Technical Appendix C

Noise Impact Analysis
Urban Crossroads, Inc.
May 29, 2012

URBAN CROSSROADS

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NORTH NEWPORT CENTER PLANNED COMMUNITY
NOISE IMPACT ANALYSIS
CITY OF NEWPORT BEACH, CALIFORNIA

June 6, 2012

JN:08211-04 Noise Report

TABLE OF CONTENTS

LIST OF APPENDICES

LIST OF EXHIBITS

LIST OF TABLES

NORTH NEWPORT CENTER PLANNED COMMUNITY
NOISE IMPACT ANALYSIS
CITY OF NEWPORT BEACH, CALIFORNIA

1.0 EXECUTIVE SUMMARY

This noise study has been completed to determine the noise impacts associated with the development of the proposed North Newport Center Planned Community (NNCPC) (referred to as "Project"). The purpose of this noise assessment is to evaluate the off-site project traffic noise impacts and to recommend noise mitigation measures, if necessary, to minimize the potential project impacts.

1.1 Project Overview

The Project involves increasing the residential development allocation within the NNCPC from 430 dwelling units to a total of 524 dwelling units (increase of 94 units). The NNCPC was originally adopted in 2007, for which an addendum to the City of Newport Beach General Plan 2006 Update Final Program EIR was prepared.

1.2 Off-Site Transportation 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 impacts on the surrounding off-site areas, the changes in traffic noise levels on 73 roadway segments surrounding the Project site were estimated based on the change in the average daily traffic volumes. The traffic noise levels provided in this analysis are based on the traffic forecasts from the *North Newport Center San Joaquin Plaza TPO Traffic Analysis* prepared by Stantec in May 2012.

To assess the off-site noise level impacts associated with the proposed project, noise contour boundaries were developed for Existing and Year 2016 traffic conditions. In order for an off-site transportation related noise impact to be considered a significant impact, the project traffic must create a significant noise level increase as defined by the City of Newport Beach General Plan Noise Policy N 1.8. This analysis shows that the project will not generate a substantial permanent off-site traffic noise level increase for existing sensitive uses or expose persons to noise levels in excess of the standards established by the City of Newport Beach General Plan Noise Policy N 1.8.

2.0 INTRODUCTION

This noise study has been completed to determine the noise impacts associated with the construction and operation of the proposed North Newport Center Planned Community.

2.1 Purpose of Report

The purpose of this report is to satisfy CEQA Guidelines section 15168(c), which requires the City to analyze whether subsequent activities regarding the North Newport Center zoning require an additional environmental document beyond the Final Environmental Impact Report ("EIR") for the City of Newport Beach General Plan 2006 Update (State Clearinghouse No. 200601119) ("General Plan EIR"), and the first North Newport Center Addendum to the Environmental Impact Report for the City of Newport Beach General Plan 2006 Update, approved by Resolution No. 2007-79 on December 11, 2007. The General Plan EIR was certified by the Newport Beach City Council on July 25, 2006, as adequately addressing the potential environmental impacts associated with the buildout of the City of Newport Beach, inclusive of North Newport Center. Pursuant to CEQA Guidelines section 15168(c), this report analyzes whether the Project would have effects that were not examined in the General Plan EIR and confirms that the Project will not result in new effects and will not require new mitigation measures so that the City can determine whether it is appropriate to approve the Project as within the scope of the General Plan EIR. As required by CEQA Guidelines section 15168(e), this report also analyzes whether: (i) the Project is within the scope of the General Plan 2006 Update; and (ii) the General Plan EIR adequately describes the subsequent activity for the purposes of CEQA.

CEQA Guidelines section 15164(a) states: "The lead agency or responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for the preparation of a subsequent EIR have occurred." Pursuant to CEQA Guidelines section 15162, no subsequent EIR may be required for the project unless the City determines, on the basis of substantial evidence, that one or more of the following conditions are met:

(a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR, was certified as complete or the Negative Declaration was adopted, shows any of the following:

(A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

In order to provide the analysis necessary for the City to make its determination under CEQA Guidelines section 15168(c), this noise study briefly describes the proposed Project, provides information regarding noise fundamentals, describes the local noise guidelines, provides the study methods and procedures for traffic noise analysis, and evaluates the future off-site exterior noise environment. Additional information beyond that required for the City's determination is included for public information. This study also satisfies the City of Newport Beach noise standards requirements.

2.2 Project Description

The NNCPC Development Plan currently allows for 430 multi-family residential units to be developed in areas of the NNCPC designated MU-H3 by the General Plan. In comparison, the General Plan allows a maximum of 450 units in the MU-H3 category throughout the Newport

Center Statistical Area. In other words, of the 450 MU-H3 residential units allowed by the General Plan in the Newport Center Statistical Area, 430 are specifically allocated to be developed within the areas of the NNCPC designated by the NNCPC Development Plan as Block 500, Block 600 and San Joaquin Plaza. The remaining 20 units are allowed to be developed in any MU-H3 designated area in the Newport Center Statistical Area. Five (5) MU-H3 units have been assigned to the Golf Realty Fund Tennis Club development and the other 15 MU-H3 units are not assigned to any particular property.

In addition, certain areas of the City are identified on the General Plan Land Use Map as "Anomaly Locations," where a maximum development intensity is allowed pursuant to General Plan Tables LU1 and LU2. Anomaly Location 43 in the Newport Center Statistical Area (Statistical Area L1) is developed with a 532 room resort hotel presently operated by Marriott Hotels and Resorts. General Plan Table LU2 allows a maximum of 611 hotel rooms in Anomaly Location 43; therefore, 79 hotel rooms allowed by the General Plan are un-built. The proposed Project would convert the 79 un-built hotel rooms to 79 multi-family residential units and then transfer them to the San Joaquin Plaza portion of the NNCPC.

Under existing conditions, Block 500, Block 600, and San Joaquin Plaza are developed with commercial/office land uses and the Island Hotel. No multi-family residential units are constructed in these areas, although the NNCPC Development Plan allows for up to 430 residential units. Thus, the City's General Plan and NNCPC Development Plan currently allow for the existing land uses in Block 500, Block 600 and San Joaquin Plaza to be supplemented by or partially replaced with multi-family residential housing.

The Project Applicant proposes an amendment to the NNCPC Development Plan to increase the allowable residential development intensity by 94 units (comprising the 15 un-assigned and un-built multi-family units and the 79 hotel units that would be converted to multi-family units), and to assign those 94 units, along with 430 units already allocated to the NNCCP, to the portion of the NNCCP designated as San Joaquin Plaza.

No specific development project is proposed at this time. A proposal to develop a specific residential project in the San Joaquin Plaza would be subject to the procedures for development specified in the NNCPC Development Plan. There would be no change to the boundaries of the NNCPC Development Plan area or any constituent blocks or sub-districts, and there would be no change in the permitted types of land uses, development regulations, or design guidelines resulting from approval of the proposed NNCPC Development Plan Amendment.

Since no specific development is proposed at this time, and the exact location of the units is unknown, a specific calculation of construction noise levels impacts that may be associated with future construction activities is not possible and is not provided. However, construction activities would be consistent with the assumptions made in the General Plan EIR and would not result in any new impacts or increase the severity of any impacts previously identified in the General Plan EIR.

2.3 General Plan Analysis of Transportation-Related Noise Impacts

Operational noise impacts associated with implementation of the General Plan were previously evaluated as part of the General Plan EIR, which identified significant and unavoidable impacts due to the exposure of existing development to future traffic related noise that would exceed the General Plan noise standards and/or would represent a substantial permanent increase in ambient noise levels. The General Plan EIR notes that compliance with General Plan Goal N-2 (Transportation Noise) would reduce this impact, but not to a level below significant.

Although the proposed Project would involve the allocation of 94 additional units to the San Joaquin Plaza, implementation of the proposed Project would result in the reduction of traffic with buildout of the General Plan. Specifically, the TPO Traffic Analysis shows that the proposed Project, which would convert 79 hotel units to multi-family units, would result in a net reduction in average daily traffic (ADT) of 315 trips, including 17 fewer a.m. peak hour trips and 17 fewer p.m. peak hour trips. Due to the reduction in traffic volumes generated by the Project compared to the assumptions made in the General Plan EIR, the proposed Project would not result in a substantial increase in the significant and unavoidable transportation noise-related impacts identified in the General Plan EIR.

To substantiate this conclusion, future noise conditions for study area roadway segments were calculated based on the TPO Traffic Analysis to determine whether traffic generated by the Project would cause or contribute to transportation-related noise levels that could exceed the General Plan standards and/or result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project. The results are presented in Section 4.0 of this report.

3.0 NOISE 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.

3.1 Range of Noise

Since the range of sound that the human ear can detect is so large, the scale used to measure sound intensity is a scale based on multiples of 10, the logarithmic scale. The unit of measure in which a sound intensity is described is the decibel (dB). 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. However, due to the internal mechanism of the human ear and how it receives and processes noise, when two sound sources of equal intensity or power are measured together, their combined effect (intensity level) is 3 dBA higher than the level of either separately. Thus, two 72 dBA cars together measure 75 dBA under ideal conditions.

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. Exhibit 3-A presents a summary of the typical noise levels and their subjective loudness and effects that are described in more detail below.

3.2 Effects of Noise

Harmful effects of noise can include speech interference; sleep disruption and loss of hearing. High background noise levels can affect performance and learning processes through distraction, reduced accuracy, increased fatigue, annoyance and irritability, the inability to concentrate, and sleep prevention.

Several factors determine whether a particular noise will interfere with sleep. These factors include the noise level and characteristics, the stage of sleep, the individual's age and motivation to waken.

EXHIBIT 3-A

TYPICAL NOISE LEVELS AND THEIR SUBJECTIVE LOUDNESS AND EFFECTS

COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE
THRESHOLD OF PAIN		140	INTOLERABLE OR DEAFENING	HEARING LOSS
NEAR JET ENGINE		130		
		120		
JET FLY-OVER AT 300m (1000 ft)	ROCK BAND	110		
LOUD AUTO HORN		100	VERY NOISY	
GAS LAWN MOWER AT 1m (3 ft)		90		
DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph)	FOOD BLENDER AT 1m (3 ft)	80		SPEECH INTERFERENCE
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70	LOUD	
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60		
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40		SLEEP DISTURBANCE
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: NOISE TECHNICAL SUPPLEMENT BY CALTRANS

3.3 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). Leq represents a steady sound level containing the same total energy as a time-varying level over a given measurement interval. Leq's may represent any desired length of time; however, one hour is the most commonly used in environmental work. Consequently, Leq's can vary depending upon the time of day. In traffic noise measurements, the noisiest hour of the day is considered the benchmark of a road's noise emissions; therefore, the peak hour Leq is the noise metric used by Caltrans for all traffic noise impact analyses.

Peak hour noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour levels 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 twenty-four hour noise level, is utilized.

The Community Noise Equivalent Level (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 five decibels to sound levels in the evening from 7 p.m. to 10 p.m., and the addition of ten decibels to sound levels at night between 10 p.m. and 7 a.m. These additions are made to account for the noise sensitive time periods during the evening and night hours when sound appears louder and it is weighted accordingly. CNEL does not represent the actual sound level heard at any particular time, but rather represents the total sound exposure.

3.4 Traffic Noise Prediction

According to the *Highway Traffic Noise Analysis and Abatement Policy and Guidance,* provided by the Federal Highway Administration, the level of traffic noise depends on three primary factors: (1) the volume of the traffic, (2) the speed of the traffic, and (3) the vehicle mix within the flow of traffic. Generally, the loudness of traffic noise is increased by heavier traffic volumes, higher speeds, and a greater number of trucks. A doubling of the traffic volume, assuming that the speed and vehicle mix do not change, results in a noise level increase of 3 dBA. The

vehicle mix on a given roadway may also have an effect on community noise levels. As the number of medium and heavy trucks increases and becomes a larger percentage of the vehicle mix, adjacent noise level impacts will increase. Vehicle noise is a combination of the noise produced by the engine, exhaust, and tires on the roadway.

3.5 Ground Absorption

To account for the ground-effect attenuation (absorption), two types of site conditions are commonly used in traffic noise models, soft site and hard site conditions. Soft site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. A drop-off rate of 4.5 dBA per doubling of distance is typically observed over soft ground with landscaping, as compared with a 3.0 dBA drop-off rate over hard ground such as asphalt, concrete, stone and very hard packed earth. Caltrans research has shown that the use of soft site conditions is more appropriate for the application of the FHWA traffic noise prediction model used in this analysis.

3.6 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.

3.7 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 view of the noise source.

3.8 Community Response to Noise

Approximately ten (10) percent of the population has a very low tolerance for noise and will object to any noise not of their own making. Consequently, even in the quietest environment,

some complaints will occur. Another 25 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.

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. An increase or decrease of 1.0 dBA cannot be perceived except in carefully controlled laboratory experiments, a change of 3.0 dBA are considered "barely perceptible," and changes of 5 dBA are considered "readily perceptible."

3.9 Land Use Compatibility With Noise

Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches and residences are considered to be more sensitive to noise intrusion than are commercial or industrial activities. Ambient noise levels can also affect the perceived desirability or livability of a development. For these reasons, land use compatibility with the noise environment is an important consideration in the planning and design process.

4.0 NOISE STANDARDS

Local noise guidelines are often based on the broader guidelines established by state and federal agencies. This section describes the regulatory setting for the proposed North Newport Center Planned Community project.

4.1 Transportation Noise Standards

The City of Newport Beach General Plan Noise Element specifies the maximum noise levels allowable for new developments impacted by transportation noise sources such as arterial roads, freeways, airports and railroads. For the purposes of this project, the noise impacts associated with traffic are controlled by the General Plan Noise Element.

The General Plan standards are derived from standards contained in the *General Plan Guidelines*, a publication of the California Office of Planning and Research. These standards are used by many California cities and counties. The Noise Element includes standards for land use compatibility for community noise exposure. For noise sensitive uses such as schools and single-family homes, exterior noise levels ranging from 60 to 65 dBA CNEL are considered normally compatible. According the Noise Element, the 60 dBA CNEL contour defines the Noise Referral Zone. This is the noise level for which noise considerations should be included when making land use policy decisions that effect existing and proposed noise-sensitive developments. The 65 dBA CNEL contour describes the area for which new noise sensitive developments will be permitted only if appropriate mitigation measures are included.

4.2 Significant Noise Impact Criteria

Noise Policy N 1.8 requires the employment of noise mitigation measures for existing sensitive uses when a significant noise impact is identified. A significant noise impact occurs when there is a substantial increase in the ambient CNEL produced by new development impacting existing sensitive uses. For purposes of analysis in this report (and as required by General Plan Policy N 1.8), off-site transportation-related noise increases would be considered "substantial" if Project-related traffic results in any of the following: a noise level increase of 3 dBA CNEL where the existing without project ambient noise levels range from 55 to 60 dBA CNEL; a noise

level increase of 2 dBA CNEL where the existing without project ambient noise levels range from 60 to 65 dBA CNEL; a noise level increase of 1 dBA CNEL where the existing without project ambient noise levels range from 65 to 75 dBA CNEL; and/or any off-site transportation project related noise level increase where the existing without project ambient noise levels are over 75 dBA CNEL is considered a significant impact. If the Project's transportation-related noise increases are substantial and impact sensitive receptors that were previously identified by the General Plan EIR as being impacted by noise, then the Project's contribution would be considered to comprise a substantial increase in the severity of a significant effect (CEQA Guidelines §15162(3)(b)). If the Project's transportation-related noise increases are substantial and impact sensitive receptors that were not previously identified by the General Plan EIR as being impacted by traffic-related noise, then the Project's noise contribution would be considered a significant effect not discussed in the General Plan EIR (CEQA Guidelines §15162(3)(a)).

5.0 METHODS AND PROCEDURES

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

5.1 FHWA Traffic Noise Prediction Model

The projected roadway noise impacts from vehicular traffic were projected using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108 (the "FHWA Model"). The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). Adjustments are then made to the REMEL to account for: the roadway classification (e.g., collector, secondary, major or arterial), the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT), the travel speed, the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, the roadway grade, the angle of view (e.g., whether the roadway view is blocked), the site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping), and the percentage of total ADT which flows each hour throughout a 24-hour period.

5.2 Traffic Noise Prediction Model Inputs

Table 5-1 presents the FHWA Traffic Noise Prediction Model roadway parameters used in this analysis. Soft site conditions were used to develop the noise contours to analyze the traffic noise impacts to the study area. Soft site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation.

The Existing and Year 2016 average daily traffic volumes used for this study and presented in Table 5-2 were provided by the *North Newport Center San Joaquin Plaza TPO Traffic Analysis* prepared by Stantec in May 2012.[1]

Table 5-3 presents the hourly 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 Model.

Table 5-1 (1 of 2)

Off-Site Roadway Parameters

Roadway	Segment	Roadway Classification[1]	Lanes	Vehicle Speed (MPH)
Macarthur	South of Bonita Canyon	Major Arterial	6	45
Macarthur	North of San Joaquin Hills	Major Arterial	6	45
Macarthur	South of San Joaquin Hills	Major Arterial	6	45
Macarthur	North of San Miguel	Major Arterial	6	45
Macarthur	South of San Miguel	Major Arterial	6	45
Macarthur	North of Coast Highway	Major Arterial	6	45
San Joaquin Hills	West of Jamboree	Major Arterial	6	45
San Joaquin Hills	East of Jamboree	Major Arterial	6	45
San Joaquin Hills	West of Santa Cruz	Major Arterial	6	45
San Joaquin Hills	East of Santa Cruz	Major Arterial	6	45
San Joaquin Hills	West of Santa Rosa	Major Arterial	6	45
San Joaquin Hills	East of Santa Rosa	Major Arterial	6	45
San Joaquin Hills	West of Macarthur	Major Arterial	6	45
San Joaquin Hills	East of Macarthur	Major Arterial	6	45
Coast Highway	West of Jamboree	Major Arterial	6	45
Coast Highway	East of Jamboree	Major Arterial	6	45
Coast Highway	West of Newport CTR	Major Arterial	6	45
Coast Highway	East of Newport CTR	Major Arterial	6	45
Coast Highway	West of Avacado	Major Arterial	6	45
Coast Highway	East of Avacado	Major Arterial	6	45
Coast Highway	West of Macarthur	Major Arterial	6	45
Coast Highway	East of Macarthur	Major Arterial	6	45
Jamboree	North of Eastbluff	Major Arterial	6	45
Jamboree	Eastbluff to San Joaquin Hills	Major Arterial	6	45
Jamboree	South of San Joaquin Hills	Major Arterial	6	45
Jamboree	North of Santa Barbara	Major Arterial	6	45
Jamboree	South of Santa Barbara	Major Arterial	6	45
Jamboree	North of Coast Highway	Major Arterial	6	45
Jamboree	South of Coast Highway	Major Arterial	6	45
Newport CTR	West of Newport CTR	Major Arterial	6	45
Newport CTR	South of Santa Barbara	Major Arterial	6	45
Newport CTR	North of Santa Barbara	Major Arterial	6	45
Newport CTR	South of Santa Cruz	Major Arterial	6	45
Newport CTR	North of Santa Cruz	Major Arterial	6	45
Newport CTR	North of Santa Rosa	Major Arterial	6	45
Newport CTR	South of Santa Rosa	Major Arterial	6	45
Newport CTR	North of San Miguel	Major Arterial	6	45
Newport CTR	South of San Miguel	Major Arterial	6	45
Newport CTR	East of Newport CTR	Major Arterial	6	45

Table 5-1 (2 of 2)

Off-Site Roadway Parameters

Roadway	Segment	Roadway Classification[1]	Lanes	Vehicle Speed (MPH)
Newport CTR	South of Newport CTR (Circle	Major Arterial	6	45
Newport CTR	North of Coast Highway	Major Arterial	6	45
Macarthur	North of Bonita Canyon	Major Arterial	6	45
Eastbluff/Ford/Bonita Cyn	West of Jamboree	Primary Arterial	4	45
Eastbluff/Ford/Bonita Cyn	East of Jamboree	Primary Arterial	4	45
Eastbluff/Ford/Bonita Cyn	West of Bonita Canyon	Primary Arterial	4	45
Eastbluff/Ford/Bonita Cyn	East of Bonita Canyon	Primary Arterial	4	45
San Miguel	West of Newport CTR	Primary Arterial	4	45
San Miguel	East of Newport CTR	Primary Arterial	4	45
San Miguel	West of Avacado	Primary Arterial	4	45
San Miguel	East of Avacado	Primary Arterial	4	45
San Miguel	West of Macarthur	Primary Arterial	4	45
San Miguel	East of Macarthur	Primary Arterial	4	45
Santa Cruz	North of San Joaquin Hills	Primary Arterial	4	45
Santa Cruz	Souh of San Joaquin Hills	Primary Arterial	4	45
Santa Cruz	North of San Clemente	Primary Arterial	4	45
Santa Cruz	South of San Clemente	Primary Arterial	4	45
Santa Cruz	North of Newport CTR	Primary Arterial	4	45
Santa Cruz	South of Newport CTR	Primary Arterial	4	45
Santa Rosa	North of San Joaquin Hills	Primary Arterial	4	45
Santa Rosa	South of San Joaquin Hills	Primary Arterial	4	45
Santa Rosa	North of Newport CTR	Primary Arterial	4	45
Santa Rosa	South of Newport CTR	Primary Arterial	4	45
San Clemente	East of Santa Barbara	Secondary	4	40
San Clemente	West of Santa Cruz	Secondary	4	40
Santa Barbara	West of Jamboree	Secondary	4	40
Santa Barbara	East of Jamboree	Secondary	4	40
Santa Barbara	North of San Clemente	Secondary	4	40
Santa Barbara	South of San Clemente	Secondary	4	40
Santa Barbara	West of Newport CTR	Secondary	4	40
Santa Barbara	East of Newport CTR	Secondary	4	40
Avocado	North of San Miguel	Secondary	4	40
Avocado	South of San Miguel	Secondary	4	40
Avocado	North of Coast Highway	Secondary	4	40

[1] According to the City of Newport Beach General Plan Circulation Element.

Table 5-2 (1 of 3)

Average Daily Traffic Volumes (1000's)

Roadway	Segment	Average Daily Traffic (1,000's)			
		Existing		Year 2016	
		No Project	With Project	No Project	With Project
Macarthur	South of Bonita Canyon	61.4	61.5	69.1	69.2
Macarthur	North of San Joaquin Hills	61.4	61.5	68.1	68.1
Macarthur	South of San Joaquin Hills	38.8	38.8	43.4	43.4
Macarthur	North of San Miguel	34.8	34.8	38.8	38.8
Macarthur	South of San Miguel	28.6	28.6	32.4	32.4
Macarthur	North of Coast Highway	28.7	28.7	32.5	32.5
San Joaquin Hills	West of Jamboree	4.8	4.8	5.0	5.0
San Joaquin Hills	East of Jamboree	17.7	17.9	20.3	20.4
San Joaquin Hills	West of Santa Cruz	21.9	22.0	23.7	23.7
San Joaquin Hills	East of Santa Cruz	13.7	13.8	14.9	15.0
San Joaquin Hills	West of Santa Rosa	15.7	15.8	17.2	17.3
San Joaquin Hills	East of Santa Rosa	21.6	21.7	22.8	22.9
San Joaquin Hills	West of Macarthur	21.2	21.3	23.5	23.6
San Joaquin Hills	East of Macarthur	20.6	20.6	21.3	21.3
Coast Highway	West of Jamboree	60.0	60.0	71.5	71.6
Coast Highway	East of Jamboree	47.0	47.0	58.3	58.3
Coast Highway	West of Newport CTR	43.6	43.6	54.1	54.1
Coast Highway	East of Newport CTR	35.7	35.8	45.2	45.3
Coast Highway	West of Avacado	34.4	34.5	43.8	43.8
Coast Highway	East of Avacado	36.3	36.4	45.0	45.1
Coast Highway	West of Macarthur	36.4	36.5	41.8	45.3
Coast Highway	East of Macarthur	5.7	50.3	61.7	61.8
Jamboree	North of Eastbluff	25.5	43.6	52.2	52.4
Jamboree	Eastbluff to San Joaquin Hills	53.6	53.7	63.0	63.2
Jamboree	South of San Joaquin Hills	36.0	36.0	43.0	43.1
Jamboree	North of Santa Barbara	38.5	38.6	45.1	45.2
Jamboree	South of Santa Barbara	34.5	34.6	41.0	41.1
Jamboree	North of Coast Highway	32.0	32.1	38.6	38.7
Jamboree	South of Coast Highway	12.2	12.2	12.9	12.9
Newport CTR	West of Newport CTR	7.0	7.0	7.3	7.3
Newport CTR	South of Santa Barbara	7.7	7.7	7.9	7.9
Newport CTR	North of Santa Barbara	6.5	6.5	6.9	6.9
Newport CTR	South of Santa Cruz	6.0	6.0	6.3	6.3
Newport CTR	North of Santa Cruz	5.6	5.6	5.8	5.8
Newport CTR	North of Santa Rosa	6.5	6.5	7.3	7.3

Table 5-2 (2 of 3)

Average Daily Traffic Volumes (1000's)

Roadway	Segment	Average Daily Traffic (1,000's)			
		Existing		Year 2016	
		No Project	With Project	No Project	With Project
Newport CTR	South of Santa Rosa	9.1	9.2	10.0	10.0
Newport CTR	North of San Miguel	7.2	9.2	7.6	7.6
Newport CTR	South of San Miguel	10.6	10.6	10.9	10.9
Newport CTR	East of Newport CTR	8.8	8.8	9.1	9.1
Newport CTR	South of Newport CTR (Circle	12.9	12.9	14.2	14.2
Newport CTR	North of Coast Highway	14.9	14.9	16.4	16.4
Macarthur	North of Bonita Canyon	72.9	72.9	80.4	80.5
Eastbluff/Ford/Bonita Cyn	West of Jamboree	14.4	14.4	15.3	15.3
Eastbluff/Ford/Bonita Cyn	East of Jamboree	11.5	11.5	12.2	12.3
Eastbluff/Ford/Bonita Cyn	West of Bonita Canyon	9.9	10.0	10.6	10.6
Eastbluff/Ford/Bonita Cyn	East of Bonita Canyon	37.6	37.7	39.3	39.4
San Miguel	West of Newport CTR	7.8	7.8	9.1	9.1
San Miguel	East of Newport CTR	12.7	12.7	14.4	14.4
San Miguel	West of Avacado	16.4	16.4	18.1	18.1
San Miguel	East of Avacado	24.3	24.3	26.8	26.8
San Miguel	West of Macarthur	22.1	22.1	25.0	25.0
San Miguel	East of Macarthur	11.8	11.8	12.5	12.5
Santa Cruz	North of San Joaquin Hills	1.7	1.7	1.7	1.7
Santa Cruz	Souh of San Joaquin Hills	12.0	13.2	12.5	12.7
Santa Cruz	North of San Clemente	11.7	11.8	12.3	12.4
Santa Cruz	South of San Clemente	9.3	9.4	9.9	10.0
Santa Cruz	North of Newport CTR	8.9	9.0	9.5	9.5
Santa Cruz	South of Newport CTR	4.3	4.3	4.6	4.6
Santa Rosa	North of San Joaquin Hills	3.8	3.8	3.8	3.8
Santa Rosa	South of San Joaquin Hills	14.5	14.5	16.8	16.8
Santa Rosa	North of Newport CTR	12.2	12.2	14.3	14.3
Santa Rosa	South of Newport CTR	6.8	6.8	7.9	7.9
San Clemente	East of Santa Barbara	5.6	5.7	5.6	5.7
San Clemente	West of Santa Cruz	5.8	5.9	5.8	5.9
Santa Barbara	West of Jamboree	2.1	2.1	2.3	2.3
Santa Barbara	East of Jamboree	12.1	12.2	12.8	12.9
Santa Barbara	North of San Clemente	12.0	12.1	12.6	12.6
Santa Barbara	South of San Clemente	7.3	7.3	7.9	7.9

Table 5-2 (3 of 3)

Average Daily Traffic Volumes (1000's)

Roadway	Segment	Average Daily Traffic (1,000's)			
		Existing		Year 2016	
		No Project	With Project	No Project	With Project
Santa Barbara	West of Newport CTR	6.3	6.4	6.9	6.9
Santa Barbara	East of Newport CTR	3.3	3.3	3.7	3.7
Avocado	North of San Miguel	4.2	4.2	5.0	5.0
Avocado	South of San Miguel	13.1	13.1	15.5	15.5
Avocado	North of Coast Highway	9.2	9.2	11.0	11.0

[1] Traffic volumes according to the North Newport Center San Joaquin Plaza TPO Traffic Analysis by Stantec, May 2012.

Table 5-3 (1 of 1)

Hourly Traffic Flow Distribution [1]

Motor-Vehicle Type	Daytime (7 am to 7 pm)	Evening (7 pm to 10 pm)	Night (10 pm to 7 am)	Total % Traffic Flow
Automobiles	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%

[1] Typical southern California vehicle mix.

6.0 OFF-SITE TRANSPORTATION NOISE IMPACTS

To assess the off-site noise level impacts associated with development of the proposed North Newport Center Planned Community project, noise contours were developed for the following traffic scenarios:

Existing With / Without Project: This scenario refers to the existing present-day noise conditions, without and with construction of the proposed project.

Year 2016 With / Without Project: This scenario refers to the background noise conditions at future Year 2016 with and without the proposed project. This corresponds to the existing plus growth plus approved projects plus cumulative project conditions without and with the NNCPC.

6.1 Traffic Noise Contours

Noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway. CNEL noise contours are determined below for the 70, 65, 60, and 55 dBA noise levels. The distance from the centerline of the roadway to the CNEL contours for roadways in the proposed project's vicinity are presented in Tables 6-1 through 6-4. The noise contours do not take into account the noise reducing effect of any existing noise barriers or topography that may affect ambient noise levels. The off-site FHWA model printouts are included in Appendix 6.1.

6.2 Existing Roadway Noise Levels

Table 6-1 shows that the unmitigated exterior noise levels are expected to range from 54.0 to 71.1 dBA CNEL at 100 feet from each roadway's centerline. Table 6-2 presents the existing with project conditions unmitigated noise contours that are expected to remain the same and range from 54.0 to 71.1 dBA CNEL at 100 feet from the roadway centerline. Most of the off-site study area is currently developed or planned for development.

6.3 Year 2016 Roadway Noise Levels

Table 6-3 shows that for Year 2016 without project conditions the off-site traffic noise levels are estimated to range from 54.4 to 71.5 dBA CNEL. With the addition of the Project, Table 6-4

Table 6-1 (1 of 3)

Existing Without Project Conditions Noise Contours

Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Jamboree	North of Eastbluff	68.8	84	180	389	837
Jamboree	Eastbluff to San Joaquin Hills	69.8	96	207	447	962
Jamboree	South of San Joaquin Hills	68.0	74	159	343	738
Jamboree	North of Santa Barbara	68.3	77	166	358	772
Jamboree	South of Santa Barbara	67.8	72	155	333	718
Jamboree	North of Coast Highway	67.5	68	147	317	682
Jamboree	South of Coast Highway	63.3	RW	77	167	359
Santa Cruz	North of San Joaquin Hills	54.5	RW	RW	RW	92
Santa Cruz	Souh of San Joaquin Hills	63.0	RW	73	158	340
Santa Cruz	North of San Clemente	62.9	RW	72	155	334
Santa Cruz	South of San Clemente	61.9	RW	RW	133	287
Santa Cruz	North of Newport CTR	61.7	RW	RW	129	279
Santa Cruz	South of Newport CTR	58.5	RW	RW	80	172
Newport CTR	West of Newport CTR	60.9	RW	RW	115	248
Newport CTR	South of Santa Barbara	61.3	RW	RW	123	264
Newport CTR	North of Santa Barbara	60.6	RW	RW	109	236
Newport CTR	South of Santa Cruz	60.2	RW	RW	104	224
Newport CTR	North of Santa Cruz	59.9	RW	RW	99	214
Newport CTR	North of Santa Rosa	60.6	RW	RW	109	236
Newport CTR	South of Santa Rosa	62.0	RW	64	137	295
Newport CTR	North of San Miguel	61.0	RW	RW	117	252
Newport CTR	South of San Miguel	62.7	RW	70	152	327
Newport CTR	East of Newport CTR	61.9	RW	RW	134	289
Newport CTR	South of Newport CTR (Circle	63.6	RW	80	173	372
Newport CTR	North of Coast Highway	64.2	RW	88	190	410
Santa Rosa	North of San Joaquin Hills	58.0	RW	RW	73	158
Santa Rosa	South of San Joaquin Hills	63.8	RW	83	179	386
Santa Rosa	North of Newport CTR	63.0	RW	74	160	344
Santa Rosa	South of Newport CTR	60.5	RW	RW	108	233
Avocado	North of San Miguel	57.0	RW	RW	RW	136
Avocado	South of San Miguel	62.0	RW	RW	135	291
Avocado	North of Coast Highway	60.4	RW	RW	107	230
Macarthur	North of Bonita Canyon	71.1	118	255	548	1,181
Macarthur	South of Bonita Canyon	70.3	105	227	489	1,054
Macarthur	North of San Joaquin Hills	70.3	105	227	489	1,054

Table 6-1 (2 of 3)

Existing Without Project Conditions Noise Contours

Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Macarthur	South of San Joaquin Hills	68.3	78	167	360	776
Macarthur	North of San Miguel	67.9	72	155	335	722
Macarthur	South of San Miguel	67.0	RW	136	294	633
Macarthur	North of Coast Highway	67.0	RW	137	295	635
Eastbluff/Ford/Bonita Cyn	West of Jamboree	63.8	RW	83	178	384
Eastbluff/Ford/Bonita Cyn	East of Jamboree	62.8	RW	71	153	330
Eastbluff/Ford/Bonita Cyn	West of Bonita Canyon	62.1	RW	64	139	299
Eastbluff/Ford/Bonita Cyn	East of Bonita Canyon	67.9	73	157	338	728
San Joaquin Hills	West of Jamboree	59.3	RW	RW	89	193
San Joaquin Hills	East of Jamboree	64.9	RW	99	213	460
San Joaquin Hills	West of Santa Cruz	65.9	RW	114	246	530
San Joaquin Hills	East of Santa Cruz	63.8	RW	84	180	388
San Joaquin Hills	West of Santa Rosa	64.4	RW	91	197	425
San Joaquin Hills	East of Santa Rosa	65.8	RW	113	244	525
San Joaquin Hills	West of Macarthur	65.7	RW	112	241	519
San Joaquin Hills	East of Macarthur	65.6	RW	110	236	509
San Clemente	East of Santa Barbara	58.3	RW	RW	77	165
San Clemente	West of Santa Cruz	58.4	RW	RW	78	169
Santa Barbara	West of Jamboree	54.0	RW	RW	RW	86
Santa Barbara	East of Jamboree	61.6	RW	RW	128	276
Santa Barbara	North of San Clemente	61.6	RW	RW	127	275
Santa Barbara	South of San Clemente	59.4	RW	RW	91	197
Santa Barbara	West of Newport CTR	58.8	RW	RW	83	179
Santa Barbara	East of Newport CTR	56.0	RW	RW	RW	116
San Miguel	West of Newport CTR	61.1	RW	RW	118	255
San Miguel	East of Newport CTR	63.2	RW	76	164	353
San Miguel	West of Avacado	64.3	RW	90	194	419
San Miguel	East of Avacado	66.0	RW	117	253	544
San Miguel	West of Macarthur	65.6	RW	110	237	511
San Miguel	East of Macarthur	62.9	RW	72	156	336
Coast Highway	West of Jamboree	70.2	104	224	482	1,038
Coast Highway	East of Jamboree	69.2	88	190	409	882
Coast Highway	West of Newport CTR	68.9	84	181	389	839

Table 6-1 (3 of 3)

Existing Without Project Conditions Noise Contours

Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Coast Highway	East of Newport CTR	68.0	73	158	341	734
Coast Highway	West of Avacado	67.8	72	154	332	716
Coast Highway	East of Avacado	68.1	74	160	345	742
Coast Highway	West of Macarthur	68.1	74	160	345	744
Coast Highway	East of Macarthur	69.5	92	198	428	921

[1] "RW" = Location of the respective noise contour falls within the right-of-way of the road

Table 6-2 (1 of 3)

Existing With Project Conditions Noise Contours

Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Jamboree	North of Eastbluff	68.9	84	181	389	839
Jamboree	Eastbluff to San Joaquin Hills	69.8	96	208	447	964
Jamboree	South of San Joaquin Hills	68.0	74	159	343	738
Jamboree	North of Santa Barbara	68.3	77	167	359	773
Jamboree	South of Santa Barbara	67.8	72	155	334	719
Jamboree	North of Coast Highway	67.5	68	147	317	684
Jamboree	South of Coast Highway	63.3	RW	77	167	359
Santa Cruz	North of San Joaquin Hills	54.5	RW	RW	RW	92
Santa Cruz	Souh of San Joaquin Hills	63.4	RW	78	168	362
Santa Cruz	North of San Clemente	62.9	RW	72	156	336
Santa Cruz	South of San Clemente	61.9	RW	RW	134	289
Santa Cruz	North of Newport CTR	61.7	RW	RW	130	281
Santa Cruz	South of Newport CTR	58.5	RW	RW	80	172
Newport CTR	West of Newport CTR	60.9	RW	RW	115	248
Newport CTR	South of Santa Barbara	61.3	RW	RW	123	264
Newport CTR	North of Santa Barbara	60.6	RW	RW	109	236
Newport CTR	South of Santa Cruz	60.2	RW	RW	104	224
Newport CTR	North of Santa Cruz	59.9	RW	RW	99	214
Newport CTR	North of Santa Rosa	60.6	RW	RW	109	236
Newport CTR	South of Santa Rosa	62.1	RW	64	138	297
Newport CTR	North of San Miguel	62.1	RW	64	138	297
Newport CTR	South of San Miguel	62.7	RW	70	152	327
Newport CTR	East of Newport CTR	61.9	RW	RW	134	289
Newport CTR	South of Newport CTR (Circle	63.6	RW	80	173	372
Newport CTR	North of Coast Highway	64.2	RW	88	190	410
Santa Rosa	North of San Joaquin Hills	58.0	RW	RW	73	158
Santa Rosa	South of San Joaquin Hills	63.8	RW	83	179	386
Santa Rosa	North of Newport CTR	63.0	RW	74	160	344
Santa Rosa	South of Newport CTR	60.5	RW	RW	108	233
Avocado	North of San Miguel	57.0	RW	RW	RW	136
Avocado	South of San Miguel	62.0	RW	RW	135	291
Avocado	North of Coast Highway	60.4	RW	RW	107	230
Macarthur	North of Bonita Canyon	71.1	118	255	548	1,181
Macarthur	South of Bonita Canyon	70.3	105	227	490	1,055
Macarthur	North of San Joaquin Hills	70.3	105	227	490	1,055

Table 6-2 (2 of 3)

Existing With Project Conditions Noise Contours

Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Macarthur	South of San Joaquin Hills	68.3	78	167	360	776
Macarthur	North of San Miguel	67.9	72	155	335	722
Macarthur	South of San Miguel	67.0	RW	136	294	633
Macarthur	North of Coast Highway	67.0	RW	137	295	635
Eastbluff/Ford/Bonita Cyn	West of Jamboree	63.8	RW	83	178	384
Eastbluff/Ford/Bonita Cyn	East of Jamboree	62.8	RW	71	153	330
Eastbluff/Ford/Bonita Cyn	West of Bonita Canyon	62.2	RW	65	140	301
Eastbluff/Ford/Bonita Cyn	East of Bonita Canyon	67.9	73	157	338	729
San Joaquin Hills	West of Jamboree	59.3	RW	RW	89	193
San Joaquin Hills	East of Jamboree	65.0	RW	100	215	463
San Joaquin Hills	West of Santa Cruz	65.9	RW	115	247	532
San Joaquin Hills	East of Santa Cruz	63.9	RW	84	181	390
San Joaquin Hills	West of Santa Rosa	64.4	RW	92	198	426
San Joaquin Hills	East of Santa Rosa	65.8	RW	113	244	527
San Joaquin Hills	West of Macarthur	65.7	RW	112	241	520
San Joaquin Hills	East of Macarthur	65.6	RW	110	236	509
San Clemente	East of Santa Barbara	58.3	RW	RW	78	167
San Clemente	West of Santa Cruz	58.5	RW	RW	79	171
Santa Barbara	West of Jamboree	54.0	RW	RW	RW	86
Santa Barbara	East of Jamboree	61.7	RW	RW	129	278
Santa Barbara	North of San Clemente	61.6	RW	RW	128	276
Santa Barbara	South of San Clemente	59.4	RW	RW	91	197
Santa Barbara	West of Newport CTR	58.8	RW	RW	84	181
Santa Barbara	East of Newport CTR	56.0	RW	RW	RW	116
San Miguel	West of Newport CTR	61.1	RW	RW	118	255
San Miguel	East of Newport CTR	63.2	RW	76	164	353
San Miguel	West of Avacado	64.3	RW	90	194	419
San Miguel	East of Avacado	66.0	RW	117	253	544
San Miguel	West of Macarthur	65.6	RW	110	237	511
San Miguel	East of Macarthur	62.9	RW	72	156	336
Coast Highway	West of Jamboree	70.2	104	224	482	1,038
Coast Highway	East of Jamboree	69.2	88	190	409	882
Coast Highway	West of Newport CTR	68.9	84	181	389	839

Table 6-2 (3 of 3)

Existing With Project Conditions Noise Contours

Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Coast Highway	East of Newport CTR	68.0	74	158	341	735
Coast Highway	West of Avacado	67.8	72	155	333	718
Coast Highway	East of Avacado	68.1	74	160	345	744
Coast Highway	West of Macarthur	68.1	74	161	346	745
Coast Highway	East of Macarthur	69.5	92	199	428	923

[1] "RW" = Location of the respective noise contour falls within the right-of-way of the road

Table 6-3 (1 of 3)

2016 Without Project Conditions Noise Contours

Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Jamboree	North of Eastbluff	69.6	95	204	439	946
Jamboree	Eastbluff to San Joaquin Hills	70.5	107	231	498	1,072
Jamboree	South of San Joaquin Hills	68.8	83	179	386	831
Jamboree	North of Santa Barbara	69.0	86	185	398	858
Jamboree	South of Santa Barbara	68.6	81	173	374	805
Jamboree	North of Coast Highway	68.3	77	167	359	773
Jamboree	South of Coast Highway	63.6	RW	80	173	372
Santa Cruz	North of San Joaquin Hills	54.5	RW	RW	RW	92
Santa Cruz	Souh of San Joaquin Hills	63.1	RW	75	162	349
Santa Cruz	North of San Clemente	63.1	RW	74	160	346
Santa Cruz	South of San Clemente	62.1	RW	64	139	299
Santa Cruz	North of Newport CTR	62.0	RW	RW	135	291
Santa Cruz	South of Newport CTR	58.8	RW	RW	83	179
Newport CTR	West of Newport CTR	61.1	RW	RW	118	255
Newport CTR	South of Santa Barbara	61.4	RW	RW	125	269
Newport CTR	North of Santa Barbara	60.8	RW	RW	114	245
Newport CTR	South of Santa Cruz	60.5	RW	RW	107	231
Newport CTR	North of Santa Cruz	60.1	RW	RW	101	219
Newport CTR	North of Santa Rosa	61.1	RW	RW	118	255
Newport CTR	South of Santa Rosa	62.5	RW	68	146	314
Newport CTR	North of San Miguel	61.3	RW	RW	121	262
Newport CTR	South of San Miguel	62.8	RW	72	154	333
Newport CTR	East of Newport CTR	62.0	RW	64	137	295
Newport CTR	South of Newport CTR (Circle	64.0	RW	86	184	397
Newport CTR	North of Coast Highway	64.6	RW	94	203	437
Santa Rosa	North of San Joaquin Hills	58.0	RW	RW	73	158
Santa Rosa	South of San Joaquin Hills	64.4	RW	92	197	425
Santa Rosa	North of Newport CTR	63.7	RW	82	177	382
Santa Rosa	South of Newport CTR	61.2	RW	RW	119	257
Avocado	North of San Miguel	57.8	RW	RW	71	153
Avocado	South of San Miguel	62.7	RW	70	151	326
Avocado	North of Coast Highway	61.2	RW	RW	120	259
Macarthur	North of Bonita Canyon	71.5	126	272	585	1,261
Macarthur	South of Bonita Canyon	70.9	114	246	529	1,140
Macarthur	North of San Joaquin Hills	70.8	113	243	524	1,129

Table 6-3 (2 of 3)

2016 Without Project Conditions Noise Contours

Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Macarthur	South of San Joaquin Hills	68.8	84	180	388	836
Macarthur	North of San Miguel	68.3	78	167	360	776
Macarthur	South of San Miguel	67.6	69	148	319	688
Macarthur	North of Coast Highway	67.6	69	149	320	690
Eastbluff/Ford/Bonita Cyn	West of Jamboree	64.0	RW	86	186	400
Eastbluff/Ford/Bonita Cyn	East of Jamboree	63.0	RW	74	160	344
Eastbluff/Ford/Bonita Cyn	West of Bonita Canyon	62.4	RW	67	145	313
Eastbluff/Ford/Bonita Cyn	East of Bonita Canyon	68.1	75	162	348	750
San Joaquin Hills	West of Jamboree	59.4	RW	RW	92	198
San Joaquin Hills	East of Jamboree	65.5	RW	109	234	504
San Joaquin Hills	West of Santa Cruz	66.2	RW	120	259	559
San Joaquin Hills	East of Santa Cruz	64.2	RW	88	190	410
San Joaquin Hills	West of Santa Rosa	64.8	RW	97	209	451
San Joaquin Hills	East of Santa Rosa	66.0	RW	117	253	544
San Joaquin Hills	West of Macarthur	66.2	RW	120	258	555
San Joaquin Hills	East of Macarthur	65.7	RW	112	241	520
San Clemente	East of Santa Barbara	58.3	RW	RW	77	165
San Clemente	West of Santa Cruz	58.4	RW	RW	78	169
Santa Barbara	West of Jamboree	54.4	RW	RW	RW	91
Santa Barbara	East of Jamboree	61.9	RW	RW	133	287
Santa Barbara	North of San Clemente	61.8	RW	RW	132	284
Santa Barbara	South of San Clemente	59.8	RW	RW	96	208
Santa Barbara	West of Newport CTR	59.2	RW	RW	88	190
Santa Barbara	East of Newport CTR	56.5	RW	RW	RW	125
San Miguel	West of Newport CTR	61.8	RW	RW	131	283
San Miguel	East of Newport CTR	63.8	RW	83	178	384
San Miguel	West of Avacado	64.8	RW	96	208	447
San Miguel	East of Avacado	66.5	RW	125	270	581
San Miguel	West of Macarthur	66.2	RW	119	257	555
San Miguel	East of Macarthur	63.1	RW	75	162	349
Coast Highway	West of Jamboree	71.0	117	251	541	1,166
Coast Highway	East of Jamboree	70.1	102	219	472	1,018
Coast Highway	West of Newport CTR	69.8	97	209	450	968

Table 6-3 (3 of 3)

2016 Without Project Conditions Noise Contours

Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Coast Highway	East of Newport CTR	69.0	86	185	399	859
Coast Highway	West of Avacado	68.9	84	181	390	841
Coast Highway	East of Avacado	69.0	86	185	398	857
Coast Highway	West of Macarthur	68.7	82	176	378	815
Coast Highway	East of Macarthur	70.4	106	228	491	1,057

[1] "RW" = Location of the respective noise contour falls within the right-of-way of the road

Table 6-4 (1 of 3)

2016 With Project Conditions Noise Contours

Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Jamboree	North of Eastbluff	69.7	95	204	440	948
Jamboree	Eastbluff to San Joaquin Hills	70.5	107	231	499	1,074
Jamboree	South of San Joaquin Hills	68.8	83	179	386	832
Jamboree	North of Santa Barbara	69.0	86	185	399	859
Jamboree	South of Santa Barbara	68.6	81	174	374	806
Jamboree	North of Coast Highway	68.3	77	167	360	775
Jamboree	South of Coast Highway	63.6	RW	80	173	372
Santa Cruz	North of San Joaquin Hills	54.5	RW	RW	RW	92
Santa Cruz	Souh of San Joaquin Hills	63.2	RW	76	164	353
Santa Cruz	North of San Clemente	63.1	RW	75	161	347
Santa Cruz	South of San Clemente	62.2	RW	65	140	301
Santa Cruz	North of Newport CTR	62.0	RW	RW	135	291
Santa Cruz	South of Newport CTR	58.8	RW	RW	83	179
Newport CTR	West of Newport CTR	61.1	RW	RW	118	255
Newport CTR	South of Santa Barbara	61.4	RW	RW	125	269
Newport CTR	North of Santa Barbara	60.8	RW	RW	114	245
Newport CTR	South of Santa Cruz	60.5	RW	RW	107	231
Newport CTR	North of Santa Cruz	60.1	RW	RW	101	219
Newport CTR	North of Santa Rosa	61.1	RW	RW	118	255
Newport CTR	South of Santa Rosa	62.5	RW	68	146	314
Newport CTR	North of San Miguel	61.3	RW	RW	121	262
Newport CTR	South of San Miguel	62.8	RW	72	154	333
Newport CTR	East of Newport CTR	62.0	RW	64	137	295
Newport CTR	South of Newport CTR (Circle	64.0	RW	86	184	397
Newport CTR	North of Coast Highway	64.6	RW	94	203	437
Santa Rosa	North of San Joaquin Hills	58.0	RW	RW	73	158
Santa Rosa	South of San Joaquin Hills	64.4	RW	92	197	425
Santa Rosa	North of Newport CTR	63.7	RW	82	177	382
Santa Rosa	South of Newport CTR	61.2	RW	RW	119	257
Avocado	North of San Miguel	57.8	RW	RW	71	153
Avocado	South of San Miguel	62.7	RW	70	151	326
Avocado	North of Coast Highway	61.2	RW	RW	120	259
Macarthur	North of Bonita Canyon	71.5	126	272	586	1,262
Macarthur	South of Bonita Canyon	70.9	114	246	530	1,141
Macarthur	North of San Joaquin Hills	70.8	113	243	524	1,129

Table 6-4 (2 of 3)

2016 With Project Conditions Noise Contours

Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Macarthur	South of San Joaquin Hills	68.8	84	180	388	836
Macarthur	North of San Miguel	68.3	78	167	360	776
Macarthur	South of San Miguel	67.6	69	148	319	688
Macarthur	North of Coast Highway	67.6	69	149	320	690
Eastbluff/Ford/Bonita Cyn	West of Jamboree	64.0	RW	86	186	400
Eastbluff/Ford/Bonita Cyn	East of Jamboree	63.1	RW	74	160	346
Eastbluff/Ford/Bonita Cyn	West of Bonita Canyon	62.4	RW	67	145	313
Eastbluff/Ford/Bonita Cyn	East of Bonita Canyon	68.1	75	162	349	751
San Joaquin Hills	West of Jamboree	59.4	RW	RW	92	198
San Joaquin Hills	East of Jamboree	65.6	RW	109	235	505
San Joaquin Hills	West of Santa Cruz	66.2	RW	120	259	559
San Joaquin Hills	East of Santa Cruz	64.2	RW	89	191	412
San Joaquin Hills	West of Santa Rosa	64.8	RW	98	210	453
San Joaquin Hills	East of Santa Rosa	66.1	RW	118	253	546
San Joaquin Hills	West of Macarthur	66.2	RW	120	259	557
San Joaquin Hills	East of Macarthur	65.7	RW	112	241	520
San Clemente	East of Santa Barbara	58.3	RW	RW	78	167
San Clemente	West of Santa Cruz	58.5	RW	RW	79	171
Santa Barbara	West of Jamboree	54.4	RW	RW	RW	91
Santa Barbara	East of Jamboree	61.9	RW	RW	134	288
Santa Barbara	North of San Clemente	61.8	RW	RW	132	284
Santa Barbara	South of San Clemente	59.8	RW	RW	96	208
Santa Barbara	West of Newport CTR	59.2	RW	RW	88	190
Santa Barbara	East of Newport CTR	56.5	RW	RW	RW	125
San Miguel	West of Newport CTR	61.8	RW	RW	131	283
San Miguel	East of Newport CTR	63.8	RW	83	178	384
San Miguel	West of Avacado	64.8	RW	96	208	447
San Miguel	East of Avacado	66.5	RW	125	270	581
San Miguel	West of Macarthur	66.2	RW	119	257	555
San Miguel	East of Macarthur	63.1	RW	75	162	349
Coast Highway	West of Jamboree	71.0	117	252	542	1,167
Coast Highway	East of Jamboree	70.1	102	219	472	1,018
Coast Highway	West of Newport CTR	69.8	97	209	450	968

Table 6-4 (3 of 3)

2016 With Project Conditions Noise Contours

Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Coast Highway	East of Newport CTR	69.0	86	185	399	860
Coast Highway	West of Avacado	68.9	84	181	390	841
Coast Highway	East of Avacado	69.0	86	185	398	858
Coast Highway	West of Macarthur	69.0	86	185	399	860
Coast Highway	East of Macarthur	70.4	106	228	491	1,058

[1] "RW" = Location of the respective noise contour falls within the right-of-way of the road

indicates that the unmitigated off-site traffic noise levels will remain the same and range from 54.4 to 71.5. Project contributions are discussed in the following sections.

6.4 Existing With Project Traffic Noise Level Contributions

Table 6-5 presents a comparison of the existing conditions noise levels for with and without the addition of project traffic associated with adding 94 residential dwelling units to San Joaquin Plaza. The roadway noise increases will range from 0.0 dBA CNEL to 1.1 dBA CNEL with the development of the proposed project.

6.5 Year 2016 With Project Traffic Noise Level Contributions

Table 6-6 presents a comparison of the Year 2016 noise levels for with and without the addition of project traffic associated with adding 94 residential dwelling units to San Joaquin Plaza. The roadway noise increases will range from 0.0 dBA CNEL and 0.3 dBA CNEL, with the development of the proposed project.

6.6 Off-Site Transportation Related Project Noise Impacts

Based on the significance criteria provided in Section 4.2, a new or substantial increase to the transportation-related noise impacts identified in the General Plan EIR occurs when there is a substantial increase in the ambient CNEL produced by new development impacting existing sensitive uses. According to the significance thresholds shown on Tables 6-5 and 6-6 (which are based on General Plan Policy N 1.8), 72 of the 73 study roadway segments within the project study area are not expected to create a potentially significant off-site transportation related noise impact.

Based on the Existing conditions off-site transportation noise impact analysis, the Newport Center segment north of San Miguel is the only roadway identified with a potentially significant impact. However, the land uses neighboring this roadway segment consist primarily of commercial retail and office uses and not considered existing sensitive uses that would require additional off-site noise mitigation. As such, a significant impact for this roadway segment does not exist in for future Year 2016 condition.

For all of the 73 study area roadway segments, project related noise level increases are expected to be less than 1.0 to 3.0 dBA CNEL in Year 2016, which is considered “barely perceptible.” All

Table 6-5 (1 of 3)

Existing Off-Site Project Related Traffic Noise Impacts

Roadway	Segment	CNEL at 100 Feet (dBA)			Signifcance Threshold (dBA)[1]	Potential Significant Impact?[2]
		No Project	With Project	Project Addition		
Jamboree	North of Eastbluff	68.8	68.9	0.0	1.0	No
Jamboree	Eastbluff to San Joaquin Hills	69.8	69.8	0.0	1.0	No
Jamboree	South of San Joaquin Hills	68.0	68.0	0.0	1.0	No
Jamboree	North of Santa Barbara	68.3	68.3	0.0	1.0	No
Jamboree	South of Santa Barbara	67.8	67.8	0.0	1.0	No
Jamboree	North of Coast Highway	67.5	67.5	0.0	1.0	No
Jamboree	South of Coast Highway	63.3	63.3	0.0	1.0	No
Santa Cruz	North of San Joaquin Hills	54.5	54.5	0.0	3.0	No
Santa Cruz	Souh of San Joaquin Hills	63.0	63.4	0.4	1.0	No
Santa Cruz	North of San Clemente	62.9	62.9	0.0	1.0	No
Santa Cruz	South of San Clemente	61.9	61.9	0.0	1.0	No
Santa Cruz	North of Newport CTR	61.7	61.7	0.0	1.0	No
Santa Cruz	South of Newport CTR	58.5	58.5	0.0	2.0	No
Newport CTR	West of Newport CTR	60.9	60.9	0.0	1.0	No
Newport CTR	South of Santa Barbara	61.3	61.3	0.0	1.0	No
Newport CTR	North of Santa Barbara	60.6	60.6	0.0	1.0	No
Newport CTR	South of Santa Cruz	60.2	60.2	0.0	1.0	No
Newport CTR	North of Santa Cruz	59.9	59.9	0.0	2.0	No
Newport CTR	North of Santa Rosa	60.6	60.6	0.0	1.0	No
Newport CTR	South of Santa Rosa	62.0	62.1	0.0	1.0	No
Newport CTR	North of San Miguel	61.0	62.1	1.1	1.0	Yes
Newport CTR	South of San Miguel	62.7	62.7	0.0	1.0	No
Newport CTR	East of Newport CTR	61.9	61.9	0.0	1.0	No
Newport CTR	South of Newport CTR (Circle	63.6	63.6	0.0	1.0	No
Newport CTR	North of Coast Highway	64.2	64.2	0.0	1.0	No
Santa Rosa	North of San Joaquin Hills	58.0	58.0	0.0	2.0	No
Santa Rosa	South of San Joaquin Hills	63.8	63.8	0.0	1.0	No
Santa Rosa	North of Newport CTR	63.0	63.0	0.0	1.0	No
Santa Rosa	South of Newport CTR	60.5	60.5	0.0	1.0	No
Avocado	North of San Miguel	57.0	57.0	0.0	2.0	No
Avocado	South of San Miguel	62.0	62.0	0.0	1.0	No
Avocado	North of Coast Highway	60.4	60.4	0.0	1.0	No
Macarthur	North of Bonita Canyon	71.1	71.1	0.0	1.0	No
Macarthur	South of Bonita Canyon	70.3	70.3	0.0	1.0	No
Macarthur	North of San Joaquin Hills	70.3	70.3	0.0	1.0	No

Table 6-5 (2 of 3)

Existing Off-Site Project Related Traffic Noise Impacts

Roadway	Segment	CNEL at 100 Feet (dBA)			Signifcance Threshold (dBA)[1]	Potential Significant Impact?[2]
		No Project	With Project	Project Addition		
Macarthur	South of San Joaquin Hills	68.3	68.3	0.0	1.0	No
Macarthur	North of San Miguel	67.9	67.9	0.0	1.0	No
Macarthur	South of San Miguel	67.0	67.0	0.0	1.0	No
Macarthur	North of Coast Highway	67.0	67.0	0.0	1.0	No
Eastbluff/Ford/Bonita Cyn	West of Jamboree	63.8	63.8	0.0	1.0	No
Eastbluff/Ford/Bonita Cyn	East of Jamboree	62.8	62.8	0.0	1.0	No
Eastbluff/Ford/Bonita Cyn	West of Bonita Canyon	62.1	62.2	0.0	1.0	No
Eastbluff/Ford/Bonita Cyn	East of Bonita Canyon	67.9	67.9	0.0	1.0	No
San Joaquin Hills	West of Jamboree	59.3	59.3	0.0	2.0	No
San Joaquin Hills	East of Jamboree	64.9	65.0	0.0	1.0	No
San Joaquin Hills	West of Santa Cruz	65.9	65.9	0.0	1.0	No
San Joaquin Hills	East of Santa Cruz	63.8	63.9	0.0	1.0	No
San Joaquin Hills	West of Santa Rosa	64.4	64.4	0.0	1.0	No
San Joaquin Hills	East of Santa Rosa	65.8	65.8	0.0	1.0	No
San Joaquin Hills	West of Macarthur	65.7	65.7	0.0	1.0	No
San Joaquin Hills	East of Macarthur	65.6	65.6	0.0	1.0	No
San Clemente	East of Santa Barbara	58.3	58.3	0.1	2.0	No
San Clemente	West of Santa Cruz	58.4	58.5	0.1	2.0	No
Santa Barbara	West of Jamboree	54.0	54.0	0.0	3.0	No
Santa Barbara	East of Jamboree	61.6	61.7	0.0	1.0	No
Santa Barbara	North of San Clemente	61.6	61.6	0.0	1.0	No
Santa Barbara	South of San Clemente	59.4	59.4	0.0	2.0	No
Santa Barbara	West of Newport CTR	58.8	58.8	0.1	2.0	No
Santa Barbara	East of Newport CTR	56.0	56.0	0.0	2.0	No
San Miguel	West of Newport CTR	61.1	61.1	0.0	1.0	No
San Miguel	East of Newport CTR	63.2	63.2	0.0	1.0	No
San Miguel	West of Avacado	64.3	64.3	0.0	1.0	No
San Miguel	East of Avacado	66.0	66.0	0.0	1.0	No
San Miguel	West of Macarthur	65.6	65.6	0.0	1.0	No
San Miguel	East of Macarthur	62.9	62.9	0.0	1.0	No
Coast Highway	West of Jamboree	70.2	70.2	0.0	1.0	No
Coast Highway	East of Jamboree	69.2	69.2	0.0	1.0	No
Coast Highway	West of Newport CTR	68.9	68.9	0.0	1.0	No

Table 6-5 (3 of 3)

Existing Off-Site Project Related Traffic Noise Impacts

Roadway	Segment	CNEL at 100 Feet (dBA)			Signifcance Threshold (dBA)[1]	Potential Significant Impact?[2]
		No Project	With Project	Project Addition		
Coast Highway	East of Newport CTR	68.0	68.0	0.0	1.0	No
Coast Highway	West of Avacado	67.8	67.8	0.0	1.0	No
Coast Highway	East of Avacado	68.1	68.1	0.0	1.0	No
Coast Highway	West of Macarthur	68.1	68.1	0.0	1.0	No
Coast Highway	East of Macarthur	69.5	69.5	0.0	1.0	No

[1] Significant noise impact threshold defined by the City of Newport Beach Policy N 1.8.

[2] Potential noise impact for existing noise sensitive uses.

Table 6-6 (1 of 3)

Year 2016 Off-Site Project Related Traffic Noise Impacts

Roadway	Segment	CNEL at 100 Feet (dBA)			Signifcance Threshold (dBA)[1]	Potential Significant Impact?[2]
		No Project	With Project	Project Addition		
Jamboree	North of Eastbluff	69.6	69.7	0.0	1.0	No
Jamboree	Eastbluff to San Joaquin Hills	70.5	70.5	0.0	1.0	No
Jamboree	South of San Joaquin Hills	68.8	68.8	0.0	1.0	No
Jamboree	North of Santa Barbara	69.0	69.0	0.0	1.0	No
Jamboree	South of Santa Barbara	68.6	68.6	0.0	1.0	No
Jamboree	North of Coast Highway	68.3	68.3	0.0	1.0	No
Jamboree	South of Coast Highway	63.6	63.6	0.0	1.0	No
Santa Cruz	North of San Joaquin Hills	54.5	54.5	0.0	3.0	No
Santa Cruz	Souh of San Joaquin Hills	63.1	63.2	0.1	1.0	No
Santa Cruz	North of San Clemente	63.1	63.1	0.0	1.0	No
Santa Cruz	South of San Clemente	62.1	62.2	0.0	1.0	No
Santa Cruz	North of Newport CTR	62.0	62.0	0.0	1.0	No
Santa Cruz	South of Newport CTR	58.8	58.8	0.0	2.0	No
Newport CTR	West of Newport CTR	61.1	61.1	0.0	1.0	No
Newport CTR	South of Santa Barbara	61.4	61.4	0.0	1.0	No
Newport CTR	North of Santa Barbara	60.8	60.8	0.0	1.0	No
Newport CTR	South of Santa Cruz	60.5	60.5	0.0	1.0	No
Newport CTR	North of Santa Cruz	60.1	60.1	0.0	1.0	No
Newport CTR	North of Santa Rosa	61.1	61.1	0.0	1.0	No
Newport CTR	South of Santa Rosa	62.5	62.5	0.0	1.0	No
Newport CTR	North of San Miguel	61.3	61.3	0.0	1.0	No
Newport CTR	South of San Miguel	62.8	62.8	0.0	1.0	No
Newport CTR	East of Newport CTR	62.0	62.0	0.0	1.0	No
Newport CTR	South of Newport CTR (Circle	64.0	64.0	0.0	1.0	No
Newport CTR	North of Coast Highway	64.6	64.6	0.0	1.0	No
Santa Rosa	North of San Joaquin Hills	58.0	58.0	0.0	2.0	No
Santa Rosa	South of San Joaquin Hills	64.4	64.4	0.0	1.0	No
Santa Rosa	North of Newport CTR	63.7	63.7	0.0	1.0	No
Santa Rosa	South of Newport CTR	61.2	61.2	0.0	1.0	No
Avocado	North of San Miguel	57.8	57.8	0.0	2.0	No
Avocado	South of San Miguel	62.7	62.7	0.0	1.0	No
Avocado	North of Coast Highway	61.2	61.2	0.0	1.0	No
Macarthur	North of Bonita Canyon	71.5	71.5	0.0	1.0	No
Macarthur	South of Bonita Canyon	70.9	70.9	0.0	1.0	No
Macarthur	North of San Joaquin Hills	70.8	70.8	0.0	1.0	No

Table 6-6 (2 of 3)

Year 2016 Off-Site Project Related Traffic Noise Impacts

Roadway	Segment	CNEL at 100 Feet (dBA)			Signifcance Threshold (dBA)[1]	Potential Significant Impact?[2]
		No Project	With Project	Project Addition		
Macarthur	South of San Joaquin Hills	68.8	68.8	0.0	1.0	No
Macarthur	North of San Miguel	68.3	68.3	0.0	1.0	No
Macarthur	South of San Miguel	67.6	67.6	0.0	1.0	No
Macarthur	North of Coast Highway	67.6	67.6	0.0	1.0	No
Eastbluff/Ford/Bonita Cyn	West of Jamboree	64.0	64.0	0.0	1.0	No
Eastbluff/Ford/Bonita Cyn	East of Jamboree	63.0	63.1	0.0	1.0	No
Eastbluff/Ford/Bonita Cyn	West of Bonita Canyon	62.4	62.4	0.0	1.0	No
Eastbluff/Ford/Bonita Cyn	East of Bonita Canyon	68.1	68.1	0.0	1.0	No
San Joaquin Hills	West of Jamboree	59.4	59.4	0.0	2.0	No
San Joaquin Hills	East of Jamboree	65.5	65.6	0.0	1.0	No
San Joaquin Hills	West of Santa Cruz	66.2	66.2	0.0	1.0	No
San Joaquin Hills	East of Santa Cruz	64.2	64.2	0.0	1.0	No
San Joaquin Hills	West of Santa Rosa	64.8	64.8	0.0	1.0	No
San Joaquin Hills	East of Santa Rosa	66.0	66.1	0.0	1.0	No
San Joaquin Hills	West of Macarthur	66.2	66.2	0.0	1.0	No
San Joaquin Hills	East of Macarthur	65.7	65.7	0.0	1.0	No
San Clemente	East of Santa Barbara	58.3	58.3	0.1	2.0	No
San Clemente	West of Santa Cruz	58.4	58.5	0.1	2.0	No
Santa Barbara	West of Jamboree	54.4	54.4	0.0	3.0	No
Santa Barbara	East of Jamboree	61.9	61.9	0.0	1.0	No
Santa Barbara	North of San Clemente	61.8	61.8	0.0	1.0	No
Santa Barbara	South of San Clemente	59.8	59.8	0.0	2.0	No
Santa Barbara	West of Newport CTR	59.2	59.2	0.0	2.0	No
Santa Barbara	East of Newport CTR	56.5	56.5	0.0	2.0	No
San Miguel	West of Newport CTR	61.8	61.8	0.0	1.0	No
San Miguel	East of Newport CTR	63.8	63.8	0.0	1.0	No
San Miguel	West of Avacado	64.8	64.8	0.0	1.0	No
San Miguel	East of Avacado	66.5	66.5	0.0	1.0	No
San Miguel	West of Macarthur	66.2	66.2	0.0	1.0	No
San Miguel	East of Macarthur	63.1	63.1	0.0	1.0	No
Coast Highway	West of Jamboree	71.0	71.0	0.0	1.0	No
Coast Highway	East of Jamboree	70.1	70.1	0.0	1.0	No
Coast Highway	West of Newport CTR	69.8	69.8	0.0	1.0	No

Table 6-6 (3 of 3)

Year 2016 Off-Site Project Related Traffic Noise Impacts

Roadway	Segment	CNEL at 100 Feet (dBA)			Signifcance Threshold (dBA)[1]	Potential Significant Impact?[2]
		No Project	With Project	Project Addition		
Coast Highway	East of Newport CTR	69.0	69.0	0.0	1.0	No
Coast Highway	West of Avacado	68.9	68.9	0.0	1.0	No
Coast Highway	East of Avacado	69.0	69.0	0.0	1.0	No
Coast Highway	West of Macarthur	68.7	69.0	0.3	1.0	No
Coast Highway	East of Macarthur	70.4	70.4	0.0	1.0	No

[1] Significant noise impact threshold defined by the City of Newport Beach Policy N 1.8.

[2] Potential noise impact for existing noise sensitive uses.

noise level increases attributable to project-related traffic also are either below the thresholds established by General Plan Policy N 1.8, or would not impact a sensitive receptor. As such, the proposed project's contributions to off-site roadway noise increases for both existing conditions and year 2016 would not result in the exposure of persons to or result in the generation of noise levels in excess of standards established in the General Plan, City Noise Ordinance, or applicable standards of any other agencies. Additionally, Project-related traffic would not result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project.

For General Plan buildout conditions, noise level increases attributable to project-related traffic would be less than the noise level increases presented in Table 6-6. This is because buildout of the General Plan would result in an overall increase in background traffic volumes, which would thereby result in an increase in background noise levels as compared to year 2016 conditions. As background traffic-related noise levels increase, noise increases attributable to project traffic would decrease. Therefore, since project-related noise increases would be less than the values presented in Table 6-6, Project-related traffic under General Plan buildout conditions would not result in the generation of noise levels in excess of standards established in the General Plan, City Noise Ordinance, or applicable standards of any other agencies, nor would it result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project.

Based on the analysis presented above, traffic associated with the proposed project would not result in any new significant effects not discussed in the General Plan EIR, nor would Project traffic result in a substantial increase in the severity of any noise impacts previously identified in the General Plan EIR.

APPENDIX 6.1

Off-Site FHWA Traffic Noise Model Printouts

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing | Project Name: NNCPC
Road Name: Jamboree | Job Number: 8211
Road Segment: North of Eastbluff

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	43,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,350 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	4.43	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-12.80	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-16.76	-4.11	-1.20	*-5.16*	0.000	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	57.9	66.5	67.1
Medium Trucks:	61.3	59.8	53.5	51.9	60.4	60.6
Heavy Trucks:	62.2	60.8	51.7	53.0	61.3	61.5
Vehicle Noise:	69.4	67.7	64.5	59.8	68.4	68.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	78	168	362	781
CNEL:	84	180	389	837

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing | Project Name: NNCPC
Road Name: Jamboree | Job Number: 8211
Road Segment: Eastbluff to San Joaquin Hills

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	53,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,360 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	5.34	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-11.90	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-15.85	-4.11	-1.20	*-5.16*	0.000	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:	62.2	60.7	54.4	52.8	61.3	61.5
Heavy Trucks:	63.1	61.7	52.6	53.9	62.2	62.4
Vehicle Noise:	70.3	68.6	65.4	60.8	69.3	69.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	90	193	416	897
CNEL:	96	207	447	962

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing | Project Name: NNCPC
Road Name: Jamboree | Job Number: 8211
Road Segment: South of San Joaquin Hills

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	36,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,600 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	3.61	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.63	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-17.58	-4.11	-1.20	*-5.16*	0.000	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:	60.5	59.0	52.6	51.1	59.6	59.8
Heavy Trucks:	61.4	59.9	50.9	52.1	60.5	60.6
Vehicle Noise:	68.6	66.9	63.7	59.0	67.6	68.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	69	148	319	688
CNEL:	74	159	343	738

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing | Project Name: NNCPC
Road Name: Jamboree | Job Number: 8211
Road Segment: North of Santa Barbara

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	38,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,850 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	3.90	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.33	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-17.29	-4.11	-1.20	*-5.16*	0.000	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	65.2	63.4	57.3	66.0	66.6
Medium Trucks:	60.8	59.3	52.9	51.4	59.9	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	67.9	68.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	72	155	334	720
CNEL:	77	166	358	772

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing | Project Name: NNCPC
Road Name: Jamboree | Job Number: 8211
Road Segment: South of Santa Barbara

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	34,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,450 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	3.43	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-13.81	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-17.77	-4.11	-1.20	-5.16	0.000	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:	60.3	58.8	52.5	50.9	59.4	59.6
Heavy Trucks:	61.2	59.7	50.7	52.0	60.3	60.4
Vehicle Noise:	68.4	66.7	63.5	58.8	67.4	67.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	67	144	310	669
CNEL:	72	155	333	718

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing | Project Name: NNCPC
Road Name: Jamboree | Job Number: 8211
Road Segment: North of Coast Highway

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,200 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	3.10	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-14.14	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-18.09	-4.11	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.2	64.3	62.6	56.5	65.1	65.8
Medium Trucks:	60.0	58.5	52.1	50.6	59.0	59.3
Heavy Trucks:	60.8	59.4	50.4	51.6	60.0	60.1
Vehicle Noise:	68.1	66.3	63.2	58.5	67.1	67.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	64	137	295	636
CNEL:	68	147	317	682

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing | Project Name: NNCPC
Road Name: Jamboree | Job Number: 8211
Road Segment: South of Coast Highway

SITE SPECIFIC INPUT DATA

Highway Data

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:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-1.09	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-18.33	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-22.28	-4.11	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.1	60.2	58.4	52.3	61.0	61.6
Medium Trucks:	55.8	54.3	47.9	46.4	54.9	55.1
Heavy Trucks:	56.7	55.2	46.2	47.4	55.8	55.9
Vehicle Noise:	63.9	62.2	59.0	54.3	62.9	63.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	33	72	155	334
CNEL:	36	77	167	359

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing | Project Name: NNCPC
Road Name: Santa Cruz | Job Number: 8211
Road Segment: North of San Joaquin Hills

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	170 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-9.65	-4.39	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-26.88	-4.39	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-30.84	-4.39	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	53.2	51.3	49.6	43.5	52.1	52.7
Medium Trucks:	47.0	45.5	39.1	37.6	46.0	46.3
Heavy Trucks:	47.8	46.4	37.4	38.6	47.0	47.1
Vehicle Noise:	55.1	53.3	50.2	45.5	54.0	54.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	9	19	40	86
CNEL:	9	20	43	92

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Santa Cruz
Road Segment: Souh of San Joaquin Hills
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,000	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	1,200	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	52	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-1.16	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-18.40	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-22.35	-4.39	-1.20	*-5.16*	0.000	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	58.0	52.0	60.6	61.2
Medium Trucks:	55.5	54.0	47.6	46.0	54.5	54.7
Heavy Trucks:	56.3	54.9	45.8	47.1	55.5	55.6
Vehicle Noise:	63.5	61.8	58.7	54.0	62.5	63.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	32	68	147	317
CNEL:	34	73	158	340

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Santa Cruz
Road Segment: North of San Clemente
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,700	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	1,170	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	52	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-1.27	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-18.51	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-22.46	-4.39	-1.20	*-5.16*	0.000	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:	55.4	53.8	47.5	45.9	54.4	54.6
Heavy Trucks:	56.2	54.8	45.7	47.0	55.3	55.5
Vehicle Noise:	63.4	61.7	58.5	53.9	62.4	62.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	31	67	145	312
CNEL:	33	72	155	334

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Santa Cruz
Road Segment: South of San Clemente
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,300	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	930	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	52	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-2.27	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-19.50	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-23.46	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.6	58.7	56.9	50.9	59.5	60.1
Medium Trucks:	54.4	52.8	46.5	44.9	53.4	53.6
Heavy Trucks:	55.2	53.8	44.7	46.0	54.3	54.5
Vehicle Noise:	62.4	60.7	57.5	52.9	61.4	61.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	27	58	124	267
CNEL:	29	62	133	287

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Santa Cruz
Road Segment: North of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,900	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	890	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	52	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-2.46	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-19.70	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-23.65	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.4	58.5	56.7	50.7	59.3	59.9
Medium Trucks:	54.2	52.7	46.3	44.7	53.2	53.4
Heavy Trucks:	55.0	53.6	44.5	45.8	54.2	54.3
Vehicle Noise:	62.2	60.5	57.4	52.7	61.2	61.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	26	56	121	260
CNEL:	28	60	129	279

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Santa Cruz
Road Segment: South of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	430 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-5.62	-4.39	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-22.85	-4.39	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-26.81	-4.39	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	57.3	55.4	53.6	47.5	56.2	56.8
Medium Trucks:	51.0	49.5	43.1	41.6	50.1	50.3
Heavy Trucks:	51.8	50.4	41.4	42.6	51.0	51.1
Vehicle Noise:	59.1	57.3	54.2	49.5	58.1	58.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	16	34	74	160
CNEL:	17	37	80	172

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Newport CTR
Road Segment: West of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	700 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-3.50	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-20.74	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-24.69	-4.11	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.6	57.7	56.0	49.9	58.5	59.2
Medium Trucks:	53.4	51.9	45.5	44.0	52.4	52.7
Heavy Trucks:	54.2	52.8	43.8	45.0	53.4	53.5
Vehicle Noise:	61.5	59.7	56.6	51.9	60.5	60.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	23	50	107	231
CNEL:	25	53	115	248

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Newport CTR
Road Segment: South of Santa Barbara
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	770 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-3.09	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-20.32	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-24.28	-4.11	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.1	58.2	56.4	50.3	59.0	59.6
Medium Trucks:	53.8	52.3	45.9	44.4	52.9	53.1
Heavy Trucks:	54.7	53.2	44.2	45.4	53.8	53.9
Vehicle Noise:	61.9	60.2	57.0	52.3	60.9	61.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	25	53	114	246
CNEL:	26	57	123	264

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Newport CTR
Road Segment: North of Santa Barbara
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	650 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-3.82	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-21.06	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-25.02	-4.11	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.3	57.4	55.7	49.6	58.2	58.8
Medium Trucks:	53.1	51.6	45.2	43.7	52.1	52.4
Heavy Trucks:	53.9	52.5	43.5	44.7	53.1	53.2
Vehicle Noise:	61.2	59.4	56.3	51.6	60.1	60.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	22	47	102	220
CNEL:	24	51	109	236

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Newport CTR
Road Segment: South of Santa Cruz
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	6,000 vehicles	*Autos:*	15
Peak Hour Percentage:	10%	*Medium Trucks (2 Axles):*	15
Peak Hour Volume:	600 vehicles	*Heavy Trucks (3+ Axles):*	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	76 feet		
Site Data			
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	100.0 feet		
Centerline Dist. to Observer:	100.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-4.17	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-21.41	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-25.36	-4.11	-1.20	*-5.16*	0.000	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	49.3	57.9	58.5
Medium Trucks:	52.7	51.2	44.9	43.3	51.8	52.0
Heavy Trucks:	53.6	52.2	43.1	44.4	52.7	52.8
Vehicle Noise:	60.8	59.1	55.9	51.2	59.8	60.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	21	45	97	208
CNEL:	22	48	104	224

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Newport CTR
Road Segment: North of Santa Cruz
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	5,600 vehicles	*Autos:*	15
Peak Hour Percentage:	10%	*Medium Trucks (2 Axles):*	15
Peak Hour Volume:	560 vehicles	*Heavy Trucks (3+ Axles):*	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	76 feet		
Site Data			
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	100.0 feet		
Centerline Dist. to Observer:	100.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-4.47	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-21.71	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-25.66	-4.11	-1.20	*-5.16*	0.000	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:	52.4	50.9	44.6	43.0	51.5	51.7
Heavy Trucks:	53.3	51.9	42.8	44.1	52.4	52.5
Vehicle Noise:	60.5	58.8	55.6	50.9	59.5	59.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	20	43	92	199
CNEL:	21	46	99	214

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Newport CTR
Road Segment: North of Santa Rosa
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	6,500 vehicles	*Autos:*	15
Peak Hour Percentage:	10%	*Medium Trucks (2 Axles):*	15
Peak Hour Volume:	650 vehicles	*Heavy Trucks (3+ Axles):*	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	76 feet		
Site Data			
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	100.0 feet		
Centerline Dist. to Observer:	100.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-3.82	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-21.06	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-25.02	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.3	57.4	55.7	49.6	58.2	58.8
Medium Trucks:	53.1	51.6	45.2	43.7	52.1	52.4
Heavy Trucks:	53.9	52.5	43.5	44.7	53.1	53.2
Vehicle Noise:	61.2	59.4	56.3	51.6	60.1	60.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	22	47	102	220
CNEL:	24	51	109	236

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Newport CTR
Road Segment: South of Santa Rosa
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	9,100 vehicles	*Autos:*	15
Peak Hour Percentage:	10%	*Medium Trucks (2 Axles):*	15
Peak Hour Volume:	910 vehicles	*Heavy Trucks (3+ Axles):*	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	76 feet		
Site Data			
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	100.0 feet		
Centerline Dist. to Observer:	100.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-2.36	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-19.60	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-23.55	-4.11	-1.20	*-5.16*	0.000	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:	54.5	53.0	46.7	45.1	53.6	53.8
Heavy Trucks:	55.4	54.0	44.9	46.2	54.5	54.7
Vehicle Noise:	62.6	60.9	57.7	53.0	61.6	62.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	28	59	128	275
CNEL:	30	64	137	295

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Newport CTR
Road Segment: North of San Miguel
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	720 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-3.38	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-20.62	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-24.57	-4.11	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.8	57.9	56.1	50.0	58.7	59.3
Medium Trucks:	53.5	52.0	45.7	44.1	52.6	52.8
Heavy Trucks:	54.4	52.9	43.9	45.2	53.5	53.6
Vehicle Noise:	61.6	59.9	56.7	52.0	60.6	61.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	24	51	109	235
CNEL:	25	54	117	252

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Newport CTR
Road Segment: South of San Miguel
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,060 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-1.70	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-18.94	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-22.89	-4.11	-1.20	-5.16	0.000	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	57.8	51.7	60.4	61.0
Medium Trucks:	55.2	53.7	47.3	45.8	54.2	54.5
Heavy Trucks:	56.0	54.6	45.6	46.8	55.2	55.3
Vehicle Noise:	63.3	61.5	58.4	53.7	62.3	62.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	30	66	141	305
CNEL:	33	70	152	327

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Newport CTR
Road Segment: East of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	880 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-2.51	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-19.74	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-23.70	-4.11	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.6	58.7	57.0	50.9	59.5	60.1
Medium Trucks:	54.4	52.9	46.5	45.0	53.4	53.7
Heavy Trucks:	55.2	53.8	44.8	46.0	54.4	54.5
Vehicle Noise:	62.5	60.7	57.6	52.9	61.4	61.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	27	58	125	269
CNEL:	29	62	134	289

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Newport CTR
Road Segment: South of Newport CTR (Circle
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,290 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-0.85	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-18.08	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-22.04	-4.11	-1.20	-5.16	0.000	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:	56.1	54.5	48.2	46.6	55.1	55.3
Heavy Trucks:	56.9	55.5	46.4	47.7	56.0	56.2
Vehicle Noise:	64.1	62.4	59.2	54.6	63.1	63.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	35	75	161	347
CNEL:	37	80	173	372

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Newport CTR
Road Segment: North of Coast Highway
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	14,900 vehicles	*Autos:*	15
Peak Hour Percentage:	10%	*Medium Trucks (2 Axles):*	15
Peak Hour Volume:	1,490 vehicles	*Heavy Trucks (3+ Axles):*	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	76 feet		
Site Data			
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	100.0 feet		
Centerline Dist. to Observer:	100.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-0.22	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-17.46	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-21.41	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.9	61.0	59.3	53.2	61.8	62.4
Medium Trucks:	56.7	55.2	48.8	47.3	55.7	56.0
Heavy Trucks:	57.5	56.1	47.1	48.3	56.7	56.8
Vehicle Noise:	64.8	63.0	59.9	55.2	63.7	64.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	38	82	177	382
CNEL:	41	88	190	410

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Santa Rosa
Road Segment: North of San Joaquin Hills
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	3,800 vehicles	*Autos:*	15
Peak Hour Percentage:	10%	*Medium Trucks (2 Axles):*	15
Peak Hour Volume:	380 vehicles	*Heavy Trucks (3+ Axles):*	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	52 feet		
Site Data			
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	100.0 feet		
Centerline Dist. to Observer:	100.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-6.15	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-23.39	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-27.35	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	56.7	54.8	53.0	47.0	55.6	56.2
Medium Trucks:	50.5	49.0	42.6	41.1	49.5	49.7
Heavy Trucks:	51.3	49.9	40.9	42.1	50.5	50.6
Vehicle Noise:	58.5	56.8	53.7	49.0	57.5	58.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	15	32	68	147
CNEL:	16	34	73	158

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Santa Rosa
Road Segment: South of San Joaquin Hills
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	14,500 vehicles	*Autos:*	15
Peak Hour Percentage:	10%	*Medium Trucks (2 Axles):*	15
Peak Hour Volume:	1,450 vehicles	*Heavy Trucks (3+ Axles):*	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	52 feet		
Site Data			
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	100.0 feet		
Centerline Dist. to Observer:	100.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-0.34	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-17.58	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-21.53	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.5	60.6	58.9	52.8	61.4	62.0
Medium Trucks:	56.3	54.8	48.4	46.9	55.3	55.6
Heavy Trucks:	57.1	55.7	46.7	47.9	56.3	56.4
Vehicle Noise:	64.4	62.6	59.5	54.8	63.3	63.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	36	77	167	360
CNEL:	39	83	179	386

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Santa Rosa
Road Segment: North of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	12,200 vehicles	*Autos:*	15
Peak Hour Percentage:	10%	*Medium Trucks (2 Axles):*	15
Peak Hour Volume:	1,220 vehicles	*Heavy Trucks (3+ Axles):*	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	52 feet		
Site Data			
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	100.0 feet		
Centerline Dist. to Observer:	100.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-1.09	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-18.33	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-22.28	-4.39	-1.20	*-5.16*	0.000	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:	55.5	54.0	47.7	46.1	54.6	54.8
Heavy Trucks:	56.4	55.0	45.9	47.2	55.5	55.7
Vehicle Noise:	63.6	61.9	58.7	54.0	62.6	63.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	32	69	149	320
CNEL:	34	74	160	344

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Santa Rosa
Road Segment: South of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	680 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-3.63	-4.39	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-20.86	-4.39	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-24.82	-4.39	-1.20	-5.16	0.000	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:	53.0	51.5	45.1	43.6	52.0	52.3
Heavy Trucks:	53.8	52.4	43.4	44.6	53.0	53.1
Vehicle Noise:	61.1	59.3	56.2	51.5	60.0	60.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	22	47	101	217
CNEL:	23	50	108	233

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Avocado
Road Segment: North of San Miguel
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	420 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-5.21	-4.51	-1.20	-4.87	0.000	0.000
Medium Trucks:	77.72	-22.45	-4.51	-1.20	-4.97	0.000	0.000
Heavy Trucks:	82.99	-26.40	-4.51	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	55.6	53.7	51.9	45.9	54.5	55.1
Medium Trucks:	49.6	48.1	41.7	40.1	48.6	48.8
Heavy Trucks:	50.9	49.5	40.4	41.7	50.0	50.2
Vehicle Noise:	57.6	55.9	52.6	48.0	56.6	57.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	13	27	59	127
CNEL:	14	29	63	136

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Avocado
Road Segment: South of San Miguel
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,310 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-0.27	-4.51	-1.20	-4.87	0.000	0.000
Medium Trucks:	77.72	-17.51	-4.51	-1.20	-4.97	0.000	0.000
Heavy Trucks:	82.99	-21.46	-4.51	-1.20	-5.16	0.000	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	56.9	50.8	59.4	60.0
Medium Trucks:	54.5	53.0	46.6	45.1	53.5	53.8
Heavy Trucks:	55.8	54.4	45.4	46.6	55.0	55.1
Vehicle Noise:	62.5	60.8	57.5	53.0	61.5	62.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	27	59	126	272
CNEL:	29	63	135	291

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Avocado
Road Segment: North of Coast Highway
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	920 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-1.80	-4.51	-1.20	-4.87	0.000	0.000
Medium Trucks:	77.72	-19.04	-4.51	-1.20	-4.97	0.000	0.000
Heavy Trucks:	82.99	-23.00	-4.51	-1.20	-5.16	0.000	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	49.3	57.9	58.5
Medium Trucks:	53.0	51.5	45.1	43.5	52.0	52.2
Heavy Trucks:	54.3	52.9	43.8	45.1	53.4	53.6
Vehicle Noise:	61.0	59.3	56.0	51.4	60.0	60.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	21	46	100	215
CNEL:	23	50	107	230

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Macarthur
Road Segment: North of Bonita Canyon
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	72,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	7,290 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	6.68	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-10.56	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-14.52	-4.11	-1.20	-5.16	0.000	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	66.2	60.1	68.7	69.3
Medium Trucks:	63.6	62.1	55.7	54.2	62.6	62.9
Heavy Trucks:	64.4	63.0	54.0	55.2	63.6	63.7
Vehicle Noise:	71.7	69.9	66.8	62.1	70.6	71.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	110	237	511	1,101
CNEL:	118	255	548	1,181

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Macarthur
Road Segment: South of Bonita Canyon
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	61,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	6,140 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	5.93	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-11.31	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-15.26	-4.11	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.1	67.2	65.4	59.4	68.0	68.6
Medium Trucks:	62.8	61.3	55.0	53.4	61.9	62.1
Heavy Trucks:	63.7	62.3	53.2	54.5	62.8	62.9
Vehicle Noise:	70.9	69.2	66.0	61.3	69.9	70.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	98	212	456	982
CNEL:	105	227	489	1,054

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Macarthur
Road Segment: North of San Joaquin Hills
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	61,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	6,140 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	5.93	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-11.31	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-15.26	-4.11	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.1	67.2	65.4	59.4	68.0	68.6
Medium Trucks:	62.8	61.3	55.0	53.4	61.9	62.1
Heavy Trucks:	63.7	62.3	53.2	54.5	62.8	62.9
Vehicle Noise:	70.9	69.2	66.0	61.3	69.9	70.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	98	212	456	982
CNEL:	105	227	489	1,054

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Macarthur
Road Segment: South of San Joaquin Hills
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	38,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,880 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	3.94	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-13.30	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-17.26	-4.11	-1.20	-5.16	0.000	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	63.4	57.4	66.0	66.6
Medium Trucks:	60.8	59.3	53.0	51.4	59.9	60.1
Heavy Trucks:	61.7	60.3	51.2	52.5	60.8	61.0
Vehicle Noise:	68.9	67.2	64.0	59.3	67.9	68.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	72	156	336	723
CNEL:	78	167	360	776

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing | Project Name: NNCPC
Road Name: Macarthur | Job Number: 8211
Road Segment: North of San Miguel

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	34,800	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,480	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	3.46	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-13.77	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-17.73	-4.11	-1.20	-5.16	0.000	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:	60.4	58.9	52.5	51.0	59.4	59.6
Heavy Trucks:	61.2	59.8	50.8	52.0	60.4	60.5
Vehicle Noise:	68.4	66.7	63.6	58.9	67.4	67.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	67	145	312	673
CNEL:	72	155	335	722

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing | Project Name: NNCPC
Road Name: Macarthur | Job Number: 8211
Road Segment: South of San Miguel

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,600	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,860	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.61	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-14.63	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-18.58	-4.11	-1.20	-5.16	0.000	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	56.0	64.7	65.3
Medium Trucks:	59.5	58.0	51.6	50.1	58.6	58.8
Heavy Trucks:	60.4	58.9	49.9	51.1	59.5	59.6
Vehicle Noise:	67.6	65.9	62.7	58.0	66.6	67.0

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

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing | Project Name: NNCPC
Road Name: Macarthur | Job Number: 8211
Road Segment: North of Coast Highway

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,700	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,870	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.63	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-14.61	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-18.57	-4.11	-1.20	-5.16	0.000	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:	59.5	58.0	51.7	50.1	58.6	58.8
Heavy Trucks:	60.4	59.0	49.9	51.2	59.5	59.6
Vehicle Noise:	67.6	65.9	62.7	58.0	66.6	67.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	59	127	275	592
CNEL:	63	137	295	635

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing | Project Name: NNCPC
Road Name: Eastbluff/Ford/Bonita Cyn | Job Number: 8211
Road Segment: West of Jamboree

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,400	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	1,440	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	52	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-0.37	-4.39	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-17.61	-4.39	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-21.56	-4.39	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.5	60.6	58.8	52.8	61.4	62.0
Medium Trucks:	56.3	54.7	48.4	46.8	55.3	55.5
Heavy Trucks:	57.1	55.7	46.6	47.9	56.2	56.4
Vehicle Noise:	64.3	62.6	59.4	54.8	63.3	63.8

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

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Eastbluff/Ford/Bonita Cyn
Road Segment: East of Jamboree
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,150 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-1.34	-4.39	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-18.58	-4.39	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-22.54	-4.39	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.5	59.6	57.9	51.8	60.4	61.0
Medium Trucks:	55.3	53.8	47.4	45.9	54.3	54.6
Heavy Trucks:	56.1	54.7	45.7	46.9	55.3	55.4
Vehicle Noise:	63.4	61.6	58.5	53.8	62.3	62.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	31	66	143	308
CNEL:	33	71	153	330

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Eastbluff/Ford/Bonita Cyn
Road Segment: West of Bonita Canyon
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	990 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-1.99	-4.39	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-19.23	-4.39	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-23.19	-4.39	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.9	59.0	57.2	51.2	59.8	60.4
Medium Trucks:	54.6	53.1	46.8	45.2	53.7	53.9
Heavy Trucks:	55.5	54.0	45.0	46.3	54.6	54.7
Vehicle Noise:	62.7	61.0	57.8	53.1	61.7	62.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	28	60	129	279
CNEL:	30	64	139	299

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Eastbluff/Ford/Bonita Cyn
Road Segment: East of Bonita Canyon
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	37,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,760 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	3.80	-4.39	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-13.44	-4.39	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-17.39	-4.39	-1.20	-5.16	0.000	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	63.0	56.9	65.6	66.2
Medium Trucks:	60.4	58.9	52.6	51.0	59.5	59.7
Heavy Trucks:	61.3	59.8	50.8	52.1	60.4	60.5
Vehicle Noise:	68.5	66.8	63.6	58.9	67.5	67.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	68	146	315	679
CNEL:	73	157	338	728

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: San Joaquin Hills
Road Segment: West of Jamboree
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	480 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-5.14	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-22.38	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-26.33	-4.11	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	58.0	56.1	54.3	48.3	56.9	57.5
Medium Trucks:	51.8	50.3	43.9	42.3	50.8	51.0
Heavy Trucks:	52.6	51.2	42.1	43.4	51.8	51.9
Vehicle Noise:	59.8	58.1	55.0	50.3	58.8	59.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	18	39	83	180
CNEL:	19	42	89	193

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing | Project Name: NNCPC
Road Name: San Joaquin Hills | Job Number: 8211
Road Segment: East of Jamboree

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,770 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.53	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-16.71	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-20.67	-4.11	-1.20	*-5.16*	0.000	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:	57.4	55.9	49.6	48.0	56.5	56.7
Heavy Trucks:	58.3	56.9	47.8	49.1	57.4	57.5
Vehicle Noise:	65.5	63.8	60.6	55.9	64.5	64.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	43	92	199	429
CNEL:	46	99	213	460

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing | Project Name: NNCPC
Road Name: San Joaquin Hills | Job Number: 8211
Road Segment: West of Santa Cruz

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,190 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.45	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-15.78	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-19.74	-4.11	-1.20	*-5.16*	0.000	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	60.9	54.9	63.5	64.1
Medium Trucks:	58.4	56.8	50.5	48.9	57.4	57.6
Heavy Trucks:	59.2	57.8	48.7	50.0	58.3	58.5
Vehicle Noise:	66.4	64.7	61.5	56.9	65.4	65.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	49	106	229	494
CNEL:	53	114	246	530

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing | Project Name: NNCPC
Road Name: San Joaquin Hills | Job Number: 8211
Road Segment: East of Santa Cruz

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,370 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-0.58	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-17.82	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-21.78	-4.11	-1.20	*-5.16*	0.000	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	58.9	52.8	61.5	62.1
Medium Trucks:	56.3	54.8	48.4	46.9	55.4	55.6
Heavy Trucks:	57.2	55.7	46.7	48.0	56.3	56.4
Vehicle Noise:	64.4	62.7	59.5	54.8	63.4	63.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	36	78	168	361
CNEL:	39	84	180	388

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing | Project Name: NNCPC
Road Name: San Joaquin Hills | Job Number: 8211
Road Segment: West of Santa Rosa

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,570 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.01	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-17.23	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-21.19	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.2	61.3	59.5	53.4	62.1	62.7
Medium Trucks:	56.9	55.4	49.0	47.5	56.0	56.2
Heavy Trucks:	57.8	56.3	47.3	48.5	56.9	57.0
Vehicle Noise:	65.0	63.2	60.1	55.4	64.0	64.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	40	85	184	396
CNEL:	42	91	197	425

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: San Joaquin Hills
Road Segment: East of Santa Rosa
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		**Site Conditions (Hard = 10, Soft = 15)**	
Average Daily Traffic (Adt):	21,600 vehicles	Autos:	15
Peak Hour Percentage:	10%	Medium Trucks (2 Axles):	15
Peak Hour Volume:	2,160 vehicles	Heavy Trucks (3+ Axles):	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	76 feet		
Site Data		**Vehicle Mix**	
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	100.0 feet		
Centerline Dist. to Observer:	100.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.39	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-15.84	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-19.80	-4.11	-1.20	-5.16	0.000	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	60.9	54.8	63.4	64.0
Medium Trucks:	58.3	56.8	50.4	48.9	57.3	57.6
Heavy Trucks:	59.1	57.7	48.7	49.9	58.3	58.4
Vehicle Noise:	66.4	64.6	61.5	56.8	65.3	65.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	49	105	227	490
CNEL:	53	113	244	525

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: San Joaquin Hills
Road Segment: West of Macarthur
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		**Site Conditions (Hard = 10, Soft = 15)**	
Average Daily Traffic (Adt):	21,200 vehicles	Autos:	15
Peak Hour Percentage:	10%	Medium Trucks (2 Axles):	15
Peak Hour Volume:	2,120 vehicles	Heavy Trucks (3+ Axles):	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	76 feet		
Site Data		**Vehicle Mix**	
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	100.0 feet		
Centerline Dist. to Observer:	100.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.31	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-15.93	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-19.88	-4.11	-1.20	-5.16	0.000	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:	58.2	56.7	50.3	48.8	57.3	57.5
Heavy Trucks:	59.1	57.6	48.6	49.8	58.2	58.3
Vehicle Noise:	66.3	64.6	61.4	56.7	65.3	65.7

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

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: San Joaquin Hills
Road Segment: East of Macarthur
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		**Site Conditions (Hard = 10, Soft = 15)**	
Average Daily Traffic (Adt):	20,600 vehicles	Autos:	15
Peak Hour Percentage:	10%	Medium Trucks (2 Axles):	15
Peak Hour Volume:	2,060 vehicles	Heavy Trucks (3+ Axles):	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	76 feet		
Site Data		**Vehicle Mix**	
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	100.0 feet		
Centerline Dist. to Observer:	100.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.19	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-16.05	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-20.01	-4.11	-1.20	-5.16	0.000	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	60.7	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:	66.2	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:	47	102	220	474
CNEL:	51	110	236	509

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: San Clemente
Road Segment: East of Santa Barbara
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		**Site Conditions (Hard = 10, Soft = 15)**	
Average Daily Traffic (Adt):	5,600 vehicles	Autos:	15
Peak Hour Percentage:	10%	Medium Trucks (2 Axles):	15
Peak Hour Volume:	560 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:	100.0 feet		
Centerline Dist. to Observer:	100.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-3.96	-4.51	-1.20	-4.87	0.000	0.000
Medium Trucks:	77.72	-21.20	-4.51	-1.20	-4.97	0.000	0.000
Heavy Trucks:	82.99	-25.15	-4.51	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	56.8	54.9	53.2	47.1	55.7	56.3
Medium Trucks:	50.8	49.3	42.9	41.4	49.9	50.1
Heavy Trucks:	52.1	50.7	41.7	42.9	51.3	51.4
Vehicle Noise:	58.8	57.1	53.8	49.3	57.8	58.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	15	33	72	154
CNEL:	17	36	77	165

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: San Clemente
Road Segment: West of Santa Cruz
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,800	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	580	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-3.81	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-21.04	-4.51	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	82.99	-25.00	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	57.0	55.1	53.3	47.3	55.9	56.5
Medium Trucks:	51.0	49.5	43.1	41.5	50.0	50.2
Heavy Trucks:	52.3	50.9	41.8	43.1	51.4	51.6
Vehicle Noise:	59.0	57.3	54.0	49.4	58.0	58.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	16	34	73	158
CNEL:	17	36	78	169

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Santa Barbara
Road Segment: West of Jamboree
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,100	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	210	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-8.22	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-25.46	-4.51	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	82.99	-29.41	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	52.6	50.7	48.9	42.9	51.5	52.1
Medium Trucks:	46.5	45.0	38.7	37.1	45.6	45.8
Heavy Trucks:	47.9	46.4	37.4	38.7	47.0	47.1
Vehicle Noise:	54.6	52.9	49.6	45.0	53.6	54.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	8	17	37	80
CNEL:	9	19	40	86

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Santa Barbara
Road Segment: East of Jamboree
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,100	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	1,210	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-0.61	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-17.85	-4.51	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	82.99	-21.81	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.2	58.3	56.5	50.5	59.1	59.7
Medium Trucks:	54.2	52.6	46.3	44.7	53.2	53.4
Heavy Trucks:	55.5	54.1	45.0	46.3	54.6	54.7
Vehicle Noise:	62.2	60.5	57.2	52.6	61.2	61.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	26	56	120	258
CNEL:	28	59	128	276

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Santa Barbara
Road Segment: North of San Clemente
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,000	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	1,200	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-0.65	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-17.89	-4.51	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	82.99	-21.84	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.1	58.3	56.5	50.4	59.1	59.7
Medium Trucks:	54.1	52.6	46.2	44.7	53.2	53.4
Heavy Trucks:	55.4	54.0	45.0	46.2	54.6	54.7
Vehicle Noise:	62.2	60.4	57.1	52.6	61.1	61.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	26	55	119	256
CNEL:	27	59	127	275

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Santa Barbara
Road Segment: South of San Clemente
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	730 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-2.81	-4.51	-1.20	-4.87	0.000	0.000
Medium Trucks:	77.72	-20.04	-4.51	-1.20	-4.97	0.000	0.000
Heavy Trucks:	82.99	-24.00	-4.51	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	58.0	56.1	54.3	48.3	56.9	57.5
Medium Trucks:	52.0	50.5	44.1	42.5	51.0	51.2
Heavy Trucks:	53.3	51.9	42.8	44.1	52.4	52.6
Vehicle Noise:	60.0	58.3	55.0	50.4	59.0	59.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	18	40	85	184
CNEL:	20	42	91	197

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Santa Barbara
Road Segment: West of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	630 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-3.45	-4.51	-1.20	-4.87	0.000	0.000
Medium Trucks:	77.72	-20.68	-4.51	-1.20	-4.97	0.000	0.000
Heavy Trucks:	82.99	-24.64	-4.51	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	57.4	55.5	53.7	47.6	56.3	56.9
Medium Trucks:	51.3	49.8	43.4	41.9	50.4	50.6
Heavy Trucks:	52.6	51.2	42.2	43.4	51.8	51.9
Vehicle Noise:	59.4	57.6	54.4	49.8	58.3	58.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	17	36	77	167
CNEL:	18	38	83	179

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Santa Barbara
Road Segment: East of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	330 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-6.25	-4.51	-1.20	-4.87	0.000	0.000
Medium Trucks:	77.72	-23.49	-4.51	-1.20	-4.97	0.000	0.000
Heavy Trucks:	82.99	-27.45	-4.51	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	54.5	52.6	50.9	44.8	53.4	54.1
Medium Trucks:	48.5	47.0	40.6	39.1	47.6	47.8
Heavy Trucks:	49.8	48.4	39.4	40.6	49.0	49.1
Vehicle Noise:	56.5	54.8	51.5	47.0	55.5	56.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	11	23	50	108
CNEL:	12	25	54	116

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: San Miguel
Road Segment: West of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	780 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-3.03	-4.39	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-20.27	-4.39	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-24.22	-4.39	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.8	57.9	56.2	50.1	58.7	59.3
Medium Trucks:	53.6	52.1	45.7	44.2	52.6	52.9
Heavy Trucks:	54.4	53.0	44.0	45.2	53.6	53.7
Vehicle Noise:	61.7	59.9	56.8	52.1	60.6	61.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	24	51	110	238
CNEL:	26	55	118	255

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: San Miguel
Road Segment: East of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

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:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-0.91	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-18.15	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-22.11	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.0	60.1	58.3	52.2	60.9	61.5
Medium Trucks:	55.7	54.2	47.8	46.3	54.8	55.0
Heavy Trucks:	56.6	55.1	46.1	47.3	55.7	55.8
Vehicle Noise:	63.8	62.0	58.9	54.2	62.8	63.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	33	71	153	329
CNEL:	35	76	164	353

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: San Miguel
Road Segment: West of Avacado
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,640 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	0.20	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-17.04	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-21.00	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.1	61.2	59.4	53.3	62.0	62.6
Medium Trucks:	56.8	55.3	48.9	47.4	55.9	56.1
Heavy Trucks:	57.7	56.2	47.2	48.5	56.8	56.9
Vehicle Noise:	64.9	63.2	60.0	55.3	63.9	64.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	39	84	181	390
CNEL:	42	90	194	419

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: San Miguel
Road Segment: East of Avacado
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,430 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	1.91	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-15.33	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-19.29	-4.39	-1.20	*-5.16*	0.000	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	61.1	55.1	63.7	64.3
Medium Trucks:	58.5	57.0	50.7	49.1	57.6	57.8
Heavy Trucks:	59.4	57.9	48.9	50.2	58.5	58.6
Vehicle Noise:	66.6	64.9	61.7	57.0	65.6	66.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	51	109	235	507
CNEL:	54	117	253	544

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: San Miguel
Road Segment: West of Macarthur
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	22,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,210 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	1.49	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-15.75	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-19.70	-4.39	-1.20	*-5.16*	0.000	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	54.6	63.3	63.9
Medium Trucks:	58.1	56.6	50.2	48.7	57.2	57.4
Heavy Trucks:	59.0	57.5	48.5	49.7	58.1	58.2
Vehicle Noise:	66.2	64.5	61.3	56.6	65.2	65.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	48	103	221	476
CNEL:	51	110	237	511

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: San Miguel
Road Segment: East of Macarthur
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,800	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	1,180	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	52	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-1.23	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-18.47	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-22.43	-4.39	-1.20	*-5.16*	0.000	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:	55.4	53.9	47.5	46.0	54.4	54.7
Heavy Trucks:	56.2	54.8	45.8	47.0	55.4	55.5
Vehicle Noise:	63.5	61.7	58.6	53.9	62.4	62.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	31	68	145	313
CNEL:	34	72	156	336

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Coast Highway
Road Segment: West of Jamboree
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	60,000	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	6,000	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	5.83	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-11.41	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-15.36	-4.11	-1.20	*-5.16*	0.000	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:	62.7	61.2	54.9	53.3	61.8	62.0
Heavy Trucks:	63.6	62.2	53.1	54.4	62.7	62.8
Vehicle Noise:	70.8	69.1	65.9	61.2	69.8	70.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	97	208	449	967
CNEL:	104	224	482	1,038

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Coast Highway
Road Segment: East of Jamboree
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	47,000	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	4,700	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	4.77	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-12.47	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-16.42	-4.11	-1.20	*-5.16*	0.000	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	64.3	58.2	66.8	67.4
Medium Trucks:	61.7	60.2	53.8	52.3	60.7	60.9
Heavy Trucks:	62.5	61.1	52.1	53.3	61.7	61.8
Vehicle Noise:	69.8	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:	82	177	382	822
CNEL:	88	190	409	882

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Coast Highway
Road Segment: West of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	43,600	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	4,360	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	4.44	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-12.79	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-16.75	-4.11	-1.20	*-5.16*	0.000	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	57.9	66.5	67.1
Medium Trucks:	61.3	59.8	53.5	51.9	60.4	60.6
Heavy Trucks:	62.2	60.8	51.7	53.0	61.3	61.5
Vehicle Noise:	69.4	67.7	64.5	59.9	68.4	68.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	78	168	363	782
CNEL:	84	181	389	839

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Coast Highway
Road Segment: East of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	35,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,570 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	3.58	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.66	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-17.62	-4.11	-1.20	*-5.16*	0.000	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:	60.5	59.0	52.6	51.1	59.5	59.8
Heavy Trucks:	61.3	59.9	50.9	52.1	60.5	60.6
Vehicle Noise:	68.6	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:	68	147	318	684
CNEL:	73	158	341	734

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Coast Highway
Road Segment: West of Avacado
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	34,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,440 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	3.41	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.82	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-17.78	-4.11	-1.20	*-5.16*	0.000	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	56.8	65.5	66.1
Medium Trucks:	60.3	58.8	52.4	50.9	59.4	59.6
Heavy Trucks:	61.2	59.7	50.7	52.0	60.3	60.4
Vehicle Noise:	68.4	66.7	63.5	58.8	67.4	67.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	67	144	310	668
CNEL:	72	154	332	716

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Coast Highway
Road Segment: East of Avacado
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	36,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,630 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	3.65	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.59	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-17.55	-4.11	-1.20	*-5.16*	0.000	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	57.1	65.7	66.3
Medium Trucks:	60.5	59.0	52.7	51.1	59.6	59.8
Heavy Trucks:	61.4	60.0	50.9	52.2	60.5	60.7
Vehicle Noise:	68.6	66.9	63.7	59.1	67.6	68.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	69	149	321	692
CNEL:	74	160	345	742

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Coast Highway
Road Segment: West of Macarthur
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	36,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,640 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	3.66	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.58	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-17.53	-4.11	-1.20	*-5.16*	0.000	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	57.1	65.7	66.3
Medium Trucks:	60.6	59.1	52.7	51.1	59.6	59.8
Heavy Trucks:	61.4	60.0	50.9	52.2	60.6	60.7
Vehicle Noise:	68.6	66.9	63.7	59.1	67.6	68.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	69	149	322	693
CNEL:	74	160	345	744

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing | Project Name: NNCPC
Road Name: Coast Highway | Job Number: 8211
Road Segment: East of Macarthur

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	50,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,020 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	5.06	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-12.18	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-16.14	-4.11	-1.20	-5.16	0.000	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	58.5	67.1	67.7
Medium Trucks:	62.0	60.4	54.1	52.5	61.0	61.2
Heavy Trucks:	62.8	61.4	52.3	53.6	61.9	62.1
Vehicle Noise:	70.0	68.3	65.1	60.5	69.0	69.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	86	185	399	859
CNEL:	92	198	428	921

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project | Project Name: NNCPC
Road Name: Jamboree | Job Number: 8211
Road Segment: North of Eastbluff

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	43,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,360 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	4.44	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-12.79	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-16.75	-4.11	-1.20	-5.16	0.000	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	57.9	66.5	67.1
Medium Trucks:	61.3	59.8	53.5	51.9	60.4	60.6
Heavy Trucks:	62.2	60.8	51.7	53.0	61.3	61.5
Vehicle Noise:	69.4	67.7	64.5	59.9	68.4	68.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	78	168	363	782
CNEL:	84	181	389	839

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project | Project Name: NNCPC
Road Name: Jamboree | Job Number: 8211
Road Segment: Eastbluff to San Joaquin Hills

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	53,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,370 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	5.35	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-11.89	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-15.85	-4.11	-1.20	-5.16	0.000	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:	62.2	60.7	54.4	52.8	61.3	61.5
Heavy Trucks:	63.1	61.7	52.6	53.9	62.2	62.4
Vehicle Noise:	70.3	68.6	65.4	60.8	69.3	69.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	90	194	417	898
CNEL:	96	208	447	964

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project | Project Name: NNCPC
Road Name: Jamboree | Job Number: 8211
Road Segment: South of San Joaquin Hills

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	36,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,600 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	3.61	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-13.63	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-17.58	-4.11	-1.20	-5.16	0.000	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:	60.5	59.0	52.6	51.1	59.6	59.8
Heavy Trucks:	61.4	59.9	50.9	52.1	60.5	60.6
Vehicle Noise:	68.6	66.9	63.7	59.0	67.6	68.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	69	148	319	688
CNEL:	74	159	343	738

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project | Project Name: NNCPC
Road Name: Jamboree | Job Number: 8211
Road Segment: North of Santa Barbara

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	38,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,860 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	3.91	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.32	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-17.28	-4.11	-1.20	*-5.16*	0.000	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	63.4	57.3	66.0	66.6
Medium Trucks:	60.8	59.3	52.9	51.4	59.9	60.1
Heavy Trucks:	61.7	60.2	51.2	52.5	60.8	60.9
Vehicle Noise:	68.9	67.2	64.0	59.3	67.9	68.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	72	155	335	721
CNEL:	77	167	359	773

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project | Project Name: NNCPC
Road Name: Jamboree | Job Number: 8211
Road Segment: South of Santa Barbara

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	34,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,460 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	3.44	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.80	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-17.75	-4.11	-1.20	*-5.16*	0.000	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:	60.3	58.8	52.5	50.9	59.4	59.6
Heavy Trucks:	61.2	59.8	50.7	52.0	60.3	60.5
Vehicle Noise:	68.4	66.7	63.5	58.8	67.4	67.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	67	144	311	670
CNEL:	72	155	334	719

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project | Project Name: NNCPC
Road Name: Jamboree | Job Number: 8211
Road Segment: North of Coast Highway

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,210 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	3.11	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-14.12	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-18.08	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.3	64.4	62.6	56.5	65.2	65.8
Medium Trucks:	60.0	58.5	52.1	50.6	59.1	59.3
Heavy Trucks:	60.9	59.4	50.4	51.6	60.0	60.1
Vehicle Noise:	68.1	66.4	63.2	58.5	67.1	67.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	64	137	296	637
CNEL:	68	147	317	684

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project | Project Name: NNCPC
Road Name: Jamboree | Job Number: 8211
Road Segment: South of Coast Highway

SITE SPECIFIC INPUT DATA

Highway Data

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:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-1.09	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-18.33	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-22.28	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.1	60.2	58.4	52.3	61.0	61.6
Medium Trucks:	55.8	54.3	47.9	46.4	54.9	55.1
Heavy Trucks:	56.7	55.2	46.2	47.4	55.8	55.9
Vehicle Noise:	63.9	62.2	59.0	54.3	62.9	63.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	33	72	155	334
CNEL:	36	77	167	359

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Santa Cruz
Road Segment: North of San Joaquin Hills
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	170 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-9.65	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-26.88	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-30.84	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	53.2	51.3	49.6	43.5	52.1	52.7
Medium Trucks:	47.0	45.5	39.1	37.6	46.0	46.3
Heavy Trucks:	47.8	46.4	37.4	38.6	47.0	47.1
Vehicle Noise:	55.1	53.3	50.2	45.5	54.0	54.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	9	19	40	86
CNEL:	9	20	43	92

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Santa Cruz
Road Segment: Souh of San Joaquin Hills
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,320 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-0.75	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-17.98	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-21.94	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.1	60.2	58.5	52.4	61.0	61.6
Medium Trucks:	55.9	54.4	48.0	46.5	54.9	55.2
Heavy Trucks:	56.7	55.3	46.3	47.5	55.9	56.0
Vehicle Noise:	64.0	62.2	59.1	54.4	62.9	63.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	34	73	157	338
CNEL:	36	78	168	362

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Santa Cruz
Road Segment: North of San Clemente
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,180 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-1.23	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-18.47	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-22.43	-4.39	-1.20	*-5.16*	0.000	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:	55.4	53.9	47.5	46.0	54.4	54.7
Heavy Trucks:	56.2	54.8	45.8	47.0	55.4	55.5
Vehicle Noise:	63.5	61.7	58.6	53.9	62.4	62.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	31	68	145	313
CNEL:	34	72	156	336

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Santa Cruz
Road Segment: South of San Clemente
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	940 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-2.22	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-19.46	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-23.41	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.6	58.7	57.0	50.9	59.5	60.2
Medium Trucks:	54.4	52.9	46.5	45.0	53.4	53.7
Heavy Trucks:	55.2	53.8	44.8	46.0	54.4	54.5
Vehicle Noise:	62.5	60.7	57.6	52.9	61.5	61.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	27	58	125	269
CNEL:	29	62	134	289

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Santa Cruz
Road Segment: North of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	900 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-2.41	-4.39	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-19.65	-4.39	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-23.60	-4.39	-1.20	-5.16	0.000	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	50.7	59.4	60.0
Medium Trucks:	54.2	52.7	46.3	44.8	53.3	53.5
Heavy Trucks:	55.1	53.6	44.6	45.8	54.2	54.3
Vehicle Noise:	62.3	60.5	57.4	52.7	61.3	61.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	26	56	121	262
CNEL:	28	60	130	281

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Santa Cruz
Road Segment: South of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	430 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-5.62	-4.39	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-22.85	-4.39	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-26.81	-4.39	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	57.3	55.4	53.6	47.5	56.2	56.8
Medium Trucks:	51.0	49.5	43.1	41.6	50.1	50.3
Heavy Trucks:	51.8	50.4	41.4	42.6	51.0	51.1
Vehicle Noise:	59.1	57.3	54.2	49.5	58.1	58.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	16	34	74	160
CNEL:	17	37	80	172

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Newport CTR
Road Segment: West of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	700 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-3.50	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-20.74	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-24.69	-4.11	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.6	57.7	56.0	49.9	58.5	59.2
Medium Trucks:	53.4	51.9	45.5	44.0	52.4	52.7
Heavy Trucks:	54.2	52.8	43.8	45.0	53.4	53.5
Vehicle Noise:	61.5	59.7	56.6	51.9	60.5	60.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	23	50	107	231
CNEL:	25	53	115	248

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Newport CTR
Road Segment: South of Santa Barbara
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	770 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-3.09	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-20.32	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-24.28	-4.11	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.1	58.2	56.4	50.3	59.0	59.6
Medium Trucks:	53.8	52.3	45.9	44.4	52.9	53.1
Heavy Trucks:	54.7	53.2	44.2	45.4	53.8	53.9
Vehicle Noise:	61.9	60.2	57.0	52.3	60.9	61.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	25	53	114	246
CNEL:	26	57	123	264

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Newport CTR
Road Segment: North of Santa Barbara
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	650 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-3.82	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-21.06	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-25.02	-4.11	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.3	57.4	55.7	49.6	58.2	58.8
Medium Trucks:	53.1	51.6	45.2	43.7	52.1	52.4
Heavy Trucks:	53.9	52.5	43.5	44.7	53.1	53.2
Vehicle Noise:	61.2	59.4	56.3	51.6	60.1	60.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	22	47	102	220
CNEL:	24	51	109	236

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Newport CTR
Road Segment: South of Santa Cruz
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	600 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-4.17	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-21.41	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-25.36	-4.11	-1.20	-5.16	0.000	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	49.3	57.9	58.5
Medium Trucks:	52.7	51.2	44.9	43.3	51.8	52.0
Heavy Trucks:	53.6	52.2	43.1	44.4	52.7	52.8
Vehicle Noise:	60.8	59.1	55.9	51.2	59.8	60.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	21	45	97	208
CNEL:	22	48	104	224

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Newport CTR
Road Segment: North of Santa Cruz
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	560 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-4.47	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-21.71	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-25.66	-4.11	-1.20	-5.16	0.000	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:	52.4	50.9	44.6	43.0	51.5	51.7
Heavy Trucks:	53.3	51.9	42.8	44.1	52.4	52.5
Vehicle Noise:	60.5	58.8	55.6	50.9	59.5	59.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	20	43	92	199
CNEL:	21	46	99	214

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Newport CTR
Road Segment: North of Santa Rosa
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	650 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-3.82	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-21.06	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-25.02	-4.11	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.3	57.4	55.7	49.6	58.2	58.8
Medium Trucks:	53.1	51.6	45.2	43.7	52.1	52.4
Heavy Trucks:	53.9	52.5	43.5	44.7	53.1	53.2
Vehicle Noise:	61.2	59.4	56.3	51.6	60.1	60.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	22	47	102	220
CNEL:	24	51	109	236

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Newport CTR
Road Segment: South of Santa Rosa
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	920 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-2.31	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-19.55	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-23.51	-4.11	-1.20	-5.16	0.000	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	57.2	51.1	59.7	60.3
Medium Trucks:	54.6	53.1	46.7	45.2	53.6	53.9
Heavy Trucks:	55.4	54.0	45.0	46.2	54.6	54.7
Vehicle Noise:	62.7	60.9	57.8	53.1	61.6	62.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	28	60	129	277
CNEL:	30	64	138	297

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Newport CTR
Road Segment: North of San Miguel
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	920 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-2.31	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-19.55	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-23.51	-4.11	-1.20	-5.16	0.000	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	57.2	51.1	59.7	60.3
Medium Trucks:	54.6	53.1	46.7	45.2	53.6	53.9
Heavy Trucks:	55.4	54.0	45.0	46.2	54.6	54.7
Vehicle Noise:	62.7	60.9	57.8	53.1	61.6	62.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	28	60	129	277
CNEL:	30	64	138	297

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Newport CTR
Road Segment: South of San Miguel
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,060 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-1.70	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-18.94	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-22.89	-4.11	-1.20	-5.16	0.000	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	57.8	51.7	60.4	61.0
Medium Trucks:	55.2	53.7	47.3	45.8	54.2	54.5
Heavy Trucks:	56.0	54.6	45.6	46.8	55.2	55.3
Vehicle Noise:	63.3	61.5	58.4	53.7	62.3	62.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	30	66	141	305
CNEL:	33	70	152	327

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Newport CTR
Road Segment: East of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	880 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-2.51	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-19.74	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-23.70	-4.11	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.6	58.7	57.0	50.9	59.5	60.1
Medium Trucks:	54.4	52.9	46.5	45.0	53.4	53.7
Heavy Trucks:	55.2	53.8	44.8	46.0	54.4	54.5
Vehicle Noise:	62.5	60.7	57.6	52.9	61.4	61.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	27	58	125	269
CNEL:	29	62	134	289

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Newport CTR
Road Segment: South of Newport CTR (Circle
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,900	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	1,290	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-0.85	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-18.08	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-22.04	-4.11	-1.20	*-5.16*	0.000	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:	56.1	54.5	48.2	46.6	55.1	55.3
Heavy Trucks:	56.9	55.5	46.4	47.7	56.0	56.2
Vehicle Noise:	64.1	62.4	59.2	54.6	63.1	63.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	35	75	161	347
CNEL:	37	80	173	372

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Newport CTR
Road Segment: North of Coast Highway
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,900	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	1,490	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-0.22	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-17.46	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-21.41	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.9	61.0	59.3	53.2	61.8	62.4
Medium Trucks:	56.7	55.2	48.8	47.3	55.7	56.0
Heavy Trucks:	57.5	56.1	47.1	48.3	56.7	56.8
Vehicle Noise:	64.8	63.0	59.9	55.2	63.7	64.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	38	82	177	382
CNEL:	41	88	190	410

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Santa Rosa
Road Segment: North of San Joaquin Hills
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,800	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	380	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	52	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-6.15	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-23.39	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-27.35	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	56.7	54.8	53.0	47.0	55.6	56.2
Medium Trucks:	50.5	49.0	42.6	41.1	49.5	49.7
Heavy Trucks:	51.3	49.9	40.9	42.1	50.5	50.6
Vehicle Noise:	58.5	56.8	53.7	49.0	57.5	58.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	15	32	68	147
CNEL:	16	34	73	158

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Santa Rosa
Road Segment: South of San Joaquin Hills
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,500	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	1,450	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	52	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-0.34	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-17.58	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-21.53	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.5	60.6	58.9	52.8	61.4	62.0
Medium Trucks:	56.3	54.8	48.4	46.9	55.3	55.6
Heavy Trucks:	57.1	55.7	46.7	47.9	56.3	56.4
Vehicle Noise:	64.4	62.6	59.5	54.8	63.3	63.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	36	77	167	360
CNEL:	39	83	179	386

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Santa Rosa
Road Segment: North of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

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:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-1.09	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-18.33	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-22.28	-4.39	-1.20	*-5.16*	0.000	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:	55.5	54.0	47.7	46.1	54.6	54.8
Heavy Trucks:	56.4	55.0	45.9	47.2	55.5	55.7
Vehicle Noise:	63.6	61.9	58.7	54.0	62.6	63.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	32	69	149	320
CNEL:	34	74	160	344

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Santa Rosa
Road Segment: South of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	680 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-3.63	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-20.86	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-24.82	-4.39	-1.20	*-5.16*	0.000	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:	53.0	51.5	45.1	43.6	52.0	52.3
Heavy Trucks:	53.8	52.4	43.4	44.6	53.0	53.1
Vehicle Noise:	61.1	59.3	56.2	51.5	60.0	60.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	22	47	101	217
CNEL:	23	50	108	233

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Avocado
Road Segment: North of San Miguel
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	420 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-5.21	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-22.45	-4.51	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	82.99	-26.40	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	55.6	53.7	51.9	45.9	54.5	55.1
Medium Trucks:	49.6	48.1	41.7	40.1	48.6	48.8
Heavy Trucks:	50.9	49.5	40.4	41.7	50.0	50.2
Vehicle Noise:	57.6	55.9	52.6	48.0	56.6	57.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	13	27	59	127
CNEL:	14	29	63	136

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Avocado
Road Segment: South of San Miguel
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,310 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-0.27	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-17.51	-4.51	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	82.99	-21.46	-4.51	-1.20	*-5.16*	0.000	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	56.9	50.8	59.4	60.0
Medium Trucks:	54.5	53.0	46.6	45.1	53.5	53.8
Heavy Trucks:	55.8	54.4	45.4	46.6	55.0	55.1
Vehicle Noise:	62.5	60.8	57.5	53.0	61.5	62.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	27	59	126	272
CNEL:	29	63	135	291

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Avocado
Road Segment: North of Coast Highway
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	920 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-1.80	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-19.04	-4.51	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	82.99	-23.00	-4.51	-1.20	*-5.16*	0.000	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	49.3	57.9	58.5
Medium Trucks:	53.0	51.5	45.1	43.5	52.0	52.2
Heavy Trucks:	54.3	52.9	43.8	45.1	53.4	53.6
Vehicle Noise:	61.0	59.3	56.0	51.4	60.0	60.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	21	46	100	215
CNEL:	23	50	107	230

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Macarthur
Road Segment: North of Bonita Canyon
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	72,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	7,290 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	6.68	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-10.56	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-14.52	-4.11	-1.20	*-5.16*	0.000	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	66.2	60.1	68.7	69.3
Medium Trucks:	63.6	62.1	55.7	54.2	62.6	62.9
Heavy Trucks:	64.4	63.0	54.0	55.2	63.6	63.7
Vehicle Noise:	71.7	69.9	66.8	62.1	70.6	71.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	110	237	511	1,101
CNEL:	118	255	548	1,181

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Macarthur
Road Segment: South of Bonita Canyon
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	61,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	6,150 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	5.94	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-11.30	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-15.26	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.1	67.2	65.4	59.4	68.0	68.6
Medium Trucks:	62.8	61.3	55.0	53.4	61.9	62.1
Heavy Trucks:	63.7	62.3	53.2	54.5	62.8	63.0
Vehicle Noise:	70.9	69.2	66.0	61.3	69.9	70.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	98	212	456	983
CNEL:	105	227	490	1,055

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Macarthur
Road Segment: North of San Joaquin Hills
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	61,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	6,150 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	5.94	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-11.30	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-15.26	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.1	67.2	65.4	59.4	68.0	68.6
Medium Trucks:	62.8	61.3	55.0	53.4	61.9	62.1
Heavy Trucks:	63.7	62.3	53.2	54.5	62.8	63.0
Vehicle Noise:	70.9	69.2	66.0	61.3	69.9	70.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	98	212	456	983
CNEL:	105	227	490	1,055

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Macarthur
Road Segment: South of San Joaquin Hills
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	38,800	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,880	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.94	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.30	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-17.26	-4.11	-1.20	*-5.16*	0.000	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	63.4	57.4	66.0	66.6
Medium Trucks:	60.8	59.3	53.0	51.4	59.9	60.1
Heavy Trucks:	61.7	60.3	51.2	52.5	60.8	61.0
Vehicle Noise:	68.9	67.2	64.0	59.3	67.9	68.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	72	156	336	723
CNEL:	78	167	360	776

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Macarthur
Road Segment: North of San Miguel
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	34,800	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,480	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.46	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.77	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-17.73	-4.11	-1.20	*-5.16*	0.000	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:	60.4	58.9	52.5	51.0	59.4	59.6
Heavy Trucks:	61.2	59.8	50.8	52.0	60.4	60.5
Vehicle Noise:	68.4	66.7	63.6	58.9	67.4	67.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	67	145	312	673
CNEL:	72	155	335	722

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Macarthur
Road Segment: South of San Miguel
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,600	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,860	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	2.61	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-14.63	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-18.58	-4.11	-1.20	*-5.16*	0.000	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	56.0	64.7	65.3
Medium Trucks:	59.5	58.0	51.6	50.1	58.6	58.8
Heavy Trucks:	60.4	58.9	49.9	51.1	59.5	59.6
Vehicle Noise:	67.6	65.9	62.7	58.0	66.6	67.0

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

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Macarthur
Road Segment: North of Coast Highway
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,700	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,870	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	2.63	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-14.61	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-18.57	-4.11	-1.20	*-5.16*	0.000	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:	59.5	58.0	51.7	50.1	58.6	58.8
Heavy Trucks:	60.4	59.0	49.9	51.2	59.5	59.6
Vehicle Noise:	67.6	65.9	62.7	58.0	66.6	67.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	59	127	275	592
CNEL:	63	137	295	635

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Eastbluff/Ford/Bonita Cyn
Road Segment: West of Jamboree

Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,440 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-0.37	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-17.61	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-21.56	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.5	60.6	58.8	52.8	61.4	62.0
Medium Trucks:	56.3	54.7	48.4	46.8	55.3	55.5
Heavy Trucks:	57.1	55.7	46.6	47.9	56.2	56.4
Vehicle Noise:	64.3	62.6	59.4	54.8	63.3	63.8

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

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Eastbluff/Ford/Bonita Cyn
Road Segment: East of Jamboree

Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,150 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-1.34	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-18.58	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-22.54	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.5	59.6	57.9	51.8	60.4	61.0
Medium Trucks:	55.3	53.8	47.4	45.9	54.3	54.6
Heavy Trucks:	56.1	54.7	45.7	46.9	55.3	55.4
Vehicle Noise:	63.4	61.6	58.5	53.8	62.3	62.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	31	66	143	308
CNEL:	33	71	153	330

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Eastbluff/Ford/Bonita Cyn
Road Segment: West of Bonita Canyon

Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,000 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-1.95	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-19.19	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-23.15	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.9	59.0	57.3	51.2	59.8	60.4
Medium Trucks:	54.7	53.2	46.8	45.3	53.7	53.9
Heavy Trucks:	55.5	54.1	45.1	46.3	54.7	54.8
Vehicle Noise:	62.7	61.0	57.9	53.2	61.7	62.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	28	60	130	281
CNEL:	30	65	140	301

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Eastbluff/Ford/Bonita Cyn
Road Segment: East of Bonita Canyon

Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	37,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,770 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.81	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.43	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-17.38	-4.39	-1.20	*-5.16*	0.000	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	63.0	57.0	65.6	66.2
Medium Trucks:	60.4	58.9	52.6	51.0	59.5	59.7
Heavy Trucks:	61.3	59.9	50.8	52.1	60.4	60.6
Vehicle Noise:	68.5	66.8	63.6	58.9	67.5	67.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	68	146	316	680
CNEL:	73	157	338	729

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: San Joaquin Hills
Road Segment: West of Jamboree
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	480 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-5.14	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-22.38	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-26.33	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	58.0	56.1	54.3	48.3	56.9	57.5
Medium Trucks:	51.8	50.3	43.9	42.3	50.8	51.0
Heavy Trucks:	52.6	51.2	42.1	43.4	51.8	51.9
Vehicle Noise:	59.8	58.1	55.0	50.3	58.8	59.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	18	39	83	180
CNEL:	19	42	89	193

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: San Joaquin Hills
Road Segment: East of Jamboree
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,790 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.58	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-16.66	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-20.62	-4.11	-1.20	*-5.16*	0.000	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	60.1	54.0	62.6	63.2
Medium Trucks:	57.5	56.0	49.6	48.1	56.5	56.8
Heavy Trucks:	58.3	56.9	47.9	49.1	57.5	57.6
Vehicle Noise:	65.6	63.8	60.7	56.0	64.5	65.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	43	93	200	432
CNEL:	46	100	215	463

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: San Joaquin Hills
Road Segment: West of Santa Cruz
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	22,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,200 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.47	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-15.77	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-19.72	-4.11	-1.20	*-5.16*	0.000	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:	58.4	56.9	50.5	49.0	57.4	57.7
Heavy Trucks:	59.2	57.8	48.8	50.0	58.4	58.5
Vehicle Noise:	66.5	64.7	61.6	56.9	65.4	65.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	50	107	230	496
CNEL:	53	115	247	532

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: San Joaquin Hills
Road Segment: East of Santa Cruz
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,380 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-0.55	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-17.79	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-21.75	-4.11	-1.20	*-5.16*	0.000	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	58.9	52.9	61.5	62.1
Medium Trucks:	56.3	54.8	48.5	46.9	55.4	55.6
Heavy Trucks:	57.2	55.8	46.7	48.0	56.3	56.5
Vehicle Noise:	64.4	62.7	59.5	54.9	63.4	63.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	36	78	169	363
CNEL:	39	84	181	390

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: San Joaquin Hills
Road Segment: West of Santa Rosa
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,800	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	1,580	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	0.04	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-17.20	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-21.16	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.2	61.3	59.5	53.5	62.1	62.7
Medium Trucks:	56.9	55.4	49.1	47.5	56.0	56.2
Heavy Trucks:	57.8	56.4	47.3	48.6	56.9	57.1
Vehicle Noise:	65.0	63.3	60.1	55.4	64.0	64.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	40	86	184	397
CNEL:	43	92	198	426

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: San Joaquin Hills
Road Segment: East of Santa Rosa
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,700	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,170	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	1.41	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-15.82	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-19.78	-4.11	-1.20	*-5.16*	0.000	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	60.9	54.8	63.5	64.1
Medium Trucks:	58.3	56.8	50.4	48.9	57.4	57.6
Heavy Trucks:	59.2	57.7	48.7	49.9	58.3	58.4
Vehicle Noise:	66.4	64.7	61.5	56.8	65.4	65.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	49	106	228	491
CNEL:	53	113	244	527

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: San Joaquin Hills
Road Segment: West of Macarthur
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

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:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	1.33	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-15.91	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-19.86	-4.11	-1.20	*-5.16*	0.000	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	54.8	63.4	64.0
Medium Trucks:	58.2	56.7	50.4	48.8	57.3	57.5
Heavy Trucks:	59.1	57.7	48.6	49.9	58.2	58.4
Vehicle Noise:	66.3	64.6	61.4	56.7	65.3	65.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	48	104	225	485
CNEL:	52	112	241	520

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: San Joaquin Hills
Road Segment: East of Macarthur
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,600	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,060	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	1.19	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-16.05	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-20.01	-4.11	-1.20	*-5.16*	0.000	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	60.7	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:	66.2	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:	47	102	220	474
CNEL:	51	110	236	509

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project | Project Name: NNCPC
Road Name: San Clemente | Job Number: 8211
Road Segment: East of Santa Barbara

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	570 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-3.88	-4.51	-1.20	-4.87	0.000	0.000
Medium Trucks:	77.72	-21.12	-4.51	-1.20	-4.97	0.000	0.000
Heavy Trucks:	82.99	-25.07	-4.51	-1.20	-5.16	0.000	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	53.3	47.2	55.8	56.4
Medium Trucks:	50.9	49.4	43.0	41.5	49.9	50.2
Heavy Trucks:	52.2	50.8	41.7	43.0	51.4	51.5
Vehicle Noise:	58.9	57.2	53.9	49.4	57.9	58.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	16	34	72	156
CNEL:	17	36	78	167

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project | Project Name: NNCPC
Road Name: San Clemente | Job Number: 8211
Road Segment: West of Santa Cruz

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	590 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-3.73	-4.51	-1.20	-4.87	0.000	0.000
Medium Trucks:	77.72	-20.97	-4.51	-1.20	-4.97	0.000	0.000
Heavy Trucks:	82.99	-24.93	-4.51	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	57.1	55.2	53.4	47.3	56.0	56.6
Medium Trucks:	51.0	49.5	43.2	41.6	50.1	50.3
Heavy Trucks:	52.4	50.9	41.9	43.1	51.5	51.6
Vehicle Noise:	59.1	57.3	54.1	49.5	58.1	58.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	16	34	74	160
CNEL:	17	37	79	171

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project | Project Name: NNCPC
Road Name: Santa Barbara | Job Number: 8211
Road Segment: West of Jamboree

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	210 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-8.22	-4.51	-1.20	-4.87	0.000	0.000
Medium Trucks:	77.72	-25.46	-4.51	-1.20	-4.97	0.000	0.000
Heavy Trucks:	82.99	-29.41	-4.51	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	52.6	50.7	48.9	42.9	51.5	52.1
Medium Trucks:	46.5	45.0	38.7	37.1	45.6	45.8
Heavy Trucks:	47.9	46.4	37.4	38.7	47.0	47.1
Vehicle Noise:	54.6	52.9	49.6	45.0	53.6	54.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	8	17	37	80
CNEL:	9	19	40	86

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project | Project Name: NNCPC
Road Name: Santa Barbara | Job Number: 8211
Road Segment: East of Jamboree

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,220 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-0.58	-4.51	-1.20	-4.87	0.000	0.000
Medium Trucks:	77.72	-17.81	-4.51	-1.20	-4.97	0.000	0.000
Heavy Trucks:	82.99	-21.77	-4.51	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.2	58.3	56.6	50.5	59.1	59.7
Medium Trucks:	54.2	52.7	46.3	44.8	53.2	53.5
Heavy Trucks:	55.5	54.1	45.1	46.3	54.7	54.8
Vehicle Noise:	62.2	60.5	57.2	52.7	61.2	61.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	26	56	120	259
CNEL:	28	60	129	278

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Santa Barbara
Road Segment: North of San Clemente
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		**Site Conditions (Hard = 10, Soft = 15)**	
Average Daily Traffic (Adt):	12,100 vehicles	Autos:	15
Peak Hour Percentage:	10%	Medium Trucks (2 Axles):	15
Peak Hour Volume:	1,210 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:	100.0 feet		
Centerline Dist. to Observer:	100.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-0.61	-4.51	-1.20	-4.87	0.000	0.000
Medium Trucks:	77.72	-17.85	-4.51	-1.20	-4.97	0.000	0.000
Heavy Trucks:	82.99	-21.81	-4.51	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.2	58.3	56.5	50.5	59.1	59.7
Medium Trucks:	54.2	52.6	46.3	44.7	53.2	53.4
Heavy Trucks:	55.5	54.1	45.0	46.3	54.6	54.7
Vehicle Noise:	62.2	60.5	57.2	52.6	61.2	61.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	26	56	120	258
CNEL:	28	59	128	276

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Santa Barbara
Road Segment: South of San Clemente
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		**Site Conditions (Hard = 10, Soft = 15)**	
Average Daily Traffic (Adt):	7,300 vehicles	Autos:	15
Peak Hour Percentage:	10%	Medium Trucks (2 Axles):	15
Peak Hour Volume:	730 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:	100.0 feet		
Centerline Dist. to Observer:	100.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-2.81	-4.51	-1.20	-4.87	0.000	0.000
Medium Trucks:	77.72	-20.04	-4.51	-1.20	-4.97	0.000	0.000
Heavy Trucks:	82.99	-24.00	-4.51	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	58.0	56.1	54.3	48.3	56.9	57.5
Medium Trucks:	52.0	50.5	44.1	42.5	51.0	51.2
Heavy Trucks:	53.3	51.9	42.8	44.1	52.4	52.6
Vehicle Noise:	60.0	58.3	55.0	50.4	59.0	59.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	18	40	85	184
CNEL:	20	42	91	197

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Santa Barbara
Road Segment: West of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		**Site Conditions (Hard = 10, Soft = 15)**	
Average Daily Traffic (Adt):	6,400 vehicles	Autos:	15
Peak Hour Percentage:	10%	Medium Trucks (2 Axles):	15
Peak Hour Volume:	640 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:	100.0 feet		
Centerline Dist. to Observer:	100.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-3.38	-4.51	-1.20	-4.87	0.000	0.000
Medium Trucks:	77.72	-20.62	-4.51	-1.20	-4.97	0.000	0.000
Heavy Trucks:	82.99	-24.57	-4.51	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	57.4	55.5	53.8	47.7	56.3	56.9
Medium Trucks:	51.4	49.9	43.5	42.0	50.4	50.7
Heavy Trucks:	52.7	51.3	42.3	43.5	51.9	52.0
Vehicle Noise:	59.4	57.7	54.4	49.9	58.4	58.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	17	36	78	169
CNEL:	18	39	84	181

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Santa Barbara
Road Segment: East of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		**Site Conditions (Hard = 10, Soft = 15)**	
Average Daily Traffic (Adt):	3,300 vehicles	Autos:	15
Peak Hour Percentage:	10%	Medium Trucks (2 Axles):	15
Peak Hour Volume:	330 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:	100.0 feet		
Centerline Dist. to Observer:	100.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-6.25	-4.51	-1.20	-4.87	0.000	0.000
Medium Trucks:	77.72	-23.49	-4.51	-1.20	-4.97	0.000	0.000
Heavy Trucks:	82.99	-27.45	-4.51	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	54.5	52.6	50.9	44.8	53.4	54.1
Medium Trucks:	48.5	47.0	40.6	39.1	47.6	47.8
Heavy Trucks:	49.8	48.4	39.4	40.6	49.0	49.1
Vehicle Noise:	56.5	54.8	51.5	47.0	55.5	56.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	11	23	50	108
CNEL:	12	25	54	116

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: San Miguel
Road Segment: West of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	780 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-3.03	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-20.27	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-24.22	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.8	57.9	56.2	50.1	58.7	59.3
Medium Trucks:	53.6	52.1	45.7	44.2	52.6	52.9
Heavy Trucks:	54.4	53.0	44.0	45.2	53.6	53.7
Vehicle Noise:	61.7	59.9	56.8	52.1	60.6	61.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	24	51	110	238
CNEL:	26	55	118	255

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: San Miguel
Road Segment: East of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

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:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-0.91	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-18.15	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-22.11	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.0	60.1	58.3	52.2	60.9	61.5
Medium Trucks:	55.7	54.2	47.8	46.3	54.8	55.0
Heavy Trucks:	56.6	55.1	46.1	47.3	55.7	55.8
Vehicle Noise:	63.8	62.0	58.9	54.2	62.8	63.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	33	71	153	329
CNEL:	35	76	164	353

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: San Miguel
Road Segment: West of Avacado
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,640 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.20	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-17.04	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-21.00	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.1	61.2	59.4	53.3	62.0	62.6
Medium Trucks:	56.8	55.3	48.9	47.4	55.9	56.1
Heavy Trucks:	57.7	56.2	47.2	48.5	56.8	56.9
Vehicle Noise:	64.9	63.2	60.0	55.3	63.9	64.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	39	84	181	390
CNEL:	42	90	194	419

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: San Miguel
Road Segment: East of Avacado
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,430 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.91	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-15.33	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-19.29	-4.39	-1.20	*-5.16*	0.000	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	61.1	55.1	63.7	64.3
Medium Trucks:	58.5	57.0	50.7	49.1	57.6	57.8
Heavy Trucks:	59.4	57.9	48.9	50.2	58.5	58.6
Vehicle Noise:	66.6	64.9	61.7	57.0	65.6	66.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	51	109	235	507
CNEL:	54	117	253	544

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: San Miguel
Road Segment: West of Macarthur
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	22,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,210 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.49	-4.39	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-15.75	-4.39	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-19.70	-4.39	-1.20	-5.16	0.000	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	54.6	63.3	63.9
Medium Trucks:	58.1	56.6	50.2	48.7	57.2	57.4
Heavy Trucks:	59.0	57.5	48.5	49.7	58.1	58.2
Vehicle Noise:	66.2	64.5	61.3	56.6	65.2	65.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	48	103	221	476
CNEL:	51	110	237	511

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: San Miguel
Road Segment: East of Macarthur
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,180 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-1.23	-4.39	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-18.47	-4.39	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-22.43	-4.39	-1.20	-5.16	0.000	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:	55.4	53.9	47.5	46.0	54.4	54.7
Heavy Trucks:	56.2	54.8	45.8	47.0	55.4	55.5
Vehicle Noise:	63.5	61.7	58.6	53.9	62.4	62.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	31	68	145	313
CNEL:	34	72	156	336

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Coast Highway
Road Segment: West of Jamboree
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	60,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	6,000 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	5.83	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-11.41	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-15.36	-4.11	-1.20	-5.16	0.000	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:	62.7	61.2	54.9	53.3	61.8	62.0
Heavy Trucks:	63.6	62.2	53.1	54.4	62.7	62.8
Vehicle Noise:	70.8	69.1	65.9	61.2	69.8	70.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	97	208	449	967
CNEL:	104	224	482	1,038

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Coast Highway
Road Segment: East of Jamboree
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	47,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,700 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	4.77	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-12.47	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-16.42	-4.11	-1.20	-5.16	0.000	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	64.3	58.2	66.8	67.4
Medium Trucks:	61.7	60.2	53.8	52.3	60.7	60.9
Heavy Trucks:	62.5	61.1	52.1	53.3	61.7	61.8
Vehicle Noise:	69.8	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:	82	177	382	822
CNEL:	88	190	409	882

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Coast Highway
Road Segment: West of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	43,600	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	4,360	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	4.44	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-12.79	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-16.75	-4.11	-1.20	*-5.16*	0.000	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	57.9	66.5	67.1
Medium Trucks:	61.3	59.8	53.5	51.9	60.4	60.6
Heavy Trucks:	62.2	60.8	51.7	53.0	61.3	61.5
Vehicle Noise:	69.4	67.7	64.5	59.9	68.4	68.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	78	168	363	782
CNEL:	84	181	389	839

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Coast Highway
Road Segment: East of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	35,800	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,580	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.59	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.65	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-17.61	-4.11	-1.20	*-5.16*	0.000	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:	60.5	59.0	52.6	51.1	59.5	59.8
Heavy Trucks:	61.3	59.9	50.9	52.1	60.5	60.6
Vehicle Noise:	68.6	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:	69	148	318	686
CNEL:	74	158	341	735

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Coast Highway
Road Segment: West of Avacado
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	34,500	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,450	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.43	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.81	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-17.77	-4.11	-1.20	*-5.16*	0.000	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:	60.3	58.8	52.5	50.9	59.4	59.6
Heavy Trucks:	61.2	59.7	50.7	52.0	60.3	60.4
Vehicle Noise:	68.4	66.7	63.5	58.8	67.4	67.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	67	144	310	669
CNEL:	72	155	333	718

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Coast Highway
Road Segment: East of Avacado
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	36,400	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,640	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.66	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.58	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-17.53	-4.11	-1.20	*-5.16*	0.000	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	57.1	65.7	66.3
Medium Trucks:	60.6	59.1	52.7	51.1	59.6	59.8
Heavy Trucks:	61.4	60.0	50.9	52.2	60.6	60.7
Vehicle Noise:	68.6	66.9	63.7	59.1	67.6	68.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	69	149	322	693
CNEL:	74	160	345	744

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project | Project Name: NNCPC
Road Name: Coast Highway | Job Number: 8211
Road Segment: West of Macarthur

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	36,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,650 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	3.67	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-13.57	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-17.52	-4.11	-1.20	-5.16	0.000	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:	60.6	59.1	52.7	51.2	59.6	59.9
Heavy Trucks:	61.4	60.0	51.0	52.2	60.6	60.7
Vehicle Noise:	68.7	66.9	63.8	59.1	67.6	68.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	69	150	322	694
CNEL:	74	161	346	745

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project | Project Name: NNCPC
Road Name: Coast Highway | Job Number: 8211
Road Segment: East of Macarthur

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	50,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,030 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	5.06	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-12.17	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-16.13	-4.11	-1.20	-5.16	0.000	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	58.5	67.1	67.7
Medium Trucks:	62.0	60.5	54.1	52.6	61.0	61.2
Heavy Trucks:	62.8	61.4	52.4	53.6	62.0	62.1
Vehicle Noise:	70.0	68.3	65.2	60.5	69.0	69.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	86	185	399	860
CNEL:	92	199	428	923

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project | Project Name: NNCPC
Road Name: Jamboree | Job Number: 8211
Road Segment: North of Eastbluff

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	52,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,220 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	5.23	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-12.01	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-15.97	-4.11	-1.20	-5.16	0.000	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:	62.1	60.6	54.3	52.7	61.2	61.4
Heavy Trucks:	63.0	61.5	52.5	53.8	62.1	62.2
Vehicle Noise:	70.2	68.5	65.3	60.6	69.2	69.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	88	190	409	882
CNEL:	95	204	439	946

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project | Project Name: NNCPC
Road Name: Jamboree | Job Number: 8211
Road Segment: Eastbluff to San Joaquin Hills

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	63,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	6,300 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	6.04	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-11.20	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-15.15	-4.11	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.2	67.3	65.5	59.5	68.1	68.7
Medium Trucks:	62.9	61.4	55.1	53.5	62.0	62.2
Heavy Trucks:	63.8	62.4	53.3	54.6	62.9	63.1
Vehicle Noise:	71.0	69.3	66.1	61.5	70.0	70.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	100	215	464	999
CNEL:	107	231	498	1,072

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Jamboree
Road Segment: South of San Joaquin Hills
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	43,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,300 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	4.38	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-12.85	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-16.81	-4.11	-1.20	*-5.16*	0.000	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	63.9	57.8	66.4	67.0
Medium Trucks:	61.3	59.8	53.4	51.9	60.3	60.6
Heavy Trucks:	62.1	60.7	51.7	52.9	61.3	61.4
Vehicle Noise:	69.4	67.6	64.5	59.8	68.3	68.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	77	167	360	775
CNEL:	83	179	386	831

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Jamboree
Road Segment: North of Santa Barbara
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	45,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,510 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	4.59	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-12.65	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-16.60	-4.11	-1.20	*-5.16*	0.000	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	64.1	58.0	66.6	67.2
Medium Trucks:	61.5	60.0	53.6	52.1	60.5	60.8
Heavy Trucks:	62.3	60.9	51.9	53.1	61.5	61.6
Vehicle Noise:	69.6	67.8	64.7	60.0	68.5	69.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	80	172	371	800
CNEL:	86	185	398	858

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Jamboree
Road Segment: South of Santa Barbara
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	41,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,100 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	4.18	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.06	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-17.02	-4.11	-1.20	*-5.16*	0.000	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:	61.1	59.6	53.2	51.7	60.1	60.4
Heavy Trucks:	61.9	60.5	51.5	52.7	61.1	61.2
Vehicle Noise:	69.2	67.4	64.3	59.6	68.1	68.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	75	162	348	750
CNEL:	81	173	374	805

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Jamboree
Road Segment: North of Coast Highway
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	38,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,860 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	3.91	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.32	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-17.28	-4.11	-1.20	*-5.16*	0.000	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	63.4	57.3	66.0	66.6
Medium Trucks:	60.8	59.3	52.9	51.4	59.9	60.1
Heavy Trucks:	61.7	60.2	51.2	52.5	60.8	60.9
Vehicle Noise:	68.9	67.2	64.0	59.3	67.9	68.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	72	155	335	721
CNEL:	77	167	359	773

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Jamboree
Road Segment: South of Coast Highway
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,290 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-0.85	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-18.08	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-22.04	-4.11	-1.20	-5.16	0.000	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:	56.1	54.5	48.2	46.6	55.1	55.3
Heavy Trucks:	56.9	55.5	46.4	47.7	56.0	56.2
Vehicle Noise:	64.1	62.4	59.2	54.6	63.1	63.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	35	75	161	347
CNEL:	37	80	173	372

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Santa Cruz
Road Segment: North of San Joaquin Hills
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	170 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-9.65	-4.39	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-26.88	-4.39	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-30.84	-4.39	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	53.2	51.3	49.6	43.5	52.1	52.7
Medium Trucks:	47.0	45.5	39.1	37.6	46.0	46.3
Heavy Trucks:	47.8	46.4	37.4	38.6	47.0	47.1
Vehicle Noise:	55.1	53.3	50.2	45.5	54.0	54.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	9	19	40	86
CNEL:	9	20	43	92

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Santa Cruz
Road Segment: Souh of San Joaquin Hills
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,250 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-0.98	-4.39	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-18.22	-4.39	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-22.18	-4.39	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.9	60.0	58.2	52.2	60.8	61.4
Medium Trucks:	55.6	54.1	47.8	46.2	54.7	54.9
Heavy Trucks:	56.5	55.1	46.0	47.3	55.6	55.8
Vehicle Noise:	63.7	62.0	58.8	54.1	62.7	63.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	33	70	151	326
CNEL:	35	75	162	349

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Santa Cruz
Road Segment: North of San Clemente
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

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:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-1.05	-4.39	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-18.29	-4.39	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-22.25	-4.39	-1.20	-5.16	0.000	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:	55.6	54.1	47.7	46.2	54.6	54.8
Heavy Trucks:	56.4	55.0	46.0	47.2	55.6	55.7
Vehicle Noise:	63.6	61.9	58.8	54.1	62.6	63.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	32	69	150	322
CNEL:	35	74	160	346

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Santa Cruz
Road Segment: South of San Clemente
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,900	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	990	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	52	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-1.99	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-19.23	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-23.19	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.9	59.0	57.2	51.2	59.8	60.4
Medium Trucks:	54.6	53.1	46.8	45.2	53.7	53.9
Heavy Trucks:	55.5	54.0	45.0	46.3	54.6	54.7
Vehicle Noise:	62.7	61.0	57.8	53.1	61.7	62.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	28	60	129	279
CNEL:	30	64	139	299

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Santa Cruz
Road Segment: North of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,500	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	950	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	52	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-2.17	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-19.41	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-23.37	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.7	58.8	57.0	51.0	59.6	60.2
Medium Trucks:	54.4	52.9	46.6	45.0	53.5	53.7
Heavy Trucks:	55.3	53.9	44.8	46.1	54.4	54.6
Vehicle Noise:	62.5	60.8	57.6	53.0	61.5	62.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	27	58	126	271
CNEL:	29	63	135	291

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Santa Cruz
Road Segment: South of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,600	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	460	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	52	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-5.32	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-22.56	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-26.52	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	57.5	55.6	53.9	47.8	56.4	57.1
Medium Trucks:	51.3	49.8	43.4	41.9	50.3	50.6
Heavy Trucks:	52.1	50.7	41.7	42.9	51.3	51.4
Vehicle Noise:	59.4	57.6	54.5	49.8	58.3	58.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	17	36	78	167
CNEL:	18	39	83	179

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Newport CTR
Road Segment: West of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,300	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	730	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-3.32	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-20.56	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-24.51	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	59.8	57.9	56.2	50.1	58.7	59.3
Medium Trucks:	53.6	52.1	45.7	44.2	52.6	52.9
Heavy Trucks:	54.4	53.0	44.0	45.2	53.6	53.7
Vehicle Noise:	61.7	59.9	56.8	52.1	60.6	61.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	24	51	110	238
CNEL:	25	55	118	255

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Newport CTR
Road Segment: South of Santa Barbara
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	790 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-2.97	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-20.21	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-24.17	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.2	58.3	56.5	50.5	59.1	59.7
Medium Trucks:	53.9	52.4	46.1	44.5	53.0	53.2
Heavy Trucks:	54.8	53.3	44.3	45.6	53.9	54.0
Vehicle Noise:	62.0	60.3	57.1	52.4	61.0	61.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	25	54	116	250
CNEL:	27	58	125	269

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Newport CTR
Road Segment: North of Santa Barbara
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	690 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-3.56	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-20.80	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-24.76	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	59.6	57.7	55.9	49.9	58.5	59.1
Medium Trucks:	53.3	51.8	45.5	43.9	52.4	52.6
Heavy Trucks:	54.2	52.8	43.7	45.0	53.3	53.5
Vehicle Noise:	61.4	59.7	56.5	51.8	60.4	60.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	23	49	106	229
CNEL:	25	53	114	245

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Newport CTR
Road Segment: South of Santa Cruz
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	630 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-3.96	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-21.20	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-25.15	-4.11	-1.20	*-5.16*	0.000	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	55.5	49.5	58.1	58.7
Medium Trucks:	52.9	51.4	45.1	43.5	52.0	52.2
Heavy Trucks:	53.8	52.4	43.3	44.6	52.9	53.1
Vehicle Noise:	61.0	59.3	56.1	51.5	60.0	60.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	22	46	100	215
CNEL:	23	50	107	231

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Newport CTR
Road Segment: North of Santa Cruz
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	580 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-4.32	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-21.56	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-25.51	-4.11	-1.20	*-5.16*	0.000	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	55.2	49.1	57.7	58.3
Medium Trucks:	52.6	51.1	44.7	43.2	51.6	51.9
Heavy Trucks:	53.4	52.0	43.0	44.2	52.6	52.7
Vehicle Noise:	60.7	58.9	55.8	51.1	59.6	60.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	20	44	95	204
CNEL:	22	47	101	219

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Newport CTR
Road Segment: North of Santa Rosa
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,300	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	730	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-3.32	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-20.56	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-24.51	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	59.8	57.9	56.2	50.1	58.7	59.3
Medium Trucks:	53.6	52.1	45.7	44.2	52.6	52.9
Heavy Trucks:	54.4	53.0	44.0	45.2	53.6	53.7
Vehicle Noise:	61.7	59.9	56.8	52.1	60.6	61.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	24	51	110	238
CNEL:	25	55	118	255

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Newport CTR
Road Segment: South of Santa Rosa
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,000	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	1,000	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-1.95	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-19.19	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-23.15	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.2	59.3	57.5	51.5	60.1	60.7
Medium Trucks:	54.9	53.4	47.1	45.5	54.0	54.2
Heavy Trucks:	55.8	54.4	45.3	46.6	54.9	55.1
Vehicle Noise:	63.0	61.3	58.1	53.5	62.0	62.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	29	63	136	293
CNEL:	31	68	146	314

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Newport CTR
Road Segment: North of San Miguel
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,600	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	760	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-3.14	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-20.38	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-24.34	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.0	58.1	56.3	50.3	58.9	59.5
Medium Trucks:	53.8	52.2	45.9	44.3	52.8	53.0
Heavy Trucks:	54.6	53.2	44.1	45.4	53.7	53.9
Vehicle Noise:	61.8	60.1	56.9	52.3	60.8	61.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	24	53	113	244
CNEL:	26	56	121	262

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Newport CTR
Road Segment: South of San Miguel
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,900	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	1,090	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-1.58	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-18.82	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-22.77	-4.11	-1.20	*-5.16*	0.000	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	51.8	60.5	61.1
Medium Trucks:	55.3	53.8	47.5	45.9	54.4	54.6
Heavy Trucks:	56.2	54.7	45.7	47.0	55.3	55.4
Vehicle Noise:	63.4	61.7	58.5	53.8	62.4	62.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	31	67	144	310
CNEL:	33	72	154	333

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Newport CTR
Road Segment: East of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		**Site Conditions (Hard = 10, Soft = 15)**	
Average Daily Traffic (Adt):	9,100 vehicles	Autos:	15
Peak Hour Percentage:	10%	Medium Trucks (2 Axles):	15
Peak Hour Volume:	910 vehicles	Heavy Trucks (3+ Axles):	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	76 feet		
Site Data		**Vehicle Mix**	
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	100.0 feet		
Centerline Dist. to Observer:	100.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-2.36	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-19.60	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-23.55	-4.11	-1.20	-5.16	0.000	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:	54.5	53.0	46.7	45.1	53.6	53.8
Heavy Trucks:	55.4	54.0	44.9	46.2	54.5	54.7
Vehicle Noise:	62.6	60.9	57.7	53.0	61.6	62.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	28	59	128	275
CNEL:	30	64	137	295

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Newport CTR
Road Segment: South of Newport CTR (Circle
Project Name: NNCPC
Job Number: 8211

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:	45 mph		
Near/Far Lane Distance:	76 feet		
Site Data		**Vehicle Mix**	
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	100.0 feet		
Centerline Dist. to Observer:	100.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-0.43	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-17.67	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-21.62	-4.11	-1.20	-5.16	0.000	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:	56.5	55.0	48.6	47.1	55.5	55.8
Heavy Trucks:	57.3	55.9	46.9	48.1	56.5	56.6
Vehicle Noise:	64.6	62.8	59.7	55.0	63.5	64.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	37	80	172	370
CNEL:	40	86	184	397

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Newport CTR
Road Segment: North of Coast Highway
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		**Site Conditions (Hard = 10, Soft = 15)**	
Average Daily Traffic (Adt):	16,400 vehicles	Autos:	15
Peak Hour Percentage:	10%	Medium Trucks (2 Axles):	15
Peak Hour Volume:	1,640 vehicles	Heavy Trucks (3+ Axles):	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	76 feet		
Site Data		**Vehicle Mix**	
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	100.0 feet		
Centerline Dist. to Observer:	100.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.20	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-17.04	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-21.00	-4.11	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.3	61.4	59.7	53.6	62.2	62.9
Medium Trucks:	57.1	55.6	49.2	47.7	56.1	56.4
Heavy Trucks:	57.9	56.5	47.5	48.7	57.1	57.2
Vehicle Noise:	65.2	63.4	60.3	55.6	64.2	64.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	41	88	189	407
CNEL:	44	94	203	437

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Santa Rosa
Road Segment: North of San Joaquin Hills
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		**Site Conditions (Hard = 10, Soft = 15)**	
Average Daily Traffic (Adt):	3,800 vehicles	Autos:	15
Peak Hour Percentage:	10%	Medium Trucks (2 Axles):	15
Peak Hour Volume:	380 vehicles	Heavy Trucks (3+ Axles):	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	52 feet		
Site Data		**Vehicle Mix**	
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	100.0 feet		
Centerline Dist. to Observer:	100.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-6.15	-4.39	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-23.39	-4.39	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-27.35	-4.39	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	56.7	54.8	53.0	47.0	55.6	56.2
Medium Trucks:	50.5	49.0	42.6	41.1	49.5	49.7
Heavy Trucks:	51.3	49.9	40.9	42.1	50.5	50.6
Vehicle Noise:	58.5	56.8	53.7	49.0	57.5	58.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	15	32	68	147
CNEL:	16	34	73	158

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Santa Rosa
Road Segment: South of San Joaquin Hills
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,800	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	1,680	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	52	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	0.30	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-16.94	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-20.89	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.2	61.3	59.5	53.4	62.1	62.7
Medium Trucks:	56.9	55.4	49.1	47.5	56.0	56.2
Heavy Trucks:	57.8	56.3	47.3	48.6	56.9	57.0
Vehicle Noise:	65.0	63.3	60.1	55.4	64.0	64.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	40	85	184	397
CNEL:	43	92	197	425

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Santa Rosa
Road Segment: North of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,300	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	1,430	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	52	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-0.40	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-17.64	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-21.59	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.5	60.6	58.8	52.7	61.4	62.0
Medium Trucks:	56.2	54.7	48.4	46.8	55.3	55.5
Heavy Trucks:	57.1	55.6	46.6	47.9	56.2	56.3
Vehicle Noise:	64.3	62.6	59.4	54.7	63.3	63.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	36	77	165	356
CNEL:	38	82	177	382

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Santa Rosa
Road Segment: South of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,900	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	790	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	52	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-2.97	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-20.21	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-24.17	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	59.9	58.0	56.2	50.2	58.8	59.4
Medium Trucks:	53.6	52.1	45.8	44.2	52.7	52.9
Heavy Trucks:	54.5	53.1	44.0	45.3	53.6	53.8
Vehicle Noise:	61.7	60.0	56.8	52.2	60.7	61.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	24	52	111	240
CNEL:	26	55	119	257

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Avocado
Road Segment: North of San Miguel
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

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

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-4.45	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-21.69	-4.51	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	82.99	-25.64	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	56.3	54.4	52.7	46.6	55.2	55.9
Medium Trucks:	50.3	48.8	42.4	40.9	49.4	49.6
Heavy Trucks:	51.6	50.2	41.2	42.4	50.8	50.9
Vehicle Noise:	58.4	56.6	53.3	48.8	57.3	57.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	14	31	66	143
CNEL:	15	33	71	153

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Avocado
Road Segment: South of San Miguel
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,500	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	1,550	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	0.46	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-16.77	-4.51	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	82.99	-20.73	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.3	59.4	57.6	51.5	60.2	60.8
Medium Trucks:	55.2	53.7	47.4	45.8	54.3	54.5
Heavy Trucks:	56.5	55.1	46.1	47.3	55.7	55.8
Vehicle Noise:	63.3	61.5	58.3	53.7	62.2	62.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	30	66	141	304
CNEL:	33	70	151	326

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Avocado
Road Segment: North of Coast Highway
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,000	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	1,100	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-1.03	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-18.26	-4.51	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	82.99	-22.22	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	59.8	57.9	56.1	50.1	58.7	59.3
Medium Trucks:	53.7	52.2	45.9	44.3	52.8	53.0
Heavy Trucks:	55.1	53.6	44.6	45.9	54.2	54.3
Vehicle Noise:	61.8	60.0	56.8	52.2	60.8	61.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	24	52	112	242
CNEL:	26	56	120	259

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Macarthur
Road Segment: North of Bonita Canyon
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	80,400	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	8,040	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	7.10	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-10.14	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-14.09	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.2	68.3	66.6	60.5	69.2	69.8
Medium Trucks:	64.0	62.5	56.1	54.6	63.0	63.3
Heavy Trucks:	64.8	63.4	54.4	55.6	64.0	64.1
Vehicle Noise:	72.1	70.3	67.2	62.5	71.1	71.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	118	253	546	1,176
CNEL:	126	272	585	1,261

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Macarthur
Road Segment: South of Bonita Canyon
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	69,100	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	6,910	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	6.44	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-10.79	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-14.75	-4.11	-1.20	*-5.16*	0.000	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:	63.3	61.8	55.5	53.9	62.4	62.6
Heavy Trucks:	64.2	62.8	53.7	55.0	63.3	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:	106	229	493	1,063
CNEL:	114	246	529	1,140

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Macarthur
Road Segment: North of San Joaquin Hills
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	68,100	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	6,810	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	6.38	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-10.86	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-14.81	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.5	67.6	65.9	59.8	68.4	69.0
Medium Trucks:	63.3	61.8	55.4	53.9	62.3	62.6
Heavy Trucks:	64.1	62.7	53.7	54.9	63.3	63.4
Vehicle Noise:	71.4	69.6	66.5	61.8	70.3	70.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	105	227	489	1,053
CNEL:	113	243	524	1,129

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Macarthur
Road Segment: South of San Joaquin Hills
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	43,400	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	4,340	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	4.42	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-12.81	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-16.77	-4.11	-1.20	*-5.16*	0.000	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	57.9	66.5	67.1
Medium Trucks:	61.3	59.8	53.5	51.9	60.4	60.6
Heavy Trucks:	62.2	60.7	51.7	53.0	61.3	61.4
Vehicle Noise:	69.4	67.7	64.5	59.8	68.4	68.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	78	168	362	779
CNEL:	84	180	388	836

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Macarthur
Road Segment: North of San Miguel
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	38,800	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,880	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.94	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.30	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-17.26	-4.11	-1.20	*-5.16*	0.000	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	63.4	57.4	66.0	66.6
Medium Trucks:	60.8	59.3	53.0	51.4	59.9	60.1
Heavy Trucks:	61.7	60.3	51.2	52.5	60.8	61.0
Vehicle Noise:	68.9	67.2	64.0	59.3	67.9	68.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	72	156	336	723
CNEL:	78	167	360	776

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Macarthur
Road Segment: South of San Miguel
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,400	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,240	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.15	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-14.08	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-18.04	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	66.3	64.4	62.6	56.6	65.2	65.8
Medium Trucks:	60.1	58.5	52.2	50.6	59.1	59.3
Heavy Trucks:	60.9	59.5	50.4	51.7	60.0	60.2
Vehicle Noise:	68.1	66.4	63.2	58.6	67.1	67.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	64	138	298	641
CNEL:	69	148	319	688

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Macarthur
Road Segment: North of Coast Highway
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,500	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,250	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.17	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-14.07	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-18.03	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	66.3	64.4	62.6	56.6	65.2	65.8
Medium Trucks:	60.1	58.6	52.2	50.7	59.1	59.3
Heavy Trucks:	60.9	59.5	50.5	51.7	60.1	60.2
Vehicle Noise:	68.1	66.4	63.3	58.6	67.1	67.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	64	138	298	643
CNEL:	69	149	320	690

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Eastbluff/Ford/Bonita Cyn
Road Segment: West of Jamboree
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,300	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	1,530	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	52	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-0.10	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-17.34	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-21.30	-4.39	-1.20	*-5.16*	0.000	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	59.1	53.0	61.7	62.3
Medium Trucks:	56.5	55.0	48.6	47.1	55.6	55.8
Heavy Trucks:	57.4	55.9	46.9	48.2	56.5	56.6
Vehicle Noise:	64.6	62.9	59.7	55.0	63.6	64.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	37	80	173	373
CNEL:	40	86	186	400

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Eastbluff/Ford/Bonita Cyn
Road Segment: East of Jamboree
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

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:	52	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-1.09	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-18.33	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-22.28	-4.39	-1.20	*-5.16*	0.000	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:	55.5	54.0	47.7	46.1	54.6	54.8
Heavy Trucks:	56.4	55.0	45.9	47.2	55.5	55.7
Vehicle Noise:	63.6	61.9	58.7	54.0	62.6	63.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	32	69	149	320
CNEL:	34	74	160	344

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Eastbluff/Ford/Bonita Cyn
Road Segment: West of Bonita Canyon
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,600	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	1,060	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	52	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-1.70	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-18.94	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-22.89	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.2	59.3	57.5	51.4	60.1	60.7
Medium Trucks:	54.9	53.4	47.1	45.5	54.0	54.2
Heavy Trucks:	55.8	54.3	45.3	46.6	54.9	55.0
Vehicle Noise:	63.0	61.3	58.1	53.4	62.0	62.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	29	63	135	292
CNEL:	31	67	145	313

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Eastbluff/Ford/Bonita Cyn
Road Segment: East of Bonita Canyon
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	39,300 vehicles	*Autos:*	15
Peak Hour Percentage:	10%	*Medium Trucks (2 Axles):*	15
Peak Hour Volume:	3,930 vehicles	*Heavy Trucks (3+ Axles):*	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	52 feet		
Site Data			
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	100.0 feet		
Centerline Dist. to Observer:	100.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	3.99	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.25	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-17.20	-4.39	-1.20	*-5.16*	0.000	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	63.2	57.1	65.8	66.4
Medium Trucks:	60.6	59.1	52.7	51.2	59.7	59.9
Heavy Trucks:	61.5	60.0	51.0	52.2	60.6	60.7
Vehicle Noise:	68.7	67.0	63.8	59.1	67.7	68.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	70	151	324	699
CNEL:	75	162	348	750

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: San Joaquin Hills
Road Segment: West of Jamboree
Project Name: NNCPC
Job Number: 8211

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:	45 mph		
Near/Far Lane Distance:	76 feet		
Site Data			
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	100.0 feet		
Centerline Dist. to Observer:	100.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-4.96	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-22.20	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-26.16	-4.11	-1.20	*-5.16*	0.000	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:	51.9	50.4	44.1	42.5	51.0	51.2
Heavy Trucks:	52.8	51.4	42.3	43.6	51.9	52.1
Vehicle Noise:	60.0	58.3	55.1	50.4	59.0	59.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	18	40	86	185
CNEL:	20	43	92	198

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: San Joaquin Hills
Road Segment: East of Jamboree
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	20,300 vehicles	*Autos:*	15
Peak Hour Percentage:	10%	*Medium Trucks (2 Axles):*	15
Peak Hour Volume:	2,030 vehicles	*Heavy Trucks (3+ Axles):*	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	76 feet		
Site Data			
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	100.0 feet		
Centerline Dist. to Observer:	100.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.12	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-16.11	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-20.07	-4.11	-1.20	*-5.16*	0.000	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:	58.0	56.5	50.2	48.6	57.1	57.3
Heavy Trucks:	58.9	57.4	48.4	49.7	58.0	58.1
Vehicle Noise:	66.1	64.4	61.2	56.5	65.1	65.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	47	101	218	470
CNEL:	50	109	234	504

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: San Joaquin Hills
Road Segment: West of Santa Cruz
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	23,700 vehicles	*Autos:*	15
Peak Hour Percentage:	10%	*Medium Trucks (2 Axles):*	15
Peak Hour Volume:	2,370 vehicles	*Heavy Trucks (3+ Axles):*	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	76 feet		
Site Data			
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	100.0 feet		
Centerline Dist. to Observer:	100.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.80	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-15.44	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-19.40	-4.11	-1.20	*-5.16*	0.000	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	61.3	55.2	63.8	64.5
Medium Trucks:	58.7	57.2	50.8	49.3	57.7	58.0
Heavy Trucks:	59.5	58.1	49.1	50.3	58.7	58.8
Vehicle Noise:	66.8	65.0	61.9	57.2	65.7	66.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	52	112	242	521
CNEL:	56	120	259	559

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: San Joaquin Hills
Road Segment: East of Santa Cruz
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,490 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-0.22	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-17.46	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-21.41	-4.11	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.9	61.0	59.3	53.2	61.8	62.4
Medium Trucks:	56.7	55.2	48.8	47.3	55.7	56.0
Heavy Trucks:	57.5	56.1	47.1	48.3	56.7	56.8
Vehicle Noise:	64.8	63.0	59.9	55.2	63.7	64.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	38	82	177	382
CNEL:	41	88	190	410

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: San Joaquin Hills
Road Segment: West of Santa Rosa
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,720 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.40	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-16.83	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-20.79	-4.11	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.6	61.7	59.9	53.8	62.5	63.1
Medium Trucks:	57.3	55.8	49.4	47.9	56.4	56.6
Heavy Trucks:	58.1	56.7	47.7	48.9	57.3	57.4
Vehicle Noise:	65.4	63.6	60.5	55.8	64.4	64.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	42	91	195	421
CNEL:	45	97	209	451

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: San Joaquin Hills
Road Segment: East of Santa Rosa
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	22,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,280 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.63	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-15.61	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-19.57	-4.11	-1.20	-5.16	0.000	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	61.1	55.1	63.7	64.3
Medium Trucks:	58.5	57.0	50.7	49.1	57.6	57.8
Heavy Trucks:	59.4	58.0	48.9	50.2	58.5	58.6
Vehicle Noise:	66.6	64.9	61.7	57.0	65.6	66.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	51	109	236	507
CNEL:	54	117	253	544

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: San Joaquin Hills
Road Segment: West of Macarthur
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,350 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.76	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-15.48	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-19.43	-4.11	-1.20	-5.16	0.000	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	55.2	63.8	64.4
Medium Trucks:	58.7	57.2	50.8	49.2	57.7	57.9
Heavy Trucks:	59.5	58.1	49.0	50.3	58.7	58.8
Vehicle Noise:	66.7	65.0	61.8	57.2	65.7	66.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	52	112	240	518
CNEL:	56	120	258	555

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: San Joaquin Hills
Road Segment: East of Macarthur
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

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:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.33	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-15.91	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-19.86	-4.11	-1.20	*-5.16*	0.000	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	54.8	63.4	64.0
Medium Trucks:	58.2	56.7	50.4	48.8	57.3	57.5
Heavy Trucks:	59.1	57.7	48.6	49.9	58.2	58.4
Vehicle Noise:	66.3	64.6	61.4	56.7	65.3	65.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	48	104	225	485
CNEL:	52	112	241	520

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: San Clemente
Road Segment: East of Santa Barbara
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,600	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	560	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-3.96	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-21.20	-4.51	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	82.99	-25.15	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	56.8	54.9	53.2	47.1	55.7	56.3
Medium Trucks:	50.8	49.3	42.9	41.4	49.9	50.1
Heavy Trucks:	52.1	50.7	41.7	42.9	51.3	51.4
Vehicle Noise:	58.8	57.1	53.8	49.3	57.8	58.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	15	33	72	154
CNEL:	17	36	77	165

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: San Clemente
Road Segment: West of Santa Cruz
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,800	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	580	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-3.81	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-21.04	-4.51	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	82.99	-25.00	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	57.0	55.1	53.3	47.3	55.9	56.5
Medium Trucks:	51.0	49.5	43.1	41.5	50.0	50.2
Heavy Trucks:	52.3	50.9	41.8	43.1	51.4	51.6
Vehicle Noise:	59.0	57.3	54.0	49.4	58.0	58.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	16	34	73	158
CNEL:	17	36	78	169

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Santa Barbara
Road Segment: West of Jamboree
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,300	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	230	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-7.82	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-25.06	-4.51	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	82.99	-29.02	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	53.0	51.1	49.3	43.3	51.9	52.5
Medium Trucks:	46.9	45.4	39.1	37.5	46.0	46.2
Heavy Trucks:	48.3	46.8	37.8	39.1	47.4	47.5
Vehicle Noise:	55.0	53.3	50.0	45.4	54.0	54.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	9	18	40	85
CNEL:	9	20	42	91

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Santa Barbara
Road Segment: East of Jamboree
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

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

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-0.37	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-17.61	-4.51	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	82.99	-21.56	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.4	58.5	56.8	50.7	59.3	59.9
Medium Trucks:	54.4	52.9	46.5	45.0	53.4	53.7
Heavy Trucks:	55.7	54.3	45.3	46.5	54.9	55.0
Vehicle Noise:	62.4	60.7	57.4	52.9	61.4	61.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	27	58	124	268
CNEL:	29	62	133	287

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Santa Barbara
Road Segment: North of San Clemente
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,600	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	1,260	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-0.44	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-17.67	-4.51	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	82.99	-21.63	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.4	58.5	56.7	50.6	59.3	59.9
Medium Trucks:	54.3	52.8	46.5	44.9	53.4	53.6
Heavy Trucks:	55.6	54.2	45.2	46.4	54.8	54.9
Vehicle Noise:	62.4	60.6	57.4	52.8	61.3	61.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	26	57	123	265
CNEL:	28	61	132	284

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Santa Barbara
Road Segment: South of San Clemente
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,900	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	790	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-2.46	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-19.70	-4.51	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	82.99	-23.66	-4.51	-1.20	*-5.16*	0.000	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	54.7	48.6	57.2	57.8
Medium Trucks:	52.3	50.8	44.4	42.9	51.3	51.6
Heavy Trucks:	53.6	52.2	43.2	44.4	52.8	52.9
Vehicle Noise:	60.3	58.6	55.3	50.8	59.3	59.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	19	42	90	194
CNEL:	21	45	96	208

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Santa Barbara
Road Segment: West of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,900	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	690	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-3.05	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-20.29	-4.51	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	82.99	-24.25	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	57.7	55.8	54.1	48.0	56.6	57.3
Medium Trucks:	51.7	50.2	43.8	42.3	50.8	51.0
Heavy Trucks:	53.0	51.6	42.6	43.8	52.2	52.3
Vehicle Noise:	59.8	58.0	54.7	50.2	58.7	59.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	18	38	82	177
CNEL:	19	41	88	190

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Santa Barbara
Road Segment: East of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,700	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	370	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-5.76	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-23.00	-4.51	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	82.99	-26.95	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	55.0	53.1	51.4	45.3	53.9	54.5
Medium Trucks:	49.0	47.5	41.1	39.6	48.1	48.3
Heavy Trucks:	50.3	48.9	39.9	41.1	49.5	49.6
Vehicle Noise:	57.0	55.3	52.0	47.5	56.0	56.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	12	25	54	117
CNEL:	13	27	58	125

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: San Miguel
Road Segment: West of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,100	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	910	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	52	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-2.36	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-19.60	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-23.55	-4.39	-1.20	*-5.16*	0.000	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:	54.3	52.8	46.4	44.8	53.3	53.5
Heavy Trucks:	55.1	53.7	44.6	45.9	54.3	54.4
Vehicle Noise:	62.3	60.6	57.4	52.8	61.3	61.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	26	57	122	264
CNEL:	28	61	131	283

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: San Miguel
Road Segment: East of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,400	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	1,440	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	52	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-0.37	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-17.61	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-21.56	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.5	60.6	58.8	52.8	61.4	62.0
Medium Trucks:	56.3	54.7	48.4	46.8	55.3	55.5
Heavy Trucks:	57.1	55.7	46.6	47.9	56.2	56.4
Vehicle Noise:	64.3	62.6	59.4	54.8	63.3	63.8

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

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: San Miguel
Road Segment: West of Avacado
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

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:	52	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	0.63	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-16.61	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-20.57	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.5	61.6	59.8	53.8	62.4	63.0
Medium Trucks:	57.2	55.7	49.4	47.8	56.3	56.5
Heavy Trucks:	58.1	56.7	47.6	48.9	57.2	57.4
Vehicle Noise:	65.3	63.6	60.4	55.8	64.3	64.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	42	90	193	417
CNEL:	45	96	208	447

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project | Project Name: NNCPC
Road Name: San Miguel | Job Number: 8211
Road Segment: East of Avacado

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,680 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.33	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-14.91	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-18.86	-4.39	-1.20	*-5.16*	0.000	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	61.5	55.5	64.1	64.7
Medium Trucks:	59.0	57.4	51.1	49.5	58.0	58.2
Heavy Trucks:	59.8	58.4	49.3	50.6	58.9	59.1
Vehicle Noise:	67.0	65.3	62.1	57.5	66.0	66.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	54	117	251	541
CNEL:	58	125	270	581

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project | Project Name: NNCPC
Road Name: San Miguel | Job Number: 8211
Road Segment: West of Macarthur

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,500 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.03	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-15.21	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-19.17	-4.39	-1.20	*-5.16*	0.000	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	55.2	63.8	64.4
Medium Trucks:	58.6	57.1	50.8	49.2	57.7	57.9
Heavy Trucks:	59.5	58.1	49.0	50.3	58.6	58.8
Vehicle Noise:	66.7	65.0	61.8	57.2	65.7	66.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	52	111	240	517
CNEL:	55	119	257	555

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project | Project Name: NNCPC
Road Name: San Miguel | Job Number: 8211
Road Segment: East of Macarthur

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,250 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-0.98	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-18.22	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-22.18	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.9	60.0	58.2	52.2	60.8	61.4
Medium Trucks:	55.6	54.1	47.8	46.2	54.7	54.9
Heavy Trucks:	56.5	55.1	46.0	47.3	55.6	55.8
Vehicle Noise:	63.7	62.0	58.8	54.1	62.7	63.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	33	70	151	326
CNEL:	35	75	162	349

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project | Project Name: NNCPC
Road Name: Coast Highway | Job Number: 8211
Road Segment: West of Jamboree

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	71,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	7,150 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	6.59	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-10.65	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-14.60	-4.11	-1.20	*-5.16*	0.000	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:	109	234	505	1,087
CNEL:	117	251	541	1,166

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Coast Highway
Road Segment: East of Jamboree
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	58,300	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	5,830	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	5.71	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-11.53	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-15.49	-4.11	-1.20	*-5.16*	0.000	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:	62.6	61.1	54.7	53.2	61.7	61.9
Heavy Trucks:	63.4	62.0	53.0	54.2	62.6	62.7
Vehicle Noise:	70.7	68.9	65.8	61.1	69.7	70.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	95	204	440	949
CNEL:	102	219	472	1,018

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Coast Highway
Road Segment: West of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	54,100	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	5,410	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	5.38	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-11.86	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-15.81	-4.11	-1.20	*-5.16*	0.000	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	64.9	58.8	67.4	68.0
Medium Trucks:	62.3	60.8	54.4	52.9	61.3	61.6
Heavy Trucks:	63.1	61.7	52.7	53.9	62.3	62.4
Vehicle Noise:	70.4	68.6	65.5	60.8	69.3	69.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	90	195	419	903
CNEL:	97	209	450	968

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Coast Highway
Road Segment: East of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	45,200	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	4,520	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	4.60	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-12.64	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-16.59	-4.11	-1.20	*-5.16*	0.000	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	64.1	58.0	66.6	67.3
Medium Trucks:	61.5	60.0	53.6	52.1	60.5	60.8
Heavy Trucks:	62.3	60.9	51.9	53.1	61.5	61.6
Vehicle Noise:	69.6	67.8	64.7	60.0	68.6	69.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	80	173	372	801
CNEL:	86	185	399	859

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project
Road Name: Coast Highway
Road Segment: West of Avacado
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	43,800	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	4,380	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	4.46	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-12.77	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-16.73	-4.11	-1.20	*-5.16*	0.000	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	57.9	66.5	67.1
Medium Trucks:	61.4	59.9	53.5	51.9	60.4	60.6
Heavy Trucks:	62.2	60.8	51.8	53.0	61.4	61.5
Vehicle Noise:	69.4	67.7	64.6	59.9	68.4	68.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	78	169	364	784
CNEL:	84	181	390	841

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project | Project Name: NNCPC
Road Name: Coast Highway | Job Number: 8211
Road Segment: East of Avacado

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	45,000	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	4,500	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	4.58	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-12.66	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-16.61	-4.11	-1.20	*-5.16*	0.000	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	64.1	58.0	66.6	67.2
Medium Trucks:	61.5	60.0	53.6	52.1	60.5	60.8
Heavy Trucks:	62.3	60.9	51.9	53.1	61.5	61.6
Vehicle Noise:	69.6	67.8	64.7	60.0	68.5	69.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	80	172	371	798
CNEL:	86	185	398	857

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project | Project Name: NNCPC
Road Name: Coast Highway | Job Number: 8211
Road Segment: West of Macarthur

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	41,800	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	4,180	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	4.26	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-12.98	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-16.93	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.4	65.5	63.7	57.7	66.3	66.9
Medium Trucks:	61.2	59.7	53.3	51.7	60.2	60.4
Heavy Trucks:	62.0	60.6	51.5	52.8	61.2	61.3
Vehicle Noise:	69.2	67.5	64.4	59.7	68.2	68.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	76	164	353	760
CNEL:	82	176	378	815

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 Without Project | Project Name: NNCPC
Road Name: Coast Highway | Job Number: 8211
Road Segment: East of Macarthur

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	61,700	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	6,170	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	5.95	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-11.29	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-15.24	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.1	67.2	65.4	59.4	68.0	68.6
Medium Trucks:	62.9	61.3	55.0	53.4	61.9	62.1
Heavy Trucks:	63.7	62.3	53.2	54.5	62.8	63.0
Vehicle Noise:	70.9	69.2	66.0	61.4	69.9	70.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	99	212	457	985
CNEL:	106	228	491	1,057

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project | Project Name: NNCPC
Road Name: Jamboree | Job Number: 8211
Road Segment: North of Eastbluff

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	52,400	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	5,240	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	5.24	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-12.00	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-15.95	-4.11	-1.20	*-5.16*	0.000	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:	62.1	60.6	54.3	52.7	61.2	61.4
Heavy Trucks:	63.0	61.6	52.5	53.8	62.1	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:	88	190	410	884
CNEL:	95	204	440	948

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Jamboree
Road Segment: Eastbluff to San Joaquin Hills
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	63,200	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	6,320	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	6.06	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-11.18	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-15.14	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.2	67.3	65.5	59.5	68.1	68.7
Medium Trucks:	63.0	61.4	55.1	53.5	62.0	62.2
Heavy Trucks:	63.8	62.4	53.3	54.6	62.9	63.1
Vehicle Noise:	71.0	69.3	66.1	61.5	70.0	70.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	100	216	465	1,001
CNEL:	107	231	499	1,074

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Jamboree
Road Segment: South of San Joaquin Hills
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	43,100	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	4,310	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	4.39	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-12.84	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-16.80	-4.11	-1.20	*-5.16*	0.000	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	63.9	57.8	66.4	67.0
Medium Trucks:	61.3	59.8	53.4	51.9	60.3	60.6
Heavy Trucks:	62.1	60.7	51.7	52.9	61.3	61.4
Vehicle Noise:	69.4	67.6	64.5	59.8	68.3	68.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	78	167	360	776
CNEL:	83	179	386	832

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Jamboree
Road Segment: North of Santa Barbara
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	45,200	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	4,520	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	4.60	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-12.64	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-16.59	-4.11	-1.20	*-5.16*	0.000	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	64.1	58.0	66.6	67.3
Medium Trucks:	61.5	60.0	53.6	52.1	60.5	60.8
Heavy Trucks:	62.3	60.9	51.9	53.1	61.5	61.6
Vehicle Noise:	69.6	67.8	64.7	60.0	68.6	69.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	80	173	372	801
CNEL:	86	185	399	859

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Jamboree
Road Segment: South of Santa Barbara
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	41,100	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	4,110	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	4.19	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.05	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-17.01	-4.11	-1.20	*-5.16*	0.000	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:	61.1	59.6	53.2	51.7	60.1	60.4
Heavy Trucks:	61.9	60.5	51.5	52.7	61.1	61.2
Vehicle Noise:	69.2	67.4	64.3	59.6	68.1	68.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	75	162	349	752
CNEL:	81	174	374	806

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Jamboree
Road Segment: North of Coast Highway
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	38,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,870 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	3.93	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.31	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-17.27	-4.11	-1.20	*-5.16*	0.000	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	63.4	57.4	66.0	66.6
Medium Trucks:	60.8	59.3	53.0	51.4	59.9	60.1
Heavy Trucks:	61.7	60.2	51.2	52.5	60.8	60.9
Vehicle Noise:	68.9	67.2	64.0	59.3	67.9	68.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	72	156	335	722
CNEL:	77	167	360	775

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Jamboree
Road Segment: South of Coast Highway
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,290 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-0.85	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-18.08	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-22.04	-4.11	-1.20	*-5.16*	0.000	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:	56.1	54.5	48.2	46.6	55.1	55.3
Heavy Trucks:	56.9	55.5	46.4	47.7	56.0	56.2
Vehicle Noise:	64.1	62.4	59.2	54.6	63.1	63.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	35	75	161	347
CNEL:	37	80	173	372

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Santa Cruz
Road Segment: North of San Joaquin Hills
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	170 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-9.65	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-26.88	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-30.84	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	53.2	51.3	49.6	43.5	52.1	52.7
Medium Trucks:	47.0	45.5	39.1	37.6	46.0	46.3
Heavy Trucks:	47.8	46.4	37.4	38.6	47.0	47.1
Vehicle Noise:	55.1	53.3	50.2	45.5	54.0	54.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	9	19	40	86
CNEL:	9	20	43	92

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Santa Cruz
Road Segment: Souh of San Joaquin Hills
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

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:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-0.91	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-18.15	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-22.11	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.0	60.1	58.3	52.2	60.9	61.5
Medium Trucks:	55.7	54.2	47.8	46.3	54.8	55.0
Heavy Trucks:	56.6	55.1	46.1	47.3	55.7	55.8
Vehicle Noise:	63.8	62.0	58.9	54.2	62.8	63.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	33	71	153	329
CNEL:	35	76	164	353

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Santa Cruz
Road Segment: North of San Clemente
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

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:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-1.02	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-18.26	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-22.21	-4.39	-1.20	*-5.16*	0.000	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	60.0	58.2	52.1	60.8	61.4
Medium Trucks:	55.6	54.1	47.7	46.2	54.6	54.9
Heavy Trucks:	56.4	55.0	46.0	47.2	55.6	55.7
Vehicle Noise:	63.7	61.9	58.8	54.1	62.7	63.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	32	70	150	324
CNEL:	35	75	161	347

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Santa Cruz
Road Segment: South of San Clemente
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,000 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-1.95	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-19.19	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-23.15	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.9	59.0	57.3	51.2	59.8	60.4
Medium Trucks:	54.7	53.2	46.8	45.3	53.7	53.9
Heavy Trucks:	55.5	54.1	45.1	46.3	54.7	54.8
Vehicle Noise:	62.7	61.0	57.9	53.2	61.7	62.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	28	60	130	281
CNEL:	30	65	140	301

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Santa Cruz
Road Segment: North of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	950 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-2.17	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-19.41	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-23.37	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.7	58.8	57.0	51.0	59.6	60.2
Medium Trucks:	54.4	52.9	46.6	45.0	53.5	53.7
Heavy Trucks:	55.3	53.9	44.8	46.1	54.4	54.6
Vehicle Noise:	62.5	60.8	57.6	53.0	61.5	62.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	27	58	126	271
CNEL:	29	63	135	291

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Santa Cruz
Road Segment: South of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	460 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-5.32	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-22.56	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-26.52	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	57.5	55.6	53.9	47.8	56.4	57.1
Medium Trucks:	51.3	49.8	43.4	41.9	50.3	50.6
Heavy Trucks:	52.1	50.7	41.7	42.9	51.3	51.4
Vehicle Noise:	59.4	57.6	54.5	49.8	58.3	58.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	17	36	78	167
CNEL:	18	39	83	179

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Newport CTR
Road Segment: West of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	730 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-3.32	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-20.56	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-24.51	-4.11	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.8	57.9	56.2	50.1	58.7	59.3
Medium Trucks:	53.6	52.1	45.7	44.2	52.6	52.9
Heavy Trucks:	54.4	53.0	44.0	45.2	53.6	53.7
Vehicle Noise:	61.7	59.9	56.8	52.1	60.6	61.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	24	51	110	238
CNEL:	25	55	118	255

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Newport CTR
Road Segment: South of Santa Barbara
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	790 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-2.97	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-20.21	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-24.17	-4.11	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.2	58.3	56.5	50.5	59.1	59.7
Medium Trucks:	53.9	52.4	46.1	44.5	53.0	53.2
Heavy Trucks:	54.8	53.3	44.3	45.6	53.9	54.0
Vehicle Noise:	62.0	60.3	57.1	52.4	61.0	61.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	25	54	116	250
CNEL:	27	58	125	269

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Newport CTR
Road Segment: North of Santa Barbara
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	690 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-3.56	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-20.80	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-24.76	-4.11	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.6	57.7	55.9	49.9	58.5	59.1
Medium Trucks:	53.3	51.8	45.5	43.9	52.4	52.6
Heavy Trucks:	54.2	52.8	43.7	45.0	53.3	53.5
Vehicle Noise:	61.4	59.7	56.5	51.8	60.4	60.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	23	49	106	229
CNEL:	25	53	114	245

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Newport CTR
Road Segment: South of Santa Cruz
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	630 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-3.96	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-21.20	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-25.15	-4.11	-1.20	-5.16	0.000	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	55.5	49.5	58.1	58.7
Medium Trucks:	52.9	51.4	45.1	43.5	52.0	52.2
Heavy Trucks:	53.8	52.4	43.3	44.6	52.9	53.1
Vehicle Noise:	61.0	59.3	56.1	51.5	60.0	60.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	22	46	100	215
CNEL:	23	50	107	231

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Newport CTR
Road Segment: North of Santa Cruz
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	580 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-4.32	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-21.56	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-25.51	-4.11	-1.20	*-5.16*	0.000	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	55.2	49.1	57.7	58.3
Medium Trucks:	52.6	51.1	44.7	43.2	51.6	51.9
Heavy Trucks:	53.4	52.0	43.0	44.2	52.6	52.7
Vehicle Noise:	60.7	58.9	55.8	51.1	59.6	60.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	20	44	95	204
CNEL:	22	47	101	219

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Newport CTR
Road Segment: North of Santa Rosa
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	730 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-3.32	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-20.56	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-24.51	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.8	57.9	56.2	50.1	58.7	59.3
Medium Trucks:	53.6	52.1	45.7	44.2	52.6	52.9
Heavy Trucks:	54.4	53.0	44.0	45.2	53.6	53.7
Vehicle Noise:	61.7	59.9	56.8	52.1	60.6	61.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	24	51	110	238
CNEL:	25	55	118	255

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Newport CTR
Road Segment: South of Santa Rosa
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,000 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-1.95	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-19.19	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-23.15	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.2	59.3	57.5	51.5	60.1	60.7
Medium Trucks:	54.9	53.4	47.1	45.5	54.0	54.2
Heavy Trucks:	55.8	54.4	45.3	46.6	54.9	55.1
Vehicle Noise:	63.0	61.3	58.1	53.5	62.0	62.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	29	63	136	293
CNEL:	31	68	146	314

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Newport CTR
Road Segment: North of San Miguel
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	760 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-3.14	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-20.38	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-24.34	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.0	58.1	56.3	50.3	58.9	59.5
Medium Trucks:	53.8	52.2	45.9	44.3	52.8	53.0
Heavy Trucks:	54.6	53.2	44.1	45.4	53.7	53.9
Vehicle Noise:	61.8	60.1	56.9	52.3	60.8	61.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	24	53	113	244
CNEL:	26	56	121	262

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Newport CTR
Road Segment: South of San Miguel
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,090 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-1.58	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-18.82	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-22.77	-4.11	-1.20	*-5.16*	0.000	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	51.8	60.5	61.1
Medium Trucks:	55.3	53.8	47.5	45.9	54.4	54.6
Heavy Trucks:	56.2	54.7	45.7	47.0	55.3	55.4
Vehicle Noise:	63.4	61.7	58.5	53.8	62.4	62.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	31	67	144	310
CNEL:	33	72	154	333

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Newport CTR
Road Segment: East of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	910 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-2.36	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-19.60	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-23.55	-4.11	-1.20	*-5.16*	0.000	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:	54.5	53.0	46.7	45.1	53.6	53.8
Heavy Trucks:	55.4	54.0	44.9	46.2	54.5	54.7
Vehicle Noise:	62.6	60.9	57.7	53.0	61.6	62.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	28	59	128	275
CNEL:	30	64	137	295

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Newport CTR
Road Segment: South of Newport CTR (Circle
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,420 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-0.43	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-17.67	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-21.62	-4.11	-1.20	*-5.16*	0.000	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:	56.5	55.0	48.6	47.1	55.5	55.8
Heavy Trucks:	57.3	55.9	46.9	48.1	56.5	56.6
Vehicle Noise:	64.6	62.8	59.7	55.0	63.5	64.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	37	80	172	370
CNEL:	40	86	184	397

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Newport CTR
Road Segment: North of Coast Highway
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,640 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.20	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-17.04	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-21.00	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.3	61.4	59.7	53.6	62.2	62.9
Medium Trucks:	57.1	55.6	49.2	47.7	56.1	56.4
Heavy Trucks:	57.9	56.5	47.5	48.7	57.1	57.2
Vehicle Noise:	65.2	63.4	60.3	55.6	64.2	64.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	41	88	189	407
CNEL:	44	94	203	437

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Santa Rosa
Road Segment: North of San Joaquin Hills
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	380 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-6.15	-4.39	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-23.39	-4.39	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-27.35	-4.39	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	56.7	54.8	53.0	47.0	55.6	56.2
Medium Trucks:	50.5	49.0	42.6	41.1	49.5	49.7
Heavy Trucks:	51.3	49.9	40.9	42.1	50.5	50.6
Vehicle Noise:	58.5	56.8	53.7	49.0	57.5	58.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	15	32	68	147
CNEL:	16	34	73	158

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Santa Rosa
Road Segment: South of San Joaquin Hills
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,680 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.30	-4.39	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-16.94	-4.39	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-20.89	-4.39	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.2	61.3	59.5	53.4	62.1	62.7
Medium Trucks:	56.9	55.4	49.1	47.5	56.0	56.2
Heavy Trucks:	57.8	56.3	47.3	48.6	56.9	57.0
Vehicle Noise:	65.0	63.3	60.1	55.4	64.0	64.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	40	85	184	397
CNEL:	43	92	197	425

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Santa Rosa
Road Segment: North of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,430 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-0.40	-4.39	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-17.64	-4.39	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-21.59	-4.39	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.5	60.6	58.8	52.7	61.4	62.0
Medium Trucks:	56.2	54.7	48.4	46.8	55.3	55.5
Heavy Trucks:	57.1	55.6	46.6	47.9	56.2	56.3
Vehicle Noise:	64.3	62.6	59.4	54.7	63.3	63.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	36	77	165	356
CNEL:	38	82	177	382

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Santa Rosa
Road Segment: South of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	790 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-2.97	-4.39	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-20.21	-4.39	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-24.17	-4.39	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.9	58.0	56.2	50.2	58.8	59.4
Medium Trucks:	53.6	52.1	45.8	44.2	52.7	52.9
Heavy Trucks:	54.5	53.1	44.0	45.3	53.6	53.8
Vehicle Noise:	61.7	60.0	56.8	52.2	60.7	61.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	24	52	111	240
CNEL:	26	55	119	257

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Avocado
Road Segment: North of San Miguel
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

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

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-4.45	-4.51	-1.20	-4.87	0.000	0.000
Medium Trucks:	77.72	-21.69	-4.51	-1.20	-4.97	0.000	0.000
Heavy Trucks:	82.99	-25.64	-4.51	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	56.3	54.4	52.7	46.6	55.2	55.9
Medium Trucks:	50.3	48.8	42.4	40.9	49.4	49.6
Heavy Trucks:	51.6	50.2	41.2	42.4	50.8	50.9
Vehicle Noise:	58.4	56.6	53.3	48.8	57.3	57.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	14	31	66	143
CNEL:	15	33	71	153

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Avocado
Road Segment: South of San Miguel
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,550 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	0.46	-4.51	-1.20	-4.87	0.000	0.000
Medium Trucks:	77.72	-16.77	-4.51	-1.20	-4.97	0.000	0.000
Heavy Trucks:	82.99	-20.73	-4.51	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.3	59.4	57.6	51.5	60.2	60.8
Medium Trucks:	55.2	53.7	47.4	45.8	54.3	54.5
Heavy Trucks:	56.5	55.1	46.1	47.3	55.7	55.8
Vehicle Noise:	63.3	61.5	58.3	53.7	62.2	62.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	30	66	141	304
CNEL:	33	70	151	326

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Avocado
Road Segment: North of Coast Highway
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,100 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-1.03	-4.51	-1.20	-4.87	0.000	0.000
Medium Trucks:	77.72	-18.26	-4.51	-1.20	-4.97	0.000	0.000
Heavy Trucks:	82.99	-22.22	-4.51	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.8	57.9	56.1	50.1	58.7	59.3
Medium Trucks:	53.7	52.2	45.9	44.3	52.8	53.0
Heavy Trucks:	55.1	53.6	44.6	45.9	54.2	54.3
Vehicle Noise:	61.8	60.0	56.8	52.2	60.8	61.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	24	52	112	242
CNEL:	26	56	120	259

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Macarthur
Road Segment: North of Bonita Canyon
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	80,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	8,050 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	7.11	-4.11	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-10.13	-4.11	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-14.09	-4.11	-1.20	-5.16	0.000	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:	64.0	62.5	56.1	54.6	63.1	63.3
Heavy Trucks:	64.9	63.4	54.4	55.6	64.0	64.1
Vehicle Noise:	72.1	70.3	67.2	62.5	71.1	71.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	118	254	546	1,177
CNEL:	126	272	586	1,262

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Macarthur
Road Segment: South of Bonita Canyon
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	69,200	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	6,920	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	6.45	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-10.79	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-14.74	-4.11	-1.20	*-5.16*	0.000	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:	63.3	61.8	55.5	53.9	62.4	62.6
Heavy Trucks:	64.2	62.8	53.7	55.0	63.3	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:	106	229	494	1,064
CNEL:	114	246	530	1,141

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Macarthur
Road Segment: North of San Joaquin Hills
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	68,100	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	6,810	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	6.38	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-10.86	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-14.81	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.5	67.6	65.9	59.8	68.4	69.0
Medium Trucks:	63.3	61.8	55.4	53.9	62.3	62.6
Heavy Trucks:	64.1	62.7	53.7	54.9	63.3	63.4
Vehicle Noise:	71.4	69.6	66.5	61.8	70.3	70.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	105	227	489	1,053
CNEL:	113	243	524	1,129

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Macarthur
Road Segment: South of San Joaquin Hills
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	43,400	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	4,340	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	4.42	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-12.81	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-16.77	-4.11	-1.20	*-5.16*	0.000	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	57.9	66.5	67.1
Medium Trucks:	61.3	59.8	53.5	51.9	60.4	60.6
Heavy Trucks:	62.2	60.7	51.7	53.0	61.3	61.4
Vehicle Noise:	69.4	67.7	64.5	59.8	68.4	68.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	78	168	362	779
CNEL:	84	180	388	836

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Macarthur
Road Segment: North of San Miguel
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	38,800	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,880	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.94	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.30	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-17.26	-4.11	-1.20	*-5.16*	0.000	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	63.4	57.4	66.0	66.6
Medium Trucks:	60.8	59.3	53.0	51.4	59.9	60.1
Heavy Trucks:	61.7	60.3	51.2	52.5	60.8	61.0
Vehicle Noise:	68.9	67.2	64.0	59.3	67.9	68.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	72	156	336	723
CNEL:	78	167	360	776

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Macarthur
Road Segment: South of San Miguel
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,400	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,240	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.15	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-14.08	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-18.04	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	66.3	64.4	62.6	56.6	65.2	65.8
Medium Trucks:	60.1	58.5	52.2	50.6	59.1	59.3
Heavy Trucks:	60.9	59.5	50.4	51.7	60.0	60.2
Vehicle Noise:	68.1	66.4	63.2	58.6	67.1	67.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	64	138	298	641
CNEL:	69	148	319	688

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Macarthur
Road Segment: North of Coast Highway
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,500	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,250	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.17	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-14.07	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-18.03	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	66.3	64.4	62.6	56.6	65.2	65.8
Medium Trucks:	60.1	58.6	52.2	50.7	59.1	59.3
Heavy Trucks:	60.9	59.5	50.5	51.7	60.1	60.2
Vehicle Noise:	68.1	66.4	63.3	58.6	67.1	67.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	64	138	298	643
CNEL:	69	149	320	690

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Eastbluff/Ford/Bonita Cyn
Road Segment: West of Jamboree
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,300	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	1,530	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	52	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-0.10	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-17.34	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-21.30	-4.39	-1.20	*-5.16*	0.000	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	59.1	53.0	61.7	62.3
Medium Trucks:	56.5	55.0	48.6	47.1	55.6	55.8
Heavy Trucks:	57.4	55.9	46.9	48.2	56.5	56.6
Vehicle Noise:	64.6	62.9	59.7	55.0	63.6	64.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	37	80	173	373
CNEL:	40	86	186	400

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Eastbluff/Ford/Bonita Cyn
Road Segment: East of Jamboree
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

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:	52	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-1.05	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-18.29	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-22.25	-4.39	-1.20	*-5.16*	0.000	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:	55.6	54.1	47.7	46.2	54.6	54.8
Heavy Trucks:	56.4	55.0	46.0	47.2	55.6	55.7
Vehicle Noise:	63.6	61.9	58.8	54.1	62.6	63.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	32	69	150	322
CNEL:	35	74	160	346

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Eastbluff/Ford/Bonita Cyn
Road Segment: West of Bonita Canyon
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,600	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	1,060	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	52	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-1.70	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-18.94	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-22.89	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.2	59.3	57.5	51.4	60.1	60.7
Medium Trucks:	54.9	53.4	47.1	45.5	54.0	54.2
Heavy Trucks:	55.8	54.3	45.3	46.6	54.9	55.0
Vehicle Noise:	63.0	61.3	58.1	53.4	62.0	62.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	29	63	135	292
CNEL:	31	67	145	313

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Eastbluff/Ford/Bonita Cyn
Road Segment: East of Bonita Canyon
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	39,400	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,940	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	52	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	4.00	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.23	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-17.19	-4.39	-1.20	*-5.16*	0.000	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	63.2	57.2	65.8	66.4
Medium Trucks:	60.6	59.1	52.8	51.2	59.7	59.9
Heavy Trucks:	61.5	60.0	51.0	52.3	60.6	60.7
Vehicle Noise:	68.7	67.0	63.8	59.1	67.7	68.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	70	151	325	700
CNEL:	75	162	349	751

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: San Joaquin Hills
Road Segment: West of Jamboree
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,000	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	500	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-4.96	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-22.20	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-26.16	-4.11	-1.20	*-5.16*	0.000	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:	51.9	50.4	44.1	42.5	51.0	51.2
Heavy Trucks:	52.8	51.4	42.3	43.6	51.9	52.1
Vehicle Noise:	60.0	58.3	55.1	50.4	59.0	59.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	18	40	86	185
CNEL:	20	43	92	198

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: San Joaquin Hills
Road Segment: East of Jamboree
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,400	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,040	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	1.15	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-16.09	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-20.05	-4.11	-1.20	*-5.16*	0.000	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:	58.0	56.5	50.2	48.6	57.1	57.3
Heavy Trucks:	58.9	57.5	48.4	49.7	58.0	58.2
Vehicle Noise:	66.1	64.4	61.2	56.6	65.1	65.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	47	102	219	471
CNEL:	51	109	235	505

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: San Joaquin Hills
Road Segment: West of Santa Cruz
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	23,700 vehicles	*Autos:*	15
Peak Hour Percentage:	10%	*Medium Trucks (2 Axles):*	15
Peak Hour Volume:	2,370 vehicles	*Heavy Trucks (3+ Axles):*	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	76 feet		
Site Data			
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	100.0 feet		
Centerline Dist. to Observer:	100.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.80	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-15.44	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-19.40	-4.11	-1.20	*-5.16*	0.000	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	61.3	55.2	63.8	64.5
Medium Trucks:	58.7	57.2	50.8	49.3	57.7	58.0
Heavy Trucks:	59.5	58.1	49.1	50.3	58.7	58.8
Vehicle Noise:	66.8	65.0	61.9	57.2	65.7	66.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	52	112	242	521
CNEL:	56	120	259	559

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: San Joaquin Hills
Road Segment: East of Santa Cruz
Project Name: NNCPC
Job Number: 8211

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:	45 mph		
Near/Far Lane Distance:	76 feet		
Site Data			
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	100.0 feet		
Centerline Dist. to Observer:	100.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-0.19	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-17.43	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-21.38	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.0	61.1	59.3	53.2	61.9	62.5
Medium Trucks:	56.7	55.2	48.8	47.3	55.8	56.0
Heavy Trucks:	57.6	56.1	47.1	48.3	56.7	56.8
Vehicle Noise:	64.8	63.0	59.9	55.2	63.8	64.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	38	83	178	384
CNEL:	41	89	191	412

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: San Joaquin Hills
Road Segment: West of Santa Rosa
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	17,300 vehicles	*Autos:*	15
Peak Hour Percentage:	10%	*Medium Trucks (2 Axles):*	15
Peak Hour Volume:	1,730 vehicles	*Heavy Trucks (3+ Axles):*	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	76 feet		
Site Data			
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	100.0 feet		
Centerline Dist. to Observer:	100.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.43	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-16.81	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-20.76	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.6	61.7	59.9	53.9	62.5	63.1
Medium Trucks:	57.3	55.8	49.5	47.9	56.4	56.6
Heavy Trucks:	58.2	56.8	47.7	49.0	57.3	57.4
Vehicle Noise:	65.4	63.7	60.5	55.8	64.4	64.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	42	91	196	422
CNEL:	45	98	210	453

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: San Joaquin Hills
Road Segment: East of Santa Rosa
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	22,900 vehicles	*Autos:*	15
Peak Hour Percentage:	10%	*Medium Trucks (2 Axles):*	15
Peak Hour Volume:	2,290 vehicles	*Heavy Trucks (3+ Axles):*	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	76 feet		
Site Data			
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	100.0 feet		
Centerline Dist. to Observer:	100.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.65	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-15.59	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-19.55	-4.11	-1.20	*-5.16*	0.000	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	61.1	55.1	63.7	64.3
Medium Trucks:	58.5	57.0	50.7	49.1	57.6	57.8
Heavy Trucks:	59.4	58.0	48.9	50.2	58.5	58.7
Vehicle Noise:	66.6	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:	51	110	236	509
CNEL:	55	118	253	546

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: San Joaquin Hills
Road Segment: West of Macarthur
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,600	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,360	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	1.78	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-15.46	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-19.42	-4.11	-1.20	*-5.16*	0.000	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	61.3	55.2	63.8	64.4
Medium Trucks:	58.7	57.2	50.8	49.3	57.7	58.0
Heavy Trucks:	59.5	58.1	49.1	50.3	58.7	58.8
Vehicle Noise:	66.8	65.0	61.9	57.2	65.7	66.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	52	112	241	519
CNEL:	56	120	259	557

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: San Joaquin Hills
Road Segment: East of Macarthur
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

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:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	1.33	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-15.91	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-19.86	-4.11	-1.20	*-5.16*	0.000	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	54.8	63.4	64.0
Medium Trucks:	58.2	56.7	50.4	48.8	57.3	57.5
Heavy Trucks:	59.1	57.7	48.6	49.9	58.2	58.4
Vehicle Noise:	66.3	64.6	61.4	56.7	65.3	65.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	48	104	225	485
CNEL:	52	112	241	520

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: San Clemente
Road Segment: East of Santa Barbara
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,700	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	570	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-3.88	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-21.12	-4.51	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	82.99	-25.07	-4.51	-1.20	*-5.16*	0.000	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	53.3	47.2	55.8	56.4
Medium Trucks:	50.9	49.4	43.0	41.5	49.9	50.2
Heavy Trucks:	52.2	50.8	41.7	43.0	51.4	51.5
Vehicle Noise:	58.9	57.2	53.9	49.4	57.9	58.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	16	34	72	156
CNEL:	17	36	78	167

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: San Clemente
Road Segment: West of Santa Cruz
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,900	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	590	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	36	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-3.73	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-20.97	-4.51	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	82.99	-24.93	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	57.1	55.2	53.4	47.3	56.0	56.6
Medium Trucks:	51.0	49.5	43.2	41.6	50.1	50.3
Heavy Trucks:	52.4	50.9	41.9	43.1	51.5	51.6
Vehicle Noise:	59.1	57.3	54.1	49.5	58.1	58.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	16	34	74	160
CNEL:	17	37	79	171

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Santa Barbara
Road Segment: West of Jamboree
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	230 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-7.82	-4.51	-1.20	-4.87	0.000	0.000
Medium Trucks:	77.72	-25.06	-4.51	-1.20	-4.97	0.000	0.000
Heavy Trucks:	82.99	-29.02	-4.51	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	53.0	51.1	49.3	43.3	51.9	52.5
Medium Trucks:	46.9	45.4	39.1	37.5	46.0	46.2
Heavy Trucks:	48.3	46.8	37.8	39.1	47.4	47.5
Vehicle Noise:	55.0	53.3	50.0	45.4	54.0	54.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	9	18	40	85
CNEL:	9	20	42	91

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Santa Barbara
Road Segment: East of Jamboree
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,290 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-0.33	-4.51	-1.20	-4.87	0.000	0.000
Medium Trucks:	77.72	-17.57	-4.51	-1.20	-4.97	0.000	0.000
Heavy Trucks:	82.99	-21.53	-4.51	-1.20	-5.16	0.000	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	50.7	59.4	60.0
Medium Trucks:	54.4	52.9	46.6	45.0	53.5	53.7
Heavy Trucks:	55.8	54.3	45.3	46.5	54.9	55.0
Vehicle Noise:	62.5	60.7	57.5	52.9	61.4	61.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	27	58	125	269
CNEL:	29	62	134	288

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Santa Barbara
Road Segment: North of San Clemente
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,260 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-0.44	-4.51	-1.20	-4.87	0.000	0.000
Medium Trucks:	77.72	-17.67	-4.51	-1.20	-4.97	0.000	0.000
Heavy Trucks:	82.99	-21.63	-4.51	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.4	58.5	56.7	50.6	59.3	59.9
Medium Trucks:	54.3	52.8	46.5	44.9	53.4	53.6
Heavy Trucks:	55.6	54.2	45.2	46.4	54.8	54.9
Vehicle Noise:	62.4	60.6	57.4	52.8	61.3	61.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	26	57	123	265
CNEL:	28	61	132	284

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Santa Barbara
Road Segment: South of San Clemente
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	790 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-2.46	-4.51	-1.20	-4.87	0.000	0.000
Medium Trucks:	77.72	-19.70	-4.51	-1.20	-4.97	0.000	0.000
Heavy Trucks:	82.99	-23.66	-4.51	-1.20	-5.16	0.000	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	54.7	48.6	57.2	57.8
Medium Trucks:	52.3	50.8	44.4	42.9	51.3	51.6
Heavy Trucks:	53.6	52.2	43.2	44.4	52.8	52.9
Vehicle Noise:	60.3	58.6	55.3	50.8	59.3	59.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	19	42	90	194
CNEL:	21	45	96	208

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Santa Barbara
Road Segment: West of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	690 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-3.05	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-20.29	-4.51	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	82.99	-24.25	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	57.7	55.8	54.1	48.0	56.6	57.3
Medium Trucks:	51.7	50.2	43.8	42.3	50.8	51.0
Heavy Trucks:	53.0	51.6	42.6	43.8	52.2	52.3
Vehicle Noise:	59.8	58.0	54.7	50.2	58.7	59.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	18	38	82	177
CNEL:	19	41	88	190

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Santa Barbara
Road Segment: East of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	370 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.372
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-5.76	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-23.00	-4.51	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	82.99	-26.95	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	55.0	53.1	51.4	45.3	53.9	54.5
Medium Trucks:	49.0	47.5	41.1	39.6	48.1	48.3
Heavy Trucks:	50.3	48.9	39.9	41.1	49.5	49.6
Vehicle Noise:	57.0	55.3	52.0	47.5	56.0	56.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	12	25	54	117
CNEL:	13	27	58	125

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: San Miguel
Road Segment: West of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	910 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-2.36	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-19.60	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-23.55	-4.39	-1.20	*-5.16*	0.000	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:	54.3	52.8	46.4	44.8	53.3	53.5
Heavy Trucks:	55.1	53.7	44.6	45.9	54.3	54.4
Vehicle Noise:	62.3	60.6	57.4	52.8	61.3	61.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	26	57	122	264
CNEL:	28	61	131	283

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: San Miguel
Road Segment: East of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,440 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-0.37	-4.39	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-17.61	-4.39	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-21.56	-4.39	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.5	60.6	58.8	52.8	61.4	62.0
Medium Trucks:	56.3	54.7	48.4	46.8	55.3	55.5
Heavy Trucks:	57.1	55.7	46.6	47.9	56.2	56.4
Vehicle Noise:	64.3	62.6	59.4	54.8	63.3	63.8

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

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project | Project Name: NNCPC
Road Name: San Miguel | Job Number: 8211
Road Segment: West of Avacado

SITE SPECIFIC INPUT DATA

Highway Data

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:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.63	-4.39	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-16.61	-4.39	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-20.57	-4.39	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.5	61.6	59.8	53.8	62.4	63.0
Medium Trucks:	57.2	55.7	49.4	47.8	56.3	56.5
Heavy Trucks:	58.1	56.7	47.6	48.9	57.2	57.4
Vehicle Noise:	65.3	63.6	60.4	55.8	64.3	64.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	42	90	193	417
CNEL:	45	96	208	447

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project | Project Name: NNCPC
Road Name: San Miguel | Job Number: 8211
Road Segment: East of Avacado

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,680 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.33	-4.39	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-14.91	-4.39	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-18.86	-4.39	-1.20	-5.16	0.000	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	61.5	55.5	64.1	64.7
Medium Trucks:	59.0	57.4	51.1	49.5	58.0	58.2
Heavy Trucks:	59.8	58.4	49.3	50.6	58.9	59.1
Vehicle Noise:	67.0	65.3	62.1	57.5	66.0	66.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	54	117	251	541
CNEL:	58	125	270	581

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project | Project Name: NNCPC
Road Name: San Miguel | Job Number: 8211
Road Segment: West of Macarthur

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,500 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.03	-4.39	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-15.21	-4.39	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-19.17	-4.39	-1.20	-5.16	0.000	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	55.2	63.8	64.4
Medium Trucks:	58.6	57.1	50.8	49.2	57.7	57.9
Heavy Trucks:	59.5	58.1	49.0	50.3	58.6	58.8
Vehicle Noise:	66.7	65.0	61.8	57.2	65.7	66.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	52	111	240	517
CNEL:	55	119	257	555

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project | Project Name: NNCPC
Road Name: San Miguel | Job Number: 8211
Road Segment: East of Macarthur

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,250 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	52 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	96.607
Medium Trucks:	96.566
Heavy Trucks:	96.608

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-0.98	-4.39	-1.20	-4.87	0.000	0.000
Medium Trucks:	79.45	-18.22	-4.39	-1.20	-4.97	0.000	0.000
Heavy Trucks:	84.25	-22.18	-4.39	-1.20	-5.16	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.9	60.0	58.2	52.2	60.8	61.4
Medium Trucks:	55.6	54.1	47.8	46.2	54.7	54.9
Heavy Trucks:	56.5	55.1	46.0	47.3	55.6	55.8
Vehicle Noise:	63.7	62.0	58.8	54.1	62.7	63.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	33	70	151	326
CNEL:	35	75	162	349

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Coast Highway
Road Segment: West of Jamboree
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	71,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	7,160 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	6.60	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-10.64	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-14.60	-4.11	-1.20	*-5.16*	0.000	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	69.3
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	70.6	71.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	109	234	505	1,088
CNEL:	117	252	542	1,167

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Coast Highway
Road Segment: East of Jamboree
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	58,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,830 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	5.71	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-11.53	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-15.49	-4.11	-1.20	*-5.16*	0.000	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:	62.6	61.1	54.7	53.2	61.7	61.9
Heavy Trucks:	63.4	62.0	53.0	54.2	62.6	62.7
Vehicle Noise:	70.7	68.9	65.8	61.1	69.7	70.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	95	204	440	949
CNEL:	102	219	472	1,018

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Coast Highway
Road Segment: West of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	54,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,410 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	5.38	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-11.86	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-15.81	-4.11	-1.20	*-5.16*	0.000	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	64.9	58.8	67.4	68.0
Medium Trucks:	62.3	60.8	54.4	52.9	61.3	61.6
Heavy Trucks:	63.1	61.7	52.7	53.9	62.3	62.4
Vehicle Noise:	70.4	68.6	65.5	60.8	69.3	69.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	90	195	419	903
CNEL:	97	209	450	968

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Coast Highway
Road Segment: East of Newport CTR
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	45,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,530 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	76 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	4.61	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-12.63	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-16.58	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.8	65.9	64.1	58.0	66.7	67.3
Medium Trucks:	61.5	60.0	53.6	52.1	60.6	60.8
Heavy Trucks:	62.4	60.9	51.9	53.1	61.5	61.6
Vehicle Noise:	69.6	67.8	64.7	60.0	68.6	69.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	80	173	372	802
CNEL:	86	185	399	860

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Coast Highway
Road Segment: West of Avacado
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	43,800	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	4,380	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	4.46	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-12.77	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-16.73	-4.11	-1.20	*-5.16*	0.000	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	57.9	66.5	67.1
Medium Trucks:	61.4	59.9	53.5	51.9	60.4	60.6
Heavy Trucks:	62.2	60.8	51.8	53.0	61.4	61.5
Vehicle Noise:	69.4	67.7	64.6	59.9	68.4	68.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	78	169	364	784
CNEL:	84	181	390	841

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Coast Highway
Road Segment: East of Avacado
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	45,100	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	4,510	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	4.59	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-12.65	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-16.60	-4.11	-1.20	*-5.16*	0.000	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	64.1	58.0	66.6	67.2
Medium Trucks:	61.5	60.0	53.6	52.1	60.5	60.8
Heavy Trucks:	62.3	60.9	51.9	53.1	61.5	61.6
Vehicle Noise:	69.6	67.8	64.7	60.0	68.5	69.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	80	172	371	800
CNEL:	86	185	398	858

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Coast Highway
Road Segment: West of Macarthur
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	45,300	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	4,530	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	4.61	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-12.63	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-16.58	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	67.8	65.9	64.1	58.0	66.7	67.3
Medium Trucks:	61.5	60.0	53.6	52.1	60.6	60.8
Heavy Trucks:	62.4	60.9	51.9	53.1	61.5	61.6
Vehicle Noise:	69.6	67.8	64.7	60.0	68.6	69.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	80	173	372	802
CNEL:	86	185	399	860

Tuesday, May 29, 2012

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2016 With Project
Road Name: Coast Highway
Road Segment: East of Macarthur
Project Name: NNCPC
Job Number: 8211

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	61,800	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	6,180	vehicles
Vehicle Speed:	45	mph
Near/Far Lane Distance:	76	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	100.0	feet
Centerline Dist. to Observer:	100.0	feet
Barrier Distance to Observer:	0.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	0.0	feet
Road Elevation:	0.0	feet
Road Grade:	0.0%	
Left View:	-90.0	degrees
Right View:	90.0	degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	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:	2.000		
Medium Trucks:	4.000		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	92.547
Medium Trucks:	92.504
Heavy Trucks:	92.547

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	5.96	-4.11	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-11.28	-4.11	-1.20	*-4.97*	0.000	0.000
Heavy Trucks:	84.25	-15.24	-4.11	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.1	67.2	65.4	59.4	68.0	68.6
Medium Trucks:	62.9	61.4	55.0	53.4	61.9	62.1
Heavy Trucks:	63.7	62.3	53.2	54.5	62.8	63.0
Vehicle Noise:	70.9	69.2	66.0	61.4	69.9	70.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	99	213	458	987
CNEL:	106	228	491	1,058

Tuesday, May 29, 2012