	72.5	73.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			103	222	479	1,032			
CNEL:			111	239	515	1,110			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Warren Rd. Road Segment: n/o Whittier Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 30,300 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,030 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	1.99	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	82.40	-15.25	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	86.40	-19.20	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	71.7	69.8	68.0	62.0	70.6	71.2			
Medium Trucks:	65.1	63.6	57.2	55.7	64.2	64.4			
Heavy Trucks:	65.1	63.7	54.7	55.9	64.3	64.4			
Vehicle Noise:	73.3	71.5	68.6	63.7	72.3	72.7			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			99	213	459	989			
CNEL:			106	229	494	1,064			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Warren Rd. Road Segment: s/o Whittier Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 30,800 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,080 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	2.06	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	82.40	-15.18	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	86.40	-19.13	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	71.8	69.9	68.1	62.1	70.7	71.3			
Medium Trucks:	65.2	63.7	57.3	55.8	64.2	64.5			
Heavy Trucks:	65.2	63.8	54.8	56.0	64.4	64.5			
Vehicle Noise:	73.4	71.6	68.6	63.8	72.3	72.8			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				100	215	464	1,000		
CNEL:				108	232	499	1,075		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Existing Without Project Road Name: Warren Rd. Road Segment: s/o Stetson Av. (N.)				Project Name: Rancho Diamante Job Number: 9792			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 24,900 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,490 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 84 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0			
				Lane Equivalent Distance (in feet)			
				Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.01	-0.87	-1.20	-4.72	0.000	0.000
Medium Trucks:	79.45	-15.23	-0.85	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-19.18	-0.85	-1.20	-5.28	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	68.4	66.5	64.7	58.7	67.3	67.9	
Medium Trucks:	62.2	60.7	54.3	52.8	61.2	61.5	
Heavy Trucks:	63.0	61.6	52.6	53.8	62.2	62.3	
Vehicle Noise:	70.2	68.5	65.3	60.7	69.2	69.7	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			62	134	288	621	
CNEL:			67	143	309	666	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Sanderson Av. Road Segment: n/o Stetson Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 51,900 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 5,190 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 50 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					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%				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 54.0 feet Centerline Dist. to Observer: 54.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 48.125				
					Medium Trucks: 47.941				
					Heavy Trucks: 47.959				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	5.20	0.15	-1.20	-4.67	0.000	0.000		
Medium Trucks:	79.45	-12.04	0.17	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-15.99	0.17	-1.20	-5.39	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	72.6	70.7	68.9	62.9	71.5	72.1			
Medium Trucks:	66.4	64.9	58.5	57.0	65.4	65.7			
Heavy Trucks:	67.2	65.8	56.8	58.0	66.4	66.5			
Vehicle Noise:	74.4	72.7	69.6	64.9	73.4	73.9			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				91	197	424	913		
CNEL:				98	211	455	979		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Existing Without Project Road Name: Florida Av. Road Segment: w/o Winchester Rd.				Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 43,000 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 4,300 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 78 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data				Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 76.0 feet Centerline Dist. to Observer: 76.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
				Lane Equivalent Distance (in feet)				
				Autos: 65.422 Medium Trucks: 65.286 Heavy Trucks: 65.300				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	70.20	3.93	-1.85	-1.20	-4.73	0.000	0.000	
Medium Trucks:	81.00	-13.31	-1.84	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	85.38	-17.27	-1.84	-1.20	-5.25	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	71.1	69.2	67.4	61.4	70.0	70.6		
Medium Trucks:	64.6	63.1	56.8	55.2	63.7	63.9		
Heavy Trucks:	65.1	63.6	54.6	55.9	64.2	64.3		
Vehicle Noise:	72.8	71.0	68.0	63.2	71.7	72.2		
Centerline Distance to Noise Contour (in feet)								
				70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:				99	214	461	993	
CNEL:				107	230	495	1,067	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing Without Project Road Name: Florida Av. Road Segment: e/o Warren Rd.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 53,500 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 5,350 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0					
					Lane Equivalent Distance (in feet)					
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081					
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	4.87	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-12.36	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-16.32	-0.85	-1.20	-5.28	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:	73.0	71.1	69.3	63.3	71.9	72.5				
Medium Trucks:	66.6	65.1	58.7	57.2	65.6	65.9				
Heavy Trucks:	67.0	65.6	56.6	57.8	66.2	66.3				
Vehicle Noise:	74.7	73.0	69.9	65.1	73.7	74.1				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				123	265	571	1,231			
CNEL:				132	285	614	1,323			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Florida Av. Road Segment: e/o Myers St.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 49,200 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 4,920 vehicles Vehicle Speed: 35 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	64.30	6.06	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	75.75	-11.18	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	81.57	-15.13	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.3	66.4	64.6	58.6	67.2	67.8			
Medium Trucks:	62.5	61.0	54.7	53.1	61.6	61.8			
Heavy Trucks:	64.4	63.0	53.9	55.2	63.5	63.7			
Vehicle Noise:	70.5	68.8	65.4	61.0	69.5	69.9			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				65	140	301	649		
CNEL:				69	149	322	694		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing Without Project Road Name: Stowe Rd. Road Segment: w/o California Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 5,000 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 500 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data					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%					
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Noise Source Elevations (in feet)					
					Autos: 0.000					
					Medium Trucks: 2.297					
					Heavy Trucks: 8.006 Grade Adjustment: 0.0					
					Lane Equivalent Distance (in feet)					
					Autos: 43.704					
					Medium Trucks: 43.501					
					Heavy Trucks: 43.521					
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	-4.45	0.77	-1.20	-4.63	0.000	0.000			
Medium Trucks:	77.72	-21.69	0.80	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-25.64	0.80	-1.20	-5.46	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	61.6	59.7	58.0	51.9	60.5	61.1				
Medium Trucks:	55.6	54.1	47.8	46.2	54.7	54.9				
Heavy Trucks:	57.0	55.5	46.5	47.7	56.1	56.2				
Vehicle Noise:	63.7	61.9	58.6	54.1	62.6	63.1				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				15	33	70	152			
CNEL:				16	35	75	162			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing Without Project Road Name: Grand Av. Road Segment: e/o Patterson Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		40 mph								
Near/Far Lane Distance:		84 feet								
Site Data					Vehicle Mix					
Barrier Height:		0.0 feet			VehicleType		Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm):		0.0			Autos:		77.5%	12.9%	9.6%	97.42%
Centerline Dist. to Barrier:		70.0 feet			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Observer:		70.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Barrier Distance to Observer:		0.0 feet								
Observer Height (Above Pad):		5.0 feet								
Pad Elevation:		0.0 feet								
Road Elevation:		0.0 feet								
Road Grade:		0.0%								
Left View:		-90.0 degrees								
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	-21.44	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	77.72	-38.68	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	82.99	-42.63	-0.85	-1.20	-5.28	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:	43.0	41.1	39.3	33.3	41.9	42.5				
Medium Trucks:	37.0	35.5	29.1	27.6	36.0	36.3				
Heavy Trucks:	38.3	36.9	27.9	29.1	37.5	37.6				
Vehicle Noise:	45.0	43.3	40.0	35.5	44.0	44.4				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				1	3	6	13			
CNEL:				1	3	6	14			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL													
Scenario: Existing Without Project Road Name: Grand Av. Road Segment: w/o Calvert Av.					Project Name: Rancho Diamante Job Number: 9792								
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS								
Highway Data					Site Conditions (Hard = 10, Soft = 15)								
Average Daily Traffic (Adt):		100 vehicles			Autos:		15						
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15						
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15						
Vehicle Speed:		40 mph			Vehicle Mix								
Near/Far Lane Distance:		84 feet											
Site Data					VehicleType					Day	Evening	Night	Daily
Barrier Height:		0.0 feet			Autos:		77.5%	12.9%	9.6%	97.42%			
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%	4.9%	10.3%	1.84%			
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%			
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)								
Barrier Distance to Observer:		0.0 feet											
Observer Height (Above Pad):		5.0 feet			Autos:		0.000						
Pad Elevation:		0.0 feet			Medium Trucks:		2.297						
Road Elevation:		0.0 feet			Heavy Trucks:		8.006	Grade Adjustment: 0.0					
Road Grade:		0.0%			Lane Equivalent Distance (in feet)								
Left View:		-90.0 degrees											
Right View:		90.0 degrees			Autos:		56.223						
FHWA Noise Model Calculations					Medium Trucks:		56.065						
					Heavy Trucks:		56.081						
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten						
Autos:	66.51	-21.44	-0.87	-1.20	-4.72	0.000	0.000						
Medium Trucks:	77.72	-38.68	-0.85	-1.20	-4.88	0.000	0.000						
Heavy Trucks:	82.99	-42.63	-0.85	-1.20	-5.28	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:	43.0	41.1	39.3	33.3	41.9	42.5							
Medium Trucks:	37.0	35.5	29.1	27.6	36.0	36.3							
Heavy Trucks:	38.3	36.9	27.9	29.1	37.5	37.6							
Vehicle Noise:	45.0	43.3	40.0	35.5	44.0	44.4							
Centerline Distance to Noise Contour (in feet)													
				70 dBA	65 dBA	60 dBA	55 dBA						
Ldn:				1	3	6	13						
CNEL:				1	3	6	14						

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing Without Project Road Name: Grand Av. Road Segment: e/o Calvert Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		40 mph								
Near/Far Lane Distance:		84 feet								
Site Data					Vehicle Mix					
Barrier Height:		0.0 feet			VehicleType		Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm):		0.0			Autos:		77.5%	12.9%	9.6%	97.42%
Centerline Dist. to Barrier:		70.0 feet			Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Observer:		70.0 feet			Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Barrier Distance to Observer:		0.0 feet			Noise Source Elevations (in feet)					
Observer Height (Above Pad):		5.0 feet			Autos:		0.000			
Pad Elevation:		0.0 feet			Medium Trucks:		2.297			
Road Elevation:		0.0 feet			Heavy Trucks:		8.006	Grade Adjustment: 0.0		
Road Grade:		0.0%			Lane Equivalent Distance (in feet)					
Left View:		-90.0 degrees			Autos:		56.223			
Right View:		90.0 degrees			Medium Trucks:		56.065			
					Heavy Trucks:		56.081			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	-21.44	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	77.72	-38.68	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	82.99	-42.63	-0.85	-1.20	-5.28	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:	43.0	41.1	39.3	33.3	41.9		42.5			
Medium Trucks:	37.0	35.5	29.1	27.6	36.0		36.3			
Heavy Trucks:	38.3	36.9	27.9	29.1	37.5		37.6			
Vehicle Noise:	45.0	43.3	40.0	35.5	44.0		44.4			
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				1	3	6	13			
CNEL:				1	3	6	14			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing Without Project Road Name: Stetson Av. (S.) Road Segment: e/o SR-79 SB Ramps					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos:		15			
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15			
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15			
Vehicle Speed:		50 mph			Vehicle Mix					
Near/Far Lane Distance:		84 feet			VehicleType					
Site Data					Day		Evening		Night	
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%	
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%	
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%		2.7%	
Centerline Dist. to Observer:		70.0 feet					10.8%		0.74%	
Barrier Distance to Observer:		0.0 feet			Noise Source Elevations (in feet)					
Observer Height (Above Pad):		5.0 feet			Autos:		0.000			
Pad Elevation:		0.0 feet			Medium Trucks:		2.297			
Road Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment: 0.0	
Road Grade:		0.0%			Lane Equivalent Distance (in feet)					
Left View:		-90.0 degrees			Autos:		56.223			
Right View:		90.0 degrees			Medium Trucks:		56.065			
					Heavy Trucks:		56.081			
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	45.7	43.8	42.1	36.0	44.6	45.2				
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6				
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0				
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				2	4	9	19			
CNEL:				2	4	9	20			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Stetson Av. (S.) Road Segment: w/o California Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		100 vehicles			Autos:		15		
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15		
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15		
Vehicle Speed:		50 mph			Vehicle Mix				
Near/Far Lane Distance:		84 feet			VehicleType				
Site Data					Day				
Barrier Height:		0.0 feet			Evening				
Barrier Type (0-Wall, 1-Berm):		0.0			Night				
Centerline Dist. to Barrier:		70.0 feet			Daily				
Centerline Dist. to Observer:		70.0 feet			Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Distance to Observer:		0.0 feet			Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Observer Height (Above Pad):		5.0 feet			Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Pad Elevation:		0.0 feet			Noise Source Elevations (in feet)				
Road Elevation:		0.0 feet			Autos: 0.000				
Road Grade:		0.0%			Medium Trucks: 2.297				
Left View:		-90.0 degrees			Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Right View:		90.0 degrees			Lane Equivalent Distance (in feet)				
					Autos: 56.223				
					Medium Trucks: 56.065				
					Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	45.7	43.8	42.1	36.0	44.6	45.2			
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6			
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0			
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				2	4	9	19		
CNEL:				2	4	9	20		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL														
Scenario: Existing Without Project Road Name: Stetson Av. (S.) Road Segment: e/o SR-79 NB Ramps					Project Name: Rancho Diamante Job Number: 9792									
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS									
Highway Data					Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt):		100 vehicles			Autos:		15							
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15							
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15							
Vehicle Speed:		50 mph			Vehicle Mix									
Near/Far Lane Distance:		84 feet												
Site Data					VehicleType					Day	Evening	Night	Daily	
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%		9.6%		97.42%	
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%		10.3%		1.84%	
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%		2.7%		10.8%		0.74%	
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)									
Barrier Distance to Observer:		0.0 feet			Autos:		0.000							
Observer Height (Above Pad):		5.0 feet			Medium Trucks:		2.297							
Pad Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment:		0.0			
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)									
Road Grade:		0.0%			Autos:		56.223							
Left View:		-90.0 degrees			Medium Trucks:		56.065							
Right View:		90.0 degrees			Heavy Trucks:		56.081							
FHWA Noise Model Calculations														
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten							
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000							
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000							
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2								
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6								
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0								
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9								
Centerline Distance to Noise Contour (in feet)														
				70 dBA		65 dBA		60 dBA		55 dBA				
Ldn:				2		4		9		19				
CNEL:				2		4		9		20				

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing Without Project Road Name: Stetson Av. (S.) Road Segment: e/o California Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		50 mph								
Near/Far Lane Distance:		84 feet			Vehicle Mix					
Site Data					Vehicle Type		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: 0.000					
					Medium Trucks: 2.297					
Heavy Trucks: 8.006					Grade Adjustment: 0.0					
Barrier Height: 0.0 feet					Lane Equivalent Distance (in feet)					
Barrier Type (0-Wall, 1-Berm):		0.0			Autos: 56.223					
Centerline Dist. to Barrier:		70.0 feet			Medium Trucks: 56.065					
Centerline Dist. to Observer:		70.0 feet			Heavy Trucks: 56.081					
Barrier Distance to Observer:		0.0 feet								
Observer Height (Above Pad):		5.0 feet								
Pad Elevation:		0.0 feet								
Road Elevation:		0.0 feet								
Road Grade:		0.0%								
Left View:		-90.0 degrees								
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	45.7	43.8	42.1	36.0	44.6	45.2				
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6				
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0				
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			2	4	9	19				
CNEL:			2	4	9	20				

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Stetson Av. (S.) Road Segment: e/o Street "C"					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt):		600 vehicles			Autos: 15				
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15				
Peak Hour Volume:		60 vehicles			Heavy Trucks (3+ Axles): 15				
Vehicle Speed:		50 mph							
Near/Far Lane Distance:		84 feet			Vehicle Mix				
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223				
					Medium Trucks: 56.065				
					Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-14.63	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-31.87	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-35.82	-0.85	-1.20	-5.28	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:	53.5	51.6	49.8	43.8	52.4	53.0			
Medium Trucks:	47.1	45.6	39.2	37.7	46.1	46.4			
Heavy Trucks:	47.5	46.1	37.0	38.3	46.7	46.8			
Vehicle Noise:	55.2	53.5	50.4	45.6	54.2	54.6			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				6	13	29	62		
CNEL:				7	14	31	66		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Stetson Av. (S.) Road Segment: e/o Mustang Wy.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 1,800 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 180 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-9.86	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-27.09	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-31.05	-0.85	-1.20	-5.28	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:	51.9	50.3	44.0	42.4	50.9	51.1			
Heavy Trucks:	52.3	50.9	41.8	43.1	51.4	51.6			
Vehicle Noise:	60.0	58.2	55.2	50.4	58.9	59.4			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				13	28	60	128		
CNEL:				14	30	64	138		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Stetson Av. (S.) Road Segment: w/o Warren Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 2,400 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 240 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-8.61	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-25.84	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-29.80	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	59.5	57.6	55.9	49.8	58.4	59.0			
Medium Trucks:	53.1	51.6	45.2	43.7	52.2	52.4			
Heavy Trucks:	53.5	52.1	43.1	44.3	52.7	52.8			
Vehicle Noise:	61.2	59.5	56.4	51.6	60.2	60.7			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				16	33	72	155		
CNEL:				17	36	78	167		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing Without Project Road Name: Stetson Av. (S.) Road Segment: e/o Warren Rd.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):		100 vehicles			Autos: 15					
Peak Hour Percentage:		10%			Medium Trucks (2 Axles): 15					
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles): 15					
Vehicle Speed:		50 mph			Vehicle Mix					
Near/Far Lane Distance:		84 feet			VehicleType		Day	Evening	Night	Daily
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%					
Barrier Height:		0.0 feet			Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
Barrier Type (0-Wall, 1-Berm):		0.0			Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
Centerline Dist. to Barrier:		70.0 feet			Noise Source Elevations (in feet)					
Centerline Dist. to Observer:		70.0 feet			Autos: 0.000					
Barrier Distance to Observer:		0.0 feet			Medium Trucks: 2.297					
Observer Height (Above Pad):		5.0 feet			Heavy Trucks: 8.006 Grade Adjustment: 0.0					
Pad Elevation:		0.0 feet			Lane Equivalent Distance (in feet)					
Road Elevation:		0.0 feet			Autos: 56.223					
Road Grade:		0.0%			Medium Trucks: 56.065					
Left View:		-90.0 degrees			Heavy Trucks: 56.081					
Right View:		90.0 degrees								
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2				
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6				
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0				
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			2	4	9	19				
CNEL:			2	4	9	20				

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL														
Scenario: Existing Without Project Road Name: Stetson Av. (S.) Road Segment: e/o Fisher St.					Project Name: Rancho Diamante Job Number: 9792									
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS									
Highway Data					Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt):		100 vehicles			Autos:		15							
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15							
Peak Hour Volume:		10 vehicles			Heavy Trucks (3+ Axles):		15							
Vehicle Speed:		50 mph			Vehicle Mix									
Near/Far Lane Distance:		84 feet												
Site Data					VehicleType					Day	Evening	Night	Daily	
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%		9.6%		97.42%	
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%		10.3%		1.84%	
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%		2.7%		10.8%		0.74%	
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)									
Barrier Distance to Observer:		0.0 feet												
Observer Height (Above Pad):		5.0 feet			Autos:		0.000							
Pad Elevation:		0.0 feet			Medium Trucks:		2.297							
Road Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment:		0.0			
Road Grade:		0.0%			Lane Equivalent Distance (in feet)									
Left View:		-90.0 degrees												
Right View:		90.0 degrees			Autos:		56.223							
					Medium Trucks:		56.065							
					Heavy Trucks:		56.081							
FHWA Noise Model Calculations														
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten							
Autos:	70.20	-22.41	-0.87	-1.20	-4.72	0.000	0.000							
Medium Trucks:	81.00	-39.65	-0.85	-1.20	-4.88	0.000	0.000							
Heavy Trucks:	85.38	-43.60	-0.85	-1.20	-5.28	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:	45.7	43.8	42.1	36.0	44.6	45.2								
Medium Trucks:	39.3	37.8	31.4	29.9	38.4	38.6								
Heavy Trucks:	39.7	38.3	29.3	30.5	38.9	39.0								
Vehicle Noise:	47.4	45.7	42.6	37.8	46.4	46.9								
Centerline Distance to Noise Contour (in feet)														
				70 dBA	65 dBA	60 dBA	55 dBA							
Ldn:				2	4	9	19							
CNEL:				2	4	9	20							

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Stetson Av. Road Segment: e/o New Stetson Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 12,600 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,260 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-1.40	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-18.64	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-22.60	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	66.7	64.8	63.1	57.0	65.6	66.2			
Medium Trucks:	60.3	58.8	52.4	50.9	59.4	59.6			
Heavy Trucks:	60.7	59.3	50.3	51.5	59.9	60.0			
Vehicle Noise:	68.4	66.7	63.6	58.8	67.4	67.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			47	101	218	469			
CNEL:			50	109	234	504			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing Without Project Road Name: Stetson Av. Road Segment: e/o Cawston Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 15,800 vehicles					Autos: 15					
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,580 vehicles					Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph										
Near/Far Lane Distance: 84 feet										
Site Data					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: 0.000					
					Medium Trucks: 2.297					
					Heavy Trucks: 8.006 Grade Adjustment: 0.0					
					Lane Equivalent Distance (in feet)					
Autos: 56.223										
Medium Trucks: 56.065										
Heavy Trucks: 56.081										
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	-0.42	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-17.66	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-21.62	-0.85	-1.20	-5.28	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	67.7	65.8	64.0	58.0	66.6	67.2				
Medium Trucks:	61.3	59.8	53.4	51.9	60.3	60.6				
Heavy Trucks:	61.7	60.3	51.3	52.5	60.9	61.0				
Vehicle Noise:	69.4	67.7	64.6	59.8	68.4	68.8				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			55	118	253	546				
CNEL:			59	126	272	587				

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: Stetson Av. Road Segment: e/o Sanderson Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 45,600 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 4,560 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	4.64	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	79.45	-12.60	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	84.25	-16.56	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	71.0	69.1	67.4	61.3	69.9	70.5			
Medium Trucks:	64.8	63.3	56.9	55.4	63.8	64.1			
Heavy Trucks:	65.6	64.2	55.2	56.4	64.8	64.9			
Vehicle Noise:	72.9	71.1	68.0	63.3	71.8	72.3			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			93	200	431	929			
CNEL:			100	215	463	997			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing Without Project Road Name: 9th St. Road Segment: w/o Winchester Rd.				Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 2,500 vehicles				Autos: 15					
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 250 vehicles				Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 25 mph				Vehicle Mix					
Near/Far Lane Distance: 84 feet									
Site Data				VehicleType		Day	Evening	Night	Daily
Barrier Height: 0.0 feet				Autos:		77.5%	12.9%	9.6%	97.42%
Barrier Type (0-Wall, 1-Berm): 0.0				Medium Trucks:		84.8%	4.9%	10.3%	1.84%
Centerline Dist. to Barrier: 70.0 feet				Heavy Trucks:		86.5%	2.7%	10.8%	0.74%
Centerline Dist. to Observer: 70.0 feet				Noise Source Elevations (in feet)					
Barrier Distance to Observer: 0.0 feet									
Observer Height (Above Pad): 5.0 feet				Autos:		0.000			
Pad Elevation: 0.0 feet				Medium Trucks:		2.297			
Road Elevation: 0.0 feet				Heavy Trucks:		8.006			
Road Grade: 0.0%				Grade Adjustment: 0.0					
Left View: -90.0 degrees				Lane Equivalent Distance (in feet)					
Right View: 90.0 degrees									
				Autos:		56.223			
				Medium Trucks:		56.065			
				Heavy Trucks:		56.081			
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	58.73	-5.42	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	70.80	-22.66	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	77.97	-26.61	-0.85	-1.20	-5.28	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:	51.2	49.3	47.6	41.5	50.2	50.8			
Medium Trucks:	46.1	44.6	38.2	36.7	45.1	45.4			
Heavy Trucks:	49.3	47.9	38.9	40.1	48.5	48.6			
Vehicle Noise:	54.1	52.5	48.6	44.6	53.1	53.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			5	11	24	53			
CNEL:			6	12	26	56			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL														
Scenario: Existing Without Project Road Name: 9th St. Road Segment: e/o Winchester Rd.					Project Name: Rancho Diamante Job Number: 9792									
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS									
Highway Data					Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt):		600 vehicles			Autos:		15							
Peak Hour Percentage:		10%			Medium Trucks (2 Axles):		15							
Peak Hour Volume:		60 vehicles			Heavy Trucks (3+ Axles):		15							
Vehicle Speed:		25 mph			Vehicle Mix									
Near/Far Lane Distance:		84 feet												
Site Data					VehicleType					Day	Evening	Night	Daily	
Barrier Height:		0.0 feet			Autos:		77.5%		12.9%		9.6%		97.42%	
Barrier Type (0-Wall, 1-Berm):		0.0			Medium Trucks:		84.8%		4.9%		10.3%		1.84%	
Centerline Dist. to Barrier:		70.0 feet			Heavy Trucks:		86.5%		2.7%		10.8%		0.74%	
Centerline Dist. to Observer:		70.0 feet			Noise Source Elevations (in feet)									
Barrier Distance to Observer:		0.0 feet			Autos:		0.000							
Observer Height (Above Pad):		5.0 feet			Medium Trucks:		2.297							
Pad Elevation:		0.0 feet			Heavy Trucks:		8.006		Grade Adjustment:		0.0			
Road Elevation:		0.0 feet			Lane Equivalent Distance (in feet)									
Road Grade:		0.0%			Autos:		56.223							
Left View:		-90.0 degrees			Medium Trucks:		56.065							
Right View:		90.0 degrees			Heavy Trucks:		56.081							
FHWA Noise Model Calculations														
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten							
Autos:	58.73	-11.62	-0.87	-1.20	-4.72	0.000	0.000							
Medium Trucks:	70.80	-28.86	-0.85	-1.20	-4.88	0.000	0.000							
Heavy Trucks:	77.97	-32.81	-0.85	-1.20	-5.28	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:	45.1	43.2	41.4	35.3	44.0	44.6								
Medium Trucks:	39.9	38.4	32.0	30.5	38.9	39.2								
Heavy Trucks:	43.1	41.7	32.7	33.9	42.3	42.4								
Vehicle Noise:	47.9	46.3	42.4	38.4	46.9	47.3								
Centerline Distance to Noise Contour (in feet)														
				70 dBA	65 dBA	60 dBA	55 dBA							
Ldn:				2	4	9	20							
CNEL:				2	5	10	22							

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Winchester Rd. Road Segment: s/o Florida Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 24,500 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,450 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					Vehicle Type	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)				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 43.704 Medium Trucks: 43.501 Heavy Trucks: 43.521				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	1.07	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	82.40	-16.17	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	86.40	-20.13	0.80	-1.20	-5.46	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	72.4	70.5	68.8	62.7	71.3	71.9			
Medium Trucks:	65.8	64.3	58.0	56.4	64.9	65.1			
Heavy Trucks:	65.9	64.5	55.4	56.7	65.0	65.1			
Vehicle Noise:	74.0	72.2	69.3	64.4	73.0	73.4			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				74	160	344	742		
CNEL:				80	172	370	798		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Winchester Rd. Road Segment: n/o 9th St.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 28,700 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,870 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph									
Near/Far Lane Distance: 36 feet					Vehicle Mix				
					Vehicle Type	Day	Evening	Night	Daily
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%				
					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
					Noise Source Elevations (in feet)				
					Autos: 0.000				
Barrier Height: 0.0 feet					Medium Trucks: 2.297				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 8.006				
Centerline Dist. to Barrier: 47.0 feet					Grade Adjustment: 0.0				
Centerline Dist. to Observer: 47.0 feet					Lane Equivalent Distance (in feet)				
Barrier Distance to Observer: 0.0 feet					Autos: 43.704				
Observer Height (Above Pad): 5.0 feet					Medium Trucks: 43.501				
Pad Elevation: 0.0 feet					Heavy Trucks: 43.521				
Road Elevation: 0.0 feet									
Road Grade: 0.0%									
Left View: -90.0 degrees									
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	2.63	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	79.45	-14.61	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-18.57	0.80	-1.20	-5.46	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.7	68.8	67.0	60.9	69.6	70.2			
Medium Trucks:	64.4	62.9	56.6	55.0	63.5	63.7			
Heavy Trucks:	65.3	63.9	54.8	56.1	64.4	64.6			
Vehicle Noise:	72.5	70.8	67.6	62.9	71.5	71.9			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				59	127	274	590		
CNEL:				63	136	294	633		

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Patterson Av. Road Segment: s/o Grand Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 12,800 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,280 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph									
Near/Far Lane Distance: 12 feet									
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet					VehicleType	Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm): 0.0					Autos: 77.5% 12.9% 9.6% 97.42%				
Centerline Dist. to Barrier: 22.0 feet					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Centerline Dist. to Observer: 22.0 feet					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Barrier Distance to Observer: 0.0 feet									
Observer Height (Above Pad): 5.0 feet									
Pad Elevation: 0.0 feet									
Road Elevation: 0.0 feet									
Road Grade: 0.0%									
Left View: -90.0 degrees									
Right View: 90.0 degrees									
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 21.749				
					Medium Trucks: 21.338				
					Heavy Trucks: 21.378				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-0.37	5.32	-1.20	-4.34	0.000	0.000		
Medium Trucks:	77.72	-17.61	5.44	-1.20	-4.85	0.000	0.000		
Heavy Trucks:	82.99	-21.56	5.43	-1.20	-6.07	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.3	68.4	66.6	60.5	69.2	69.8			
Medium Trucks:	64.4	62.8	56.5	54.9	63.4	63.6			
Heavy Trucks:	65.7	64.2	55.2	56.5	64.8	64.9			
Vehicle Noise:	72.3	70.6	67.3	62.8	71.3	71.7			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				27	58	125	268		
CNEL:				29	62	133	287		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: California Av. Road Segment: n/o Stowe Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 12,400 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,240 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 43.704 Medium Trucks: 43.501 Heavy Trucks: 43.521				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-0.51	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	77.72	-17.74	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-21.70	0.80	-1.20	-5.46	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	65.6	63.7	61.9	55.9	64.5	65.1			
Medium Trucks:	59.6	58.1	51.7	50.2	58.6	58.9			
Heavy Trucks:	60.9	59.5	50.4	51.7	60.0	60.2			
Vehicle Noise:	67.6	65.9	62.6	58.0	66.6	67.0			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				28	60	129	278		
CNEL:				30	64	138	297		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing With Project Road Name: California Av. Road Segment: s/o Stowe Rd.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 16,900 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,690 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0					
					Lane Equivalent Distance (in feet)					
					Autos: 43.704 Medium Trucks: 43.501 Heavy Trucks: 43.521					
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	0.84	0.77	-1.20	-4.63	0.000	0.000			
Medium Trucks:	77.72	-16.40	0.80	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-20.35	0.80	-1.20	-5.46	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	66.9	65.0	63.3	57.2	65.8	66.4				
Medium Trucks:	60.9	59.4	53.1	51.5	60.0	60.2				
Heavy Trucks:	62.2	60.8	51.8	53.0	61.4	61.5				
Vehicle Noise:	68.9	67.2	63.9	59.4	67.9	68.4				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				34	74	159	342			
CNEL:				37	79	170	366			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Existing With Project Road Name: California Av. Road Segment: s/o Stetson Av. (S.)				Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 17,900 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,790 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 36 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data				Vehicle Mix				
				VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
				Lane Equivalent Distance (in feet)				
				Autos: 43.704 Medium Trucks: 43.501 Heavy Trucks: 43.521				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	66.51	1.09	0.77	-1.20	-4.63	0.000	0.000	
Medium Trucks:	77.72	-16.15	0.80	-1.20	-4.87	0.000	0.000	
Heavy Trucks:	82.99	-20.11	0.80	-1.20	-5.46	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	67.2	65.3	63.5	57.5	66.1	66.7		
Medium Trucks:	61.2	59.7	53.3	51.8	60.2	60.4		
Heavy Trucks:	62.5	61.1	52.0	53.3	61.6	61.8		
Vehicle Noise:	69.2	67.5	64.2	59.6	68.2	68.6		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			35	76	165	355		
CNEL:			38	82	176	380		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Warren Rd. Road Segment: n/o Devonshire Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 35,300 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 3,530 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 55 mph									
Near/Far Lane Distance: 84 feet									
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet					VehicleType	Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm): 0.0					Autos: 77.5% 12.9% 9.6% 97.42%				
Centerline Dist. to Barrier: 70.0 feet					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Centerline Dist. to Observer: 70.0 feet					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Barrier Distance to Observer: 0.0 feet									
Observer Height (Above Pad): 5.0 feet									
Pad Elevation: 0.0 feet									
Road Elevation: 0.0 feet									
Road Grade: 0.0%									
Left View: -90.0 degrees					Grade Adjustment: 0.0				
Right View: 90.0 degrees									
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223				
					Medium Trucks: 56.065				
					Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	2.66	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	82.40	-14.58	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	86.40	-18.54	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	72.4	70.5	68.7	62.6	71.3	71.9			
Medium Trucks:	65.8	64.3	57.9	56.4	64.8	65.1			
Heavy Trucks:	65.8	64.4	55.3	56.6	65.0	65.1			
Vehicle Noise:	74.0	72.2	69.2	64.4	72.9	73.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			109	236	508	1,095			
CNEL:			118	254	547	1,178			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Warren Rd. Road Segment: n/o Florida Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 26,500 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,650 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 55 mph					Vehicle Mix				
Near/Far Lane Distance: 84 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height: 0.0 feet					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Barrier: 70.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 70.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 56.223				
Road Grade: 0.0%					Medium Trucks: 56.065				
Left View: -90.0 degrees					Heavy Trucks: 56.081				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	1.41	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	82.40	-15.83	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	86.40	-19.78	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	71.1	69.2	67.5	61.4	70.0	70.6			
Medium Trucks:	64.5	63.0	56.7	55.1	63.6	63.8			
Heavy Trucks:	64.6	63.1	54.1	55.4	63.7	63.8			
Vehicle Noise:	72.7	70.9	68.0	63.1	71.7	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			90	195	420	904			
CNEL:			97	210	452	973			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Warren Rd. Road Segment: s/o Florida Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 37,700 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 3,770 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 55 mph									
Near/Far Lane Distance: 84 feet									
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet					VehicleType				
Barrier Type (0-Wall, 1-Berm): 0.0					Day				
Centerline Dist. to Barrier: 70.0 feet					Evening				
Centerline Dist. to Observer: 70.0 feet					Night				
Barrier Distance to Observer: 0.0 feet					Daily				
Observer Height (Above Pad): 5.0 feet					Autos: 77.5% 12.9% 9.6% 97.42%				
Pad Elevation: 0.0 feet					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Road Elevation: 0.0 feet					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Road Grade: 0.0%									
Left View: -90.0 degrees					Noise Source Elevations (in feet)				
Right View: 90.0 degrees					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223				
					Medium Trucks: 56.065				
					Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	2.94	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	82.40	-14.30	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	86.40	-18.25	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn		CNEL		
Autos:	72.7	70.8	69.0	62.9	71.6		72.2		
Medium Trucks:	66.1	64.5	58.2	56.6	65.1		65.3		
Heavy Trucks:	66.1	64.7	55.6	56.9	65.2		65.4		
Vehicle Noise:	74.2	72.5	69.5	64.6	73.2		73.7		
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			114	246	531	1,144			
CNEL:			123	265	571	1,231			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Warren Rd. Road Segment: n/o Whittier Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 29,800 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,980 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	1.92	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	82.40	-15.32	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	86.40	-19.27	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	71.6	69.7	68.0	61.9	70.5	71.1			
Medium Trucks:	65.0	63.5	57.2	55.6	64.1	64.3			
Heavy Trucks:	65.1	63.6	54.6	55.9	64.2	64.3			
Vehicle Noise:	73.2	71.5	68.5	63.6	72.2	72.7			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			98	211	454	978			
CNEL:			105	227	488	1,052			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Warren Rd. Road Segment: s/o Whittier Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 27,400 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,740 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	1.55	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	82.40	-15.68	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	86.40	-19.64	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	71.3	69.4	67.6	61.5	70.2	70.8			
Medium Trucks:	64.7	63.2	56.8	55.3	63.7	64.0			
Heavy Trucks:	64.7	63.3	54.2	55.5	63.9	64.0			
Vehicle Noise:	72.9	71.1	68.1	63.3	71.8	72.3			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				92	199	429	925		
CNEL:				99	214	462	995		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Warren Rd. Road Segment: s/o Stetson Av. (N.)					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 22,200 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,220 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	1.51	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	79.45	-15.73	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	84.25	-19.68	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.9	66.0	64.2	58.2	66.8	67.4			
Medium Trucks:	61.7	60.2	53.8	52.3	60.7	61.0			
Heavy Trucks:	62.5	61.1	52.1	53.3	61.7	61.8			
Vehicle Noise:	69.7	68.0	64.9	60.2	68.7	69.2			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			57	124	267	575			
CNEL:			62	133	286	617			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Warren Rd. Road Segment: s/o Stetson Av. (S.)					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 23,300 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,330 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph					Vehicle Mix				
Near/Far Lane Distance: 84 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height: 0.0 feet					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Barrier: 70.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 70.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 56.223				
Road Grade: 0.0%					Medium Trucks: 56.065				
Left View: -90.0 degrees					Heavy Trucks: 56.081				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	1.72	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	79.45	-15.52	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	84.25	-19.47	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.1	66.2	64.5	58.4	67.0			67.6	
Medium Trucks:	61.9	60.4	54.0	52.5	60.9			61.2	
Heavy Trucks:	62.7	61.3	52.3	53.5	61.9			62.0	
Vehicle Noise:	70.0	68.2	65.1	60.4	68.9			69.4	
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				59	128	276	594		
CNEL:				64	137	296	637		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Warren Rd. Road Segment: s/o Mustang Wy.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 19,700 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,970 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.51	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	77.72	-15.73	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	82.99	-19.69	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	65.9	64.1	62.3	56.2	64.9	65.5			
Medium Trucks:	59.9	58.4	52.1	50.5	59.0	59.2			
Heavy Trucks:	61.3	59.8	50.8	52.0	60.4	60.5			
Vehicle Noise:	68.0	66.2	63.0	58.4	66.9	67.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			44	94	203	438			
CNEL:			47	101	217	469			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Warren Rd. Road Segment: s/o Simpson Rd.				Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 17,800 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,780 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 84 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				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: 0.000					
				Medium Trucks: 2.297					
				Heavy Trucks: 8.006					Grade Adjustment: 0.0
				Lane Equivalent Distance (in feet)					
				Autos: 56.223					
				Medium Trucks: 56.065					
				Heavy Trucks: 56.081					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.06	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	77.72	-16.17	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	82.99	-20.13	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	65.5	63.6	61.8	55.8	64.4	65.0			
Medium Trucks:	59.5	58.0	51.6	50.1	58.5	58.8			
Heavy Trucks:	60.8	59.4	50.4	51.6	60.0	60.1			
Vehicle Noise:	67.5	65.8	62.5	58.0	66.5	66.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			41	88	190	409			
CNEL:			44	94	203	438			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Sanderson Av. Road Segment: s/o Florida Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 33,800 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,380 vehicles Vehicle Speed: 30 mph Near/Far Lane Distance: 50 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 54.0 feet Centerline Dist. to Observer: 54.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000				
Medium Trucks: 2.297									
Heavy Trucks: 8.006 Grade Adjustment: 0.0									
Lane Equivalent Distance (in feet)					Autos: 48.125				
					Medium Trucks: 47.941				
					Heavy Trucks: 47.959				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	61.75	5.10	0.15	-1.20	-4.67	0.000	0.000		
Medium Trucks:	73.48	-12.14	0.17	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	79.92	-16.10	0.17	-1.20	-5.39	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	65.8	63.9	62.1	56.1	64.7	65.3			
Medium Trucks:	60.3	58.8	52.4	50.9	59.4	59.6			
Heavy Trucks:	62.8	61.4	52.3	53.6	61.9	62.1			
Vehicle Noise:	68.3	66.6	63.0	58.8	67.3	67.7			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			36	77	166	357			
CNEL:			38	82	177	380			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Sanderson Av. Road Segment: n/o Stetson Av.				Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 33,800 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,380 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 50 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				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: 0.000					
				Medium Trucks: 2.297					
				Heavy Trucks: 8.006 Grade Adjustment: 0.0					
				Lane Equivalent Distance (in feet)					
				Autos: 48.125					
				Medium Trucks: 47.941					
				Heavy Trucks: 47.959					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	3.34	0.15	-1.20	-4.67	0.000	0.000		
Medium Trucks:	79.45	-13.90	0.17	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-17.86	0.17	-1.20	-5.39	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.7	68.8	67.1	61.0	69.6	70.3			
Medium Trucks:	64.5	63.0	56.7	55.1	63.6	63.8			
Heavy Trucks:	65.4	63.9	54.9	56.2	64.5	64.6			
Vehicle Noise:	72.6	70.8	67.7	63.0	71.6	72.0			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				69	148	318	686		
CNEL:				74	159	342	736		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Florida Av. Road Segment: w/o Winchester Rd.				Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 69,200 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 6,920 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 78 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 76.0 feet Centerline Dist. to Observer: 76.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0					
				Lane Equivalent Distance (in feet)					
				Autos: 65.422 Medium Trucks: 65.286 Heavy Trucks: 65.300					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	5.99	-1.85	-1.20	-4.73	0.000	0.000		
Medium Trucks:	81.00	-11.25	-1.84	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-15.20	-1.84	-1.20	-5.25	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:	73.1	71.2	69.5	63.4	72.0	72.6			
Medium Trucks:	66.7	65.2	58.8	57.3	65.8	66.0			
Heavy Trucks:	67.1	65.7	56.7	57.9	66.3	66.4			
Vehicle Noise:	74.8	73.1	70.0	65.3	73.8	74.3			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			136	294	633	1,363			
CNEL:			146	316	680	1,465			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Existing With Project Road Name: Florida Av. Road Segment: e/o Warren Rd.				Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 86,600 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 8,660 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data				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: 0.000				
				Medium Trucks: 2.297				
				Heavy Trucks: 8.006 Grade Adjustment: 0.0				
				Lane Equivalent Distance (in feet)				
				Autos: 56.223				
				Medium Trucks: 56.065				
				Heavy Trucks: 56.081				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	70.20	6.97	-0.87	-1.20	-4.72	0.000	0.000	
Medium Trucks:	81.00	-10.27	-0.85	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	85.38	-14.23	-0.85	-1.20	-5.28	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:	75.1	73.2	71.4	65.4	74.0	74.6		
Medium Trucks:	68.7	67.2	60.8	59.3	67.7	68.0		
Heavy Trucks:	69.1	67.7	58.6	59.9	68.2	68.4		
Vehicle Noise:	76.8	75.0	72.0	67.2	75.8	76.2		
Centerline Distance to Noise Contour (in feet)								
				70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:				170	366	788	1,697	
CNEL:				182	393	846	1,823	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL											
Scenario: Existing With Project Road Name: Florida Av. Road Segment: e/o Myers St.					Project Name: Rancho Diamante Job Number: 9792						
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS						
Highway Data					Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): 70,600 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 7,060 vehicles Vehicle Speed: 35 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15						
Site Data					Vehicle Mix						
					VehicleType	Day	Evening	Night	Daily		
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006					Grade Adjustment: 0.0	
					Lane Equivalent Distance (in feet)						
Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081											
FHWA Noise Model Calculations											
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten				
Autos:	64.30	7.63	-0.87	-1.20	-4.72	0.000	0.000				
Medium Trucks:	75.75	-9.61	-0.85	-1.20	-4.88	0.000	0.000				
Heavy Trucks:	81.57	-13.57	-0.85	-1.20	-5.28	0.000	0.000				
Unmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL					
Autos:	69.9	68.0	66.2	60.1	68.8	69.4					
Medium Trucks:	64.1	62.6	56.2	54.7	63.1	63.4					
Heavy Trucks:	66.0	64.5	55.5	56.7	65.1	65.2					
Vehicle Noise:	72.1	70.4	66.9	62.6	71.1	71.5					
Centerline Distance to Noise Contour (in feet)											
			70 dBA	65 dBA	60 dBA	55 dBA					
Ldn:			83	178	383	826					
CNEL:			88	190	410	882					

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing With Project Road Name: Stowe Rd. Road Segment: w/o California Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 8,500 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 850 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0					
FHWA Noise Model Calculations					Lane Equivalent Distance (in feet)					
					Autos: 43.704 Medium Trucks: 43.501 Heavy Trucks: 43.521					
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	-2.15	0.77	-1.20	-4.63	0.000	0.000			
Medium Trucks:	77.72	-19.38	0.80	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	82.99	-23.34	0.80	-1.20	-5.46	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	63.9	62.0	60.3	54.2	62.8	63.4				
Medium Trucks:	57.9	56.4	50.1	48.5	57.0	57.2				
Heavy Trucks:	59.3	57.8	48.8	50.0	58.4	58.5				
Vehicle Noise:	66.0	64.2	60.9	56.4	64.9	65.4				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				22	47	100	216			
CNEL:				23	50	107	231			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Grand Av. Road Segment: e/o Patterson Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 34,000 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,400 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	3.88	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	77.72	-13.36	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	82.99	-17.32	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.3	66.4	64.7	58.6	67.2	67.8			
Medium Trucks:	62.3	60.8	54.4	52.9	61.3	61.6			
Heavy Trucks:	63.6	62.2	53.2	54.4	62.8	62.9			
Vehicle Noise:	70.3	68.6	65.3	60.8	69.3	69.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			63	136	292	630			
CNEL:			67	145	313	674			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Existing With Project Road Name: Stetson Av. (S.) Road Segment: w/o Warren Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 33,500 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 3,350 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 50 mph									
Near/Far Lane Distance: 84 feet									
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet					Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Type (0-Wall, 1-Berm): 0.0					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Centerline Dist. to Barrier: 70.0 feet					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Observer: 70.0 feet									
Barrier Distance to Observer: 0.0 feet					Noise Source Elevations (in feet)				
Observer Height (Above Pad): 5.0 feet					Autos: 0.000				
Pad Elevation: 0.0 feet					Medium Trucks: 2.297				
Road Elevation: 0.0 feet					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Road Grade: 0.0%									
Left View: -90.0 degrees					Lane Equivalent Distance (in feet)				
Right View: 90.0 degrees					Autos: 56.223				
					Medium Trucks: 56.065				
					Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	2.84	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-14.40	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-18.35	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	71.0	69.1	67.3	61.3	69.9	70.5			
Medium Trucks:	64.6	63.0	56.7	55.1	63.6	63.8			
Heavy Trucks:	65.0	63.6	54.5	55.8	64.1	64.2			
Vehicle Noise:	72.7	70.9	67.9	63.1	71.6	72.1			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				90	194	418	901		
CNEL:				97	209	449	968		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL											
Scenario: Existing With Project Road Name: Stetson Av. (S.) Road Segment: e/o Warren Rd.					Project Name: Rancho Diamante Job Number: 9792						
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS						
Highway Data					Site Conditions (Hard = 10, Soft = 15)						
Average Daily Traffic (Adt): 30,300 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,030 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15						
Site Data					Vehicle Mix						
					VehicleType	Day	Evening	Night	Daily		
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006					Grade Adjustment: 0.0	
					Lane Equivalent Distance (in feet)						
Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081											
FHWA Noise Model Calculations											
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten				
Autos:	70.20	2.41	-0.87	-1.20	-4.72	0.000	0.000				
Medium Trucks:	81.00	-14.83	-0.85	-1.20	-4.88	0.000	0.000				
Heavy Trucks:	85.38	-18.79	-0.85	-1.20	-5.28	0.000	0.000				
Unmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL					
Autos:	70.5	68.6	66.9	60.8	69.4	70.1					
Medium Trucks:	64.1	62.6	56.2	54.7	63.2	63.4					
Heavy Trucks:	64.5	63.1	54.1	55.3	63.7	63.8					
Vehicle Noise:	72.2	70.5	67.4	62.7	71.2	71.7					
Centerline Distance to Noise Contour (in feet)											
			70 dBA	65 dBA	60 dBA	55 dBA					
Ldn:			84	182	391	843					
CNEL:			91	195	420	905					

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Existing With Project Road Name: Stetson Av. (S.) Road Segment: e/o Fisher St.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 30,300 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,030 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data					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%					
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Noise Source Elevations (in feet)					
					Autos: 0.000					
					Medium Trucks: 2.297					
					Heavy Trucks: 8.006 Grade Adjustment: 0.0					
					Lane Equivalent Distance (in feet)					
					Autos: 56.223					
					Medium Trucks: 56.065					
					Heavy Trucks: 56.081					
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	2.41	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-14.83	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-18.79	-0.85	-1.20	-5.28	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	70.5	68.6	66.9	60.8	69.4	70.1				
Medium Trucks:	64.1	62.6	56.2	54.7	63.2	63.4				
Heavy Trucks:	64.5	63.1	54.1	55.3	63.7	63.8				
Vehicle Noise:	72.2	70.5	67.4	62.7	71.2	71.7				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				84	182	391	843			
CNEL:				91	195	420	905			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Existing With Project Road Name: Stetson Av. Road Segment: e/o New Stetson Av.				Project Name: Rancho Diamante Job Number: 9792			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 35,900 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,590 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0			
				Lane Equivalent Distance (in feet)			
				Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	3.14	-0.87	-1.20	-4.72	0.000	0.000
Medium Trucks:	81.00	-14.10	-0.85	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-18.05	-0.85	-1.20	-5.28	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	71.3	69.4	67.6	61.6	70.2	70.8	
Medium Trucks:	64.9	63.3	57.0	55.4	63.9	64.1	
Heavy Trucks:	65.3	63.9	54.8	56.1	64.4	64.5	
Vehicle Noise:	73.0	71.2	68.2	63.4	71.9	72.4	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			94	203	438	944	
CNEL:			101	218	471	1,014	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Winchester Rd. Road Segment: s/o Florida Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,000 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,500 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					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)				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 43.704 Medium Trucks: 43.501 Heavy Trucks: 43.521				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	71.78	1.16	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	82.40	-16.08	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	86.40	-20.04	0.80	-1.20	-5.46	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	72.5	70.6	68.8	62.8	71.4	72.0			
Medium Trucks:	65.9	64.4	58.1	56.5	65.0	65.2			
Heavy Trucks:	66.0	64.5	55.5	56.8	65.1	65.2			
Vehicle Noise:	74.1	72.3	69.4	64.5	73.1	73.5			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				75	162	349	752		
CNEL:				81	174	375	809		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Winchester Rd. Road Segment: n/o 9th St.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 29,100 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,910 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 43.704 Medium Trucks: 43.501 Heavy Trucks: 43.521				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	2.69	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	79.45	-14.55	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	84.25	-18.51	0.80	-1.20	-5.46	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.7	68.8	67.1	61.0	69.6	70.2			
Medium Trucks:	64.5	63.0	56.6	55.1	63.5	63.8			
Heavy Trucks:	65.3	63.9	54.9	56.1	64.5	64.6			
Vehicle Noise:	72.6	70.8	67.7	63.0	71.5	72.0			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				60	128	276	595		
CNEL:				64	138	296	638		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2019 Without Project Road Name: Patterson Av. Road Segment: s/o Grand Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 13,600 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,360 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 12 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 22.0 feet Centerline Dist. to Observer: 22.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0					
					Lane Equivalent Distance (in feet)					
					Autos: 21.749 Medium Trucks: 21.338 Heavy Trucks: 21.378					
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	-0.10	5.32	-1.20	-4.34	0.000	0.000			
Medium Trucks:	77.72	-17.34	5.44	-1.20	-4.85	0.000	0.000			
Heavy Trucks:	82.99	-21.30	5.43	-1.20	-6.07	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	70.5	68.6	66.9	60.8	69.4	70.0				
Medium Trucks:	64.6	63.1	56.7	55.2	63.7	63.9				
Heavy Trucks:	65.9	64.5	55.5	56.7	65.1	65.2				
Vehicle Noise:	72.6	70.8	67.5	63.0	71.6	72.0				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				28	60	130	279			
CNEL:				30	64	139	299			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: California Av. Road Segment: n/o Stowe Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 12,800 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,280 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 43.704 Medium Trucks: 43.501 Heavy Trucks: 43.521				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-0.37	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	77.72	-17.61	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-21.56	0.80	-1.20	-5.46	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	65.7	63.8	62.1	56.0	64.6	65.2			
Medium Trucks:	59.7	58.2	51.8	50.3	58.8	59.0			
Heavy Trucks:	61.0	59.6	50.6	51.8	60.2	60.3			
Vehicle Noise:	67.7	66.0	62.7	58.2	66.7	67.2			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				28	61	132	284		
CNEL:				30	65	141	304		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: California Av. Road Segment: s/o Stowe Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 17,700 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,770 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph									
Near/Far Lane Distance: 36 feet									
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet					VehicleType	Day	Evening	Night	Daily
Barrier Type (0-Wall, 1-Berm): 0.0					Autos: 77.5% 12.9% 9.6% 97.42%				
Centerline Dist. to Barrier: 47.0 feet					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Centerline Dist. to Observer: 47.0 feet					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Barrier Distance to Observer: 0.0 feet									
Observer Height (Above Pad): 5.0 feet									
Pad Elevation: 0.0 feet									
Road Elevation: 0.0 feet									
Road Grade: 0.0%									
Left View: -90.0 degrees									
Right View: 90.0 degrees									
					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 43.704				
					Medium Trucks: 43.501				
					Heavy Trucks: 43.521				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.04	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	77.72	-16.20	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-20.15	0.80	-1.20	-5.46	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.1	65.2	63.5	57.4	66.0	66.6			
Medium Trucks:	61.1	59.6	53.3	51.7	60.2	60.4			
Heavy Trucks:	62.4	61.0	52.0	53.2	61.6	61.7			
Vehicle Noise:	69.1	67.4	64.1	59.6	68.1	68.6			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			35	76	163	352			
CNEL:			38	81	175	377			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: California Av. Road Segment: s/o Stetson Av. (S.)					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 18,600 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 1,860 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph					Vehicle Mix				
Near/Far Lane Distance: 36 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height: 0.0 feet					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Barrier: 47.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 47.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 43.704				
Road Grade: 0.0%					Medium Trucks: 43.501				
Left View: -90.0 degrees					Heavy Trucks: 43.521				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.26	0.77	-1.20	-4.63	0.000	0.000		0.000
Medium Trucks:	77.72	-15.98	0.80	-1.20	-4.87	0.000	0.000		0.000
Heavy Trucks:	82.99	-19.94	0.80	-1.20	-5.46	0.000	0.000		0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.3	65.4	63.7	57.6	66.2	66.8			
Medium Trucks:	61.3	59.8	53.5	51.9	60.4	60.6			
Heavy Trucks:	62.7	61.2	52.2	53.4	61.8	61.9			
Vehicle Noise:	69.4	67.6	64.3	59.8	68.3	68.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			36	78	169	364			
CNEL:			39	84	181	390			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2019 Without Project Road Name: California Av. Road Segment: n/o Simpson Rd.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 18,600 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,860 vehicles Vehicle Speed: 25 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0					
					Lane Equivalent Distance (in feet)					
					Autos: 43.704 Medium Trucks: 43.501 Heavy Trucks: 43.521					
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	58.73	3.30	0.77	-1.20	-4.63	0.000	0.000			
Medium Trucks:	70.80	-13.94	0.80	-1.20	-4.87	0.000	0.000			
Heavy Trucks:	77.97	-17.90	0.80	-1.20	-5.46	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	61.6	59.7	57.9	51.9	60.5	61.1				
Medium Trucks:	56.5	54.9	48.6	47.0	55.5	55.7				
Heavy Trucks:	59.7	58.3	49.2	50.5	58.8	58.9				
Vehicle Noise:	64.5	62.8	58.9	55.0	63.5	63.9				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				17	37	81	173			
CNEL:				18	40	85	184			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: California Av. Road Segment: s/o Simpson Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 5,400 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 540 vehicles Vehicle Speed: 25 mph Near/Far Lane Distance: 36 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 47.0 feet Centerline Dist. to Observer: 47.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 43.704 Medium Trucks: 43.501 Heavy Trucks: 43.521				
					FHWA Noise Model Calculations				
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	58.73	-2.07	0.77	-1.20	-4.63	0.000	0.000		
Medium Trucks:	70.80	-19.31	0.80	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	77.97	-23.27	0.80	-1.20	-5.46	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:	56.2	54.3	52.6	46.5	55.1	55.7			
Medium Trucks:	51.1	49.6	43.2	41.7	50.1	50.4			
Heavy Trucks:	54.3	52.9	43.8	45.1	53.5	53.6			
Vehicle Noise:	59.1	57.5	53.5	49.6	58.1	58.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			8	16	35	76			
CNEL:			8	17	37	81			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Warren Rd. Road Segment: s/o Stetson Av. (S.)					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 23,400 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,340 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph									
Near/Far Lane Distance: 84 feet					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%				
Site Data					Noise Source Elevations (in feet)				
Barrier Height: 0.0 feet					Autos: 0.000				
Barrier Type (0-Wall, 1-Berm): 0.0					Medium Trucks: 2.297				
Centerline Dist. to Barrier: 70.0 feet					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Centerline Dist. to Observer: 70.0 feet									
Barrier Distance to Observer: 0.0 feet									
Observer Height (Above Pad): 5.0 feet									
Pad Elevation: 0.0 feet									
Road Elevation: 0.0 feet									
Road Grade: 0.0%									
Left View: -90.0 degrees									
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	1.74	-0.87	-1.20	-4.72	0.000		0.000	
Medium Trucks:	79.45	-15.50	-0.85	-1.20	-4.88	0.000		0.000	
Heavy Trucks:	84.25	-19.45	-0.85	-1.20	-5.28	0.000		0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.1	66.2	64.5	58.4	67.0	67.6			
Medium Trucks:	61.9	60.4	54.0	52.5	60.9	61.2			
Heavy Trucks:	62.7	61.3	52.3	53.5	61.9	62.0			
Vehicle Noise:	70.0	68.2	65.1	60.4	68.9	69.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			60	128	276	595			
CNEL:			64	138	296	639			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2019 Without Project Road Name: Warren Rd. Road Segment: s/o Mustang Wy.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 20,000 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,000 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data					Vehicle Mix					
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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:		0.000			
					Medium Trucks:		2.297			
					Heavy Trucks:		8.006		Grade Adjustment: 0.0	
					Lane Equivalent Distance (in feet)					
					Autos:		56.223			
					Medium Trucks:		56.065			
					Heavy Trucks:		56.081			
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	1.57	-0.87	-1.20	-4.72	0.000		0.000		
Medium Trucks:	77.72	-15.67	-0.85	-1.20	-4.88	0.000		0.000		
Heavy Trucks:	82.99	-19.62	-0.85	-1.20	-5.28	0.000		0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	66.0	64.1	62.3	56.3	64.9	65.5				
Medium Trucks:	60.0	58.5	52.1	50.6	59.0	59.3				
Heavy Trucks:	61.3	59.9	50.9	52.1	60.5	60.6				
Vehicle Noise:	68.0	66.3	63.0	58.5	67.0	67.5				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			44	95	205	442				
CNEL:			47	102	220	473				

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Warren Rd. Road Segment: s/o Simpson Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 18,100 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,810 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	1.14	-0.87	-1.20	-4.72	0.000		0.000	
Medium Trucks:	77.72	-16.10	-0.85	-1.20	-4.88	0.000		0.000	
Heavy Trucks:	82.99	-20.06	-0.85	-1.20	-5.28	0.000		0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	65.6	63.7	61.9	55.9	64.5	65.1			
Medium Trucks:	59.6	58.1	51.7	50.2	58.6	58.8			
Heavy Trucks:	60.9	59.5	50.4	51.7	60.0	60.2			
Vehicle Noise:	67.6	65.9	62.6	58.0	66.6	67.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			41	89	192	414			
CNEL:			44	95	206	443			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Sanderson Av. Road Segment: s/o Florida Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 34,100 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,410 vehicles Vehicle Speed: 30 mph Near/Far Lane Distance: 50 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 54.0 feet Centerline Dist. to Observer: 54.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Vehicle Type	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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 48.125 Medium Trucks: 47.941 Heavy Trucks: 47.959				
FHWA Noise Model Calculations									
Vehicle Type	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	61.75	5.14	0.15	-1.20	-4.67	0.000		0.000	
Medium Trucks:	73.48	-12.10	0.17	-1.20	-4.87	0.000		0.000	
Heavy Trucks:	79.92	-16.06	0.17	-1.20	-5.39	0.000		0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)									
Vehicle Type	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	65.8	63.9	62.2	56.1	64.7	65.3			
Medium Trucks:	60.3	58.8	52.5	50.9	59.4	59.6			
Heavy Trucks:	62.8	61.4	52.4	53.6	62.0	62.1			
Vehicle Noise:	68.3	66.7	63.0	58.8	67.3	67.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			36	77	167	359			
CNEL:			38	82	178	383			

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Sanderson Av. Road Segment: n/o Stetson Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 34,100 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,410 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 50 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 54.0 feet Centerline Dist. to Observer: 54.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Lane Equivalent Distance (in feet)					Autos: 48.125				
					Medium Trucks: 47.941				
					Heavy Trucks: 47.959				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos: 68.46 3.38 0.15 -1.20 -4.67 0.000 0.000									
Medium Trucks: 79.45 -13.86 0.17 -1.20 -4.87 0.000 0.000									
Heavy Trucks: 84.25 -17.82 0.17 -1.20 -5.39 0.000 0.000									
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos: 70.8 68.9 67.1 61.1 69.7 70.3									
Medium Trucks: 64.6 63.1 56.7 55.1 63.6 63.8									
Heavy Trucks: 65.4 64.0 54.9 56.2 64.6 64.7									
Vehicle Noise: 72.6 70.9 67.7 63.1 71.6 72.1									
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			69	149	320	690			
CNEL:			74	159	344	740			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Florida Av. Road Segment: w/o Winchester Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 69,600 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 6,960 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 78 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 76.0 feet Centerline Dist. to Observer: 76.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 65.422 Medium Trucks: 65.286 Heavy Trucks: 65.300				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	6.02	-1.85	-1.20	-4.73	0.000	0.000		
Medium Trucks:	81.00	-11.22	-1.84	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-15.18	-1.84	-1.20	-5.25	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:	73.2	71.3	69.5	63.4	72.1	72.7			
Medium Trucks:	66.7	65.2	58.9	57.3	65.8	66.0			
Heavy Trucks:	67.2	65.7	56.7	58.0	66.3	66.4			
Vehicle Noise:	74.9	73.1	70.1	65.3	73.8	74.3			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				137	295	635	1,369		
CNEL:				147	317	682	1,470		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2019 Without Project Road Name: Florida Av. Road Segment: e/o Warren Rd.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 86,900 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 8,690 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0					
					Lane Equivalent Distance (in feet)					
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081					
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	70.20	6.98	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	81.00	-10.26	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	85.38	-14.21	-0.85	-1.20	-5.28	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:	75.1	73.2	71.5	65.4	74.0	74.6				
Medium Trucks:	68.7	67.2	60.8	59.3	67.7	68.0				
Heavy Trucks:	69.1	67.7	58.7	59.9	68.3	68.4				
Vehicle Noise:	76.8	75.1	72.0	67.2	75.8	76.3				
Centerline Distance to Noise Contour (in feet)										
				70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:				170	366	790	1,701			
CNEL:				183	394	848	1,828			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2019 Without Project Road Name: Florida Av. Road Segment: e/o Myers St.				Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 70,800 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 7,080 vehicles Vehicle Speed: 35 mph Near/Far Lane Distance: 84 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data				Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
				Lane Equivalent Distance (in feet)				
				Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	64.30	7.64	-0.87	-1.20	-4.72	0.000	0.000	
Medium Trucks:	75.75	-9.60	-0.85	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	81.57	-13.55	-0.85	-1.20	-5.28	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	69.9	68.0	66.2	60.2	68.8	69.4		
Medium Trucks:	64.1	62.6	56.2	54.7	63.1	63.4		
Heavy Trucks:	66.0	64.5	55.5	56.8	65.1	65.2		
Vehicle Noise:	72.1	70.4	66.9	62.6	71.1	71.5		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			83	178	384	828		
CNEL:			88	190	410	884		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL							
Scenario: Year 2019 Without Project Road Name: Stowe Rd. Road Segment: w/o California Av.				Project Name: Rancho Diamante Job Number: 9792			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt):		9,000 vehicles		Autos: 15			
Peak Hour Percentage:		10%		Medium Trucks (2 Axles): 15			
Peak Hour Volume:		900 vehicles		Heavy Trucks (3+ Axles): 15			
Vehicle Speed:		40 mph					
Near/Far Lane Distance:		36 feet					
Site Data				Vehicle Mix			
Barrier Height:		0.0 feet					
Barrier Type (0-Wall, 1-Berm):		0.0					
Centerline Dist. to Barrier:		47.0 feet		Autos: 77.5% 12.9% 9.6% 97.42%			
Centerline Dist. to Observer:		47.0 feet		Medium Trucks: 84.8% 4.9% 10.3% 1.84%			
Barrier Distance to Observer:		0.0 feet		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%			
Observer Height (Above Pad):		5.0 feet					
Pad Elevation:		0.0 feet					
Road Elevation:		0.0 feet					
Road Grade:		0.0%					
Left View:		-90.0 degrees					
Right View:		90.0 degrees					
				Noise Source Elevations (in feet)			
				Autos: 0.000			
				Medium Trucks: 2.297			
				Heavy Trucks: 8.006 Grade Adjustment: 0.0			
				Lane Equivalent Distance (in feet)			
				Autos: 43.704			
				Medium Trucks: 43.501			
				Heavy Trucks: 43.521			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-1.90	0.77	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-19.14	0.80	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-23.09	0.80	-1.20	-5.46	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	64.2	62.3	60.5	54.5	63.1	63.7	
Medium Trucks:	58.2	56.7	50.3	48.8	57.2	57.5	
Heavy Trucks:	59.5	58.1	49.0	50.3	58.7	58.8	
Vehicle Noise:	66.2	64.5	61.2	56.6	65.2	65.6	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			22	48	104	224	
CNEL:			24	52	112	240	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Grand Av. Road Segment: e/o Patterson Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 34,900 vehicles					Autos: 15				
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15				
Peak Hour Volume: 3,490 vehicles					Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 40 mph					Vehicle Mix				
Near/Far Lane Distance: 84 feet					VehicleType	Day	Evening	Night	Daily
Site Data					Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height: 0.0 feet					Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Barrier Type (0-Wall, 1-Berm): 0.0					Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Barrier: 70.0 feet					Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 70.0 feet					Autos: 0.000				
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297				
Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
Pad Elevation: 0.0 feet					Lane Equivalent Distance (in feet)				
Road Elevation: 0.0 feet					Autos: 56.223				
Road Grade: 0.0%					Medium Trucks: 56.065				
Left View: -90.0 degrees					Heavy Trucks: 56.081				
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	3.99	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	77.72	-13.25	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	82.99	-17.21	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	68.4	66.5	64.8	58.7	67.3	67.9			
Medium Trucks:	62.4	60.9	54.5	53.0	61.5	61.7			
Heavy Trucks:	63.7	62.3	53.3	54.5	62.9	63.0			
Vehicle Noise:	70.4	68.7	65.4	60.9	69.4	69.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			64	138	297	641			
CNEL:			69	148	318	686			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenario: Year 2019 Without Project Road Name: Grand Av. Road Segment: w/o Calvert Av.					Project Name: Rancho Diamante Job Number: 9792					
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS					
Highway Data					Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 34,900 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,490 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0					
					Lane Equivalent Distance (in feet)					
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081					
FHWA Noise Model Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten			
Autos:	66.51	3.99	-0.87	-1.20	-4.72	0.000	0.000			
Medium Trucks:	77.72	-13.25	-0.85	-1.20	-4.88	0.000	0.000			
Heavy Trucks:	82.99	-17.21	-0.85	-1.20	-5.28	0.000	0.000			
Unmitigated Noise Levels (without Topo and barrier attenuation)										
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL				
Autos:	68.4	66.5	64.8	58.7	67.3	67.9				
Medium Trucks:	62.4	60.9	54.5	53.0	61.5	61.7				
Heavy Trucks:	63.7	62.3	53.3	54.5	62.9	63.0				
Vehicle Noise:	70.4	68.7	65.4	60.9	69.4	69.9				
Centerline Distance to Noise Contour (in feet)										
			70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:			64	138	297	641				
CNEL:			69	148	318	686				

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Grand Av. Road Segment: e/o Calvert Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 25,200 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 2,520 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	2.57	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	77.72	-14.66	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	82.99	-18.62	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.0	65.1	63.4	57.3	65.9	66.5			
Medium Trucks:	61.0	59.5	53.1	51.6	60.0	60.3			
Heavy Trucks:	62.3	60.9	51.9	53.1	61.5	61.6			
Vehicle Noise:	69.0	67.3	64.0	59.5	68.0	68.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			52	111	239	516			
CNEL:			55	119	256	552			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Stetson Av. (S.) Road Segment: e/o Street "C"					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 40,200 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 4,020 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223				
					Medium Trucks: 56.065				
					Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	3.63	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-13.60	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-17.56	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	71.8	69.9	68.1	62.1	70.7	71.3			
Medium Trucks:	65.3	63.8	57.5	55.9	64.4	64.6			
Heavy Trucks:	65.8	64.3	55.3	56.6	64.9	65.0			
Vehicle Noise:	73.5	71.7	68.7	63.9	72.4	72.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			102	219	472	1,018			
CNEL:			109	236	507	1,093			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2019 Without Project Road Name: Stetson Av. (S.) Road Segment: e/o Mustang Wy.				Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 35,300 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,530 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data				Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
				Lane Equivalent Distance (in feet)				
				Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	70.20	3.07	-0.87	-1.20	-4.72	0.000	0.000	
Medium Trucks:	81.00	-14.17	-0.85	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	85.38	-18.13	-0.85	-1.20	-5.28	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	71.2	69.3	67.5	61.5	70.1	70.7		
Medium Trucks:	64.8	63.3	56.9	55.4	63.8	64.1		
Heavy Trucks:	65.2	63.8	54.7	56.0	64.3	64.5		
Vehicle Noise:	72.9	71.2	68.1	63.3	71.9	72.3		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			93	201	433	933		
CNEL:			100	216	465	1,002		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Stetson Av. (S.) Road Segment: w/o Warren Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 35,600 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,560 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					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%				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223				
					Medium Trucks: 56.065				
					Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	3.11	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-14.13	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-18.09	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	71.2	69.3	67.6	61.5	70.1	70.8			
Medium Trucks:	64.8	63.3	56.9	55.4	63.9	64.1			
Heavy Trucks:	65.2	63.8	54.8	56.0	64.4	64.5			
Vehicle Noise:	72.9	71.2	68.1	63.4	71.9	72.4			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				94	202	436	938		
CNEL:				101	217	468	1,008		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Stetson Av. (S.) Road Segment: e/o Warren Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 31,200 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,120 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	2.53	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-14.71	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-18.66	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.7	68.8	67.0	60.9	69.6	70.2			
Medium Trucks:	64.2	62.7	56.4	54.8	63.3	63.5			
Heavy Trucks:	64.7	63.2	54.2	55.5	63.8	63.9			
Vehicle Noise:	72.4	70.6	67.6	62.8	71.3	71.8			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				86	185	399	859		
CNEL:				92	199	429	923		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Stetson Av. (S.) Road Segment: e/o Fisher St.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 31,200 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,120 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					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%				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					Noise Source Elevations (in feet)				
					Autos: 0.000				
					Medium Trucks: 2.297				
					Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223				
					Medium Trucks: 56.065				
					Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	2.53	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-14.71	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-18.66	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.7	68.8	67.0	60.9	69.6	70.2			
Medium Trucks:	64.2	62.7	56.4	54.8	63.3	63.5			
Heavy Trucks:	64.7	63.2	54.2	55.5	63.8	63.9			
Vehicle Noise:	72.4	70.6	67.6	62.8	71.3	71.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			86	185	399	859			
CNEL:			92	199	429	923			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Stetson Av. Road Segment: e/o New Stetson Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 36,800 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,680 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	3.25	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-13.99	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-17.94	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	71.4	69.5	67.7	61.7	70.3	70.9			
Medium Trucks:	65.0	63.5	57.1	55.5	64.0	64.2			
Heavy Trucks:	65.4	64.0	54.9	56.2	64.5	64.7			
Vehicle Noise:	73.1	71.3	68.3	63.5	72.1	72.5			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				96	207	445	959		
CNEL:				103	222	478	1,031		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Stetson Av. Road Segment: e/o Cawston Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 33,600 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,360 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	2.85	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	81.00	-14.38	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-18.34	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	71.0	69.1	67.3	61.3	69.9	70.5			
Medium Trucks:	64.6	63.1	56.7	55.2	63.6	63.8			
Heavy Trucks:	65.0	63.6	54.5	55.8	64.1	64.3			
Vehicle Noise:	72.7	70.9	67.9	63.1	71.7	72.1			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				90	195	419	903		
CNEL:				97	209	450	970		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: Stetson Av. Road Segment: e/o Sanderson Av.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 50,000 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 5,000 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
					VehicleType	Day	Evening	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	68.46	5.04	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	79.45	-12.20	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	84.25	-16.16	-0.85	-1.20	-5.28	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	71.4	69.5	67.8	61.7	70.3	70.9			
Medium Trucks:	65.2	63.7	57.3	55.8	64.2	64.5			
Heavy Trucks:	66.0	64.6	55.6	56.8	65.2	65.3			
Vehicle Noise:	73.3	71.5	68.4	63.7	72.2	72.7			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			99	213	459	988			
CNEL:			106	228	492	1,060			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL								
Scenario: Year 2019 Without Project Road Name: 9th St. Road Segment: w/o Winchester Rd.				Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS				
Highway Data				Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 21,000 vehicles				Autos: 15				
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,100 vehicles				Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 25 mph								
Near/Far Lane Distance: 84 feet				Vehicle Mix				
				VehicleType	Day	Evening	Night	Daily
Site Data				Autos: 77.5% 12.9% 9.6% 97.42%				
				Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
				Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
				Noise Source Elevations (in feet)				
				Autos: 0.000				
Barrier Height: 0.0 feet				Medium Trucks: 2.297				
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 8.006				
Centerline Dist. to Barrier: 70.0 feet				Grade Adjustment: 0.0				
Centerline Dist. to Observer: 70.0 feet								
Barrier Distance to Observer: 0.0 feet								
Observer Height (Above Pad): 5.0 feet								
Pad Elevation: 0.0 feet								
Road Elevation: 0.0 feet								
Road Grade: 0.0%								
Left View: -90.0 degrees								
Right View: 90.0 degrees								
				Lane Equivalent Distance (in feet)				
				Autos: 56.223				
				Medium Trucks: 56.065				
				Heavy Trucks: 56.081				
FHWA Noise Model Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten	
Autos:	58.73	3.82	-0.87	-1.20	-4.72	0.000	0.000	
Medium Trucks:	70.80	-13.41	-0.85	-1.20	-4.88	0.000	0.000	
Heavy Trucks:	77.97	-17.37	-0.85	-1.20	-5.28	0.000	0.000	
Unmitigated Noise Levels (without Topo and barrier attenuation)								
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	60.5	58.6	56.8	50.8	59.4	60.0		
Medium Trucks:	55.3	53.8	47.5	45.9	54.4	54.6		
Heavy Trucks:	58.6	57.1	48.1	49.3	57.7	57.8		
Vehicle Noise:	63.4	61.7	57.8	53.9	62.4	62.8		
Centerline Distance to Noise Contour (in feet)								
			70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:			22	47	101	218		
CNEL:			23	50	107	231		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL									
Scenario: Year 2019 Without Project Road Name: 9th St. Road Segment: e/o Winchester Rd.					Project Name: Rancho Diamante Job Number: 9792				
SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS				
Highway Data					Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 12,400 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,240 vehicles Vehicle Speed: 25 mph Near/Far Lane Distance: 84 feet					Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
Site Data					Vehicle Mix				
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 70.0 feet Centerline Dist. to Observer: 70.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees					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: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: 0.0				
					Lane Equivalent Distance (in feet)				
					Autos: 56.223 Medium Trucks: 56.065 Heavy Trucks: 56.081				
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	58.73	1.54	-0.87	-1.20	-4.72	0.000	0.000		
Medium Trucks:	70.80	-15.70	-0.85	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	77.97	-19.66	-0.85	-1.20	-5.28	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:	58.2	56.3	54.5	48.5	57.1	57.7			
Medium Trucks:	53.0	51.5	45.2	43.6	52.1	52.3			
Heavy Trucks:	56.3	54.8	45.8	47.1	55.4	55.5			
Vehicle Noise:	61.1	59.4	55.5	51.6	60.1	60.5			
Centerline Distance to Noise Contour (in feet)									
				70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:				15	33	71	153		
CNEL:				16	35	75	163		

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APPENDIX 8.1:

ON-SITE TRAFFIC NOISE CALCULATIONS

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Backyard With Wall
 Road Name: Stetson Av. e/o "C Street"
 Lot No: 318

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 40,200 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 4,020 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet							
		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
Barrier Height: 6.0 feet		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
Barrier Type (0-Wall, 1-Berm): 0.0		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
Centerline Dist. to Barrier: 108.0 feet		Noise Source Elevations (in feet)					
Centerline Dist. to Observer: 118.0 feet		Autos: 1,499.200					
Barrier Distance to Observer: 10.0 feet		Medium Trucks: 1,501.497					
Observer Height (Above Pad): 5.0 feet		Heavy Trucks: 1,507.206 Grade Adjustment: 0.0					
Pad Elevation: 1,499.9 feet		Lane Equivalent Distance (in feet)					
Road Elevation: 1,499.2 feet		Autos: 111.735					
Barrier Elevation: 1,499.9 feet		Medium Trucks: 111.610					
Road Grade: 0.0%		Heavy Trucks: 111.523					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.12	3.63	-5.34	-1.20	0.12	-6.160	-9.160
Medium Trucks:	78.79	-13.60	-5.33	-1.20	0.09	-5.900	-8.900
Heavy Trucks:	83.02	-17.56	-5.33	-1.20	0.03	-5.300	-8.300

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.2	66.3	64.5	58.5	67.1	67.7
Medium Trucks:	58.7	57.1	50.8	49.2	57.7	57.9
Heavy Trucks:	58.9	57.5	48.5	49.7	58.1	58.2
Vehicle Noise:	69.1	67.3	64.8	59.5	68.0	68.6

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	58.4	52.3	61.0	61.6
Medium Trucks:	52.8	51.2	44.9	43.3	51.8	52.0
Heavy Trucks:	53.6	52.2	43.2	44.4	52.8	52.9
Vehicle Noise:	63.1	61.3	58.7	53.4	62.0	62.5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Backyard With Wall
 Road Name: Stetson Av. e/o "C Street"
 Lot No: 324

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 40,200 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 4,020 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet							
		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
Barrier Height: 6.0 feet		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
Barrier Type (0-Wall, 1-Berm): 0.0		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
Centerline Dist. to Barrier: 114.0 feet		Noise Source Elevations (in feet)					
Centerline Dist. to Observer: 124.0 feet		Autos: 1,498.700					
Barrier Distance to Observer: 10.0 feet		Medium Trucks: 1,500.997					
Observer Height (Above Pad): 5.0 feet		Heavy Trucks: 1,506.706 Grade Adjustment: 0.0					
Pad Elevation: 1,501.9 feet		Lane Equivalent Distance (in feet)					
Road Elevation: 1,498.7 feet		Autos: 118.270					
Barrier Elevation: 1,501.9 feet		Medium Trucks: 118.099					
Road Grade: 0.0%		Heavy Trucks: 117.885					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.12	3.63	-5.71	-1.20	0.15	-6.400	-9.400
Medium Trucks:	78.79	-13.60	-5.70	-1.20	0.12	-6.160	-9.160
Heavy Trucks:	83.02	-17.56	-5.69	-1.20	0.05	-5.500	-8.500

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.8	65.9	64.2	58.1	66.7	67.3
Medium Trucks:	58.3	56.8	50.4	48.9	57.3	57.6
Heavy Trucks:	58.6	57.1	48.1	49.4	57.7	57.8
Vehicle Noise:	68.7	66.9	64.5	59.1	67.7	68.2

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	57.8	51.7	60.3	60.9
Medium Trucks:	52.1	50.6	44.3	42.7	51.2	51.4
Heavy Trucks:	53.1	51.6	42.6	43.9	52.2	52.3
Vehicle Noise:	62.5	60.7	58.1	52.8	61.4	61.9

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Backyard With Wall
 Road Name: Stetson Av. e/o "C Street"
 Lot No: 241

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 40,200 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 4,020 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet							
		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
		Noise Source Elevations (in feet)					
		Autos: 1,502.660					
		Medium Trucks: 1,504.957					
		Heavy Trucks: 1,510.666 Grade Adjustment: 0.0					
		Lane Equivalent Distance (in feet)					
		Autos: 200.661					
		Medium Trucks: 200.626					
		Heavy Trucks: 200.652					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.12	3.63	-9.16	-1.20	-1.11	0.000	0.000
Medium Trucks:	78.79	-13.60	-9.15	-1.20	-1.17	0.000	0.000
Heavy Trucks:	83.02	-17.56	-9.16	-1.20	-1.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.4	62.5	60.7	54.7	63.3	63.9
Medium Trucks:	54.8	53.3	47.0	45.4	53.9	54.1
Heavy Trucks:	55.1	53.7	44.6	45.9	54.3	54.4
Vehicle Noise:	65.3	63.5	61.0	55.7	64.2	64.8

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.4	62.5	60.7	54.7	63.3	63.9
Medium Trucks:	54.8	53.3	47.0	45.4	53.9	54.1
Heavy Trucks:	55.1	53.7	44.6	45.9	54.3	54.4
Vehicle Noise:	65.3	63.5	61.0	55.7	64.2	64.8

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Backyard With Wall
 Road Name: Stetson Av. e/o Mustang Wy.
 Lot No: 211

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 35,300 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 3,530 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet							
Site Data		VehicleType	Day	Evening	Night	Daily	
Barrier Height: 6.0 feet		Autos:	77.5%	12.9%	9.6%	97.42%	
Barrier Type (0-Wall, 1-Berm): 0.0		Medium Trucks:	84.8%	4.9%	10.3%	1.84%	
Centerline Dist. to Barrier: 140.0 feet		Heavy Trucks:	86.5%	2.7%	10.8%	0.74%	
Centerline Dist. to Observer: 150.0 feet		Noise Source Elevations (in feet)					
Barrier Distance to Observer: 10.0 feet		Autos: 1,502.700					
Observer Height (Above Pad): 5.0 feet		Medium Trucks: 1,504.997					
Pad Elevation: 1,502.4 feet		Heavy Trucks: 1,510.706 Grade Adjustment: 0.0					
Road Elevation: 1,502.7 feet		Lane Equivalent Distance (in feet)					
Barrier Elevation: 1,502.4 feet		Autos: 145.192					
Road Grade: 0.0%		Medium Trucks: 145.115					
		Heavy Trucks: 145.092					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.12	3.07	-7.05	-1.20	0.09	-5.900	-8.900
Medium Trucks:	78.79	-14.17	-7.04	-1.20	0.07	-5.700	-8.700
Heavy Trucks:	83.02	-18.13	-7.04	-1.20	0.03	-5.300	-8.300

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.9	64.0	62.3	56.2	64.8	65.4
Medium Trucks:	56.4	54.9	48.5	47.0	55.4	55.7
Heavy Trucks:	56.7	55.2	46.2	47.4	55.8	55.9
Vehicle Noise:	66.8	65.0	62.6	57.2	65.8	66.3

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.0	58.1	56.4	50.3	58.9	59.5
Medium Trucks:	50.7	49.2	42.8	41.3	49.7	50.0
Heavy Trucks:	51.4	49.9	40.9	42.1	50.5	50.6
Vehicle Noise:	61.0	59.2	56.7	51.4	60.0	60.5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Backyard With Wall
 Road Name: Stetson Av. e/o Mustang Wy.
 Lot No: 150

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 35,300 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 3,530 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet							
Site Data		VehicleType	Day	Evening	Night	Daily	
Barrier Height: 6.0 feet		Autos:	77.5%	12.9%	9.6%	97.42%	
Barrier Type (0-Wall, 1-Berm): 0.0		Medium Trucks:	84.8%	4.9%	10.3%	1.84%	
Centerline Dist. to Barrier: 149.0 feet		Heavy Trucks:	86.5%	2.7%	10.8%	0.74%	
Centerline Dist. to Observer: 159.0 feet		Noise Source Elevations (in feet)					
Barrier Distance to Observer: 10.0 feet		Autos: 1,503.700					
Observer Height (Above Pad): 5.0 feet		Medium Trucks: 1,505.997					
Pad Elevation: 1,503.8 feet		Heavy Trucks: 1,511.706 Grade Adjustment: 0.0					
Road Elevation: 1,503.7 feet		Lane Equivalent Distance (in feet)					
Barrier Elevation: 1,503.8 feet		Autos: 154.512					
Road Grade: 0.0%		Medium Trucks: 154.433					
		Heavy Trucks: 154.395					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.12	3.07	-7.45	-1.20	0.09	-5.900	-8.900
Medium Trucks:	78.79	-14.17	-7.45	-1.20	0.07	-5.700	-8.700
Heavy Trucks:	83.02	-18.13	-7.45	-1.20	0.03	-5.300	-8.300

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.5	63.6	61.9	55.8	64.4	65.0
Medium Trucks:	56.0	54.5	48.1	46.6	55.0	55.3
Heavy Trucks:	56.2	54.8	45.8	47.0	55.4	55.5
Vehicle Noise:	66.4	64.6	62.2	56.8	65.4	65.9

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.6	57.7	56.0	49.9	58.5	59.1
Medium Trucks:	50.3	48.8	42.4	40.9	49.3	49.6
Heavy Trucks:	50.9	49.5	40.5	41.7	50.1	50.2
Vehicle Noise:	60.6	58.8	56.3	51.0	59.6	60.1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Backyard With Wall
 Road Name: Stetson Av. e/o Mustang Wy.
 Lot No: 140

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 35,300 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 3,530 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet							
		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
		Noise Source Elevations (in feet)					
		Autos: 1,503.100					
		Medium Trucks: 1,505.397					
		Heavy Trucks: 1,511.106 Grade Adjustment: 0.0					
		Lane Equivalent Distance (in feet)					
		Autos: 145.264					
		Medium Trucks: 145.161					
		Heavy Trucks: 145.075					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.12	3.07	-7.05	-1.20	0.10	-6.000	-9.000
Medium Trucks:	78.79	-14.17	-7.05	-1.20	0.08	-5.800	-8.800
Heavy Trucks:	83.02	-18.13	-7.04	-1.20	0.04	-5.400	-8.400

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.9	64.0	62.3	56.2	64.8	65.4
Medium Trucks:	56.4	54.9	48.5	47.0	55.4	55.7
Heavy Trucks:	56.7	55.2	46.2	47.4	55.8	55.9
Vehicle Noise:	66.8	65.0	62.6	57.2	65.8	66.3

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.9	58.0	56.3	50.2	58.8	59.4
Medium Trucks:	50.6	49.1	42.7	41.2	49.6	49.9
Heavy Trucks:	51.3	49.8	40.8	42.0	50.4	50.5
Vehicle Noise:	60.9	59.1	56.6	51.3	59.9	60.4

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Backyard With Wall
 Road Name: Warren Rd. s/o Stetson Av.
 Lot No: 1

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 21,100 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 2,110 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 45 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
Barrier Height: 0.0 feet		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
Barrier Type (0-Wall, 1-Berm): 0.0		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
Centerline Dist. to Barrier: 153.0 feet		Noise Source Elevations (in feet)					
Centerline Dist. to Observer: 163.0 feet		Autos: 1,510.100					
Barrier Distance to Observer: 10.0 feet		Medium Trucks: 1,512.397					
Observer Height (Above Pad): 5.0 feet		Heavy Trucks: 1,518.106 Grade Adjustment: 0.0					
Pad Elevation: 1,509.3 feet		Lane Equivalent Distance (in feet)					
Road Elevation: 1,510.1 feet		Autos: 158.801					
Barrier Elevation: 1,509.3 feet		Medium Trucks: 158.756					
Road Grade: 0.0%		Heavy Trucks: 158.791					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	69.34	1.29	-7.63	-1.20	-1.10	0.000	0.000
Medium Trucks:	77.62	-15.95	-7.63	-1.20	-1.17	0.000	0.000
Heavy Trucks:	82.14	-19.90	-7.63	-1.20	-1.36	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:	61.8	59.9	58.1	52.1	60.7	61.3
Medium Trucks:	52.8	51.3	45.0	43.4	51.9	52.1
Heavy Trucks:	53.4	52.0	43.0	44.2	52.6	52.7
Vehicle Noise:	62.8	61.0	58.5	53.2	61.8	62.3

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.8	59.9	58.1	52.1	60.7	61.3
Medium Trucks:	52.8	51.3	45.0	43.4	51.9	52.1
Heavy Trucks:	53.4	52.0	43.0	44.2	52.6	52.7
Vehicle Noise:	62.8	61.0	58.5	53.2	61.8	62.3

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Backyard With Wall
 Road Name: Warren Rd. s/o Stetson Av.
 Lot No: 6

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS				
Highway Data		Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 21,100 vehicles		Autos: 15				
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,110 vehicles		Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph		Vehicle Mix				
Near/Far Lane Distance: 74 feet		VehicleType	Day	Evening	Night	Daily
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height: 6.0 feet		Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Barrier Type (0-Wall, 1-Berm): 0.0		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Barrier: 62.0 feet		Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 72.0 feet		Autos: 1,511.100				
Barrier Distance to Observer: 10.0 feet		Medium Trucks: 1,513.397				
Observer Height (Above Pad): 5.0 feet		Heavy Trucks: 1,519.106 Grade Adjustment: 0.0				
Pad Elevation: 1,510.5 feet		Lane Equivalent Distance (in feet)				
Road Elevation: 1,511.1 feet		Autos: 60.237				
Barrier Elevation: 1,511.1 feet		Medium Trucks: 60.014				
Road Grade: 0.0%		Heavy Trucks: 59.917				

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	69.34	1.29	-1.32	-1.20	0.28	-7.360	-10.360
Medium Trucks:	77.62	-15.95	-1.29	-1.20	0.20	-6.800	-9.800
Heavy Trucks:	82.14	-19.90	-1.28	-1.20	0.07	-5.700	-8.700

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.1	66.2	64.5	58.4	67.0	67.6
Medium Trucks:	59.2	57.7	51.3	49.8	58.2	58.5
Heavy Trucks:	59.8	58.3	49.3	50.5	58.9	59.0
Vehicle Noise:	69.2	67.4	64.8	59.5	68.1	68.6

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	51.0	59.7	60.3
Medium Trucks:	52.4	50.9	44.5	43.0	51.4	51.7
Heavy Trucks:	54.1	52.6	43.6	44.8	53.2	53.3
Vehicle Noise:	62.1	60.3	57.5	52.5	61.0	61.5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Backyard With Wall
 Road Name: Warren Rd. s/o Stetson Av.
 Lot No: 14

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 21,100 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 2,110 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 45 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet							
		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
		Noise Source Elevations (in feet)					
		Autos: 1,512.700					
		Medium Trucks: 1,514.997					
		Heavy Trucks: 1,520.706 Grade Adjustment: 0.0					
		Lane Equivalent Distance (in feet)					
		Autos: 60.394					
		Medium Trucks: 60.171					
		Heavy Trucks: 60.074					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	69.34	1.29	-1.33	-1.20	0.47	-8.350	-11.350
Medium Trucks:	77.62	-15.95	-1.31	-1.20	0.37	-7.850	-10.850
Heavy Trucks:	82.14	-19.90	-1.30	-1.20	0.18	-6.640	-9.640

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.1	66.2	64.4	58.4	67.0	67.6
Medium Trucks:	59.2	57.7	51.3	49.8	58.2	58.4
Heavy Trucks:	59.7	58.3	49.3	50.5	58.9	59.0
Vehicle Noise:	69.2	67.4	64.8	59.5	68.1	68.6

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.8	57.9	56.1	50.0	58.7	59.3
Medium Trucks:	51.3	49.8	43.4	41.9	50.4	50.6
Heavy Trucks:	53.1	51.7	42.6	43.9	52.2	52.4
Vehicle Noise:	61.1	59.3	56.5	51.5	60.0	60.5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Backyard With Wall
 Road Name: Warren Rd. s/o Stetson Av.
 Lot No: 48

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 21,100 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 2,110 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 45 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet							
		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
		Noise Source Elevations (in feet)					
		Autos: 1,510.200					
		Medium Trucks: 1,512.497					
		Heavy Trucks: 1,518.206 Grade Adjustment: 0.0					
		Lane Equivalent Distance (in feet)					
		Autos: 63.450					
		Medium Trucks: 63.237					
		Heavy Trucks: 63.144					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	69.34	1.29	-1.66	-1.20	1.12	-10.540	-13.540
Medium Trucks:	77.62	-15.95	-1.63	-1.20	0.97	-10.210	-13.210
Heavy Trucks:	82.14	-19.90	-1.62	-1.20	0.63	-9.090	-12.090

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.8	65.9	64.1	58.1	66.7	67.3
Medium Trucks:	58.8	57.3	51.0	49.4	57.9	58.1
Heavy Trucks:	59.4	58.0	49.0	50.2	58.6	58.7
Vehicle Noise:	68.8	67.0	64.4	59.2	67.8	68.3

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:	48.6	47.1	40.8	39.2	47.7	47.9
Heavy Trucks:	50.3	48.9	39.9	41.1	49.5	49.6
Vehicle Noise:	58.5	56.7	54.0	48.9	57.5	58.0

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Backyard With Wall
Road Name: Warren Rd. s/o Mustang Wy.
Lot No: 620

Project Name: Rancho Diamante
Job Number: 9792
Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 20,000 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 2,000 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 40 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
Barrier Height: 6.0 feet		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
Barrier Type (0-Wall, 1-Berm): 0.0		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
Centerline Dist. to Barrier: 58.0 feet		Noise Source Elevations (in feet)					
Centerline Dist. to Observer: 68.0 feet		Autos: 1,507.200					
Barrier Distance to Observer: 10.0 feet		Medium Trucks: 1,509.497					
Observer Height (Above Pad): 5.0 feet		Heavy Trucks: 1,515.206 Grade Adjustment: 0.0					
Pad Elevation: 1,507.3 feet		Lane Equivalent Distance (in feet)					
Road Elevation: 1,507.2 feet		Autos: 55.130					
Barrier Elevation: 1,507.3 feet		Medium Trucks: 54.877					
Road Grade: 0.0%		Heavy Trucks: 54.756					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	67.36	1.57	-0.74	-1.20	0.17	-6.560	-9.560
Medium Trucks:	76.31	-15.67	-0.71	-1.20	0.11	-6.080	-9.080
Heavy Trucks:	81.16	-19.62	-0.70	-1.20	0.02	-5.200	-8.200

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.0	65.1	63.3	57.3	65.9	66.5
Medium Trucks:	58.7	57.2	50.9	49.3	57.8	58.0
Heavy Trucks:	59.6	58.2	49.2	50.4	58.8	58.9
Vehicle Noise:	68.2	66.5	63.7	58.6	67.2	67.7

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.4	58.5	56.8	50.7	59.3	59.9
Medium Trucks:	52.7	51.1	44.8	43.2	51.7	51.9
Heavy Trucks:	54.4	53.0	44.0	45.2	53.6	53.7
Vehicle Noise:	61.9	60.2	57.2	52.4	60.9	61.4

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Backyard With Wall
 Road Name: Mustang Wy. s/o Stetson Av.
 Lot No: 214

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 14,200 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,420 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 40 mph		Vehicle Mix					
Near/Far Lane Distance: 36 feet							
		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
		Noise Source Elevations (in feet)					
		Autos: 1,502.300					
		Medium Trucks: 1,504.597					
		Heavy Trucks: 1,510.306 Grade Adjustment: 0.0					
		Lane Equivalent Distance (in feet)					
		Autos: 73.047					
		Medium Trucks: 72.897					
		Heavy Trucks: 72.838					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	67.36	0.08	-2.57	-1.20	-0.93	0.000	0.000
Medium Trucks:	76.31	-17.15	-2.56	-1.20	-1.08	0.000	0.000
Heavy Trucks:	81.16	-21.11	-2.55	-1.20	-1.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.7	61.8	60.0	54.0	62.6	63.2
Medium Trucks:	55.4	53.9	47.5	46.0	54.4	54.7
Heavy Trucks:	56.3	54.9	45.8	47.1	55.4	55.6
Vehicle Noise:	64.9	63.1	60.4	55.3	63.9	64.4

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.7	61.8	60.0	54.0	62.6	63.2
Medium Trucks:	55.4	53.9	47.5	46.0	54.4	54.7
Heavy Trucks:	56.3	54.9	45.8	47.1	55.4	55.6
Vehicle Noise:	64.9	63.1	60.4	55.3	63.9	64.4

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Backyard With Wall
 Road Name: Mustang Wy. s/o Stetson Av.
 Lot No: 232

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 14,200 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,420 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 40 mph		Vehicle Mix					
Near/Far Lane Distance: 36 feet							
		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
		Noise Source Elevations (in feet)					
		Autos: 1,504.600					
		Medium Trucks: 1,506.897					
		Heavy Trucks: 1,512.606 Grade Adjustment: 0.0					
		Lane Equivalent Distance (in feet)					
		Autos: 72.960					
		Medium Trucks: 72.848					
		Heavy Trucks: 72.883					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	67.36	0.08	-2.57	-1.20	-1.01	0.000	0.000
Medium Trucks:	76.31	-17.15	-2.56	-1.20	-1.17	0.000	0.000
Heavy Trucks:	81.16	-21.11	-2.56	-1.20	-1.60	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.7	61.8	60.0	54.0	62.6	63.2
Medium Trucks:	55.4	53.9	47.5	46.0	54.4	54.7
Heavy Trucks:	56.3	54.9	45.8	47.1	55.4	55.6
Vehicle Noise:	64.9	63.1	60.4	55.3	63.9	64.4

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.7	61.8	60.0	54.0	62.6	63.2
Medium Trucks:	55.4	53.9	47.5	46.0	54.4	54.7
Heavy Trucks:	56.3	54.9	45.8	47.1	55.4	55.6
Vehicle Noise:	64.9	63.1	60.4	55.3	63.9	64.4

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Backyard With Wall
 Road Name: Mustang Wy. w/o Warren rd.
 Lot No: 85

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):	5,000 vehicles	Autos: 15					
Peak Hour Percentage:	10%	Medium Trucks (2 Axles): 15					
Peak Hour Volume:	500 vehicles	Heavy Trucks (3+ Axles): 15					
Vehicle Speed:	40 mph	Vehicle Mix					
Near/Far Lane Distance:	36 feet						
Site Data		VehicleType	Day	Evening	Night	Daily	
<div><div>Barrier Height: 0.0 feet</div><div>Barrier Type (0-Wall, 1-Berm): 0.0</div><div>Centerline Dist. to Barrier: 59.0 feet</div><div>Centerline Dist. to Observer: 69.0 feet</div><div>Barrier Distance to Observer: 10.0 feet</div><div>Observer Height (Above Pad): 5.0 feet</div><div>Pad Elevation: 1,505.8 feet</div><div>Road Elevation: 1,504.6 feet</div><div>Barrier Elevation: 1,505.8 feet</div><div>Road Grade: 0.0%</div></div>		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: 1,504.600					
		Medium Trucks: 1,506.897					
		Heavy Trucks: 1,512.606 Grade Adjustment: 0.0					
		Lane Equivalent Distance (in feet)					
		Autos: 66.899					
		Medium Trucks: 66.725					
		Heavy Trucks: 66.635					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	67.36	-4.45	-2.00	-1.20	-0.89	0.000	0.000
Medium Trucks:	76.31	-21.69	-1.98	-1.20	-1.06	0.000	0.000
Heavy Trucks:	81.16	-25.64	-1.97	-1.20	-1.51	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.7	57.8	56.0	50.0	58.6	59.2
Medium Trucks:	51.4	49.9	43.6	42.0	50.5	50.7
Heavy Trucks:	52.3	50.9	41.9	43.1	51.5	51.6
Vehicle Noise:	61.0	59.2	56.4	51.3	59.9	60.4

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.7	57.8	56.0	50.0	58.6	59.2
Medium Trucks:	51.4	49.9	43.6	42.0	50.5	50.7
Heavy Trucks:	52.3	50.9	41.9	43.1	51.5	51.6
Vehicle Noise:	61.0	59.2	56.4	51.3	59.9	60.4

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Backyard With Wall
 Road Name: Mustang Wy. w/o Warren rd.
 Lot No: 606

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):	5,000 vehicles	Autos: 15					
Peak Hour Percentage:	10%	Medium Trucks (2 Axles): 15					
Peak Hour Volume:	500 vehicles	Heavy Trucks (3+ Axles): 15					
Vehicle Speed:	40 mph	Vehicle Mix					
Near/Far Lane Distance:	36 feet						
Site Data		VehicleType	Day	Evening	Night	Daily	
<div>Barrier Height: 0.0 feet</div> <div>Barrier Type (0-Wall, 1-Berm): 0.0</div> <div>Centerline Dist. to Barrier: 64.0 feet</div> <div>Centerline Dist. to Observer: 74.0 feet</div> <div>Barrier Distance to Observer: 10.0 feet</div> <div>Observer Height (Above Pad): 5.0 feet</div> <div>Pad Elevation: 1,506.7 feet</div> <div>Road Elevation: 1,504.6 feet</div> <div>Barrier Elevation: 1,506.7 feet</div> <div>Road Grade: 0.0%</div>		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: 1,504.600					
		Medium Trucks: 1,506.897					
		Heavy Trucks: 1,512.606		Grade Adjustment: 0.0			
		Lane Equivalent Distance (in feet)					
		Autos: 72.128					
		Medium Trucks: 71.938					
		Heavy Trucks: 71.783					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	67.36	-4.45	-2.49	-1.20	-0.86	0.000	0.000
Medium Trucks:	76.31	-21.69	-2.47	-1.20	-1.00	0.000	0.000
Heavy Trucks:	81.16	-25.64	-2.46	-1.20	-1.42	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.2	57.3	55.6	49.5	58.1	58.7
Medium Trucks:	51.0	49.4	43.1	41.5	50.0	50.2
Heavy Trucks:	51.9	50.4	41.4	42.6	51.0	51.1
Vehicle Noise:	60.5	58.7	55.9	50.9	59.4	59.9

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.2	57.3	55.6	49.5	58.1	58.7
Medium Trucks:	51.0	49.4	43.1	41.5	50.0	50.2
Heavy Trucks:	51.9	50.4	41.4	42.6	51.0	51.1
Vehicle Noise:	60.5	58.7	55.9	50.9	59.4	59.9

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: First Floor With Wall
 Road Name: Stetson Av. e/o "C Street"
 Lot No: 318

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 40,200 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 4,020 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet							
Site Data		VehicleType	Day	Evening	Night	Daily	
Barrier Height: 6.0 feet		Autos:	77.5%	12.9%	9.6%	97.42%	
Barrier Type (0-Wall, 1-Berm): 0.0		Medium Trucks:	84.8%	4.9%	10.3%	1.84%	
Centerline Dist. to Barrier: 108.0 feet		Heavy Trucks:	86.5%	2.7%	10.8%	0.74%	
Centerline Dist. to Observer: 128.0 feet		Noise Source Elevations (in feet)					
Barrier Distance to Observer: 20.0 feet		Autos: 1,499.200					
Observer Height (Above Pad): 5.0 feet		Medium Trucks: 1,501.497					
Pad Elevation: 1,499.9 feet		Heavy Trucks: 1,507.206 Grade Adjustment: 0.0					
Road Elevation: 1,499.2 feet		Lane Equivalent Distance (in feet)					
Barrier Elevation: 1,499.9 feet		Autos: 121.710					
Road Grade: 0.0%		Medium Trucks: 121.585					
		Heavy Trucks: 121.498					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.12	3.63	-5.90	-1.20	0.10	-6.000	-9.000
Medium Trucks:	78.79	-13.60	-5.89	-1.20	0.07	-5.700	-8.700
Heavy Trucks:	83.02	-17.56	-5.89	-1.20	0.01	-5.100	-8.100

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.7	65.8	64.0	57.9	66.6	67.2
Medium Trucks:	58.1	56.6	50.2	48.7	57.1	57.4
Heavy Trucks:	58.4	57.0	47.9	49.2	57.5	57.6
Vehicle Noise:	68.5	66.7	64.3	58.9	67.5	68.0

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.7	59.8	58.0	51.9	60.6	61.2
Medium Trucks:	52.4	50.9	44.5	43.0	51.4	51.7
Heavy Trucks:	53.3	51.9	42.8	44.1	52.4	52.5
Vehicle Noise:	62.7	60.9	58.3	53.0	61.6	62.1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: First Floor With Wall
 Road Name: Stetson Av. e/o "C Street"
 Lot No: 324

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 40,200 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 4,020 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet							
		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
Barrier Height: 6.0 feet		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
Barrier Type (0-Wall, 1-Berm): 0.0		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
Centerline Dist. to Barrier: 114.0 feet		Noise Source Elevations (in feet)					
Centerline Dist. to Observer: 134.0 feet		Autos: 1,498.700					
Barrier Distance to Observer: 20.0 feet		Medium Trucks: 1,500.997					
Observer Height (Above Pad): 5.0 feet		Heavy Trucks: 1,506.706 Grade Adjustment: 0.0					
Pad Elevation: 1,501.9 feet		Lane Equivalent Distance (in feet)					
Road Elevation: 1,498.7 feet		Autos: 128.245					
Barrier Elevation: 1,501.9 feet		Medium Trucks: 128.074					
Road Grade: 0.0%		Heavy Trucks: 127.860					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.12	3.63	-6.24	-1.20	0.14	-6.320	-9.320
Medium Trucks:	78.79	-13.60	-6.23	-1.20	0.10	-6.000	-9.000
Heavy Trucks:	83.02	-17.56	-6.22	-1.20	0.03	-5.300	-8.300

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.3	65.4	63.6	57.6	66.2	66.8
Medium Trucks:	57.8	56.3	49.9	48.3	56.8	57.0
Heavy Trucks:	58.0	56.6	47.6	48.8	57.2	57.3
Vehicle Noise:	68.2	66.4	63.9	58.6	67.1	67.7

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.0	59.1	57.3	51.3	59.9	60.5
Medium Trucks:	51.8	50.3	43.9	42.3	50.8	51.0
Heavy Trucks:	52.7	51.3	42.3	43.5	51.9	52.0
Vehicle Noise:	62.0	60.2	57.6	52.4	61.0	61.5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: First Floor With Wall
 Road Name: Stetson Av. e/o "C Street"
 Lot No: 241

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 40,200 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 4,020 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet							
		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
		Noise Source Elevations (in feet)					
		Autos: 1,502.660					
		Medium Trucks: 1,504.957					
		Heavy Trucks: 1,510.666 Grade Adjustment: 0.0					
		Lane Equivalent Distance (in feet)					
		Autos: 210.820					
		Medium Trucks: 210.786					
		Heavy Trucks: 210.811					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.12	3.63	-9.48	-1.20	-0.56	0.000	0.000
Medium Trucks:	78.79	-13.60	-9.48	-1.20	-0.62	0.000	0.000
Heavy Trucks:	83.02	-17.56	-9.48	-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:	64.1	62.2	60.4	54.4	63.0	63.6
Medium Trucks:	54.5	53.0	46.6	45.1	53.6	53.8
Heavy Trucks:	54.8	53.4	44.3	45.6	53.9	54.1
Vehicle Noise:	65.0	63.2	60.7	55.3	63.9	64.4

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.1	62.2	60.4	54.4	63.0	63.6
Medium Trucks:	54.5	53.0	46.6	45.1	53.6	53.8
Heavy Trucks:	54.8	53.4	44.3	45.6	53.9	54.1
Vehicle Noise:	65.0	63.2	60.7	55.3	63.9	64.4

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: First Floor With Wall
 Road Name: Stetson Av. e/o Mustang Wy.
 Lot No: 211

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 35,300 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 3,530 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet							
		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
		Noise Source Elevations (in feet)					
		Autos: 1,502.700					
		Medium Trucks: 1,504.997					
		Heavy Trucks: 1,510.706 Grade Adjustment: 0.0					
		Lane Equivalent Distance (in feet)					
		Autos: 155.167					
		Medium Trucks: 155.090					
		Heavy Trucks: 155.067					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.12	3.07	-7.48	-1.20	0.07	-5.700	-8.700
Medium Trucks:	78.79	-14.17	-7.48	-1.20	0.05	-5.500	-8.500
Heavy Trucks:	83.02	-18.13	-7.48	-1.20	0.01	-5.100	-8.100

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.5	63.6	61.8	55.8	64.4	65.0
Medium Trucks:	55.9	54.4	48.1	46.5	55.0	55.2
Heavy Trucks:	56.2	54.8	45.8	47.0	55.4	55.5
Vehicle Noise:	66.4	64.6	62.1	56.8	65.3	65.9

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.8	57.9	56.1	50.1	58.7	59.3
Medium Trucks:	50.4	48.9	42.6	41.0	49.5	49.7
Heavy Trucks:	51.1	49.7	40.7	41.9	50.3	50.4
Vehicle Noise:	60.8	59.0	56.4	51.1	59.7	60.2

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: First Floor With Wall
 Road Name: Stetson Av. e/o Mustang Wy.
 Lot No: 150

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 35,300 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 3,530 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet							
Site Data		VehicleType	Day	Evening	Night	Daily	
Barrier Height: 6.0 feet		Autos:	77.5%	12.9%	9.6%	97.42%	
Barrier Type (0-Wall, 1-Berm): 0.0		Medium Trucks:	84.8%	4.9%	10.3%	1.84%	
Centerline Dist. to Barrier: 149.0 feet		Heavy Trucks:	86.5%	2.7%	10.8%	0.74%	
Centerline Dist. to Observer: 169.0 feet		Noise Source Elevations (in feet)					
Barrier Distance to Observer: 20.0 feet		Autos: 1,503.700					
Observer Height (Above Pad): 5.0 feet		Medium Trucks: 1,505.997					
Pad Elevation: 1,503.8 feet		Heavy Trucks: 1,511.706 Grade Adjustment: 0.0					
Road Elevation: 1,503.7 feet		Lane Equivalent Distance (in feet)					
Barrier Elevation: 1,503.8 feet		Autos: 164.487					
Road Grade: 0.0%		Medium Trucks: 164.408					
		Heavy Trucks: 164.371					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.12	3.07	-7.86	-1.20	0.07	-5.700	-8.700
Medium Trucks:	78.79	-14.17	-7.86	-1.20	0.05	-5.500	-8.500
Heavy Trucks:	83.02	-18.13	-7.86	-1.20	0.01	-5.100	-8.100

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.1	63.2	61.5	55.4	64.0	64.6
Medium Trucks:	55.6	54.1	47.7	46.2	54.6	54.8
Heavy Trucks:	55.8	54.4	45.4	46.6	55.0	55.1
Vehicle Noise:	66.0	64.2	61.7	56.4	65.0	65.5

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.4	57.5	55.8	49.7	58.3	58.9
Medium Trucks:	50.1	48.6	42.2	40.7	49.1	49.3
Heavy Trucks:	50.7	49.3	40.3	41.5	49.9	50.0
Vehicle Noise:	60.4	58.6	56.1	50.8	59.3	59.9

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: First Floor With Wall
 Road Name: Stetson Av. e/o Mustang Wy.
 Lot No: 140

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 35,300 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 3,530 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet							
Site Data		VehicleType	Day	Evening	Night	Daily	
Barrier Height: 6.0 feet		Autos:	77.5%	12.9%	9.6%	97.42%	
Barrier Type (0-Wall, 1-Berm): 0.0		Medium Trucks:	84.8%	4.9%	10.3%	1.84%	
Centerline Dist. to Barrier: 140.0 feet		Heavy Trucks:	86.5%	2.7%	10.8%	0.74%	
Centerline Dist. to Observer: 160.0 feet		Noise Source Elevations (in feet)					
Barrier Distance to Observer: 20.0 feet		Autos: 1,503.100					
Observer Height (Above Pad): 5.0 feet		Medium Trucks: 1,505.397					
Pad Elevation: 1,504.3 feet		Heavy Trucks: 1,511.106 Grade Adjustment: 0.0					
Road Elevation: 1,503.1 feet		Lane Equivalent Distance (in feet)					
Barrier Elevation: 1,504.3 feet		Autos: 155.239					
Road Grade: 0.0%		Medium Trucks: 155.136					
		Heavy Trucks: 155.050					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.12	3.07	-7.48	-1.20	0.09	-5.900	-8.900
Medium Trucks:	78.79	-14.17	-7.48	-1.20	0.06	-5.600	-8.600
Heavy Trucks:	83.02	-18.13	-7.48	-1.20	0.02	-5.200	-8.200

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.5	63.6	61.8	55.8	64.4	65.0
Medium Trucks:	55.9	54.4	48.1	46.5	55.0	55.2
Heavy Trucks:	56.2	54.8	45.8	47.0	55.4	55.5
Vehicle Noise:	66.4	64.6	62.1	56.8	65.3	65.9

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.6	57.7	55.9	49.9	58.5	59.1
Medium Trucks:	50.3	48.8	42.5	40.9	49.4	49.6
Heavy Trucks:	51.0	49.6	40.6	41.8	50.2	50.3
Vehicle Noise:	60.6	58.8	56.3	51.0	59.5	60.1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: First Floor With Wall
 Road Name: Warren Rd. s/o Stetson Av.
 Lot No: 1

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 21,100 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 2,110 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 45 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet							
		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
		Noise Source Elevations (in feet)					
		Autos: 1,510.100					
		Medium Trucks: 1,512.397					
		Heavy Trucks: 1,518.106 Grade Adjustment: 0.0					
		Lane Equivalent Distance (in feet)					
		Autos: 169.049					
		Medium Trucks: 169.008					
		Heavy Trucks: 169.040					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	69.34	1.29	-8.04	-1.20	-0.55	0.000	0.000
Medium Trucks:	77.62	-15.95	-8.04	-1.20	-0.62	0.000	0.000
Heavy Trucks:	82.14	-19.90	-8.04	-1.20	-0.81	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:	52.4	50.9	44.6	43.0	51.5	51.7
Heavy Trucks:	53.0	51.6	42.5	43.8	52.1	52.3
Vehicle Noise:	62.4	60.6	58.1	52.8	61.4	61.9

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:	52.4	50.9	44.6	43.0	51.5	51.7
Heavy Trucks:	53.0	51.6	42.5	43.8	52.1	52.3
Vehicle Noise:	62.4	60.6	58.1	52.8	61.4	61.9

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: First Floor With Wall
 Road Name: Warren Rd. s/o Stetson Av.
 Lot No: 6

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS				
Highway Data		Site Conditions (Hard = 10, Soft = 15)				
Average Daily Traffic (Adt): 21,100 vehicles		Autos: 15				
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15				
Peak Hour Volume: 2,110 vehicles		Heavy Trucks (3+ Axles): 15				
Vehicle Speed: 45 mph		Vehicle Mix				
Near/Far Lane Distance: 74 feet		VehicleType	Day	Evening	Night	Daily
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%				
Barrier Height: 6.0 feet		Medium Trucks: 84.8% 4.9% 10.3% 1.84%				
Barrier Type (0-Wall, 1-Berm): 0.0		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%				
Centerline Dist. to Barrier: 62.0 feet		Noise Source Elevations (in feet)				
Centerline Dist. to Observer: 82.0 feet		Autos: 1,511.100				
Barrier Distance to Observer: 20.0 feet		Medium Trucks: 1,513.397				
Observer Height (Above Pad): 5.0 feet		Heavy Trucks: 1,519.106 Grade Adjustment: 0.0				
Pad Elevation: 1,510.5 feet		Lane Equivalent Distance (in feet)				
Road Elevation: 1,511.1 feet		Autos: 70.174				
Barrier Elevation: 1,511.1 feet		Medium Trucks: 69.951				
Road Grade: 0.0%		Heavy Trucks: 69.854				

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	69.34	1.29	-2.31	-1.20	0.23	-7.010	-10.010
Medium Trucks:	77.62	-15.95	-2.29	-1.20	0.14	-6.320	-9.320
Heavy Trucks:	82.14	-19.90	-2.28	-1.20	0.02	-5.200	-8.200

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.1	65.2	63.5	57.4	66.0	66.6
Medium Trucks:	58.2	56.7	50.3	48.8	57.2	57.5
Heavy Trucks:	58.8	57.3	48.3	49.5	57.9	58.0
Vehicle Noise:	68.2	66.4	63.8	58.5	67.1	67.6

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	50.4	59.0	59.6
Medium Trucks:	51.9	50.4	44.0	42.5	50.9	51.1
Heavy Trucks:	53.6	52.1	43.1	44.3	52.7	52.8
Vehicle Noise:	61.5	59.7	56.9	51.9	60.4	60.9

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: First Floor With Wall
 Road Name: Warren Rd. s/o Stetson Av.
 Lot No: 14

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 21,100 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 2,110 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 45 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet							
		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
		Noise Source Elevations (in feet)					
		Autos: 1,512.700					
		Medium Trucks: 1,514.997					
		Heavy Trucks: 1,520.706 Grade Adjustment: 0.0					
		Lane Equivalent Distance (in feet)					
		Autos: 70.253					
		Medium Trucks: 70.030					
		Heavy Trucks: 69.933					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	69.34	1.29	-2.32	-1.20	0.35	-7.750	-10.750
Medium Trucks:	77.62	-15.95	-2.30	-1.20	0.24	-7.080	-10.080
Heavy Trucks:	82.14	-19.90	-2.29	-1.20	0.06	-5.600	-8.600

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.1	65.2	63.5	57.4	66.0	66.6
Medium Trucks:	58.2	56.7	50.3	48.8	57.2	57.5
Heavy Trucks:	58.8	57.3	48.3	49.5	57.9	58.0
Vehicle Noise:	68.2	66.4	63.8	58.5	67.1	67.6

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.4	57.5	55.7	49.6	58.3	58.9
Medium Trucks:	51.1	49.6	43.2	41.7	50.1	50.4
Heavy Trucks:	53.2	51.7	42.7	43.9	52.3	52.4
Vehicle Noise:	60.8	59.0	56.1	51.2	59.8	60.2

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: First Floor With Wall
 Road Name: Warren Rd. s/o Stetson Av.
 Lot No: 48

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 21,100 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 2,110 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 45 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet							
		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
		Noise Source Elevations (in feet)					
		Autos: 1,510.200					
		Medium Trucks: 1,512.497					
		Heavy Trucks: 1,518.206 Grade Adjustment: 0.0					
		Lane Equivalent Distance (in feet)					
		Autos: 73.021					
		Medium Trucks: 72.809					
		Heavy Trucks: 72.716					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	69.34	1.29	-2.57	-1.20	0.70	-9.300	-12.300
Medium Trucks:	77.62	-15.95	-2.55	-1.20	0.55	-8.750	-11.750
Heavy Trucks:	82.14	-19.90	-2.54	-1.20	0.25	-7.150	-10.150

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.9	65.0	63.2	57.1	65.8	66.4
Medium Trucks:	57.9	56.4	50.1	48.5	57.0	57.2
Heavy Trucks:	58.5	57.1	48.0	49.3	57.6	57.8
Vehicle Noise:	67.9	66.1	63.5	58.3	66.9	67.4

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	57.6	55.7	53.9	47.8	56.5	57.1
Medium Trucks:	49.2	47.7	41.3	39.8	48.2	48.5
Heavy Trucks:	51.3	49.9	40.9	42.1	50.5	50.6
Vehicle Noise:	59.0	57.2	54.3	49.4	57.9	58.4

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: First Floor With Wall
 Road Name: Warren Rd. s/o Mustang Wy.
 Lot No: 620

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 20,000 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 2,000 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 40 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
Barrier Height: 6.0 feet		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
Barrier Type (0-Wall, 1-Berm): 0.0		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
Centerline Dist. to Barrier: 58.0 feet		Noise Source Elevations (in feet)					
Centerline Dist. to Observer: 78.0 feet		Autos: 1,507.200					
Barrier Distance to Observer: 20.0 feet		Medium Trucks: 1,509.497					
Observer Height (Above Pad): 5.0 feet		Heavy Trucks: 1,515.206 Grade Adjustment: 0.0					
Pad Elevation: 1,507.3 feet		Lane Equivalent Distance (in feet)					
Road Elevation: 1,507.2 feet		Autos: 65.105					
Barrier Elevation: 1,507.3 feet		Medium Trucks: 64.852					
Road Grade: 0.0%		Heavy Trucks: 64.731					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	67.36	1.57	-1.82	-1.20	0.17	-6.560	-9.560
Medium Trucks:	76.31	-15.67	-1.80	-1.20	0.10	-6.000	-9.000
Heavy Trucks:	81.16	-19.62	-1.79	-1.20	0.00	-4.900	-7.900

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.9	64.0	62.2	56.2	64.8	65.4
Medium Trucks:	57.6	56.1	49.8	48.2	56.7	56.9
Heavy Trucks:	58.6	57.1	48.1	49.3	57.7	57.8
Vehicle Noise:	67.2	65.4	62.6	57.5	66.1	66.6

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.3	57.4	55.7	49.6	58.3	58.9
Medium Trucks:	51.6	50.1	43.8	42.2	50.7	50.9
Heavy Trucks:	53.7	52.2	43.2	44.4	52.8	52.9
Vehicle Noise:	60.9	59.2	56.2	51.3	59.9	60.4

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: First Floor With Wall
 Road Name: Mustang Wy. s/o Stetson Av.
 Lot No: 214

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 14,200 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,420 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 40 mph		Vehicle Mix					
Near/Far Lane Distance: 36 feet							
		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
		Noise Source Elevations (in feet)					
		Autos: 1,502.300					
		Medium Trucks: 1,504.597					
		Heavy Trucks: 1,510.306 Grade Adjustment: 0.0					
		Lane Equivalent Distance (in feet)					
		Autos: 83.282					
		Medium Trucks: 83.150					
		Heavy Trucks: 83.099					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	67.36	0.08	-3.43	-1.20	-0.41	0.000	0.000
Medium Trucks:	76.31	-17.15	-3.42	-1.20	-0.54	0.000	0.000
Heavy Trucks:	81.16	-21.11	-3.41	-1.20	-0.96	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:	62.8	60.9	59.2	53.1	61.7	62.3
Medium Trucks:	54.5	53.0	46.7	45.1	53.6	53.8
Heavy Trucks:	55.4	54.0	45.0	46.2	54.6	54.7
Vehicle Noise:	64.1	62.3	59.5	54.4	63.0	63.5

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.8	60.9	59.2	53.1	61.7	62.3
Medium Trucks:	54.5	53.0	46.7	45.1	53.6	53.8
Heavy Trucks:	55.4	54.0	45.0	46.2	54.6	54.7
Vehicle Noise:	64.1	62.3	59.5	54.4	63.0	63.5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: First Floor With Wall
 Road Name: Mustang Wy. s/o Stetson Av.
 Lot No: 232

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 14,200 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,420 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 40 mph		Vehicle Mix					
Near/Far Lane Distance: 36 feet							
		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
		Noise Source Elevations (in feet)					
		Autos: 1,504.600					
		Medium Trucks: 1,506.897					
		Heavy Trucks: 1,512.606 Grade Adjustment: 0.0					
		Lane Equivalent Distance (in feet)					
		Autos: 83.205					
		Medium Trucks: 83.107					
		Heavy Trucks: 83.138					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	67.36	0.08	-3.42	-1.20	-0.48	0.000	0.000
Medium Trucks:	76.31	-17.15	-3.41	-1.20	-0.62	0.000	0.000
Heavy Trucks:	81.16	-21.11	-3.42	-1.20	-1.06	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:	62.8	60.9	59.2	53.1	61.7	62.3
Medium Trucks:	54.5	53.0	46.7	45.1	53.6	53.8
Heavy Trucks:	55.4	54.0	45.0	46.2	54.6	54.7
Vehicle Noise:	64.1	62.3	59.5	54.5	63.0	63.5

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.8	60.9	59.2	53.1	61.7	62.3
Medium Trucks:	54.5	53.0	46.7	45.1	53.6	53.8
Heavy Trucks:	55.4	54.0	45.0	46.2	54.6	54.7
Vehicle Noise:	64.1	62.3	59.5	54.5	63.0	63.5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: First Floor With Wall
 Road Name: Mustang Wy. w/o Warren rd.
 Lot No: 85

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):	5,000 vehicles	Autos: 15					
Peak Hour Percentage:	10%	Medium Trucks (2 Axles): 15					
Peak Hour Volume:	500 vehicles	Heavy Trucks (3+ Axles): 15					
Vehicle Speed:	40 mph	Vehicle Mix					
Near/Far Lane Distance:	36 feet	VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
Barrier Height:	0.0 feet	Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
Barrier Type (0-Wall, 1-Berm):	0.0	Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
Centerline Dist. to Barrier:	59.0 feet	Noise Source Elevations (in feet)					
Centerline Dist. to Observer:	79.0 feet	Autos: 1,504.600					
Barrier Distance to Observer:	20.0 feet	Medium Trucks: 1,506.897					
Observer Height (Above Pad):	5.0 feet	Heavy Trucks: 1,512.606 Grade Adjustment: 0.0					
Pad Elevation:	1,505.8 feet	Lane Equivalent Distance (in feet)					
Road Elevation:	1,504.6 feet	Autos: 77.172					
Barrier Elevation:	1,505.8 feet	Medium Trucks: 77.021					
Road Grade:	0.0%	Heavy Trucks: 76.943					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	67.36	-4.45	-2.93	-1.20	-0.38	0.000	0.000
Medium Trucks:	76.31	-21.69	-2.92	-1.20	-0.52	0.000	0.000
Heavy Trucks:	81.16	-25.64	-2.91	-1.20	-0.96	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:	58.8	56.9	55.1	49.1	57.7	58.3
Medium Trucks:	50.5	49.0	42.6	41.1	49.6	49.8
Heavy Trucks:	51.4	50.0	40.9	42.2	50.6	50.7
Vehicle Noise:	60.0	58.2	55.5	50.4	59.0	59.5

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	58.8	56.9	55.1	49.1	57.7	58.3
Medium Trucks:	50.5	49.0	42.6	41.1	49.6	49.8
Heavy Trucks:	51.4	50.0	40.9	42.2	50.6	50.7
Vehicle Noise:	60.0	58.2	55.5	50.4	59.0	59.5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: First Floor With Wall
 Road Name: Mustang Wy. w/o Warren rd.
 Lot No: 606

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):	5,000 vehicles	Autos: 15					
Peak Hour Percentage:	10%	Medium Trucks (2 Axles): 15					
Peak Hour Volume:	500 vehicles	Heavy Trucks (3+ Axles): 15					
Vehicle Speed:	40 mph	Vehicle Mix					
Near/Far Lane Distance:	36 feet						
Site Data		VehicleType	Day	Evening	Night	Daily	
<div><div>Barrier Height: 0.0 feet</div><div>Barrier Type (0-Wall, 1-Berm): 0.0</div><div>Centerline Dist. to Barrier: 64.0 feet</div><div>Centerline Dist. to Observer: 84.0 feet</div><div>Barrier Distance to Observer: 20.0 feet</div><div>Observer Height (Above Pad): 5.0 feet</div><div>Pad Elevation: 1,506.7 feet</div><div>Road Elevation: 1,504.6 feet</div><div>Barrier Elevation: 1,506.7 feet</div><div>Road Grade: 0.0%</div></div>		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: 1,504.600					
		Medium Trucks: 1,506.897					
		Heavy Trucks: 1,512.606 Grade Adjustment: 0.0					
		Lane Equivalent Distance (in feet)					
		Autos: 82.355					
		Medium Trucks: 82.189					
		Heavy Trucks: 82.054					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	67.36	-4.45	-3.35	-1.20	-0.34	0.000	0.000
Medium Trucks:	76.31	-21.69	-3.34	-1.20	-0.47	0.000	0.000
Heavy Trucks:	81.16	-25.64	-3.33	-1.20	-0.86	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:	58.4	56.5	54.7	48.6	57.3	57.9
Medium Trucks:	50.1	48.6	42.2	40.7	49.1	49.4
Heavy Trucks:	51.0	49.6	40.5	41.8	50.1	50.3
Vehicle Noise:	59.6	57.8	55.1	50.0	58.6	59.1

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	58.4	56.5	54.7	48.6	57.3	57.9
Medium Trucks:	50.1	48.6	42.2	40.7	49.1	49.4
Heavy Trucks:	51.0	49.6	40.5	41.8	50.1	50.3
Vehicle Noise:	59.6	57.8	55.1	50.0	58.6	59.1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Second Floor With Wall
 Road Name: Stetson Av. e/o "C Street"
 Lot No: 318

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 40,200 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 4,020 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet							
		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
Barrier Height: 6.0 feet		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
Barrier Type (0-Wall, 1-Berm): 0.0		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
Centerline Dist. to Barrier: 108.0 feet		Noise Source Elevations (in feet)					
Centerline Dist. to Observer: 128.0 feet		Autos: 1,499.200					
Barrier Distance to Observer: 20.0 feet		Medium Trucks: 1,501.497					
Observer Height (Above Pad): 14.0 feet		Heavy Trucks: 1,507.206 Grade Adjustment: 0.0					
Pad Elevation: 1,499.9 feet		Lane Equivalent Distance (in feet)					
Road Elevation: 1,499.2 feet		Autos: 123.414					
Barrier Elevation: 1,499.9 feet		Medium Trucks: 123.162					
Road Grade: 0.0%		Heavy Trucks: 122.718					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.12	3.63	-5.99	-1.20	-0.89	0.000	0.000
Medium Trucks:	78.79	-13.60	-5.98	-1.20	-1.01	0.000	0.000
Heavy Trucks:	83.02	-17.56	-5.95	-1.20	-1.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.6	65.7	63.9	57.8	66.5	67.1
Medium Trucks:	58.0	56.5	50.1	48.6	57.1	57.3
Heavy Trucks:	58.3	56.9	47.8	49.1	57.5	57.6
Vehicle Noise:	68.5	66.6	64.2	58.8	67.4	67.9

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.6	65.7	63.9	57.8	66.5	67.1
Medium Trucks:	58.0	56.5	50.1	48.6	57.1	57.3
Heavy Trucks:	58.3	56.9	47.8	49.1	57.5	57.6
Vehicle Noise:	68.5	66.6	64.2	58.8	67.4	67.9

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Second Floor With Wall
Road Name: Stetson Av. e/o "C Street"
Lot No: 324

Project Name: Rancho Diamante
Job Number: 9792
Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 40,200 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 4,020 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet							
Site Data		VehicleType	Day	Evening	Night	Daily	
Barrier Height: 6.0 feet		Autos:	77.5%	12.9%	9.6%	97.42%	
Barrier Type (0-Wall, 1-Berm): 0.0		Medium Trucks:	84.8%	4.9%	10.3%	1.84%	
Centerline Dist. to Barrier: 114.0 feet		Heavy Trucks:	86.5%	2.7%	10.8%	0.74%	
Centerline Dist. to Observer: 134.0 feet		Noise Source Elevations (in feet)					
Barrier Distance to Observer: 20.0 feet		Autos: 1,498.700					
Observer Height (Above Pad): 14.0 feet		Medium Trucks: 1,500.997					
Pad Elevation: 1,501.9 feet		Heavy Trucks: 1,506.706 Grade Adjustment: 0.0					
Road Elevation: 1,498.7 feet		Lane Equivalent Distance (in feet)					
Barrier Elevation: 1,501.9 feet		Autos: 129.934					
Road Grade: 0.0%		Medium Trucks: 129.650					
		Heavy Trucks: 129.118					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.12	3.63	-6.32	-1.20	-0.79	0.000	0.000
Medium Trucks:	78.79	-13.60	-6.31	-1.20	-0.90	0.000	0.000
Heavy Trucks:	83.02	-17.56	-6.28	-1.20	-1.21	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.2	65.3	63.6	57.5	66.1	66.7
Medium Trucks:	57.7	56.2	49.8	48.3	56.7	57.0
Heavy Trucks:	58.0	56.6	47.5	48.8	57.1	57.2
Vehicle Noise:	68.1	66.3	63.8	58.5	67.1	67.6

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.2	65.3	63.6	57.5	66.1	66.7
Medium Trucks:	57.7	56.2	49.8	48.3	56.7	57.0
Heavy Trucks:	58.0	56.6	47.5	48.8	57.1	57.2
Vehicle Noise:	68.1	66.3	63.8	58.5	67.1	67.6

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Second Floor With Wall
 Road Name: Stetson Av. e/o "C Street"
 Lot No: 241

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 40,200 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 4,020 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet							
		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
Barrier Height: 0.0 feet		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
Barrier Type (0-Wall, 1-Berm): 0.0		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
Centerline Dist. to Barrier: 194.0 feet		Noise Source Elevations (in feet)					
Centerline Dist. to Observer: 214.0 feet		Autos: 1,502.660					
Barrier Distance to Observer: 20.0 feet		Medium Trucks: 1,504.957					
Observer Height (Above Pad): 14.0 feet		Heavy Trucks: 1,510.666 Grade Adjustment: 0.0					
Pad Elevation: 1,501.9 feet		Lane Equivalent Distance (in feet)					
Road Elevation: 1,502.7 feet		Autos: 211.193					
Barrier Elevation: 1,501.9 feet		Medium Trucks: 211.061					
Road Grade: 0.0%		Heavy Trucks: 210.842					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.12	3.63	-9.49	-1.20	-3.92	0.000	0.000
Medium Trucks:	78.79	-13.60	-9.48	-1.20	-4.07	0.000	0.000
Heavy Trucks:	83.02	-17.56	-9.48	-1.20	-4.45	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.1	62.2	60.4	54.3	63.0	63.6
Medium Trucks:	54.5	53.0	46.6	45.1	53.6	53.8
Heavy Trucks:	54.8	53.4	44.3	45.6	53.9	54.1
Vehicle Noise:	65.0	63.1	60.7	55.3	63.9	64.4

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.1	62.2	60.4	54.3	63.0	63.6
Medium Trucks:	54.5	53.0	46.6	45.1	53.6	53.8
Heavy Trucks:	54.8	53.4	44.3	45.6	53.9	54.1
Vehicle Noise:	65.0	63.1	60.7	55.3	63.9	64.4

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Second Floor With Wall
 Road Name: Stetson Av. e/o Mustang Wy.
 Lot No: 211

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 35,300 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 3,530 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet							
		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
		Noise Source Elevations (in feet)					
		Autos: 1,502.700					
		Medium Trucks: 1,504.997					
		Heavy Trucks: 1,510.706 Grade Adjustment: 0.0					
		Lane Equivalent Distance (in feet)					
		Autos: 156.265					
		Medium Trucks: 156.080					
		Heavy Trucks: 155.767					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.12	3.07	-7.53	-1.20	-1.05	0.000	0.000
Medium Trucks:	78.79	-14.17	-7.52	-1.20	-1.15	0.000	0.000
Heavy Trucks:	83.02	-18.13	-7.51	-1.20	-1.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.5	63.6	61.8	55.7	64.4	65.0
Medium Trucks:	55.9	54.4	48.0	46.5	55.0	55.2
Heavy Trucks:	56.2	54.8	45.7	47.0	55.3	55.5
Vehicle Noise:	66.4	64.5	62.1	56.7	65.3	65.8

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.5	63.6	61.8	55.7	64.4	65.0
Medium Trucks:	55.9	54.4	48.0	46.5	55.0	55.2
Heavy Trucks:	56.2	54.8	45.7	47.0	55.3	55.5
Vehicle Noise:	66.4	64.5	62.1	56.7	65.3	65.8

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Second Floor With Wall
 Road Name: Stetson Av. e/o Mustang Wy.
 Lot No: 150

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 35,300 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 3,530 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet							
		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
		Noise Source Elevations (in feet)					
		Autos: 1,503.700					
		Medium Trucks: 1,505.997					
		Heavy Trucks: 1,511.706 Grade Adjustment: 0.0					
		Lane Equivalent Distance (in feet)					
		Autos: 165.502					
		Medium Trucks: 165.322					
		Heavy Trucks: 165.013					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.12	3.07	-7.90	-1.20	-1.06	0.000	0.000
Medium Trucks:	78.79	-14.17	-7.89	-1.20	-1.15	0.000	0.000
Heavy Trucks:	83.02	-18.13	-7.88	-1.20	-1.41	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.1	63.2	61.4	55.4	64.0	64.6
Medium Trucks:	55.5	54.0	47.7	46.1	54.6	54.8
Heavy Trucks:	55.8	54.4	45.4	46.6	55.0	55.1
Vehicle Noise:	66.0	64.2	61.7	56.3	64.9	65.4

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.1	63.2	61.4	55.4	64.0	64.6
Medium Trucks:	55.5	54.0	47.7	46.1	54.6	54.8
Heavy Trucks:	55.8	54.4	45.4	46.6	55.0	55.1
Vehicle Noise:	66.0	64.2	61.7	56.3	64.9	65.4

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Second Floor With Wall
 Road Name: Stetson Av. e/o Mustang Wy.
 Lot No: 140

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 35,300 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 3,530 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet							
Site Data		VehicleType	Day	Evening	Night	Daily	
Barrier Height: 6.0 feet		Autos:	77.5%	12.9%	9.6%	97.42%	
Barrier Type (0-Wall, 1-Berm): 0.0		Medium Trucks:	84.8%	4.9%	10.3%	1.84%	
Centerline Dist. to Barrier: 140.0 feet		Heavy Trucks:	86.5%	2.7%	10.8%	0.74%	
Centerline Dist. to Observer: 160.0 feet		Noise Source Elevations (in feet)					
Barrier Distance to Observer: 20.0 feet		Autos: 1,503.100					
Observer Height (Above Pad): 14.0 feet		Medium Trucks: 1,505.397					
Pad Elevation: 1,504.3 feet		Heavy Trucks: 1,511.106 Grade Adjustment: 0.0					
Road Elevation: 1,503.1 feet		Lane Equivalent Distance (in feet)					
Barrier Elevation: 1,504.3 feet		Autos: 156.403					
Road Grade: 0.0%		Medium Trucks: 156.197					
		Heavy Trucks: 155.829					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.12	3.07	-7.53	-1.20	-0.98	0.000	0.000
Medium Trucks:	78.79	-14.17	-7.52	-1.20	-1.08	0.000	0.000
Heavy Trucks:	83.02	-18.13	-7.51	-1.20	-1.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.5	63.6	61.8	55.7	64.4	65.0
Medium Trucks:	55.9	54.4	48.0	46.5	54.9	55.2
Heavy Trucks:	56.2	54.8	45.7	47.0	55.3	55.5
Vehicle Noise:	66.4	64.5	62.1	56.7	65.3	65.8

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.5	63.6	61.8	55.7	64.4	65.0
Medium Trucks:	55.9	54.4	48.0	46.5	54.9	55.2
Heavy Trucks:	56.2	54.8	45.7	47.0	55.3	55.5
Vehicle Noise:	66.4	64.5	62.1	56.7	65.3	65.8

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Second Floor With Wall
 Road Name: Warren Rd. s/o Stetson Av.
 Lot No: 1

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 21,100 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 2,110 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 45 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
Barrier Height: 0.0 feet		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
Barrier Type (0-Wall, 1-Berm): 0.0		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
Centerline Dist. to Barrier: 153.0 feet		Noise Source Elevations (in feet)					
Centerline Dist. to Observer: 173.0 feet		Autos: 1,510.100					
Barrier Distance to Observer: 20.0 feet		Medium Trucks: 1,512.397					
Observer Height (Above Pad): 14.0 feet		Heavy Trucks: 1,518.106 Grade Adjustment: 0.0					
Pad Elevation: 1,509.3 feet		Lane Equivalent Distance (in feet)					
Road Elevation: 1,510.1 feet		Autos: 169.512					
Barrier Elevation: 1,509.3 feet		Medium Trucks: 169.348					
Road Grade: 0.0%		Heavy Trucks: 169.077					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	69.34	1.29	-8.06	-1.20	-3.83	0.000	0.000
Medium Trucks:	77.62	-15.95	-8.05	-1.20	-4.01	0.000	0.000
Heavy Trucks:	82.14	-19.90	-8.04	-1.20	-4.49	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:	52.4	50.9	44.6	43.0	51.5	51.7
Heavy Trucks:	53.0	51.6	42.5	43.8	52.1	52.3
Vehicle Noise:	62.4	60.6	58.0	52.8	61.4	61.9

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:	52.4	50.9	44.6	43.0	51.5	51.7
Heavy Trucks:	53.0	51.6	42.5	43.8	52.1	52.3
Vehicle Noise:	62.4	60.6	58.0	52.8	61.4	61.9

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Second Floor With Wall
 Road Name: Warren Rd. s/o Stetson Av.
 Lot No: 6

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 21,100 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 2,110 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 45 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
Barrier Height: 6.0 feet		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
Barrier Type (0-Wall, 1-Berm): 0.0		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
Centerline Dist. to Barrier: 62.0 feet		Noise Source Elevations (in feet)					
Centerline Dist. to Observer: 82.0 feet		Autos: 1,511.100					
Barrier Distance to Observer: 20.0 feet		Medium Trucks: 1,513.397					
Observer Height (Above Pad): 14.0 feet		Heavy Trucks: 1,519.106 Grade Adjustment: 0.0					
Pad Elevation: 1,510.5 feet		Lane Equivalent Distance (in feet)					
Road Elevation: 1,511.1 feet		Autos: 74.395					
Barrier Elevation: 1,511.1 feet		Medium Trucks: 74.015					
Road Grade: 0.0%		Heavy Trucks: 73.376					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	69.34	1.29	-2.69	-1.20	-0.52	0.000	0.000
Medium Trucks:	77.62	-15.95	-2.66	-1.20	-0.67	0.000	0.000
Heavy Trucks:	82.14	-19.90	-2.60	-1.20	-1.15	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.7	64.8	63.1	57.0	65.6	66.3
Medium Trucks:	57.8	56.3	49.9	48.4	56.9	57.1
Heavy Trucks:	58.4	57.0	48.0	49.2	57.6	57.7
Vehicle Noise:	67.8	66.0	63.4	58.2	66.7	67.3

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.7	64.8	63.1	57.0	65.6	66.3
Medium Trucks:	57.8	56.3	49.9	48.4	56.9	57.1
Heavy Trucks:	58.4	57.0	48.0	49.2	57.6	57.7
Vehicle Noise:	67.8	66.0	63.4	58.2	66.7	67.3

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Second Floor With Wall
 Road Name: Warren Rd. s/o Stetson Av.
 Lot No: 14

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 21,100 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 2,110 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 45 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
Barrier Height: 6.0 feet		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
Barrier Type (0-Wall, 1-Berm): 0.0		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
Centerline Dist. to Barrier: 62.0 feet		Noise Source Elevations (in feet)					
Centerline Dist. to Observer: 82.0 feet		Autos: 1,512.700					
Barrier Distance to Observer: 20.0 feet		Medium Trucks: 1,514.997					
Observer Height (Above Pad): 14.0 feet		Heavy Trucks: 1,520.706 Grade Adjustment: 0.0					
Pad Elevation: 1,511.3 feet		Lane Equivalent Distance (in feet)					
Road Elevation: 1,512.7 feet		Autos: 74.255					
Barrier Elevation: 1,512.7 feet		Medium Trucks: 73.900					
Road Grade: 0.0%		Heavy Trucks: 73.322					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	69.34	1.29	-2.68	-1.20	-0.38	0.000	0.000
Medium Trucks:	77.62	-15.95	-2.65	-1.20	-0.52	0.000	0.000
Heavy Trucks:	82.14	-19.90	-2.60	-1.20	-0.94	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.8	64.9	63.1	57.0	65.7	66.3
Medium Trucks:	57.8	56.3	50.0	48.4	56.9	57.1
Heavy Trucks:	58.4	57.0	48.0	49.2	57.6	57.7
Vehicle Noise:	67.8	66.0	63.4	58.2	66.8	67.3

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.8	64.9	63.1	57.0	65.7	66.3
Medium Trucks:	57.8	56.3	50.0	48.4	56.9	57.1
Heavy Trucks:	58.4	57.0	48.0	49.2	57.6	57.7
Vehicle Noise:	67.8	66.0	63.4	58.2	66.8	67.3

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Second Floor With Wall
 Road Name: Warren Rd. s/o Stetson Av.
 Lot No: 48

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 21,100 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 2,110 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 45 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
Barrier Height: 6.0 feet		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
Barrier Type (0-Wall, 1-Berm): 0.0		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
Centerline Dist. to Barrier: 64.0 feet		Noise Source Elevations (in feet)					
Centerline Dist. to Observer: 84.0 feet		Autos: 1,510.200					
Barrier Distance to Observer: 20.0 feet		Medium Trucks: 1,512.497					
Observer Height (Above Pad): 14.0 feet		Heavy Trucks: 1,518.206 Grade Adjustment: 0.0					
Pad Elevation: 1,506.9 feet		Lane Equivalent Distance (in feet)					
Road Elevation: 1,510.2 feet		Autos: 76.168					
Barrier Elevation: 1,510.2 feet		Medium Trucks: 75.879					
Road Grade: 0.0%		Heavy Trucks: 75.460					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	69.34	1.29	-2.85	-1.20	-0.14	0.000	0.000
Medium Trucks:	77.62	-15.95	-2.82	-1.20	-0.23	0.000	0.000
Heavy Trucks:	82.14	-19.90	-2.78	-1.20	-0.52	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.6	64.7	62.9	56.9	65.5	66.1
Medium Trucks:	57.7	56.1	49.8	48.2	56.7	56.9
Heavy Trucks:	58.3	56.8	47.8	49.0	57.4	57.5
Vehicle Noise:	67.6	65.8	63.3	58.0	66.6	67.1

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.6	64.7	62.9	56.9	65.5	66.1
Medium Trucks:	57.7	56.1	49.8	48.2	56.7	56.9
Heavy Trucks:	58.3	56.8	47.8	49.0	57.4	57.5
Vehicle Noise:	67.6	65.8	63.3	58.0	66.6	67.1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Second Floor With Wall
 Road Name: Warren Rd. s/o Mustang Wy.
 Lot No: 620

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 20,000 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 2,000 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 40 mph		Vehicle Mix					
Near/Far Lane Distance: 74 feet		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
Barrier Height: 6.0 feet		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
Barrier Type (0-Wall, 1-Berm): 0.0		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
Centerline Dist. to Barrier: 58.0 feet		Noise Source Elevations (in feet)					
Centerline Dist. to Observer: 78.0 feet		Autos: 1,507.200					
Barrier Distance to Observer: 20.0 feet		Medium Trucks: 1,509.497					
Observer Height (Above Pad): 14.0 feet		Heavy Trucks: 1,515.206 Grade Adjustment: 0.0					
Pad Elevation: 1,507.3 feet		Lane Equivalent Distance (in feet)					
Road Elevation: 1,507.2 feet		Autos: 70.099					
Barrier Elevation: 1,507.3 feet		Medium Trucks: 69.673					
Road Grade: 0.0%		Heavy Trucks: 68.936					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	67.36	1.57	-2.30	-1.20	-0.58	0.000	0.000
Medium Trucks:	76.31	-15.67	-2.26	-1.20	-0.76	0.000	0.000
Heavy Trucks:	81.16	-19.62	-2.20	-1.20	-1.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.4	63.5	61.8	55.7	64.3	64.9
Medium Trucks:	57.2	55.7	49.3	47.8	56.2	56.5
Heavy Trucks:	58.1	56.7	47.7	48.9	57.3	57.4
Vehicle Noise:	66.7	64.9	62.2	57.1	65.6	66.1

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.4	63.5	61.8	55.7	64.3	64.9
Medium Trucks:	57.2	55.7	49.3	47.8	56.2	56.5
Heavy Trucks:	58.1	56.7	47.7	48.9	57.3	57.4
Vehicle Noise:	66.7	64.9	62.2	57.1	65.6	66.1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Second Floor With Wall
 Road Name: Mustang Wy. s/o Stetson Av.
 Lot No: 214

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 14,200 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,420 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 40 mph		Vehicle Mix					
Near/Far Lane Distance: 36 feet							
		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
		Noise Source Elevations (in feet)					
		Autos: 1,502.300					
		Medium Trucks: 1,504.597					
		Heavy Trucks: 1,510.306 Grade Adjustment: 0.0					
		Lane Equivalent Distance (in feet)					
		Autos: 84.398					
		Medium Trucks: 84.023					
		Heavy Trucks: 83.358					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	67.36	0.08	-3.51	-1.20	-3.06	0.000	0.000
Medium Trucks:	76.31	-17.15	-3.48	-1.20	-3.42	0.000	0.000
Heavy Trucks:	81.16	-21.11	-3.43	-1.20	-4.42	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:	62.7	60.8	59.1	53.0	61.6	62.2
Medium Trucks:	54.5	53.0	46.6	45.1	53.5	53.8
Heavy Trucks:	55.4	54.0	45.0	46.2	54.6	54.7
Vehicle Noise:	64.0	62.2	59.5	54.4	62.9	63.4

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.7	60.8	59.1	53.0	61.6	62.2
Medium Trucks:	54.5	53.0	46.6	45.1	53.5	53.8
Heavy Trucks:	55.4	54.0	45.0	46.2	54.6	54.7
Vehicle Noise:	64.0	62.2	59.5	54.4	62.9	63.4

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Second Floor With Wall
 Road Name: Mustang Wy. s/o Stetson Av.
 Lot No: 232

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 14,200 vehicles		Autos: 15					
Peak Hour Percentage: 10%		Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,420 vehicles		Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 40 mph		Vehicle Mix					
Near/Far Lane Distance: 36 feet							
		VehicleType	Day	Evening	Night	Daily	
Site Data		Autos: 77.5% 12.9% 9.6% 97.42%					
		Medium Trucks: 84.8% 4.9% 10.3% 1.84%					
		Heavy Trucks: 86.5% 2.7% 10.8% 0.74%					
		Noise Source Elevations (in feet)					
		Autos: 1,504.600					
		Medium Trucks: 1,506.897					
		Heavy Trucks: 1,512.606 Grade Adjustment: 0.0					
		Lane Equivalent Distance (in feet)					
		Autos: 84.194					
		Medium Trucks: 83.851					
		Heavy Trucks: 83.267					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	67.36	0.08	-3.50	-1.20	-3.25	0.000	0.000
Medium Trucks:	76.31	-17.15	-3.47	-1.20	-3.62	0.000	0.000
Heavy Trucks:	81.16	-21.11	-3.43	-1.20	-4.65	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:	62.7	60.8	59.1	53.0	61.6	62.3
Medium Trucks:	54.5	53.0	46.6	45.1	53.5	53.8
Heavy Trucks:	55.4	54.0	45.0	46.2	54.6	54.7
Vehicle Noise:	64.0	62.2	59.5	54.4	63.0	63.4

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.7	60.8	59.1	53.0	61.6	62.3
Medium Trucks:	54.5	53.0	46.6	45.1	53.5	53.8
Heavy Trucks:	55.4	54.0	45.0	46.2	54.6	54.7
Vehicle Noise:	64.0	62.2	59.5	54.4	63.0	63.4

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Second Floor With Wall
Road Name: Mustang Wy. w/o Warren rd.
Lot No: 85

Project Name: Rancho Diamante
Job Number: 9792
Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):	5,000 vehicles	Autos: 15					
Peak Hour Percentage:	10%	Medium Trucks (2 Axles): 15					
Peak Hour Volume:	500 vehicles	Heavy Trucks (3+ Axles): 15					
Vehicle Speed:	40 mph	Vehicle Mix					
Near/Far Lane Distance:	36 feet						
Site Data		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: 1,504.600					
		Medium Trucks: 1,506.897					
		Heavy Trucks: 1,512.606 Grade Adjustment: 0.0					
		Lane Equivalent Distance (in feet)					
		Autos: 78.409					
		Medium Trucks: 77.997					
		Heavy Trucks: 77.258					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	67.36	-4.45	-3.03	-1.20	-2.91	0.000	0.000
Medium Trucks:	76.31	-21.69	-3.00	-1.20	-3.30	0.000	0.000
Heavy Trucks:	81.16	-25.64	-2.94	-1.20	-4.38	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:	58.7	56.8	55.0	49.0	57.6	58.2
Medium Trucks:	50.4	48.9	42.6	41.0	49.5	49.7
Heavy Trucks:	51.4	50.0	40.9	42.2	50.5	50.7
Vehicle Noise:	59.9	58.1	55.4	50.3	58.9	59.4

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	58.7	56.8	55.0	49.0	57.6	58.2
Medium Trucks:	50.4	48.9	42.6	41.0	49.5	49.7
Heavy Trucks:	51.4	50.0	40.9	42.2	50.5	50.7
Vehicle Noise:	59.9	58.1	55.4	50.3	58.9	59.4

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 10/1/2012

Scenario: Second Floor With Wall
 Road Name: Mustang Wy. w/o Warren rd.
 Lot No: 606

Project Name: Rancho Diamante
 Job Number: 9792
 Analyst: A. Wolfe

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS					
Highway Data		Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt):	5,000 vehicles	Autos: 15					
Peak Hour Percentage:	10%	Medium Trucks (2 Axles): 15					
Peak Hour Volume:	500 vehicles	Heavy Trucks (3+ Axles): 15					
Vehicle Speed:	40 mph	Vehicle Mix					
Near/Far Lane Distance:	36 feet						
Site Data		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: 1,504.600					
		Medium Trucks: 1,506.897					
		Heavy Trucks: 1,512.606 Grade Adjustment: 0.0					
		Lane Equivalent Distance (in feet)					
		Autos: 83.613					
		Medium Trucks: 83.202					
		Heavy Trucks: 82.447					

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	67.36	-4.45	-3.45	-1.20	-2.86	0.000	0.000
Medium Trucks:	76.31	-21.69	-3.42	-1.20	-3.22	0.000	0.000
Heavy Trucks:	81.16	-25.64	-3.36	-1.20	-4.20	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	48.5	57.2	57.8
Medium Trucks:	50.0	48.5	42.1	40.6	49.1	49.3
Heavy Trucks:	51.0	49.5	40.5	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	48.5	57.2	57.8
Medium Trucks:	50.0	48.5	42.1	40.6	49.1	49.3
Heavy Trucks:	51.0	49.5	40.5	41.7	50.1	50.2
Vehicle Noise:	59.5	57.7	55.0	49.9	58.5	59.0

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APPENDIX 8.2:

ON-SITE RAIL NOISE CALCULATIONS

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Federal Transit Administration
General Transit Noise Assessment
Case: 9792 - Lot 318

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RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	45.2	38.8	38.8
Diesel Loco.	39.9	33.5	33.5
Metrolink 91 Line Ext.	43.7	37.2	37.2
Source 3	0.0	0.0	0.0
CNEL (dB):	Source 1 51.4	Source 2 40.2	Source 3 0

Enter noise receiver land use category below.

LAND USE CATEGORY	
Noise receiver land use category (1, 2 or 3)	2

Enter data for each noise source below - see reference list for source numbers.

NOISE SOURCE PARAMETERS					
Parameter	Diesel Loco.		Metrolink 91 Line Ext.		Source 3
Source Num.	Diesel Loco.	2	Comm. Rail Cars	3	
Dist. to receiver	distance (ft)	279	distance (ft)	279	
Daytime Hours (7 AM - 10 PM)	speed (mph)	15	speed (mph)	40	
15 hours	trains/hour	0.17	trains/hour	0.5	
Nighttime Hours (10 PM - 7 AM)	locos/train	1	cars/train	5	
9 hours	speed (mph)	15	speed (mph)	40	
	trains/hour	0.17	trains/hour	0.5	
	locos/train	1	cars/train	5	
Jointed Track?	Y/N	N	Y/N	N	
Embedded Track?	Y/N	N	Y/N	N	
Aerial Structure?	Y/N	N	Y/N	N	
Barrier Present?	Y/N	N	Y/N	N	
Intervening Rows of Buildings	number	0	number	0	

DATA SOURCES:

Diesel locomotive information based on observed activity during the noise level measurements and the U.S. DOT Crossing Inventory Form for crossing number 027366S at Warren Road.

Metrolink information is based on the Metrolink Fact Sheet for Quarter 3 of 2014-2015 for the 91 Line which will be extended to Perris. From the Paris extension is where the San Jacinto Branch Line will potentially connect to Hemet.

SOURCE REFERENCE LIST	
Source	Number
Electric Loco.	1
Diesel Loco.	2
Comm. Rail Cars	3
RRT/LRT	4
AGT, Steel Wheel	5
AGT, Rubber Tire	6
Monorail	7
Maglev	8
Automobiles	9
City Buses	10
Commuter Buses	11
Rail Yard or Shop	12
Layover Tracks	13
Bus Storage Yard	14
Bus Op. Facility	15
Bus Transit Center	16
Parking Garage	17
Park & Ride Lot	18

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APPENDIX 10.1:

OPERATIONAL NOISE LEVEL CALCULATIONS

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STATIONARY SOURCE NOISE PREDICTION MODEL

10/16/2017

Observer Location: R1

Source: Air Conditioning Unit (Roof-Top)
Condition: Operational

Project Name: Rancho Diamante

Job Number: 9792

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	4,435.0 feet	Barrier Height:	6.0 feet
Noise Distance to Barrier:	4,435.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	20.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	78.2
Distance Attenuation	4,435.0	-59.0	-59.0	-59.0	-59.0	-59.0	-59.0
Shielding (Barrier Attenuation)	4,435.0	-10.2	-10.2	-10.2	-10.2	-10.2	-10.2
Raw (Distance + Barrier)		8.0	-69.2	-69.2	-69.2	-69.2	9.0
39 Minute Hourly Adjustment		6.1	-71.1	-71.1	-71.1	-71.1	7.1

STATIONARY SOURCE NOISE PREDICTION MODEL

10/16/2017

Observer Location: R1

Source: Parking Lot Vehicle Movements
Condition: Operational

Project Name: Rancho Diamante

Job Number: 9792

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	4,435.0 feet	Barrier Height:	6.0 feet
Noise Distance to Barrier:	4,435.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	60.1	0.0	0.0	0.0	0.0	79.5
Distance Attenuation	4,435.0	-44.2	-44.2	-44.2	-44.2	-44.2	-44.2
Shielding (Barrier Attenuation)	4,435.0	-10.2	-10.2	-10.2	-10.2	-10.2	-10.2
Raw (Distance + Barrier)		5.7	-54.4	-54.4	-54.4	-54.4	25.1
60 Minute Hourly Adjustment		5.7	-54.4	-54.4	-54.4	-54.4	25.1

STATIONARY SOURCE NOISE PREDICTION MODEL

10/16/2017

Observer Location: R1

Source: Drive-Thru Speakerphone
Condition: Operational

Project Name: Rancho Diamante

Job Number: 9792

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	4,435.0 feet	Barrier Height:	6.0 feet
Noise Distance to Barrier:	4,435.0 feet	Noise Source Height:	3.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	15.0	62.0	0.0	0.0	0.0	0.0	66.4
Distance Attenuation	4,435.0	-49.4	-49.4	-49.4	-49.4	-49.4	-49.4
Shielding (Barrier Attenuation)	4,435.0	-10.2	-10.2	-10.2	-10.2	-10.2	-10.2
Raw (Distance + Barrier)		2.4	-59.6	-59.6	-59.6	-59.6	6.8
60 Minute Hourly Adjustment		2.4	-59.6	-59.6	-59.6	-59.6	6.8

STATIONARY SOURCE NOISE PREDICTION MODEL

10/16/2017

Observer Location: R2

Source: Air Conditioning Unit (Roof-Top)
Condition: Operational

Project Name: Rancho Diamante

Job Number: 9792

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,153.0 feet	Barrier Height:	6.0 feet
Noise Distance to Barrier:	2,153.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	20.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	78.2
Distance Attenuation	2,153.0	-52.7	-52.7	-52.7	-52.7	-52.7	-52.7
Shielding (Barrier Attenuation)	2,153.0	-10.2	-10.2	-10.2	-10.2	-10.2	-10.2
Raw (Distance + Barrier)		14.3	-62.9	-62.9	-62.9	-62.9	15.3
39 Minute Hourly Adjustment		12.4	-64.8	-64.8	-64.8	-64.8	13.4

STATIONARY SOURCE NOISE PREDICTION MODEL

10/16/2017

Observer Location: R2

Source: Parking Lot Vehicle Movements
Condition: Operational

Project Name: Rancho Diamante

Job Number: 9792

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,153.0 feet	Barrier Height:	6.0 feet
Noise Distance to Barrier:	2,153.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	60.1	0.0	0.0	0.0	0.0	79.5
Distance Attenuation	2,153.0	-39.5	-39.5	-39.5	-39.5	-39.5	-39.5
Shielding (Barrier Attenuation)	2,153.0	-10.2	-10.2	-10.2	-10.2	-10.2	-10.2
Raw (Distance + Barrier)		10.4	-49.7	-49.7	-49.7	-49.7	29.8
60 Minute Hourly Adjustment		10.4	-49.7	-49.7	-49.7	-49.7	29.8

STATIONARY SOURCE NOISE PREDICTION MODEL

10/16/2017

Observer Location: R2

Source: Drive-Thru Speakerphone
Condition: Operational

Project Name: Rancho Diamante

Job Number: 9792

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,153.0 feet	Barrier Height:	6.0 feet
Noise Distance to Barrier:	2,153.0 feet	Noise Source Height:	3.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	15.0	62.0	0.0	0.0	0.0	0.0	66.4
Distance Attenuation	2,153.0	-43.1	-43.1	-43.1	-43.1	-43.1	-43.1
Shielding (Barrier Attenuation)	2,153.0	-10.2	-10.2	-10.2	-10.2	-10.2	-10.2
Raw (Distance + Barrier)		8.7	-53.3	-53.3	-53.3	-53.3	13.1
60 Minute Hourly Adjustment		8.7	-53.3	-53.3	-53.3	-53.3	13.1

STATIONARY SOURCE NOISE PREDICTION MODEL

10/16/2017

Observer Location: R3

Source: Air Conditioning Unit (Roof-Top)
Condition: Operational

Project Name: Rancho Diamante

Job Number: 9792

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,192.0 feet	Barrier Height:	6.0 feet
Noise Distance to Barrier:	2,192.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	20.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	78.2
Distance Attenuation	2,192.0	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8
Shielding (Barrier Attenuation)	2,192.0	-10.2	-10.2	-10.2	-10.2	-10.2	-10.2
Raw (Distance + Barrier)		14.2	-63.0	-63.0	-63.0	-63.0	15.2
39 Minute Hourly Adjustment		12.3	-64.9	-64.9	-64.9	-64.9	13.3

STATIONARY SOURCE NOISE PREDICTION MODEL

10/16/2017

Observer Location: R3

Source: Parking Lot Vehicle Movements
Condition: Operational

Project Name: Rancho Diamante

Job Number: 9792

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,192.0 feet	Barrier Height:	6.0 feet
Noise Distance to Barrier:	2,192.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	60.1	0.0	0.0	0.0	0.0	79.5
Distance Attenuation	2,192.0	-39.6	-39.6	-39.6	-39.6	-39.6	-39.6
Shielding (Barrier Attenuation)	2,192.0	-10.2	-10.2	-10.2	-10.2	-10.2	-10.2
Raw (Distance + Barrier)		10.3	-49.8	-49.8	-49.8	-49.8	29.7
60 Minute Hourly Adjustment		10.3	-49.8	-49.8	-49.8	-49.8	29.7

STATIONARY SOURCE NOISE PREDICTION MODEL

10/16/2017

Observer Location: R3

Source: Drive-Thru Speakerphone
Condition: Operational

Project Name: Rancho Diamante

Job Number: 9792

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	2,192.0 feet	Barrier Height:	6.0 feet
Noise Distance to Barrier:	2,192.0 feet	Noise Source Height:	3.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	15.0	62.0	0.0	0.0	0.0	0.0	66.4
Distance Attenuation	2,192.0	-43.3	-43.3	-43.3	-43.3	-43.3	-43.3
Shielding (Barrier Attenuation)	2,192.0	-10.2	-10.2	-10.2	-10.2	-10.2	-10.2
Raw (Distance + Barrier)		8.5	-53.5	-53.5	-53.5	-53.5	12.9
60 Minute Hourly Adjustment		8.5	-53.5	-53.5	-53.5	-53.5	12.9

STATIONARY SOURCE NOISE PREDICTION MODEL

10/16/2017

Observer Location: R4

Source: Air Conditioning Unit (Roof-Top)
Condition: Operational

Project Name: Rancho Diamante

Job Number: 9792

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	383.0 feet	Barrier Height:	6.0 feet
Noise Distance to Barrier:	373.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	10.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	20.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	78.2
Distance Attenuation	383.0	-37.7	-37.7	-37.7	-37.7	-37.7	-37.7
Shielding (Barrier Attenuation)	373.0	-5.1	-5.1	-5.1	-5.1	-5.1	-5.1
Raw (Distance + Barrier)		34.4	-42.8	-42.8	-42.8	-42.8	35.4
39 Minute Hourly Adjustment		32.5	-44.7	-44.7	-44.7	-44.7	33.5

STATIONARY SOURCE NOISE PREDICTION MODEL

10/16/2017

Observer Location: R4

Source: Parking Lot Vehicle Movements
Condition: Operational

Project Name: Rancho Diamante

Job Number: 9792

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	329.0 feet	Barrier Height:	6.0 feet
Noise Distance to Barrier:	319.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	10.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	60.1	0.0	0.0	0.0	0.0	79.5
Distance Attenuation	329.0	-27.3	-27.3	-27.3	-27.3	-27.3	-27.3
Shielding (Barrier Attenuation)	319.0	-5.5	-5.5	-5.5	-5.5	-5.5	-5.5
Raw (Distance + Barrier)		27.3	-32.8	-32.8	-32.8	-32.8	46.7
60 Minute Hourly Adjustment		27.3	-32.8	-32.8	-32.8	-32.8	46.7

STATIONARY SOURCE NOISE PREDICTION MODEL

10/16/2017

Observer Location: R4

Source: Drive-Thru Speakerphone
Condition: Operational

Project Name: Rancho Diamante

Job Number: 9792

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	383.0 feet	Barrier Height:	6.0 feet
Noise Distance to Barrier:	373.0 feet	Noise Source Height:	3.0 feet
Barrier Distance to Observer:	10.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	15.0	62.0	0.0	0.0	0.0	0.0	66.4
Distance Attenuation	383.0	-28.1	-28.1	-28.1	-28.1	-28.1	-28.1
Shielding (Barrier Attenuation)	373.0	-5.6	-5.6	-5.6	-5.6	-5.6	-5.6
Raw (Distance + Barrier)		28.3	-33.7	-33.7	-33.7	-33.7	32.7
60 Minute Hourly Adjustment		28.3	-33.7	-33.7	-33.7	-33.7	32.7

STATIONARY SOURCE NOISE PREDICTION MODEL

10/16/2017

Observer Location: R5

Source: Air Conditioning Unit (Roof-Top)
Condition: Operational

Project Name: Rancho Diamante

Job Number: 9792

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	537.0 feet	Barrier Height:	6.0 feet
Noise Distance to Barrier:	527.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	10.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	20.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	78.2
Distance Attenuation	537.0	-40.6	-40.6	-40.6	-40.6	-40.6	-40.6
Shielding (Barrier Attenuation)	527.0	-5.2	-5.2	-5.2	-5.2	-5.2	-5.2
Raw (Distance + Barrier)		31.4	-45.8	-45.8	-45.8	-45.8	32.4
39 Minute Hourly Adjustment		29.5	-47.7	-47.7	-47.7	-47.7	30.5

STATIONARY SOURCE NOISE PREDICTION MODEL

10/16/2017

Observer Location: R5

Source: Parking Lot Vehicle Movements
Condition: Operational

Project Name: Rancho Diamante

Job Number: 9792

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	537.0 feet	Barrier Height:	6.0 feet
Noise Distance to Barrier:	527.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	10.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	15.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	60.1	0.0	0.0	0.0	0.0	79.5
Distance Attenuation	537.0	-30.5	-30.5	-30.5	-30.5	-30.5	-30.5
Shielding (Barrier Attenuation)	527.0	-5.5	-5.5	-5.5	-5.5	-5.5	-5.5
Raw (Distance + Barrier)		24.1	-36.0	-36.0	-36.0	-36.0	43.5
60 Minute Hourly Adjustment		24.1	-36.0	-36.0	-36.0	-36.0	43.5

STATIONARY SOURCE NOISE PREDICTION MODEL

10/16/2017

Observer Location: R5

Source: Drive-Thru Speakerphone
 Condition: Operational

Project Name: Rancho Diamante

Job Number: 9792

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	537.0 feet	Barrier Height:	6.0 feet
Noise Distance to Barrier:	527.0 feet	Noise Source Height:	3.0 feet
Barrier Distance to Observer:	10.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	15.0	62.0	0.0	0.0	0.0	0.0	66.4
Distance Attenuation	537.0	-31.1	-31.1	-31.1	-31.1	-31.1	-31.1
Shielding (Barrier Attenuation)	527.0	-5.5	-5.5	-5.5	-5.5	-5.5	-5.5
Raw (Distance + Barrier)		25.4	-36.6	-36.6	-36.6	-36.6	29.8
60 Minute Hourly Adjustment		25.4	-36.6	-36.6	-36.6	-36.6	29.8

APPENDIX 11.1:

CONSTRUCTION REFERENCE NOISE LEVEL MEASUREMENTS MEMO

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SUBJECT: CONSTRUCTION REFERENCE NOISE LEVEL MEASUREMENTS MEMO

This Construction Reference Noise Level Measurements Memo has been prepared to summarize the sample reference noise level measurements collected by Urban Crossroads, Inc. To describe peak construction noise activities, we have historically relied on reference noise level measurements provided in the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM). However, our experience demonstrates that the RCNM significantly overstates the predicted construction noise levels. This is largely due the fact that RCNM is based on construction equipment data collected from the Central Artery/Tunnel project in Boston, Massachusetts in the early 1990's. Due to substantial changes in the air quality emission requirements in the State of California Air Resources Board (ARB), the RCNM reference noise level measurements do not adequately describe modern construction equipment noise levels. In addition, the RCNM methodology places all construction equipment at a single point near the property line. This scenario simply does not occur in the real world as typical construction activity represents a variety of equipment operating at different locations throughout the project site.

REFERENCE NOISE LEVEL MEASUREMENTS

To estimate a project's construction-related noise levels, sample reference noise level measurements of similar construction activities were collected by Urban Crossroads, Inc. to describe the different stages of construction. The reference noise levels are intended to represent typical construction noise levels when multiple pieces of equipment are operating simultaneously at a construction site. The following reference noise level measurements were collected from existing construction operations with similar equipment as those expected with future construction of comparable land uses. Appendix A includes the data collected from each of the reference noise level measurements adjusted to present noise levels at a uniform reference distance of 50 feet. Appendix B includes the reference noise source photos by identification number ("ID"). Table 1 summarizes the reference noise level measurements. The reference noise level measurements are identified by land use type and location below.

BUSINESS PARK CONSTRUCTION SITE, CITY OF IRVINE

On Wednesday, October 14th, 2015, Urban Crossroads, Inc. collected short-term construction noise level measurements at a business park construction site located at the northwest corner of Barranca Parkway and Alton Parkway in the City of Irvine. The reference noise level measurements include the following noise source activities: a truck pass-by and background dozer activity (ID 1) and dozer activity (ID 2). Both measurements were taken at a distance of approximately 30 feet from the source and represent typical construction activities during the grading stage of construction.

RESIDENTIAL CONSTRUCTION SITE, CITY OF RANCHO MISSION VIEJO

On Tuesday, October 20th, 2015, Urban Crossroads, Inc. collected short-term construction noise level measurements at a residential construction site located in the unincorporated area within the County of Orange known as Rancho Mission Viejo. The reference noise level measurements include the following noise source activities: construction vehicle maintenance (ID 3), foundation trenching (ID 4), rough grading activities (ID 5), and residential building framing (ID 6). All reference measurements were taken at this location at a distance of approximately 30 feet from the noise source.

INDUSTRIAL SITE, CITY OF ONTARIO

Additional short-term reference noise level measurements were collected on Friday, October 30th, 2015, by Urban Crossroads, Inc. at an active industrial construction site in the City of Ontario. The reference noise level measurements represent the grading activities associated with industrial/warehousing construction. Five reference noise level measurements were taken at this location to describe: a water truck pass-by and backup alarm (ID 7), a dozer pass-by (ID 8), two scrapers and a water truck pass-by (ID 9), two scrapers pass-by (ID 10), and scraper, water truck and dozer activities over a 30-minute period (ID 11). All reference measurements taken at this location were at a distance of approximately 30 feet from the source.

INDUSTRIAL SITE, CITY OF REDLANDS

On July 1st, 2015, Urban Crossroads, Inc. collected short-term construction noise level measurements of a nighttime concrete pour at an industrial construction site located at 27334 San Bernardino Avenue in the City of Redlands. The reference noise level measurements include the following nighttime building construction and paving-related noise source activities: concrete mixer truck movements (ID 12), concrete paver activities (ID 13), concrete mixer pour & paving activities (ID 14), concrete mixer backup alarms and air brakes (ID 15), and a one-hour measurement over the duration of all reference measurements at this location of concrete mixer pour activities (ID 16).

TABLE 1: CONSTRUCTION REFERENCE NOISE LEVEL MEASUREMENTS SUMMARY

ID	Noise Source	Reference Distance From Source (Feet)	Reference Noise Levels @ Reference Distance		Reference Noise Levels @ 50 Feet ⁶	
			dBA Leq	dBA Lmax	dBA Leq	dBA Lmax
1	Truck Pass-Bys & Dozer Activity ¹	30'	63.6	68.1	59.2	63.7
2	Dozer Activity ¹	30'	68.6	76.4	64.2	72.0
3	Construction Vehicle Maintenance Activities ²	30'	71.9	74.8	67.5	70.4
4	Foundation Trenching ²	30'	72.6	74.9	68.2	70.5
5	Rough Grading Activities ²	30'	77.9	84.8	73.5	80.4
6	Residential Framing ³	30'	66.7	76.7	62.3	72.3
7	Water Truck Pass-By & Backup Alarm ⁴	30'	76.3	82.3	71.9	77.9
8	Dozer Pass-By ⁴	30'	84.0	89.9	79.6	85.5
9	Two Scrapers & Water Truck Pass-By ⁴	30'	83.4	89.0	79.0	84.6
10	Two Scrapers Pass-By ⁴	30'	83.7	86.9	79.3	82.5
11	Scraper, Water Truck, & Dozer Activity ⁴	30'	79.7	87.7	75.3	83.3
12	Concrete Mixer Truck Movements ⁵	50'	71.2	73.1	71.2	73.1
13	Concrete Paver Activities ⁵	30'	70.0	75.7	65.6	71.3
14	Concrete Mixer Pour & Paving Activities ⁵	30'	70.3	76.3	65.9	71.9
15	Concrete Mixer Backup Alarms & Air Brakes ⁵	50'	71.6	78.8	71.6	78.8
16	Concrete Mixer Pour Activities ⁵	50'	67.7	79.2	67.7	79.2

¹ As measured by Urban Crossroads, Inc. on 10/14/15 at a business park construction site located at the northwest corner of Barranca Parkway and Alton Parkway in the City of Irvine.

² As measured by Urban Crossroads, Inc. on 10/20/15 at a construction site located in Rancho Mission Viejo.

³ As measured by Urban Crossroads, Inc. on 10/20/15 at a residential construction site located in Rancho Mission Viejo.

⁴ As measured by Urban Crossroads, Inc. on 10/30/15 during grading operations within an industrial construction site located in the City of Ontario.

⁵ Reference noise level measurements were collected from a nighttime concrete pour at an industrial construction site, located at 27334 San Bernardino Avenue in the City of Redlands, between 1:00 a.m. to 2:00 a.m. on 7/1/15.

⁶ Reference noise levels are calculated at 50 feet using a drop off rate of 6 dBA per doubling of distance (point source).

MODELED AND MEASURED CONSTRUCTION NOISE LEVELS

A RCNM construction noise analysis was prepared by Urban Crossroads, Inc. on October 17th, 2014 for an industrial project site in the City of Ontario. The noise levels due to construction in the industrial portion of the project site (Planning Area 1) were estimated at up to thirteen receiver locations to determine the potential noise impacts at adjacent sensitive land uses. Returning to the same industrial project site over a year later, in October 2015, Urban Crossroads, Inc. collected noise level measurements at the same receiver locations to validate the modeled RCNM construction noise levels with actual construction noise level measurements collected in the field. The grading stage of construction was chosen for this comparison since grading activities typically represent the worst-case construction activities due to the number and size of the mobile equipment used in the grading process.

MODELED CONSTRUCTION NOISE LEVELS

As shown on Table 2, the modeled RCNM noise levels during the grading stage of construction were estimated to produce a noise level approaching 92.6 dBA Leq at a distance of 50 feet from the project site boundary. The RCNM noise levels reflect the combined construction noise level impacts of excavators, graders, tractors, loaders, backhoes, rubber tired dozers, and scrapers producing a noise level of 92.6 dBA Leq. At nearby receiver locations, this results in a short-term construction noise level approaching 88.2 dBA Leq.

TABLE 2: RCNM MODELED CONSTRUCTION NOISE LEVELS

Equipment Type ¹	Quantity	Usage Factor ²	Hours Of Operation ³	Reference Noise Level @ 50 Feet (dBA Leq)	Combined Level @ 50 Feet (dBA Leq)
Excavator	2	40%	3.2	81.0	80.0
Grader	8	40%	3.2	85.0	90.1
Tractor/Loader/Backhoe	5	40%	3.2	78.0	81.0
Rubber Tired Dozer	2	40%	3.2	79.0	78.0
Scraper	5	40%	3.2	84.0	87.0
Combined Hourly Noise Levels 50 Feet (Leq dBA)					92.6

Receiver Location	Distance To Property Line (Feet) ⁴	Distance Attenuation (dBA Leq) ⁵	Estimated Noise Barrier Attenuation (dBA Leq)	Construction Noise Level (dBA Leq)
R2	83'	-4.4	0.0	88.2
R3	78'	-3.9	-5.6	83.1

¹ Source: FHWA's Roadway Construction Noise Model, January 2006.

² Estimates the fraction of time each piece of equipment is operating at full power during a construction operation.

³ Represents the actual hours of peak construction equipment activity out of a typical 8 hour workday.

⁴ Distance from the nearest point of construction activity to the nearest receiver.

⁵ Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

MEASURED CONSTRUCTION NOISE LEVELS

To describe the actual construction noise levels based on typical conditions, short-term construction noise level measurements were collected in the field during grading activities at receiver locations R2 and R3. Appendix C includes study area photos of the measurement locations and the construction activities observed from each location at the project site. To validate the construction noise levels, measurements were collected during continuous on-site grading activities on Friday, October 30th, and again on Friday, November 6th, 2015.

Grading activities observed on the site during the short-term noise level measurements include water trucks queuing and refilling at a stationary tank, trencher activity, up to three scrapers operating simultaneously, and dozer activity. The water truck queuing activity was the closest equipment observed near the project site boundaries due to the stationary location of the water refill tank, at a distance of approximately 100 feet from the receiver locations. The trencher was observed at a distance of roughly 600 feet from the receiver locations, and the scrapers and dozer activities were at approximately 900 feet from the receiver locations. Additional stationary scrapers were located at a distance of approximately 700 feet from the receiver locations. Additional background construction noise sources include forklifts, cranes, and man lifts used in the building construction stage of a portion of the site located roughly 900 feet southeast of the receiver locations. The construction activities observed during the short-term measurements represent typical grading activities within an industrial construction site, with multiple pieces of equipment operating at varying distances from the project site boundaries.

Table 3 shows the modeled RCNM noise levels using the actual distances from each receiver location to the nearest equipment activity observed during the short-term noise level measurements. Based on the RCNM model, the peak grading construction noise levels would range from 80.9 to 86.5 dBA Leq when equipment is located at 100 feet from each receiver location. By calculating the modeled RCNM noise level at each location, a comparison can be made between the modeled and measured grading construction noise levels to calibrate the construction noise model.

TABLE 3: MODELED CONSTRUCTION NOISE LEVELS BASED ON ACTUAL EQUIPMENT DISTANCES

Equipment Type ¹	Quantity	Usage Factor ²	Hours Of Operation ³	Reference Noise Level @ 50 Feet (dBA Leq)	Combined Level @ 50 Feet (dBA Leq)
Excavator	2	40%	3.2	81.0	80.0
Grader	8	40%	3.2	85.0	90.1
Tractor/Loader/Backhoe	5	40%	3.2	78.0	81.0
Rubber Tired Dozer	2	40%	3.2	79.0	78.0
Scraper	5	40%	3.2	84.0	87.0
Combined Hourly Noise Levels 50 Feet (Leq dBA)					92.6

Receiver Location	Distance To Closest Equipment Activity (Feet) ⁴	Distance Attenuation (dBA Leq) ⁵	Estimated Noise Barrier Attenuation (dBA Leq)	Construction Noise Level (dBA Leq)
R2	100'	-6.0	0.0	86.5
R3	100'	-6.0	-5.6	80.9

¹ Source: FHWA's Roadway Construction Noise Model, January 2006.

² Estimates the fraction of time each piece of equipment is operating at full power during a construction operation.

³ Represents the actual hours of peak construction equipment activity out of a typical 8 hour workday.

⁴ Distance from the nearest point of construction activity to the nearest receiver.

⁵ Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

To determine the project-only construction noise levels at each receiver location during the grading activities observed at the project site, the ambient without project noise level measurements are compared to the short-term with project noise level measurements. The ambient noise level measurements from the original noise study are shown on Table 4 in addition to the new short-term noise level measurements collected during typical grading activity at the receiver locations on Day 1, Friday, October 30th 2015. By subtracting the previous ambient noise level from the new combined (project construction plus ambient) noise level measurements at each receiver, the project-only construction noise levels can be logarithmically calculated. Table 4 shows the project-only construction noise levels ranged from 61.4 to 63.4 dBA Leq, and are significantly lower than those modeled with the RCNM at the same receiver locations.

Based on the Day 1 analysis, the differences between the peak RCNM model and typical measured construction noise levels range from 19.6 to 23.2 dBA Leq. This analysis demonstrates how the RCNM overstates the potential construction noise level impacts by placing all equipment at a single point at the project site boundary. In reality, the grading equipment within the project site was observed to operate in different locations throughout the project site. . In addition, the typical construction noise levels

measured at the receiver locations reflect modern construction equipment noise level emissions that are largely overstated using the older RCNM reference noise levels.

TABLE 4: DAY 1 CONSTRUCTION NOISE LEVEL COMPARISON

Original Noise Study			Calibration			
Receiver Location ¹	Measured Daytime Ambient Noise Levels (dBA Leq) ²	Peak Modeled RCNM Grading Construction Noise Levels (dBA Leq) ³	Calculated RCNM Noise Levels to Closest Observed Equipment (dBA Leq) ⁴	Measured Typical Grading Construction Noise Levels at Receivers (dBA Leq) ⁵	Calculated Project-Only Construction Noise Levels (dBA Leq) ⁶	Difference Between Modeled & Measured Noise Levels (dBA Leq) ⁷
R2	70.3	88.2	86.5	71.1	63.4	23.2
R3	68.3	83.1	80.9	69.1	61.4	19.6

¹ Receiver locations from the construction noise analysis which are closest to the Planning Area 1 construction activities.

² Ambient noise level measurements taken on 3/13/14 at the receiver locations during the Ontario industrial project noise study.

³ Estimated construction noise levels based on the RCNM peak construction noise analysis methodology. These conditions are not likely to occur as the RCNM assumes all equipment is operating simultaneously at a single point at the project site boundary.

⁴ Modeled RCNM construction noise levels at each receiver location based on the observed distance to the nearest construction equipment activity during the noise level measurements, shown on Table 3.

⁵ Measured noise levels at the receiver locations during one hour of typical grading activities in the center of the construction site.

⁶ Project only construction noise levels calculated based on the logarithmic noise level difference between the measured noise levels during grading activity and the ambient without project noise levels measured at each receiver location.

⁷ Difference between the peak RCNM modeled noise levels and the typical noise levels measured at the receiver locations during typical grading activities.

Similarly, the Day 2 short-term construction noise level measurements are shown on Table 5 in relation to the RCNM modeled noise levels. Table 5 shows the project-only construction noise levels ranged from 64.1 to 65.3 dBA Leq, and are significantly lower than those modeled with the RCNM at the same receiver locations. Based on the Day 2 analysis, the differences between the peak RCNM model and typical measured construction noise levels range from 16.8 to 21.2 dBA Leq. This Day 2 analysis is consistent with the Day 1 typical grading construction noise level measurements taken a week later at the same receiver locations.

TABLE 5: DAY 2 CONSTRUCTION NOISE LEVEL COMPARISON

Original Noise Study			Calibration			
Receiver Location ¹	Measured Daytime Ambient Noise Levels (dBA Leq) ²	Peak Modeled RCNM Grading Construction Noise Levels (dBA Leq) ³	Calculated RCNM Noise Levels to Closest Observed Equipment (dBA Leq) ⁴	Measured Typical Grading Construction Noise Levels at Receivers (dBA Leq) ⁵	Calculated Project-Only Construction Noise Levels (dBA Leq) ⁶	Difference Between Modeled & Measured Noise Levels (dBA Leq) ⁷
R2	70.3	88.2	86.5	71.5	65.3	21.2
R3	68.3	83.1	80.9	69.7	64.1	16.8

¹ Receiver locations from the construction noise analysis which are closest to the Planning Area 1 construction activities.

² Ambient noise level measurements taken on 3/13/14 at the receiver locations during the Ontario industrial project noise study.

³ Estimated construction noise levels based on the RCNM peak construction noise analysis methodology. These conditions are not likely to occur as the RCNM assumes all equipment is operating simultaneously at a single point at the project site boundary.

⁴ Modeled RCNM construction noise levels at each receiver location based on the observed distance to the nearest construction equipment activity during the noise level measurements, shown on Table 3.

⁵ Measured noise levels at the receiver locations during one hour of typical grading activities in the center of the construction site.

⁶ Project only construction noise levels calculated based on the logarithmic noise level difference between the measured noise levels during grading activity and the ambient without project noise levels measured at each receiver location.

⁷ Difference between the peak RCNM modeled noise levels and the typical noise levels measured at the receiver locations during typical grading activities.

CONCLUSIONS

The sample reference noise level measurements were taken by Urban Crossroads, Inc. in order to better describe the noise levels from various typical construction activities at different land use types. To quantify the difference between the modeled RCNM and measured construction noise levels in the field, Urban Crossroads, Inc. compared the modeled results of a RCNM construction noise level analysis with the actual measured noise levels observed in the field during typical grading activities at the same project site. While the RCNM equipment database and methodology provides conservative, worst-case, construction noise levels for specific pieces of equipment, our field measurements show how the RCNM methodology overstates the noise levels experienced at the nearby receiver locations during actual construction activities.

This analysis demonstrates how the RCNM overstates the potential construction noise level impacts by placing all equipment at a single point at the project site boundary. In reality based on our observations in the field, the grading equipment within the project site was observed to operate at different locations throughout the project site. In addition, the typical construction noise levels measured at the receiver locations reflect modern construction equipment noise level emissions that are largely overstated using the older RCNM reference noise levels. The reference noise level measurements presented in this memo are, therefore, representative of typical construction noise levels to accurately describe potential construction noise impacts at nearby receiver locations for a given project. This memo presents typical construction activity reference noise levels. Detailed site specific analysis is needed to assess potential

construction noise level impacts at nearby sensitive receiver locations on a project by project basis and to identify the appropriate mitigation measures as needed at future construction sites.

Prepared by:

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APPENDIX A

REFERENCE NOISE LEVEL MEASUREMENTS SUMMARY TABLE

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Appendix A

Construction Equipment Reference Noise Levels

ID	Reference Source	Type of Project (Land Use)	Typical Construction Stage(s)	Reference Measurement Duration (h:mm:ss)	Reference Distance From Source (Feet)	Reference Noise Levels		Reference Noise Levels @ 50 Feet	
						dB Leq	dB Lmax	dB Leq	dB Lmax
1	Truck Pass-Bys & Dozer Activity	Business Park	Grading	0:01:15	30'	63.6	68.1	59.2	63.7
2	Dozer Activity	Business Park	Grading	0:01:00	30'	68.6	76.4	64.2	72.0
3	Construction Vehicle Maintenance Activities	Residential	Grading	0:01:00	30'	71.9	74.8	67.5	70.4
4	Foundation Trenching	Residential	Trenching, Building Const.	0:01:01	30'	72.6	74.9	68.2	70.5
5	Rough Grading Activities	Residential	Grading	0:05:00	30'	77.9	84.8	73.5	80.4
6	Residential Framing	Residential	Building Const.	0:02:00	30'	66.7	76.7	62.3	72.3
7	Water Truck Pass-By & Backup Alarm	Industrial	Grading	0:00:45	30'	76.3	82.3	71.9	77.9
8	Dozer Pass-By	Industrial	Grading	0:00:32	30'	84.0	89.9	79.6	85.5
9	Two Scrapers & Water Truck Pass-By	Industrial	Grading	0:00:32	30'	83.4	89.0	79.0	84.6
10	Two Scrapers Pass-By	Industrial	Grading	0:00:30	30'	83.7	86.9	79.3	82.5
11	Scraper, Water Truck, & Dozer Activity	Industrial	Grading	0:30:00	30'	79.7	87.7	75.3	83.3
12	Concrete Mixer Truck Movements	Industrial	Building Const., Paving	0:01:00	50'	71.2	73.1	71.2	73.1
13	Concrete Paver Activities	Industrial	Building Const., Paving	0:01:00	30'	70.0	75.7	65.6	71.3
14	Concrete Mixer Pour & Paving Activities	Industrial	Building Const., Paving	0:01:00	30'	70.3	76.3	65.9	71.9
15	Concrete Mixer Backup Alarms & Air Brakes	Industrial	Building Const., Paving	0:00:20	50'	71.6	78.8	71.6	78.8
16	Concrete Mixer Pour Activities	Industrial	Building Const., Paving	1:00:00	50'	67.7	79.2	67.7	79.2

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APPENDIX B

REFERENCE NOISE SOURCE PHOTOS

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Construction Reference Noise Source Photos



1.1_TruckPass-By&DozerActivity
33, 39' 0.101600", 117, 43' 56.773600"



2.1_DozerActivity
33, 39' 0.101600", 117, 43' 56.773600"



3.1_ConstructionVehicleMaintenance
33, 31' 16.600000", 117, 36' 58.060000"



4.1_FoundationTrenching
33, 32' 8.530000", 117, 35' 55.490000"



4.2_FoundationTrenching
33, 32' 8.540000", 117, 35' 55.710000"



5.1_RoughGradingActivities
33, 31' 16.710000", 117, 37' 0.530000"

Construction Reference Noise Source Photos



5.2_RoughGradingActivities
33, 31' 16.600000", 117, 37' 0.450000"



5.3_RoughGradingActivities
33, 31' 16.570000", 117, 37' 0.450000"



5.4_RoughGradingActivities
33, 31' 16.660000", 117, 37' 0.310000"



6.1_ResidentialFraming
33, 32' 15.610000", 117, 36' 2.740000"



7.1_WaterTruckPassBy&BackupAlarm
34, 4' 19.318500", 117, 36' 25.015800"



8.1_DozerPass-By
34, 4' 19.373400", 117, 36' 24.988400"

Construction Reference Noise Source Photos



9.1_TwoScrapers&WaterTruckPass-By
34, 4' 19.332200", 117, 36' 24.988400"



10.1_TwoScrapersPass-By
34, 4' 19.373400", 117, 36' 25.070800"



10.2_TwoScrapersPass-By
34, 4' 19.373400", 117, 36' 25.070800"



11.1_Scraper,WaterTruck,&DozerActivity
34, 4' 19.373400", 117, 36' 25.070800"



11.2_Scraper,WaterTruck,&DozerActivity
34, 4' 19.318500", 117, 36' 25.125700"



11.3_Scraper,WaterTruck,&DozerActivity
34, 4' 19.346000", 117, 36' 25.043300"

Construction Reference Noise Source Photos



11.4_Scraper,WaterTruck,&DozerActivity
34, 4' 19.291000", 117, 36' 25.070800"



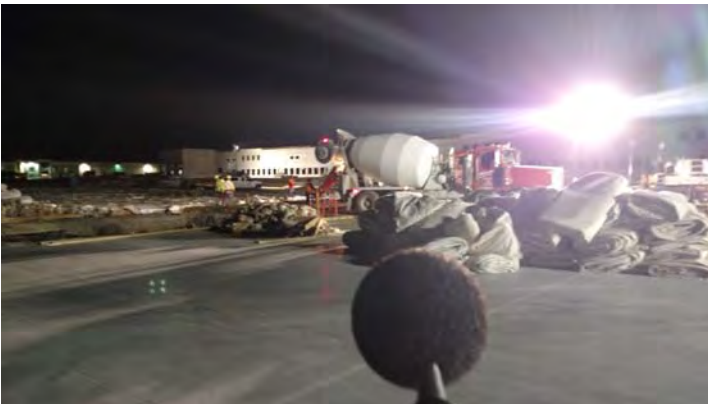
12.1_ConcreteMixerTruckMovements
34, 4' 43.200000", 117, 12' 25.779400"



13.1_ConcretePaverActivities
34, 4' 43.625700", 117, 12' 25.312500"



14.1_ConcreteMixerPour&PavingActivities
34, 4' 42.746800", 117, 12' 24.955400"



15.1_ConcreteMixerBackupAlarms&AirBrakes
34, 4' 43.666900", 117, 12' 24.763100"



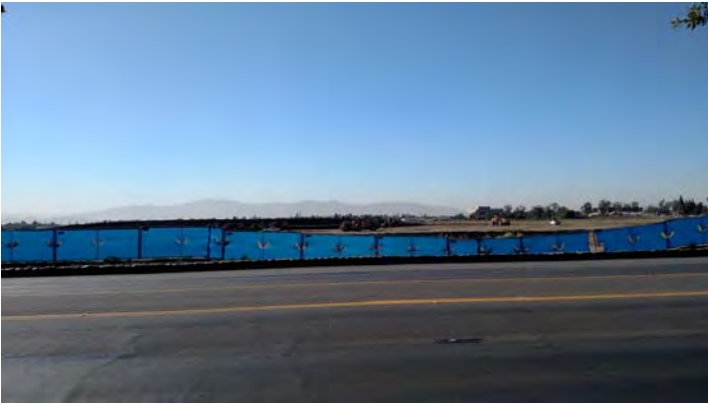
16.1_ConcreteMixerPourActivities
34, 4' 43.158800", 117, 12' 25.944200"

APPENDIX C

SHORT-TERM MEASUREMENTS & CONSTRUCTION ACTIVITY PHOTOS

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Short-Term Measurements & Construction Activities



ConstructionSite_1
34, 4' 39.808000", 117, 36' 22.955900"



ConstructionSite_2
34, 4' 39.808000", 117, 36' 22.955900"



ConstructionSite_3
34, 4' 39.533300", 117, 36' 23.312900"



ConstructionSite_4
34, 4' 39.533300", 117, 36' 23.312900"

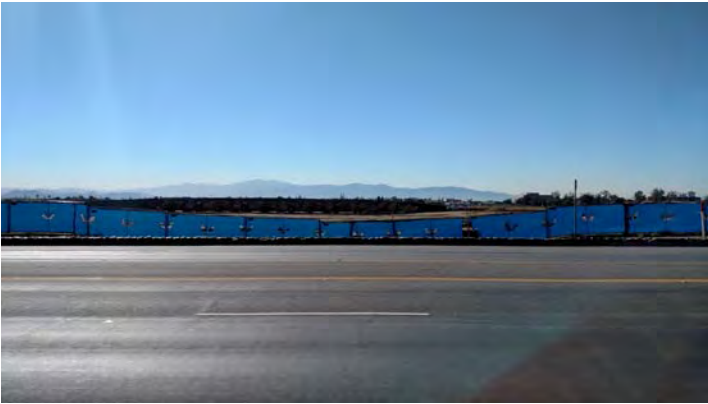


ConstructionSite_5
34, 4' 39.341100", 117, 36' 28.064500"



ConstructionSite_6
34, 4' 39.684400", 117, 36' 23.477700"

Short-Term Measurements & Construction Activities



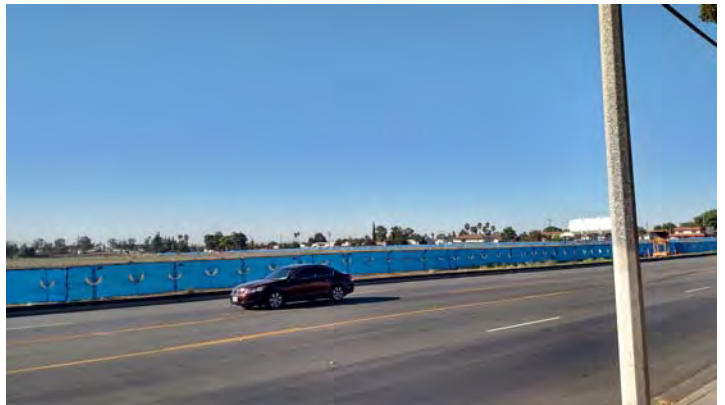
ConstructionSite_7
34, 4' 39.684400", 117, 36' 23.477700"



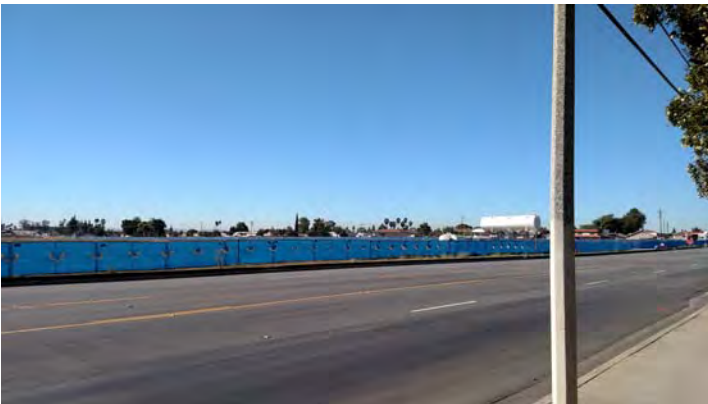
R2
34, 4' 39.341100", 117, 36' 28.064500"



R2_South
34, 4' 39.217500", 117, 36' 29.108200"



R2_Southwest
34, 4' 39.217500", 117, 36' 29.108200"



R2_Southwest2
34, 4' 39.505900", 117, 36' 28.970900"



R2_West
34, 4' 39.217500", 117, 36' 29.108200"

Short-Term Measurements & Construction Activities



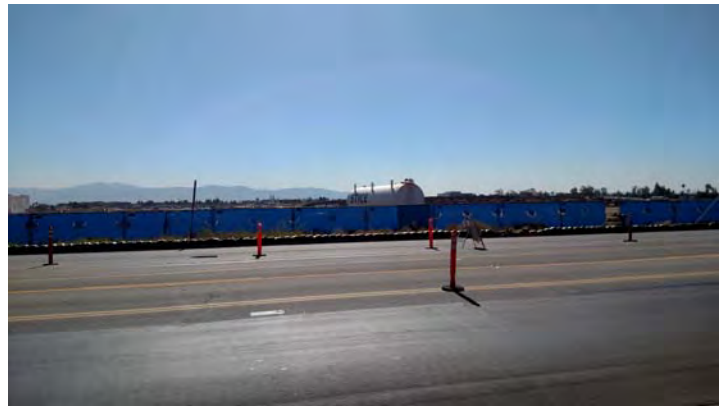
R3
34, 4' 39.972800", 117, 36' 16.803500"



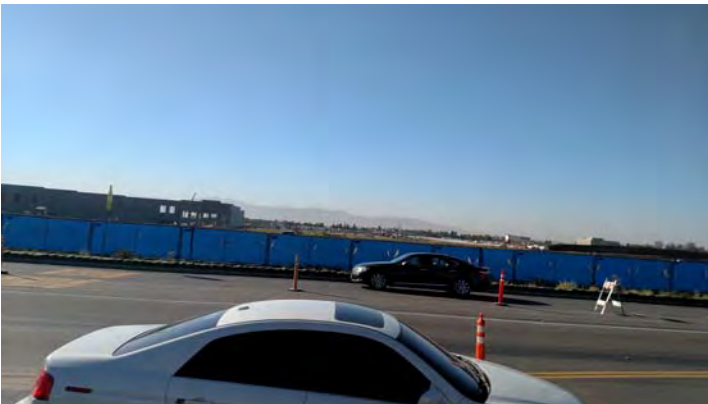
R3_E
34, 4' 39.972800", 117, 36' 16.803500"



R3_South
34, 4' 39.972800", 117, 36' 16.803500"



R3_South2
34, 4' 39.519600", 117, 36' 17.050700"



R3_South3
34, 4' 39.698100", 117, 36' 14.221800"



R3_Southeast
34, 4' 39.698100", 117, 36' 14.221800"

Short-Term Measurements & Construction Activities



R3_Southwest
34, 4' 39.972800", 117, 36' 16.803500"

APPENDIX 11.2:

TEMPORARY NOISE BARRIER ATTENUATION CALCULATIONS

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STATIONARY SOURCE NOISE PREDICTION MODEL

12/9/2015

Observer Location: R6

Source: Grading
Condition: Construction

Project Name: Rancho Diamante

Job Number: 9792

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	140.0 feet	Barrier Height:	6.0 feet
Noise Distance to Barrier:	10.0 feet	Noise Source Height:	8.0 feet
Barrier Distance to Observer:	130.0 feet	Observer Height:	5.0 feet
Observer Elevation:	1,498.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	1,496.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	1,498.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	50.0	0.0	0.0	0.0	0.0	0.0	85.5
Distance Attenuation	140.0	-8.9	-8.9	-8.9	-8.9	-8.9	-8.9
Shielding (Barrier Attenuation)	10.0	-4.9	-4.9	-4.9	-4.9	-4.9	-4.9
Raw (Distance + Barrier)		-13.8	-13.8	-13.8	-13.8	-13.8	71.7
60 Minute Hourly Adjustment		-13.8	-13.8	-13.8	-13.8	-13.8	71.7

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