APPENDIX O: NOISE IMPACT ANALYSIS

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Palomino Business Park

NOISE IMPACT ANALYSIS CITY OF NORCO

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11795-06 Noise Study



TABLE OF CONTENTS

TA	BLE OI	F CONTENTS	III				
AF	PENDI	CES	IV				
LIS	LIST OF EXHIBITS						
		ABLES					
LIS	T OF A	ABBREVIATED TERMS	VI				
EX	ECUTIV	VE SUMMARY	. 1				
	Off-Si	te Traffic Noise Analysis	. 1				
	Opera	itional Noise Analysis	.1				
	Opera	ational Vibration Analysis	. 2				
		ruction Noise Analysis					
		ruction Vibration Analysis					
	Summ	nary of Significance Findings	. 3				
1	INT	RODUCTION	. 7				
	1.1	Site Location	. 7				
	1.2	Project Study Area	. 7				
	1.3	Project Description	. 8				
2	FUI	NDAMENTALS	11				
	2.1	Range of Noise					
	2.2	Noise Descriptors					
	2.3	Sound Propagation					
	2.4	Noise Control					
	2.5	Noise Barrier Attenuation					
	2.6	Land Use Compatibility With Noise	14				
	2.7	Community Response to Noise	14				
	2.8	Exposure to High Noise Levels	15				
	2.9	Vibration	15				
3	REC	GULATORY SETTING	19				
	3.1	State of California Noise Requirements	19				
	3.2	State of California Green Building Standards Code	19				
	3.3	City of Norco General Plan Noise Element					
	3.4	Construction Noise Standards					
	3.5	Vibration Standards	22				
4	SIG	NIFICANCE CRITERIA	23				
	4.1	Noise-Sensitive Receivers	23				
	4.2	Non-Noise-Sensitive Receivers	25				
	4.3	Significance Criteria Summary	25				
5	EXI	STING NOISE LEVEL MEASUREMENTS	29				
	5.1	Measurement Procedure and Criteria	29				
	5.2	Noise Measurement Locations	29				
	5.3	Noise Measurement Results	30				



6	ME	THODS AND PROCEDURES	35
	6.1 6.2 6.3	FHWA Traffic Noise Prediction Model Off-Site Traffic Noise Prediction Model Inputs Vibration Assessment	35
7	OF	F-SITE TRANSPORTATION NOISE IMPACTS	43
	7.1 7.2 7.3 7.4	Traffic Noise Contours Existing Conditions Project Traffic Noise Level Contributions Opening Year 2022 Project Traffic Noise Level Contributions Horizon Year 2040 Project Traffic Noise Level Contributions	50 52
8 9		ISITIVE RECEIVER LOCATIONS ERATIONAL NOISE IMPACTS	
	9.1 9.2 9.3 9.4 9.5	Operational Noise Sources Reference Noise Levels Project Operational Noise Levels Project Operational Noise Level Contributions Operational Vibration Impacts	61 66 71
10	СО	NSTRUCTION IMPACTS	73
	10.1 10.2 10.3 10.4 10.5 10.6	Construction Noise Levels Construction Reference Noise Levels Construction Noise Analysis Construction Noise Thresholds of Significance Construction Vibration Impacts Soil Import/Export Activities	73 76 81 83
11 12		ERENCES	

APPENDICES

APPENDIX 3.1: CITY OF NORCO MUNICIPAL CODE

APPENDIX 5.1: STUDY AREA PHOTOS

APPENDIX 5.2: NOISE LEVEL MEASUREMENT WORKSHEETS

- APPENDIX 7.1: OFF-SITE TRAFFIC NOISE CONTOURS
- APPENDIX 9.1: OPERATIONAL STATIONARY-SOURCE NOISE CALCULATIONS



LIST OF EXHIBITS

XHIBIT ES-A: OPERATIONAL NOISE MITIGATION MEASURES	5
XHIBIT 1-A: LOCATION MAP	9
XHIBIT 1-B: SITE PLAN 1	0
XHIBIT 2-A: TYPICAL NOISE LEVELS 1	1
XHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION 1	5
XHIBIT 2-C: TYPICAL LEVELS OF GROUND-BORNE VIBRATION 1	7
XHIBIT 3-A: CITY OF NORCO LAND USE COMPATIBILITY MATRIX	1
XHIBIT 5-A: NOISE MEASUREMENT LOCATIONS	3
XHIBIT 8-A: SENSITIVE RECEIVER LOCATIONS 5	9
XHIBIT 9-A: OPERATIONAL NOISE SOURCE AND RECEIVER LOCATIONS	5
XHIBIT 10-A: CONSTRUCTION NOISE SOURCE AND RECEIVER LOCATIONS	4

LIST OF TABLES

TABLE ES-1: SUMMARY OF SIGNIFICANCE FINDINGS	4
TABLE 4-1: SIGNIFICANCE OF NOISE IMPACTS AT NOISE-SENSITIVE RECEIVERS	24
TABLE 4-2: SIGNIFICANCE CRITERIA SUMMARY 2	
TABLE 5-1: 24-HOUR AMBIENT NOISE LEVEL MEASUREMENTS	32
TABLE 6-1: OFF-SITE ROADWAY PARAMETERS 3	6
TABLE 6-2: AVERAGE DAILY TRAFFIC VOLUMES	\$7
TABLE 6-3: TIME OF DAY VEHICLE SPLITS 3	-
TABLE 6-4: WITHOUT PROJECT CONDITIONS VEHICLE MIX	8
TABLE 6-5: EXISTING WITH PROJECT CONDITIONS VEHICLE MIX	
TABLE 6-6: OPENING YEAR WITH PROJECT CONDITIONS VEHICLE MIX	10
TABLE 6-7: HORIZON YEAR WITH PROJECT CONDITIONS VEHICLE MIX	
TABLE 6-8: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT	
TABLE 7-1: EXISTING WITHOUT PROJECT CONDITIONS NOISE CONTOURS	
TABLE 7-2: EXISTING WITH PROJECT CONDITIONS NOISE CONTOURS	15
TABLE 7-3: OPENING YEAR WITHOUT PROJECT CONDITIONS NOISE CONTOURS	16
TABLE 7-4: OPENING YEAR WITH PROJECT CONDITIONS NOISE CONTOURS	17
TABLE 7-5: HORIZON YEAR WITHOUT PROJECT CONDITIONS NOISE CONTOURS	-
TABLE 7-6: HORIZON YEAR WITH PROJECT CONDITIONS NOISE CONTOURS 4	19
TABLE 7-7: UNMITIGATED EXISTING WITH PROJECT TRAFFIC NOISE LEVEL INCREASES	51
TABLE 7-8: UNMITIGATED OPENING YEAR WITH PROJECT TRAFFIC NOISE IMPACTS	;3
TABLE 7-9: UNMITIGATED HORIZON YEAR WITH PROJECT TRAFFIC NOISE IMPACTS	5
TABLE 9-1: REFERENCE NOISE LEVEL MEASUREMENTS 6	
TABLE 9-2: UNMITIGATED PROJECT-ONLY OPERATIONAL NOISE LEVELS	
TABLE 9-3: UNMITIGATED OPERATIONAL NOISE LEVEL COMPLIANCE	
TABLE 9-4: MITIGATED DAYTIME PROJECT-ONLY OPERATIONAL NOISE LEVELS	
TABLE 9-5: MITIGATED DAYTIME OPERATIONAL NOISE LEVEL COMPLIANCE	;9
TABLE 9-6: MITIGATED NIGHTTIME PROJECT-ONLY OPERATIONAL NOISE LEVELS	0'
TABLE 9-7: MITIGATED NIGHTTIME OPERATIONAL NOISE LEVEL COMPLIANCE	
TABLE 9-8: UNMITIGATED PROJECT DAYTIME NOISE LEVEL CONTRIBUTIONS	
TABLE 9-9: UNMITIGATED PROJECT NIGHTTIME NOISE LEVEL CONTRIBUTIONS	/2



TABLE 9-10: DEFINED.	MITIGATED PROJECT NIGHTTIME NOISE LEVEL CONTRIBUTIONS ERROR! BOOKMARK N	ОТ
TABLE 10-1:	CONSTRUCTION REFERENCE NOISE LEVELS	75
TABLE 10-2:	DEMOLITION EQUIPMENT NOISE LEVELS	76
TABLE 10-3:	SITE PREPARATION EQUIPMENT NOISE LEVELS	77
TABLE 10-4:	GRADING EQUIPMENT NOISE LEVELS	78
TABLE 10-5:	BUILDING CONSTRUCTION EQUIPMENT NOISE LEVELS	79
TABLE 10-6:	ARCHITECTURAL COATING EQUIPMENT NOISE LEVELS	80
TABLE 10-7:	PAVING EQUIPMENT NOISE LEVELS	81
TABLE 10-8:	UNMITIGATED CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY (DBA LEQ)	82
TABLE 10-9:	CONSTRUCTION EQUIPMENT NOISE LEVEL COMPLIANCE (DBA LEQ)	83
TABLE 10-10	: PROJECT CONSTRUCTION VIBRATION LEVELS	84

LIST OF ABBREVIATED TERMS

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

EXECUTIVE SUMMARY

Urban Crossroads, Inc. has prepared this noise study to determine the potential noise impacts and the necessary noise mitigation measures, if any, for the proposed Palomino Business Park development ("Project"). The Project site is located on either side of Mountain Avenue between Second Street and First Street in the City of Norco. The Project is proposed to consist of the development of 602,130 square feet (sf) of warehousing, 1,426,460 sf of industrial park, 6,520 sf of retail, 6,520 sf of fast-food restaurant without drive-through window, 4,275 sf of fast-food restaurant with drive-through window, and a 12-vehicle fueling position gas station with a 4,095 sf convenience market, for a total development of 2,050,000 sf. The Project is anticipated to be constructed in a single phase by the year 2022. At the time this noise analysis was prepared, the future tenants of the proposed Project were unknown, and therefore, this noise study includes a conservative analysis of the proposed Project uses. This study has been prepared to satisfy applicable City of Norco standards and thresholds of significance based on guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1)

OFF-SITE TRAFFIC NOISE ANALYSIS

Traffic generated by the operation of the Project will influence the traffic noise levels in surrounding off-site areas. To quantify the off-site traffic noise increases on the surrounding off-site areas, the changes in traffic noise levels on 31 study-area roadway segments were calculated based on the change in the average daily traffic (ADT) volumes. The traffic noise levels provided in this analysis are based on the traffic forecasts found in the *Palomino Business Park Traffic Impact Analysis* prepared by Urban Crossroads, Inc. (2) To assess the off-site noise level impacts associated with the proposed Project, noise contour boundaries were developed for Existing (2018), Opening Year Cumulative 2022, and Horizon Year 2040 conditions.

The analysis shows that the unmitigated Project-related traffic noise level increases under all with Project traffic scenarios are considered *less than significant* impacts at land uses adjacent to the study area roadway segments.

OPERATIONAL NOISE ANALYSIS

Using reference noise levels to represent the expected noise sources from the Palomino Business Park site, this analysis estimates the Project-related stationary-source noise levels at nearby sensitive receiver locations. The typical activities associated with the proposed Palomino Business Park are anticipated to include idling trucks, delivery truck activities, backup alarms, refrigerated containers or reefers, as well as loading and unloading of dry goods, roof-top air conditioning units, and parking lot vehicle movements.

OPERATIONAL NOISE LEVEL COMPLIANCE

The operational noise analysis shows that the Project-related stationary-source noise levels at receiver location R4 will exceed the City of Norco nighttime exterior noise level standards, and therefore, operational noise mitigation measures are required. With the recommended 10-foot



high noise barriers shown on Exhibit ES-A, the Project operational noise levels will be reduced to satisfy the City of Norco exterior noise level standards at the nearby sensitive receiver locations, and therefore, impacts related to Project operational noise levels will be *less than significant* with mitigation.

OPERATIONAL NOISE MITIGATION MEASURES

If receiver location R4 represents owned and/or occupied noise-sensitive uses at the time of Project operation, the following noise mitigation measures are required:

- Minimum 10-foot high noise barriers are required at the truck loading dock areas as shown on Exhibit ES-A.
 - Each barrier shall provide a weight of at least 4 pounds per square foot of face area with no decorative cutouts or line-of-sight openings between shielded areas and the roadways, or a minimum transmission loss of 20 dBA. (3) The barriers shall consist of a solid face from top to bottom. Unnecessary openings or decorative cutouts shall not be made. All gaps (except for weep holes) should be filled with grout or caulking. The noise barriers shall be constructed using the following materials:
 - Masonry block;
 - Earthen berm;
 - Or any combination of construction materials capable of the minimum weight of 4 pounds per square foot or a minimum transmission loss of 20 dBA.

OPERATIONAL NOISE LEVEL INCREASES

This analysis demonstrates that the mitigated Project operational noise levels will not contribute a long-term operational noise level impact to the existing ambient noise environment at any of the sensitive receiver locations. Therefore, the operational noise level impacts associated with the proposed 24-hour seven days per week Project activities, such as the idling trucks, delivery truck activities, backup alarms, refrigerated containers or reefers, as well as loading and unloading of dry goods, roof-top air conditioning units, and parking lot vehicle movements, are considered *less than significant*.

OPERATIONAL VIBRATION ANALYSIS

The operation of the Project site will include heavy trucks moving on site to and from the loading dock areas. Truck vibration levels are dependent on vehicle characteristics, load, speed, and pavement conditions. Typical vibration levels for the Palomino Business Park heavy truck activity at normal traffic speeds will approach 0.004 in/sec PPV at 25 feet based on the FTA *Transit Noise Impact and Vibration Assessment*. (4) Trucks transiting on site will be travelling at very low speeds so it is expected that delivery truck vibration impacts at nearby homes will satisfy the 0.04 in/sec PPV vibration Caltrans perception threshold, and therefore, will be *less than significant*.





CONSTRUCTION NOISE ANALYSIS

Construction-related noise impacts are expected to create temporary and intermittent high-level noise conditions at receivers surrounding the Project site. Using sample reference noise levels to represent the planned construction activities of the Palomino Business Park site, this analysis estimates the Project-related construction noise levels at nearby sensitive receiver locations. Since the City of Norco General Plan and Municipal Codes do not identify specific construction noise level thresholds, a threshold is identified based on the National Institute for Occupational Safety and Health (NIOSH) limits for construction noise. The Project-related short-term construction noise levels are expected to range from 57.8 to 79.6 dBA L_{eq} and will satisfy the 85 dBA L_{eq} threshold identified by the National Institute for Occupational Safety and Health (NIOSH) at all receiver locations. Therefore, based on the results of this analysis, all nearby sensitive receiver locations will experience *less than significant* impacts due to Project construction noise levels.

CONSTRUCTION VIBRATION ANALYSIS

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures and soil type. It is expected that ground-borne vibration from Project construction activities would cause only intermittent, localized intrusion. This analysis shows the highest construction vibration levels are expected to approach 0.03 in/sec PPV, which is below the Caltrans *distinctly perceptible* vibration threshold of 0.04 in/sec PPV at all receiver locations. Therefore, the Project-related vibration impacts are considered *less than significant* during the construction activities at the Project site.

Further, the Project-related construction vibration levels do not represent levels capable of causing building damage to nearby residential homes. The FTA identifies construction vibration levels capable of building damage ranging from 0.12 to 0.5 in/sec PPV. (4) The peak Project-construction vibration levels approaching 0.03 in/sec PPV will remain below the FTA vibration levels for building damage at the residential homes near the Project site. Moreover, the impacts at the site of the closest sensitive receivers are unlikely to be sustained during the entire construction period, but will occur rather only during the times that heavy construction equipment is operating adjacent to the Project site perimeter.

SUMMARY OF SIGNIFICANCE FINDINGS

The results of this Palomino Business Park Noise Impact Analysis are summarized below based on the significance criteria in Section 4 of this report. Table ES-1 shows the findings of significance for each potential noise and/or vibration impact before and after any required mitigation measures.



Anghuin	Report	Significance Findings			
Analysis	Section	Unmitigated	Mitigated		
Off-Site Traffic Noise	7	Less Than Significant	-		
Operational Noise	- 9	Potentially Significant	Less Than Significant		
Operational Vibration	9	Less Than Significant	-		
Construction Noise	10	Less Than Significant	-		
Construction Vibration	10	Less Than Significant	-		

TABLE ES-1: SUMMARY OF SIGNIFICANCE FINDINGS



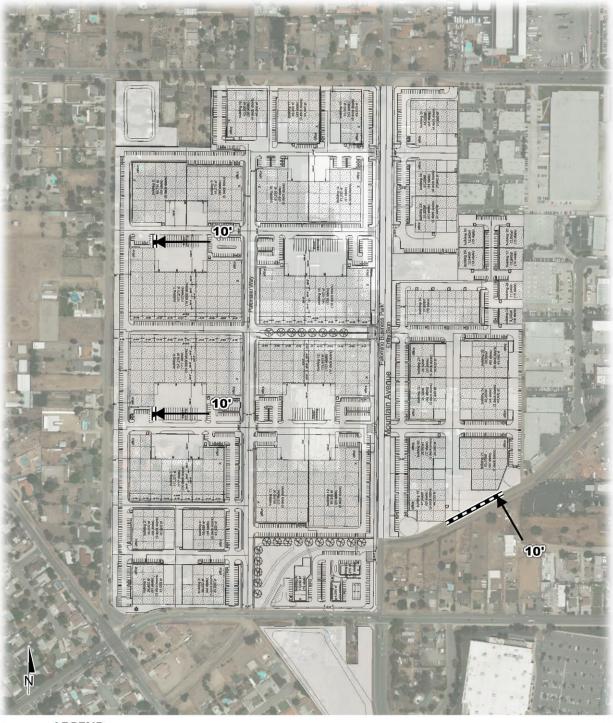


EXHIBIT ES-A: OPERATIONAL NOISE MITIGATION MEASURES

LEGEND:

(10) Required noise barrier height (in feet) 💻 Operational noise barrier mitigation



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1 INTRODUCTION

This noise analysis has been completed to determine the noise impacts associated with the development of the proposed Palomino Business Park ("Project"). This noise study briefly describes the proposed Project, provides information regarding noise fundamentals, describes the local regulatory setting, provides the study methods and procedures for traffic noise analysis, and evaluates the future exterior noise environment. In addition, this study includes an analysis of the potential Project-related long-term operational and short-term construction noise and vibration impacts.

1.1 SITE LOCATION

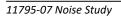
The proposed Palomino Business Park site is located on either side of Mountain Avenue between Second Street and First Street in the City of Norco, as shown on Exhibit 1-A.

1.2 PROJECT STUDY AREA

The Project site is currently developed with 36 single-family residential structures and a chicken egg warehouse and distribution facility for Hidden Villa Ranch. Residential structures are located along First Street, Second Street, and Pacific Avenue, some of which are occupied, and some are vacant. Several of the on-site residential parcels contain chickens, horses, goats, ponies, and dog raising activities; however, none are commercial operations. The site also includes several dilapidated former farm buildings, stables, chicken sheds, and concrete pads from previous uses. Additionally, a large portion of the site consists of undeveloped vacant land, a portion of which includes remnants of building foundations.

The surrounding land uses are described below.

- North: Second Street followed by single-family residential uses. General Plan Land Use designation of Residential Agricultural (RA) and Zoned Agricultural Low Density 10 acres (A-1-10).
- West: Pacific Avenue and single-family residential uses. General Plan Land Use designation of Residential Agricultural (RA) and Zoned Agricultural Low Density 10 acres (A-1-10).
- South: First Street and single-family residential. General Plan Land Use designation of Residential Agricultural (RA) and Zoned Agricultural Low Density 10 acres (A-1-10); and Gateway Specific Plan designation of Residential (R).
- East: A portion of Mountain Avenue, single-family residential, and industrial development. Gateway Specific Plan designation of Industrial (I) with a Housing Development Overlay (HDO).





1.3 PROJECT DESCRIPTION

The Project is proposed to consist of the development of 602,130 square feet (sf) of warehousing, 1,426,460 sf of industrial park, 6,520 sf of retail, 6,520 sf of fast-food restaurant without drive-through window, 4,275 sf of fast-food restaurant with drive-through window, and a 12-vehicle fueling position gas station with a 4,095 sf convenience market, for a total development of 2,050,000 sf, as shown on Exhibit 1-B. The Project is anticipated to be constructed in a single phase by the year 2022.

At the time this noise analysis was prepared, the future tenants of the proposed Project were unknown. The on-site Project-related noise sources are expected to include: idling trucks, delivery truck activities, backup alarms, refrigerated containers or reefers, as well as loading and unloading of dry goods, roof-top air conditioning units, and parking lot vehicle movements. This noise analysis is intended to describe noise level impacts associated with the expected typical, 24-hour seven days per week operational activities at the Project site.

Per the *Palomino Business Park Traffic Impact Analysis* prepared by Urban Crossroads, Inc. the Project is expected to generate a total of approximately 7,922 trip-ends per day (actual vehicles) and includes 1,040 truck trip-ends per day. (2) This noise study relies on the actual Project trips (as opposed to the passenger car equivalents) to accurately account for the effect of individual truck trips on the study area roadway network.





EXHIBIT 1-A: LOCATION MAP



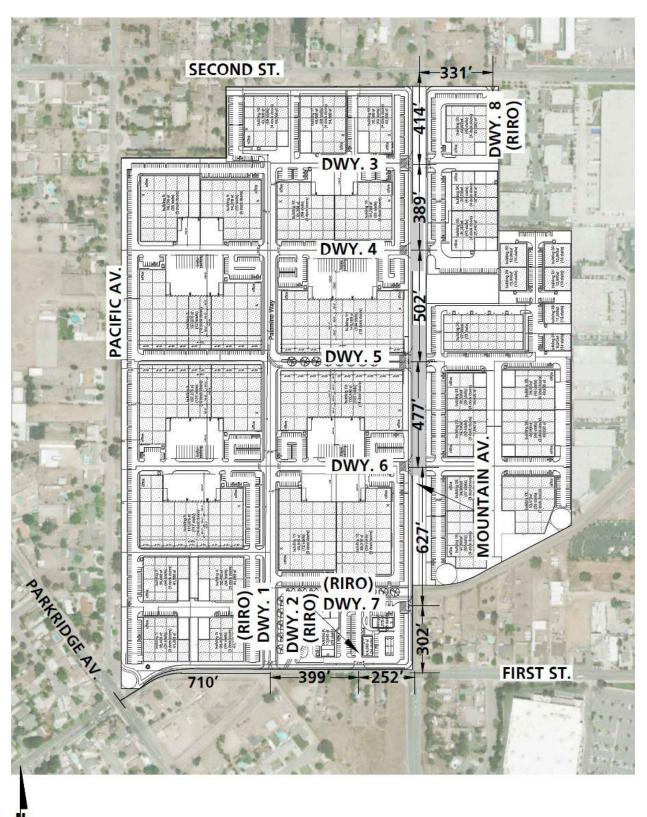


EXHIBIT 1-B: SITE PLAN



2 FUNDAMENTALS

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

COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE	
THRESHOLD OF PAIN		140			
NEAR JET ENGINE		130	INTOLERABLE OR		
		120	DEAFENING	HEARING LOSS	
JET FLY-OVER AT 300m (1000 ft)	ROCK BAND	110			
LOUD AUTO HORN		100			
GAS LAWN MOWER AT 1m (3 ft)		90			
DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph)	FOOD BLENDER AT 1m (3 ft)	80			
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70	LOUD	SPEECH INTERFERENCE	
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60			
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	SLEEP	
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40		DISTURBANCE	
QUIET SUBURBAN NIGHTTIME	LIBRARY	30			
QUIET RURAL NIGHTTIME	BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND)	20	FAINT		
	BROADCAST/RECORDING STUDIO	10	VERY FAINT	NO EFFECT	
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0	VENT FAINT		

EXHIBIT 2-A: TYPICAL NOISE LEVELS

Source: Environmental Protection Agency Office of Noise Abatement and Control, Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (EPA/ONAC 550/9-74-004) March 1974.

2.1 RANGE OF NOISE

Since the range of intensities that the human ear can detect is so large, the scale frequently used to measure intensity is a scale based on multiples of 10, the logarithmic scale. The scale for measuring intensity is the decibel scale. Each interval of 10 decibels indicates a sound energy ten times greater than before, which is perceived by the human ear as being roughly twice as loud. (5) 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. (6) Another important aspect of noise is the duration of the sound and the way it is described and distributed in time.

2.2 NOISE DESCRIPTORS

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

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

2.3 SOUND PROPAGATION

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

2.3.1 GEOMETRIC SPREADING

Sound from a localized source (i.e., a stationary point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source. (5)

2.3.2 GROUND ABSORPTION

The propagation path of noise from a highway to a receptor is usually very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually



sufficiently accurate for distances of less than 200 ft. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receptor, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receptor such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source. (7)

2.3.3 ATMOSPHERIC EFFECTS

Receptors located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects. (5)

2.3.4 SHIELDING

A large object or barrier in the path between a noise source and a receptor can substantially attenuate noise levels at the receptor. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Shielding by trees and other such vegetation typically only has an "out of sight, out of mind" effect. That is, the perception of noise impact tends to decrease when vegetation blocks the line-of-sight to nearby residents. However, for vegetation to provide a substantial, or even noticeable, noise reduction, the vegetation area must be at least 15 feet in height, 100 feet wide and dense enough to completely obstruct the line-of sight between the source and the receiver. This size of vegetation may provide up to 5 dBA of noise reduction. The FHWA does not consider the planting of vegetation to be a noise abatement measure. (7)

2.4 NOISE CONTROL

Noise control is the process of obtaining an acceptable noise environment for an 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 these three elements.

2.5 Noise Barrier Attenuation

Effective noise barriers can reduce noise levels by 10 to 15 dBA, cutting the loudness of traffic noise in half. A noise barrier is most effective when placed close to the noise source or receptor. Noise barriers, however, do have limitations. For a noise barrier to work, it must be high enough and long enough to block the path of the noise source. (7)



2.6 LAND USE COMPATIBILITY WITH NOISE

Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are more sensitive to noise intrusion than are commercial or industrial developments and related activities. As ambient noise levels affect the perceived amenity or livability of a development, so too can the mismanagement of noise impacts impair the economic health and growth potential of a community by reducing the area's desirability as a place to live, shop and work. For this reason, land use compatibility with the noise environment is an important consideration in the planning and design process. The FHWA encourages State and Local government to regulate land development in such a way that noise-sensitive land uses are either prohibited from being located adjacent to a highway, or that the developments are planned, designed, and constructed in such a way that noise impacts are minimized. (8)

2.7 COMMUNITY RESPONSE TO NOISE

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

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

Approximately ten percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints will occur. Another twenty-five percent of the population will not complain even in very severe noise environments. Thus, a variety of reactions can be expected from people exposed to any given noise environment. (9) Surveys have shown that about ten percent of the people exposed to traffic noise of 60 dBA will report being highly annoyed with the noise, and each increase of one dBA is associated with approximately two percent more people being highly annoyed. When traffic noise exceeds 60 dBA or aircraft noise exceeds 55 dBA, people may begin to complain. (9) Despite this variability in behavior on an individual level, the population can be expected to exhibit the following responses to changes in noise levels as shown on Exhibit 2-B. An increase or decrease of 1 dBA cannot be perceived except in carefully controlled laboratory experiments, a change of 3 dBA are considered *barely perceptible*, and changes of 5 dBA are considered *readily perceptible*. (7)

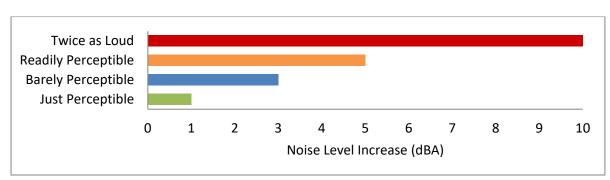


EXHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION

2.8 EXPOSURE TO HIGH NOISE LEVELS

The Occupational Safety and Health Administration (OSHA) sets legal limits on noise exposure in the workplace. The permissible exposure limit (PEL) for a worker over an eight-hour day is 90 dBA. The OSHA standard uses a 5 dBA exchange rate. This means that when the noise level is increased by 5 dBA, the amount of time a person can be exposed to a certain noise level to receive the same dose is cut in half. The National Institute for Occupational Safety and Health (NIOSH) has recommended that all worker exposures to noise should be controlled below a level equivalent to 85 dBA for eight hours to minimize occupational noise induced hearing loss. NIOSH also recommends a 3 dBA exchange rate so that every increase by 3 dBA doubles the amount of the noise and halves the recommended amount of exposure time. (10)

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

2.9 VIBRATION

Per the Federal Transit Administration (FTA) *Transit Noise Impact and Vibration Assessment* (4), vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure-borne noise. Sources of ground-borne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency.



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

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



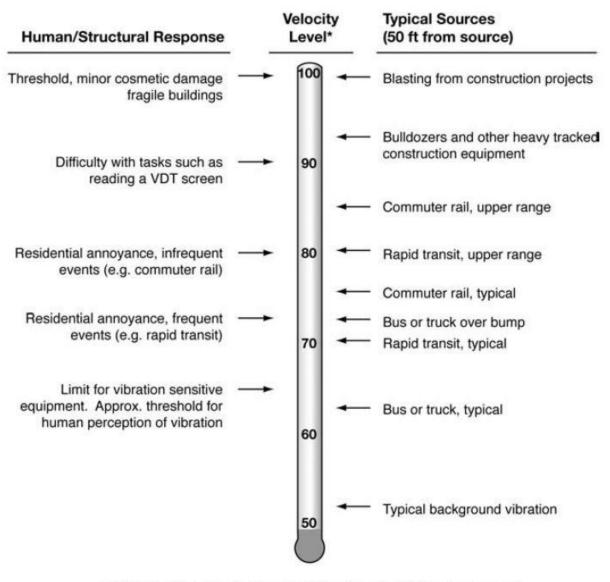


EXHIBIT 2-C: TYPICAL LEVELS OF GROUND-BORNE VIBRATION

* RMS Vibration Velocity Level in VdB relative to 10⁻⁶ inches/second

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



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3 REGULATORY SETTING

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. In most areas, automobile and truck traffic is the major source of environmental noise. Traffic activity generally produces an average sound level that remains constant with time. Air and rail traffic, and commercial and industrial activities are also major sources of noise in some areas. Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies.

3.1 STATE OF CALIFORNIA NOISE REQUIREMENTS

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared per guidelines adopted by the Governor's Office of Planning and Research (OPR). (11) The purpose of the Noise Element is to *limit the exposure of the community to excessive noise levels*.

3.2 STATE OF CALIFORNIA GREEN BUILDING STANDARDS CODE

The 2016 State of California's Green Building Standards Code contains mandatory measures for non-residential building construction in Section 5.507 on Environmental Comfort. (12) These noise standards are applied to new construction in California for controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when non-residential structures are developed in areas where the exterior noise levels exceed 65 dBA CNEL, such as within a noise contour of an airport, freeway, railroad, and other areas where noise contours are not readily available. If the development falls within an airport or freeway 65 dBA CNEL noise contour, the combined sound transmission class (STC) rating of the wall and roof-ceiling assemblies must be at least 50. For those developments in areas where noise contours are not readily available and the noise level exceeds 65 dBA L_{eq} for any hour of operation, a wall and roof-ceiling combined STC rating of 45, and exterior windows with a minimum STC rating of 40 are required (Section 5.507.4.1).

3.3 CITY OF NORCO GENERAL PLAN NOISE ELEMENT

The City of Norco has adopted a Noise Element of the General Plan to control and abate environmental noise, and to protect the citizens of the City of Norco from excessive exposure to noise. (13) The Noise Element specifies the maximum allowable unmitigated exterior noise levels for new developments impacted by transportation noise sources such as arterial roads, freeways, airports, and railroads. For the purpose of this analysis, stationary/area-source (operational) noise generated by the proposed Project uses are evaluated based on the standards described below from the City of Norco Municipal Code.



LAND USE COMPATIBILITY

The Land Use Compatibility (Table 3.8) matrix in the City of Norco General Plan Noise Element, shown on Exhibit 3-A, provides guidelines to evaluate the land use compatibility of transportation related noise. (13) The Land Use Compatibility matrix describes categories of compatibility and not specific noise standards. According to these categories of transportation-related noise compatibility, the Palomino Business Park office, business, commercial, and industrial land uses are considered *normally acceptable* with unmitigated exterior noise levels below 70 dBA CNEL and *conditionally acceptable* with noise levels approaching 75 dBA CNEL. Nearby sensitive residential land uses are considered *normally acceptable* with noise levels below 70 dBA CNEL. For *conditionally acceptable* and use, *new construction or development should be undertaken only after a detailed analysis of noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.*

3.4 CONSTRUCTION NOISE STANDARDS

Neither the City of Norco General Plan nor Municipal Code establish numeric maximum acceptable construction source noise levels at potentially affected receivers, which would allow for a quantified determination of what CEQA constitutes a *substantial temporary or periodic noise increase*.

To evaluate whether the Project will generate potentially significant construction noise levels at off-site sensitive receiver locations, a construction-related noise level threshold is adopted from the Criteria for Recommended Standard: Occupational Noise Exposure prepared by the National Institute for Occupational Safety and Health (NIOSH). (14) A division of the U.S. Department of Health and Human Services, NIOSH identifies a noise level threshold based on the duration of exposure to the source. The construction related noise level threshold starts at 85 dBA for more than eight hours per day, and for every 3 dBA increase, the exposure time is cut in half. This results in noise level thresholds of 88 dBA for more than four hours per day, 92 dBA for more than one hour per day, 96 dBA for more than 30 minutes per day, and up to 100 dBA for more than 15 minutes per day. (14) For the purposes of this analysis, the lowest, more conservative construction noise level threshold of 85 dBA Leg is used as an acceptable threshold for construction noise at the nearby sensitive receiver locations. Since this construction-related noise level threshold represents the energy average of the noise source over a given time, they are expressed as Leg noise levels. Therefore, the noise level threshold of 85 dBA Leg over a period of eight hours or more is used to evaluate the potential Project-related construction noise level impacts at the nearby sensitive receiver locations.



LAND US	(COMMUNITY NOISE EXPOSURE dB(A) CNEL					
			55	60 6		75	80
RESIDENTIAL – LOW D DUPLEX, MOBILE HOM	ENSITY, SINGLE FAMILY, ES						
RESIDENTIAL – MULTIF	PLE FAMILY						
TRANSIENT LODGING -	- MOTELS, HOTELS						
SCHOOLS, LIBRARIES, NURSING HOMES	CHURCHES, HOSPITALS	,					
AUDITORIUMS, CONCE	RT HALLS, AMPHITHEAT	ERS					
SPORTS ARENAS, OUT	DOOR SPECTATOR SPO	RTS					n market and a second sec
PLAYGROUNDS, NEIGH	IBORHOOD PARKS						
GOLF COURSES, RIDIN RECREATION, CEMETA			B				
OFFICE BUILDINGS, BL PROFESSIONAL OFFIC	ISINESS, COMMERCIAL, ES						
INDUSTRIAL, MANUFAG AGRICULTURE	CTURING, UTILITIES,						
NORMALLY ACCEPTABLE Specified land use is satisfac- tory, based upon assumption that buildings are of normal conventional construction, without special noise insula- tion.	CONDITIONALLY ACCEPTABLE New construction should only proceed after a detailed anal- ysis of noise reduction requi- rements is made and needed insulation included in the de- sign. Conventional construc- tion may suffice with closed windows and a fresh air sup- ply system.	UN. New constru- discouraged proceeds, a of noise red ments must	RMALLY ACCEPTAB uction should d. If construct detailed and uction requir be complete d insulation in esign.	d be ction alysis re- ed		struction door env would be outdoor	hould not costs to vironment prohibi- environ-

EXHIBIT 3-A: CITY OF NORCO LAND USE COMPATIBILITY MATRIX

ply system. Source: City of Norco General Plan Noise Element, Table 3.8.



3.5 VIBRATION STANDARDS

The City of Norco General Plan and Municipal Code do not identify specific vibration level standards. Therefore, applicable vibration standards identified by the California Department of Transportation ("Caltrans") *Transportation and Construction Vibration Guidance Manual* are used in this noise study. (15) According to the Caltrans vibration manual, large bulldozers, and loaded trucks used during construction activities can produce vibration which can potentially cause annoyance at sensitive land uses within the Project study area, or damage to adjacent structures. Therefore ,the Caltrans *distinctly perceptible* vibration threshold in terms of human annoyance of 0.04 in/sec peak-particle velocity (PPV) is used in this noise study to determine potential impacts at nearby sensitive receiver locations.



4 SIGNIFICANCE CRITERIA

The following significance criteria are based on currently adopted guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1) For the purposes of this report, impacts would be potentially significant if the Project results in or causes:

- A. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
- B. Generation of excessive ground-borne vibration or ground-borne noise levels?
- C. For a Project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?

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

CEQA GUIDELINES NOT FURTHER ANALYZED

The Project site is located within two miles of Corona Municipal Airport. However, based on the *Riverside County Airport Land Use Compatibility Plan Policy Document*, Map CO-3, Noise Compatibility Contours, the Project site is located outside of the 55 dBA CNEL contour boundaries of Corona Municipal Airport. (16) Table 2B of the *Riverside County Airport Land Use Compatibility Plan Policy Document* indicates that the Project land uses are considered *clearly compatible* outside of the 55 dBA CNEL noise level contour boundaries. As such, the Project site would not be exposed to excessive noise levels from airport operations, and therefore, impacts are considered *less than significant*, and no further noise analysis is conducted in relation to Guideline C.

4.1 NOISE-SENSITIVE RECEIVERS

Noise level increases resulting from the Project are evaluated based on the Appendix G CEQA Guidelines described above at the closest sensitive receiver locations. Under CEQA, consideration must be given to the magnitude of the increase, the existing ambient noise levels, and the location of noise-sensitive receivers to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes *that there is no single noise increase that renders the noise impact significant.* (17)

Unfortunately, there is no completely satisfactory way to measure the subjective effects of noise or of the corresponding human reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance and differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to



a new noise is the comparison of it to the existing environment to which one has adapted—the so-called *ambient* environment.

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

As previously stated, the approach used in this noise study recognizes *that there is no single noise increase that renders the noise impact significant*, based on a 2008 California Court of Appeal ruling on Gray v. County of Madera. (17) For example, if the ambient noise environment is quiet (<60 dBA) and the new noise source greatly increases the noise levels, an impact may occur if the noise criteria may be exceeded. Therefore, for this analysis, FICON identifies a *readily perceptible* 5 dBA or greater Project-related noise level increase is considered a significant impact when the noise criteria for a given land use is exceeded. Per the FICON, in areas where the without Project noise levels range from 60 to 65 dBA, a 3 dBA *barely perceptible* noise level increase appears to be appropriate for most people. When the without Project noise levels already exceed 65 dBA, any increase in community noise louder than 1.5 dBA or greater is considered a significant impact if the noise criteria for a given land use is exceeded, since it likely contributes to an existing noise exposure exceedance. Table 4-1 below provides a summary of the potential noise impact significance criteria, based on guidance from FICON.

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

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

Federal Interagency Committee on Noise (FICON), 1992.



4.2 NON-NOISE-SENSITIVE RECEIVERS

The City of Norco General Plan Noise Element is used to establish the satisfactory noise levels of significance for non-noise-sensitive land uses in the Project study area. As previously shown on Exhibit 3-A, the *normally acceptable* exterior noise levels for non-noise-sensitive land uses is 70 dBA CNEL. Noise levels greater than 70 dBA CNEL are considered *conditionally acceptable* per the General Plan Noise Element. (13)

To determine if Project-related traffic noise level increases are significant at off-site non-noisesensitive land uses, a *readily perceptible* 5 dBA and *barely perceptible* 3 dBA criteria were used. When the without Project noise levels at the non-noise-sensitive land uses are below the *normally acceptable* 70 dBA CNEL compatibility criteria, a *readily perceptible* 5 dBA or greater noise level increase is considered a significant impact. When the without Project noise levels are greater than the *normally acceptable* 70 dBA CNEL land use compatibility criteria, a *barely perceptible* 3 dBA or greater noise level increase is considered a significant impact since the noise level criteria is already exceeded. The noise level increases used to determine significant impacts for non-noise-sensitive land uses is generally consistent with the FICON noise level increase thresholds s for noise-sensitive land uses but instead rely on the City of Norco General Plan Noise Element, *normally acceptable* 70 dBA CNEL exterior noise level criteria.

4.3 SIGNIFICANCE CRITERIA SUMMARY

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

OFF-SITE TRAFFIC NOISE

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



OPERATIONAL NOISE & VIBRATION

- If Project-related operational (stationary-source) noise levels exceed the exterior 55 dBA L_{eq} daytime and/or 45 dBA L_{eq} nighttime noise level standards at nearby sensitive receiver locations (City of Norco Chapter 9.07 Noise Regulations). The City's Municipal Code does not include any adjustments to the noise standards to account for existing ambient noise levels. As such, Project-only noise levels are evaluated for compliance with the Municipal Code standards.
- If the existing ambient noise levels at the nearby noise-sensitive receivers near the Project site:
 - $\circ~$ are less than 60 dBA L_{eq} and the Project creates a readily perceptible 5 dBA L_{eq} or greater Project-related noise level increase; or
 - \circ range from 60 to 65 dBA L_{eq} and the Project creates a *barely perceptible* 3 dBA L_{eq} or greater Project-related noise level increase; or
 - $\circ~$ already exceed 65 dBA L_{eq} and the Project creates a community noise level impact of greater than 1.5 dBA L_{eq} (FICON, 1992).
- If long-term Project generated operational vibration levels exceed the vibration threshold of 0.04 in/sec PPV at sensitive receiver locations (Caltrans Transportation and Construction Vibration Guidance Manual).

CONSTRUCTION NOISE & VIBRATION

- If Project-related construction activities create noise levels which exceed the 85 dBA L_{eq} acceptable noise level threshold at the nearby sensitive receiver locations (NIOSH, Criteria for Recommended Standard: Occupational Noise Exposure).
- If short-term Project-generated construction vibration levels exceed the vibration threshold of 0.04 in/sec PPV at sensitive receiver locations (Caltrans Transportation and Construction Vibration Guidance Manual).



Analusia			Significance Criteria		
Analysis	Land Use	Condition(s)	Daytime	Nighttime	
	Noise- Sensitive ¹	if ambient is < 60 dBA CNEL	≥ 5 dBA CNEL Project increase		
Off-Site		if ambient is 60 - 65 dBA CNEL	≥ 3 dBA CNEL P	roject increase	
Traffic		if ambient is > 65 dBA CNEL	≥ 1.5 dBA CNEL	Project increase	
Noise	Non-Noise- Sensitive ²	if ambient is < 70 dBA CNEL	≥ 5 dBA CNEL Project increase		
		if ambient is > 70 dBA CNEL	≥ 3 dBA CNEL Project increase		
	Noise- Sensitive	Exterior Noise Level Standards ³	55 dBA L _{eq}	45 dBA L _{eq}	
Operational		if ambient is < 60 dBA L_{eq}^{1}	≥ 5 dBA L _{eq} Project increase		
Noise &		if ambient is 60 - 65 dBA L_{eq}^{1}	≥ 3 dBA L _{eq} Project increase		
Vibration		if ambient is > 65 dBA L_{eq}^{1}	≥ 1.5 dBA L _{eq} Project increas		
		Vibration Level Threshold ⁴	0.04 in/sec PPV		
Construction	Noise-	Noise Level Threshold ⁵	85 dBA L _{eq}		
Noise & Vibration	Sensitive	Vibration Level Threshold ⁴	0.04 in/sec PPV		

TABLE 4-2: SIGNIFICANCE CRITERIA SUMMARY

¹ Source: FICON, 1992.

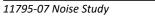
² Source: City of Norco General Plan Noise Element, Table 3.8.

³ Source: City of Norco Municipal Code, Chapter 9.07 Noise Regulations (Appendix 3.1).

⁴ Source: Caltrans Transportation and Construction Vibration Guidance Manual.

⁵ Acceptable threshold for construction noise based on the Criteria for Recommended Standard: Occupational Noise Exposure prepared by the National Institute for Occupational Safety and Health.

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





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5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, 24-hour noise level measurements were taken at eight locations in the Project study area. The receiver locations were selected to describe and document the existing noise environment within the Project study area. Exhibit 5-A provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Tuesday, November 13th, 2018. Appendix 5.1 includes study area photos.

5.1 MEASUREMENT PROCEDURE AND CRITERIA

To describe the existing noise environment, the hourly noise levels were measured during typical weekday conditions over a 24-hour period. By collecting individual hourly noise level measurements, it is possible to describe the daytime and nighttime hourly noise levels and calculate the 24-hour CNEL. The long-term noise readings were recorded using Piccolo Type 2 integrating sound level meter and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (19)

5.2 NOISE MEASUREMENT LOCATIONS

The long-term noise level measurements were positioned as close to the nearest sensitive receiver locations as possible to assess the existing ambient hourly noise levels surrounding the Project site. Both Caltrans and the FTA recognize that it is not reasonable to collect noise level measurements that can fully represent every part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development Projects. This is demonstrated in the Caltrans general site location guidelines which indicate that, *sites must be free of noise contamination by sources other than sources of interest. Avoid sites located near sources such as barking dogs, lawnmowers, pool pumps, and air conditioners unless it is the express intent of the analyst to measure these sources. (5) Further, FTA guidance states, that it is not necessary nor recommended that existing noise exposure be determined by measuring at every noise-sensitive location in the Project area. Rather, the recommended approach is to characterize the noise environment for clusters of sites based on measurements or estimates at representative locations in the community. (4)*

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



and is necessary to assess potential noise impacts due to the Project's contribution to the ambient noise levels.

5.3 NOISE MEASUREMENT RESULTS

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

- Location L1 represents the noise levels north of the Project site on Second Street, near existing residential homes. The noise level measurements collected show an overall 24-hour exterior noise level of 72.3 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 68.2 dBA L_{eq} with an average nighttime noise level of 65.2 dBA L_{eq}.
- Location L2 represents the noise levels north of the Project site near existing residential homes on Second Street. The noise level measurements collected show an overall 24-hour exterior noise level of 65.2 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 60.9 dBA L_{eq} with an average nighttime noise level of 58.0 dBA L_{eq}.
- Location L3 represents the noise levels on Mountain Avenue near existing industrial uses within the Project site boundaries. The 24-hour CNEL indicates that the overall exterior noise level is 71.5 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 67.6 dBA L_{eq} with an average nighttime noise level of 64.3 dBA L_{eq}.
- Location L4 represents the noise levels on Mountain Avenue near existing industrial uses southeast of the Project site. The noise level measurements collected show an overall 24hour exterior noise level of 70.4 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 66.4 dBA L_{eq} with an average nighttime noise level of 63.2 dBA L_{eq}.
- Location L5 represents the noise levels on Mountain Avenue near existing residential uses north of First Street. The 24-hour CNEL indicates that the overall exterior noise level is 66.3 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 61.8 dBA L_{eq} with an average nighttime noise level of 59.2 dBA L_{eq}.
- Location L6 represents the noise levels at the southern Project site boundary on First Street near existing residential and industrial uses. The noise level measurements collected show an overall 24-hour exterior noise level of 69.8 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 65.7 dBA L_{eq} with an average nighttime noise level of 62.5 dBA L_{eq}.
- Location L7 represents the noise levels west of the Project site on Pacific Avenue near existing residential homes. The noise level measurements collected show an overall 24-hour exterior noise level of 60.8 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 56.0 dBA L_{eq} with an average nighttime noise level of 53.8 dBA L_{eq}.



Location L8 represents the noise levels west of the Project site on Pacific Avenue near existing
residential homes. The noise level measurements collected show an overall 24-hour exterior
noise level of 57.5 dBA CNEL. The energy (logarithmic) average daytime noise level was
calculated at 54.4 dBA L_{eq} with an average nighttime noise level of 49.8 dBA L_{eq}.

Table 5-1 provides the (energy average) noise levels used to describe the daytime and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. Appendix 5.2 provides summary worksheets of the noise levels for each hour as well as the minimum, maximum, L₁, L₂, L₅, L₈, L₂₅, L₅₀, L₉₀, L₉₅, and L₉₉ percentile noise levels observed during the daytime and nighttime periods.

The background ambient noise levels in the Project study area are dominated by the transportation-related noise associated with I-15 and study area roadways, in addition to background existing industrial land use activities. This includes the auto and heavy truck activities on study area roadway segments near the noise level measurement locations. The 24-hour existing noise level measurement results are shown on Table 5-1.



Location ¹	Distance to Project	Description	Noise	Average Level L _{eq}) ²	CNEL
	Boundary (Feet)		Daytime	Nighttime	
L1	20'	Located north of the Project site on Second Street, near existing residential homes.	68.2	65.2	72.3
L2	190'	Located north of the Project site near existing residential homes on Second Street.	60.9	58.0	65.2
L3	0'	Located on Mountain Avenue near existing industrial uses within the Project site boundaries.	67.6	64.3	71.5
L4	0'	Located on Mountain Avenue near existing industrial uses southeast of the Project site.	66.4	63.2	70.4
L5	0'	Located on Mountain Avenue near existing residential uses north of First Street.	61.8	59.2	66.3
L6	0'	Located at the southern Project site boundary on First Street near existing residential and industrial uses.	65.7	62.5	69.8
L7	70'	Located west of the Project site on Pacific Avenue near existing residential homes.	56.0	53.8	60.8
L8	75'	Located west of the Project site on Pacific Avenue near existing residential homes.	54.4	49.8	57.5

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

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

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

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



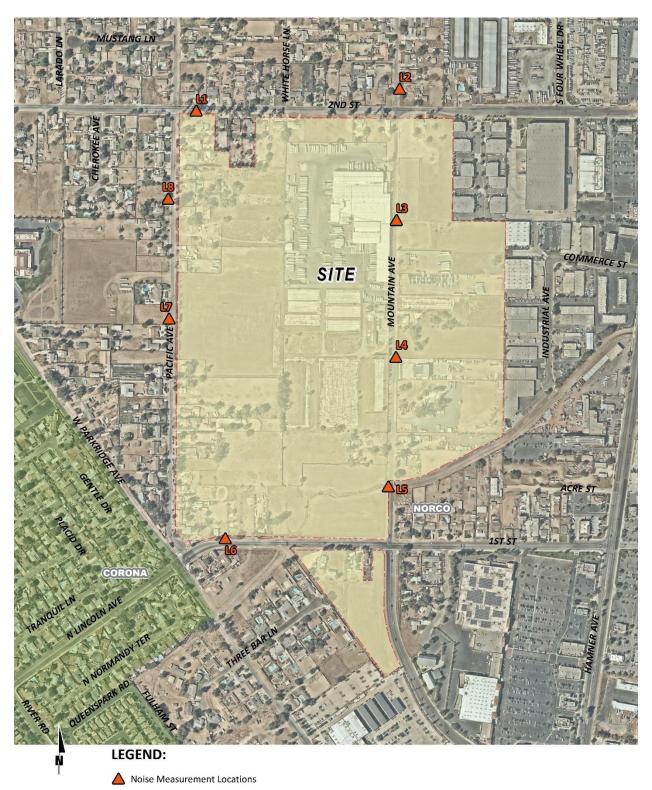


EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS



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6 METHODS AND PROCEDURES

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

6.1 FHWA TRAFFIC NOISE PREDICTION MODEL

The expected roadway noise level increases from vehicular traffic were calculated by Urban Crossroads, Inc. using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108. (20) The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). In California the national REMELs are substituted with the California Vehicle Noise (Calveno) Emission Levels. (21) Adjustments are then made to the REMEL to account for: the roadway classification (e.g., collector, secondary, major or arterial), the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT), the travel speed, the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, the roadway grade, the angle of view (e.g., whether the roadway view is blocked), the site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping), and the percentage of total ADT which flows each hour throughout a 24-hour period. Research conducted by Caltrans has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model used in this analysis. (22)

6.2 OFF-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 6-1 presents the roadway parameters used to assess the Project's off-site transportation noise impacts. Table 6-1 identifies the 31 study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per the City of Norco General Plan Circulation Element, and the posted vehicle speeds. Where posted vehicle speeds are unavailable, the 40 mph speed identified in the County of Riverside Office of Industrial Hygiene Noise Study Guidelines is used. (23) The ADT volumes used in this study are presented on Table 6-2 and were obtained from the *Palomino Business Park Traffic Impact Analysis*, for the following traffic scenarios: Existing (2018), Opening Year Cumulative 2022, and Horizon Year 2040. (2)



ID	Roadway	Segment	Adjacent Planned (Existing if Different) Land Use ¹	Distance from Centerline to Nearest Adjacent Land Use (Feet) ²	Vehicle Speed (mph) ³
1	River Rd.	s/o Corydon St.	Residential	50'	45
2	River Rd.	s/o Lincoln Av.	Residential	30'	45
3	Parkridge Av.	n/o Second St.	Residential	30'	25
4	Parkridge Av.	s/o Second St.	Residential	44'	40
5	Parkridge Av.	s/o Lincoln Av.	Residential	44'	40
6	Pacific Av.	s/o Second St.	Residential/SP:Residential	30'	25
7	Mountain Av.	n/o Hamner Av.	SP:Commercial/Vacant	44'	40
8	Hamner Av.	s/o Third St.	SP:Commercial	55'	40
9	Hamner Av.	s/o Second St.	Commercial	55'	40
10	Hamner Av.	s/o First St.	SP:Commercial	55'	40
11	Hamner Av.	s/o Hidden Valley Pkwy.	SP:Commercial	55'	40
12	E. Parkridge Av.	s/o Hidden Valley Pkwy.	Residential	44'	45
13	Lincoln Av.	s/o River Rd.	Residential	44'	40
14	Lincoln Av.	s/o Rincon St.	Light/General Industrial	44'	40
15	Lincoln Av.	s/o Railroad St.	Light Industrial (Residential)	44'	40
16	Lincoln Av.	s/o Pomona Rd.	Commercial	44'	40
17	Second St.	w/o Parkridge Av.	Residential	30'	35
18	Second St.	e/o Parkridge Av.	Residential	30'	35
19	Second St.	w/o Pacific Av.	Residential	30'	35
20	Second St.	e/o Pacific Av.	Residential/SP:Residential	30'	35
21	Second St.	w/o Mountain Av.	Residential/SP:Industrial	30'	35
22	Second St.	e/o Mountain Av.	Residential/SP:Industrial	44'	35
23	Second St.	e/o Dwy. 8	SP:Industrial	44'	35
24	Second St.	w/o Hamner Av.	SP:Industrial/Commercial	44'	35
25	First St.	w/o Parkridge Av.	Residential	30'	35
26	First St.	e/o Parkridge Av.	SP:Residential/Industrial	44'	35
27	First St.	e/o Dwy. 1	Residential/SP:Industrial	44'	35
28	First St.	e/o Mountain Av.	SP:Res./Commercial	44'	35
29	First St.	w/o Hamner Av.	SP:Commercial (Residential)	44'	35
30	Hidden Valley Pkwy.	w/o E. Parkridge Av.	Residential	50'	45
31	Hidden Valley Pkwy.	e/o E. Parkridge Av.	Residential	50'	45

TABLE 6-1: OFF-SITE ROADWAY PARAMETERS

¹ Sources: City of Norco General Plan Land Use Map and the City of Corona General Plan Land Use Map.

² Distance to adjacent land use is based upon the right-of-way distances for each functional roadway classification provided in the General Plan Circulation Element.

³ Source: Palomino Business Park Traffic Impact Analysis, Urban Crossroads, Inc.

"SP" = Specific Plan



			İ	Avei	age Daily T	raffic Volum	nes ¹		
			Exist		Openin		Horizo	n Year	
ID	Roadway	Segment	20	18	202	22	2040		
			Without Project	With Project	Without Project	With Project	Without Project	With Project	
1	River Rd.	s/o Corydon St.	24,406	24,819	28,511	28,924	34,803	35,216	
2	River Rd.	s/o Lincoln Av.	13,235	13,441	14,544	14,750	19,023	19,229	
3	Parkridge Av.	n/o Second St.	2,296	2,502	2,561	2,767	3,153	3,359	
4	Parkridge Av.	s/o Second St.	3,068	3,274	4,931	5,137	9,222	9,428	
5	Parkridge Av.	s/o Lincoln Av.	5 <i>,</i> 059	5,265	6,784	6,990	10,918	11,124	
6	Pacific Av.	s/o Second St.	386	386	560	560	659	659	
7	Mountain Av.	n/o Hamner Av.	8,345	11,136	11,135	13,926	13,286	16,077	
8	Hamner Av.	s/o Third St.	34,293	34,706	39,247	39,660	48,087	48,500	
9	Hamner Av.	s/o Second St.	29,539	29,591	33,674	33,726	41,289	41,341	
10	Hamner Av.	s/o First St.	22,937	23,145	26,577	26,785	32,490	32,698	
11	Hamner Av.	s/o Hidden Valley Pkwy.	29,221	29,686	33,848	34,313	41,542	42,007	
12	E. Parkridge Av.	s/o Hidden Valley Pkwy.	7,784	7,990	8,676	8,882	13,108	13,314	
13	Lincoln Av.	s/o River Rd.	20,087	21,119	23,440	24,472	28,619	29,651	
14	Lincoln Av.	s/o Rincon St.	19,004	20,036	23,697	24,729	28,597	29,629	
15	Lincoln Av.	s/o Railroad St.	21,585	22,411	26,204	27,030	31,768	32,594	
16	Lincoln Av.	s/o Pomona Rd.	24,057	24,883	31,267	32,093	38,360	39,186	
17	Second St.	w/o Parkridge Av.	9,969	10,520	15,898	16,449	18,468	19,019	
18	Second St.	e/o Parkridge Av.	8,712	9,675	13,016	13,979	15,262	16,225	
19	Second St.	w/o Pacific Av.	9,776	10,946	14,166	15,336	16,686	17,856	
20	Second St.	e/o Pacific Av.	10,473	11,643	14,778	15,948	17,478	18,648	
21	Second St.	w/o Mountain Av.	11,456	12,626	15,842	17,012	18,795	19,965	
22	Second St.	e/o Mountain Av.	12,190	14,206	16,293	18,309	19,436	21,452	
23	Second St.	e/o Dwy. 8	12,190	14,550	16,293	18,653	19,436	21,796	
24	Second St.	w/o Hamner Av.	17,237	19,597	18,657	21,017	23,101	25,461	
25	First St.	w/o Parkridge Av.	16,397	17,636	19,879	21,118	24,106	25,345	
26	First St.	e/o Parkridge Av.	15,837	17,282	19,551	20,996	23,634	25,079	
27	First St.	e/o Dwy. 1	15,837	16,525	19,552	20,240	23,635	24,323	
28	First St.	e/o Mountain Av.	8,581	8,737	9,618	9,774	11,830	11,986	
29	First St.	w/o Hamner Av.	9,185	9,341	10,270	10,426	12,637	12,793	
30	Hidden Valley Pkwy.	w/o E. Parkridge Av.	20,852	21,403	23,901	24,452	29,276	29,827	
31	Hidden Valley Pkwy.	e/o E. Parkridge Av.	22,594	22,800	25,287	25,493	31,112	31,318	

TABLE 6-2: AVERAGE DAILY TRAFFIC VOLUMES

¹ Source: Palomino Business Park Traffic Impact Analysis, Urban Crossroads, Inc.



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

Table 6-3 provides the time of day (daytime, evening, and nighttime) vehicle splits. The daily Project truck trip-ends were assigned to the individual off-site study area roadway segments based on the Project truck trip distribution percentages documented in the *Traffic Impact Analysis*. Using the Project truck trips in combination with the Project trip distribution, Urban Crossroads, Inc. calculated the number of additional Project truck trips and vehicle mix percentages for each of the study area roadway segments. Table 6-4 shows the traffic flow by vehicle type (vehicle mix) used for all without Project traffic scenarios, and Tables 6-5 to 6-7 show the vehicle mixes used for the with Project traffic scenarios.

		Time of Day Splits		Total of Time of
Vehicle Type	Daytime	Evening	Nighttime	Day Splits
Autos	76.34%	11.03%	12.63%	100.00%
Medium Trucks	73.27%	9.16%	17.57%	100.00%
Heavy Trucks	84.36%	3.17%	12.48%	100.00%

TABLE 6-3: TIME OF DAY VEHICLE SPLITS

Based on an existing vehicle count taken on River Road between Second Street and Corydon Street (Palomino Business Park Traffic Impact Analysis, Urban Crossroads, Inc.). Vehicle mix percentage values rounded to the nearest one-hundredth.

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

TABLE 6-4: WITHOUT PROJECT CONDITIONS VEHICLE MIX

Classification		Total % Traffic Flow		Total
Classification	Autos	Medium Trucks	Heavy Trucks	Totai
All Segments	91.88%	5.79%	2.33%	100.00%

Based on an existing vehicle count taken on River Road between Second Street and Corydon Street (Palomino Business Park Traffic Impact Analysis, Urban Crossroads, Inc.). Vehicle mix percentage values rounded to the nearest one-hundredth.



				With Pr	oject ¹	
ID	Roadway	Segment	Autos	Medium Trucks	Heavy Trucks	Total ²
1	River Rd.	s/o Corydon St.	92.01%	5.69%	2.30%	100.00%
2	River Rd.	s/o Lincoln Av.	92.00%	5.70%	2.30%	100.00%
3	Parkridge Av.	n/o Second St.	92.55%	5.31%	2.14%	100.00%
4	Parkridge Av.	s/o Second St.	92.39%	5.42%	2.19%	100.00%
5	Parkridge Av.	s/o Lincoln Av.	92.19%	5.56%	2.24%	100.00%
6	Pacific Av.	s/o Second St.	91.88%	5.79%	2.33%	100.00%
7	Mountain Av.	n/o Hamner Av.	89.24%	5.45%	5.31%	100.00%
8	Hamner Av.	s/o Third St.	91.97%	5.72%	2.31%	100.00%
9	Hamner Av.	s/o Second St.	91.71%	5.82%	2.47%	100.00%
10	Hamner Av.	s/o First St.	91.05%	5.95%	3.00%	100.00%
11	Hamner Av.	s/o Hidden Valley Pkwy.	91.83%	5.74%	2.43%	100.00%
12	E. Parkridge Av.	s/o Hidden Valley Pkwy.	92.09%	5.64%	2.27%	100.00%
13	Lincoln Av.	s/o River Rd.	92.27%	5.51%	2.22%	100.00%
14	Lincoln Av.	s/o Rincon St.	92.29%	5.49%	2.21%	100.00%
15	Lincoln Av.	s/o Railroad St.	92.18%	5.58%	2.25%	100.00%
16	Lincoln Av.	s/o Pomona Rd.	92.15%	5.60%	2.26%	100.00%
17	Second St.	w/o Parkridge Av.	92.30%	5.49%	2.21%	100.00%
18	Second St.	e/o Parkridge Av.	92.68%	5.21%	2.10%	100.00%
19	Second St.	w/o Pacific Av.	92.74%	5.17%	2.08%	100.00%
20	Second St.	e/o Pacific Av.	92.69%	5.21%	2.10%	100.00%
21	Second St.	w/o Mountain Av.	92.63%	5.25%	2.12%	100.00%
22	Second St.	e/o Mountain Av.	90.47%	5.58%	3.95%	100.00%
23	Second St.	e/o Dwy. 8	90.69%	5.45%	3.86%	100.00%
24	Second St.	w/o Hamner Av.	91.00%	5.54%	3.47%	100.00%
25	First St.	w/o Parkridge Av.	92.45%	5.38%	2.17%	100.00%
26	First St.	e/o Parkridge Av.	92.56%	5.31%	2.14%	100.00%
27	First St.	e/o Dwy. 1	92.21%	5.55%	2.24%	100.00%
28	First St.	e/o Mountain Av.	90.24%	6.11%	3.65%	100.00%
29	First St.	w/o Hamner Av.	90.34%	6.09%	3.57%	100.00%
30	Hidden Valley Pkwy.	w/o E. Parkridge Av.	92.08%	5.64%	2.27%	100.00%
31	Hidden Valley Pkwy.	e/o E. Parkridge Av.	91.95%	5.74%	2.31%	100.00%

TABLE 6-5: EXISTING WITH PROJECT CONDITIONS VEHICLE MIX

¹ Source: Palomino Business Park Traffic Impact Analysis, Urban Crossroads, Inc.

 $^{\rm 2}$ Total of vehicle mix percentage values rounded to the nearest one-hundredth.



				With Pr	oject ¹	
ID	Roadway	Segment	Autos	Medium Trucks	Heavy Trucks	Total ²
1	River Rd.	s/o Corydon St.	91.99%	5.71%	2.30%	100.00%
2	River Rd.	s/o Lincoln Av.	91.99%	5.71%	2.30%	100.00%
3	Parkridge Av.	n/o Second St.	92.48%	5.36%	2.16%	100.00%
4	Parkridge Av.	s/o Second St.	92.20%	5.56%	2.24%	100.00%
5	Parkridge Av.	s/o Lincoln Av.	92.12%	5.62%	2.27%	100.00%
6	Pacific Av.	s/o Second St.	91.88%	5.79%	2.33%	100.00%
7	Mountain Av.	n/o Hamner Av.	89.77%	5.52%	4.71%	100.00%
8	Hamner Av.	s/o Third St.	91.96%	5.73%	2.31%	100.00%
9	Hamner Av.	s/o Second St.	91.73%	5.82%	2.45%	100.00%
10	Hamner Av.	s/o First St.	91.16%	5.93%	2.91%	100.00%
11	Hamner Av.	s/o Hidden Valley Pkwy.	91.83%	5.75%	2.42%	100.00%
12	E. Parkridge Av.	s/o Hidden Valley Pkwy.	92.06%	5.66%	2.28%	100.00%
13	Lincoln Av.	s/o River Rd.	92.22%	5.55%	2.24%	100.00%
14	Lincoln Av.	s/o Rincon St.	92.22%	5.55%	2.24%	100.00%
15	Lincoln Av.	s/o Railroad St.	92.12%	5.61%	2.26%	100.00%
16	Lincoln Av.	s/o Pomona Rd.	92.09%	5.64%	2.27%	100.00%
17	Second St.	w/o Parkridge Av.	92.15%	5.60%	2.26%	100.00%
18	Second St.	e/o Parkridge Av.	92.44%	5.39%	2.17%	100.00%
19	Second St.	w/o Pacific Av.	92.50%	5.35%	2.16%	100.00%
20	Second St.	e/o Pacific Av.	92.47%	5.37%	2.16%	100.00%
21	Second St.	w/o Mountain Av.	92.43%	5.39%	2.17%	100.00%
22	Second St.	e/o Mountain Av.	90.78%	5.63%	3.59%	100.00%
23	Second St.	e/o Dwy. 8	90.95%	5.52%	3.52%	100.00%
24	Second St.	w/o Hamner Av.	91.06%	5.55%	3.39%	100.00%
25	First St.	w/o Parkridge Av.	92.35%	5.45%	2.20%	100.00%
26	First St.	e/o Parkridge Av.	92.44%	5.39%	2.17%	100.00%
27	First St.	e/o Dwy. 1	92.15%	5.59%	2.25%	100.00%
28	First St.	e/o Mountain Av.	90.41%	6.08%	3.51%	100.00%
29	First St.	w/o Hamner Av.	90.50%	6.06%	3.44%	100.00%
30	Hidden Valley Pkwy.	w/o E. Parkridge Av.	92.06%	5.66%	2.28%	100.00%
	Hidden Valley Pkwy.	e/o E. Parkridge Av.	91.94%	5.74%	2.32%	100.00%

TABLE 6-6: OPENING YEAR WITH PROJECT CONDITIONS VEHICLE MIX

¹ Source: Palomino Business Park Traffic Impact Analysis, Urban Crossroads, Inc.

 $^{\rm 2}$ Total of vehicle mix percentage values rounded to the nearest one-hundredth.



				With Pr	oject ¹	
ID	Roadway	Segment	Autos	Medium Trucks	Heavy Trucks	Total ²
1	River Rd.	s/o Corydon St.	91.97%	5.72%	2.31%	100.00%
2	River Rd.	s/o Lincoln Av.	91.96%	5.73%	2.31%	100.00%
3	Parkridge Av.	n/o Second St.	92.38%	5.43%	2.19%	100.00%
4	Parkridge Av.	s/o Second St.	92.05%	5.66%	2.28%	100.00%
5	Parkridge Av.	s/o Lincoln Av.	92.03%	5.68%	2.29%	100.00%
6	Pacific Av.	s/o Second St.	91.88%	5.79%	2.33%	100.00%
7	Mountain Av.	n/o Hamner Av.	90.05%	5.56%	4.39%	100.00%
8	Hamner Av.	s/o Third St.	91.95%	5.74%	2.31%	100.00%
9	Hamner Av.	s/o Second St.	91.76%	5.81%	2.43%	100.00%
10	Hamner Av.	s/o First St.	91.29%	5.91%	2.80%	100.00%
11	Hamner Av.	s/o Hidden Valley Pkwy.	91.84%	5.75%	2.40%	100.00%
12	E. Parkridge Av.	s/o Hidden Valley Pkwy.	92.00%	5.70%	2.30%	100.00%
13	Lincoln Av.	s/o River Rd.	92.16%	5.59%	2.25%	100.00%
14	Lincoln Av.	s/o Rincon St.	92.16%	5.59%	2.25%	100.00%
15	Lincoln Av.	s/o Railroad St.	92.08%	5.64%	2.27%	100.00%
16	Lincoln Av.	s/o Pomona Rd.	92.05%	5.67%	2.28%	100.00%
17	Second St.	w/o Parkridge Av.	92.11%	5.62%	2.27%	100.00%
18	Second St.	e/o Parkridge Av.	92.36%	5.45%	2.20%	100.00%
19	Second St.	w/o Pacific Av.	92.41%	5.41%	2.18%	100.00%
20	Second St.	e/o Pacific Av.	92.39%	5.43%	2.19%	100.00%
21	Second St.	w/o Mountain Av.	92.35%	5.45%	2.20%	100.00%
22	Second St.	e/o Mountain Av.	90.94%	5.65%	3.41%	100.00%
23	Second St.	e/o Dwy. 8	91.09%	5.56%	3.35%	100.00%
24	Second St.	w/o Hamner Av.	91.20%	5.60%	3.21%	100.00%
25	First St.	w/o Parkridge Av.	92.27%	5.51%	2.22%	100.00%
26	First St.	e/o Parkridge Av.	92.34%	5.46%	2.20%	100.00%
27	First St.	e/o Dwy. 1	92.11%	5.63%	2.27%	100.00%
28	First St.	e/o Mountain Av.	90.68%	6.02%	3.30%	100.00%
29	First St.	w/o Hamner Av.	90.76%	6.01%	3.24%	100.00%
	Hidden Valley Pkwy.	w/o E. Parkridge Av.	92.03%	5.68%	2.29%	100.00%
	Hidden Valley Pkwy.	e/o E. Parkridge Av.	91.93%	5.75%	2.32%	100.00%

TABLE 6-7: HORIZON YEAR WITH PROJECT CONDITIONS VEHICLE MIX

¹ Source: Palomino Business Park Traffic Impact Analysis, Urban Crossroads, Inc.

 $^{\rm 2}$ Total of vehicle mix percentage values rounded to the nearest one-hundredth.



6.3 VIBRATION ASSESSMENT

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

However, while vehicular traffic is rarely perceptible, construction has the potential to result in varying degrees of temporary ground vibration, depending on the specific construction activities and equipment used. Ground vibration levels associated with various types of construction equipment are summarized on Table 6-8. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the human response (annoyance) using the following vibration assessment methods defined by the FTA. To describe the human response (annoyance) associated with vibration impacts the FTA provides the following equation: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$

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

TABLE 6-8: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, September 2018.



7 OFF-SITE TRANSPORTATION NOISE IMPACTS

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

- Existing (2018) Without / With Project:
 - This scenario refers to the Existing present-day noise conditions, without and with the proposed Project.
- Opening Year Cumulative 2022 Without / With Project:
 - This scenario below refers to the background noise conditions at future Year 2022 without and with the proposed Project plus ambient growth, and includes all cumulative Projects identified in the *Traffic Impact Analysis*.
- Horizon Year 2040 Without / With Project:
 - This scenario below refers to the background noise conditions at future Year 2040 without and with the proposed Project plus ambient growth, and includes all cumulative Projects identified in the *Traffic Impact Analysis*.

7.1 TRAFFIC NOISE CONTOURS

Noise contours were used to assess the Project's incremental traffic-related noise impacts at land uses adjacent to roadways conveying Project traffic. The noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA noise levels. The noise contours do not consider the effect of any existing noise barriers or topography that may attenuate ambient noise levels. In addition, because the noise contours reflect modeling of vehicular noise on area roadways, they appropriately do not reflect noise contributions from the surrounding stationary noise sources within the Project study area. Tables 7-1 through 7-6 present a summary of the exterior traffic noise levels, without barrier attenuation, for the study area roadway segments analyzed from the without Project to the with Project conditions in each of the following timeframes: Existing, Opening Year Cumulative 2022, and Horizon Year 2040. Appendix 7.1 includes a summary of the traffic noise level contours for each of the traffic scenarios.



ID	Road	Segment	Adjacent Planned (Existing)	CNEL at Nearest Adjacent		nce to Co enterline	
	hoau	Jegment	Land Use ¹	Land Use	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	River Rd.	s/o Corydon St.	Residential	74.3	96	208	448
2	River Rd.	s/o Lincoln Av.	Residential	74.0	55	119	257
3	Parkridge Av.	n/o Second St.	Residential	60.9	RW	RW	34
4	Parkridge Av.	s/o Second St.	Residential	64.5	RW	RW	88
5	Parkridge Av.	s/o Lincoln Av.	Residential	66.7	RW	57	123
6	Pacific Av.	s/o Second St.	Residential/SP:Residential	53.2	RW	RW	RW
7	Mountain Av.	n/o Hamner Av.	SP:Commercial/Vacant	68.9	RW	80	172
8	Hamner Av.	s/o Third St.	SP:Commercial	74.9	116	250	538
9	Hamner Av.	s/o Second St.	Commercial	74.2	105	226	487
10	Hamner Av.	s/o First St.	SP:Commercial	73.1	89	191	412
11	Hamner Av.	s/o Hidden Valley Pkwy.	SP:Commercial	74.2	104	225	484
12	E. Parkridge Av.	s/o Hidden Valley Pkwy.	Residential	69.7	RW	91	195
13	Lincoln Av.	s/o River Rd.	Residential	72.7	67	143	309
14	Lincoln Av.	s/o Rincon St.	Light/General Industrial	72.5	64	138	298
15	Lincoln Av.	s/o Railroad St.	Light Industrial (Residential)	73.0	70	150	324
16	Lincoln Av.	s/o Pomona Rd.	Commercial	73.5	75	162	348
17	Second St.	w/o Parkridge Av.	Residential	70.4	32	68	147
18	Second St.	e/o Parkridge Av.	Residential	69.8	RW	62	134
19	Second St.	w/o Pacific Av.	Residential	70.3	31	67	145
20	Second St.	e/o Pacific Av.	Residential/SP:Residential	70.6	33	71	152
21	Second St.	w/o Mountain Av.	Residential/SP:Industrial	71.0	35	75	161
22	Second St.	e/o Mountain Av.	Residential/SP:Industrial	69.3	RW	85	182
23	Second St.	e/o Dwy. 8	SP:Industrial	69.3	RW	85	182
24	Second St.	w/o Hamner Av.	SP:Industrial/Commercial	70.8	49	107	230
25	First St.	w/o Parkridge Av.	Residential	72.5	44	95	205
26	First St.	e/o Parkridge Av.	SP:Residential/Industrial	70.4	47	101	217
27	First St.	e/o Dwy. 1	Residential/SP:Industrial	70.4	47	101	217
28	First St.	e/o Mountain Av.	SP:Res./Commercial	67.7	RW	67	144
29	First St.	w/o Hamner Av.	SP:Commercial (Residential)	68.0	RW	70	151
30	Hidden Valley Pkwy.	w/o E. Parkridge Av.	Residential	73.6	87	187	403
31	Hidden Valley Pkwy.	e/o E. Parkridge Av.	Residential	73.9	92	197	425

TABLE 7-1: EXISTING WITHOUT PROJECT CONDITIONS NOISE CONTOURS

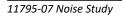
² The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.



ID	Road	Segment	Adjacent Planned (Existing)	CNEL at Nearest Adjacent		nce to Co enterline	
	Nudu	Segment	Land Use ¹	Land Use	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	River Rd.	s/o Corydon St.	Residential	74.3	97	209	450
2	River Rd.	s/o Lincoln Av.	Residential	74.0	56	120	258
3	Parkridge Av.	n/o Second St.	Residential	61.0	RW	RW	35
4	Parkridge Av.	s/o Second St.	Residential	64.6	RW	RW	90
5	Parkridge Av.	s/o Lincoln Av.	Residential	66.8	RW	58	124
6	Pacific Av.	s/o Second St.	Residential/SP:Residential	53.2	RW	RW	RW
7	Mountain Av.	n/o Hamner Av.	SP:Commercial/Vacant	71.6	57	122	262
8	Hamner Av.	s/o Third St.	SP:Commercial	74.9	116	251	540
9	Hamner Av.	s/o Second St.	Commercial	74.3	107	230	494
10	Hamner Av.	s/o First St.	SP:Commercial	73.6	95	205	442
11	Hamner Av.	s/o Hidden Valley Pkwy.	SP:Commercial	74.3	106	229	493
12	E. Parkridge Av.	s/o Hidden Valley Pkwy.	Residential	69.8	RW	91	197
13	Lincoln Av.	s/o River Rd.	Residential	72.8	67	145	313
14	Lincoln Av.	s/o Rincon St.	Light/General Industrial	72.5	65	140	301
15	Lincoln Av.	s/o Railroad St.	Light Industrial (Residential)	73.1	70	152	327
16	Lincoln Av.	s/o Pomona Rd.	Commercial	73.5	76	163	351
17	Second St.	w/o Parkridge Av.	Residential	70.4	32	69	149
18	Second St.	e/o Parkridge Av.	Residential	69.9	30	64	138
19	Second St.	w/o Pacific Av.	Residential	70.4	32	69	149
20	Second St.	e/o Pacific Av.	Residential/SP:Residential	70.7	34	72	156
21	Second St.	w/o Mountain Av.	Residential/SP:Industrial	71.1	36	77	165
22	Second St.	e/o Mountain Av.	Residential/SP:Industrial	70.9	50	109	234
23	Second St.	e/o Dwy. 8	SP:Industrial	70.9	51	109	235
24	Second St.	w/o Hamner Av.	SP:Industrial/Commercial	72.0	60	129	277
25	First St.	w/o Parkridge Av.	Residential	72.6	45	97	208
26	First St.	e/o Parkridge Av.	SP:Residential/Industrial	70.5	48	103	221
27	First St.	e/o Dwy. 1	Residential/SP:Industrial	70.5	47	102	219
28	First St.	e/o Mountain Av.	SP:Res./Commercial	68.7	RW	78	167
29	First St.	w/o Hamner Av.	SP:Commercial (Residential)	68.9	RW	81	174
30	Hidden Valley Pkwy.	w/o E. Parkridge Av.	Residential	73.6	87	188	406
31	Hidden Valley Pkwy.	e/o E. Parkridge Av.	Residential	74.0	92	198	426

TABLE 7-2: EXISTING WITH PROJECT CONDITIONS NOISE CONTOURS

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



ID	Road	Segment	Adjacent Planned (Existing)	CNEL at Nearest Adjacent		nce to Co enterline	
	Nudu	Segment	Land Use ¹	Land Use	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	River Rd.	s/o Corydon St.	Residential	75.0	107	230	496
2	River Rd.	s/o Lincoln Av.	Residential	74.4	59	127	273
3	Parkridge Av.	n/o Second St.	Residential	61.4	RW	RW	37
4	Parkridge Av.	s/o Second St.	Residential	66.6	RW	56	121
5	Parkridge Av.	s/o Lincoln Av.	Residential	68.0	RW	70	150
6	Pacific Av.	s/o Second St.	Residential/SP:Residential	54.8	RW	RW	RW
7	Mountain Av.	n/o Hamner Av.	SP:Commercial/Vacant	70.1	45	97	208
8	Hamner Av.	s/o Third St.	SP:Commercial	75.4	127	273	589
9	Hamner Av.	s/o Second St.	Commercial	74.8	115	247	532
10	Hamner Av.	s/o First St.	SP:Commercial	73.8	98	211	454
11	Hamner Av.	s/o Hidden Valley Pkwy.	SP:Commercial	74.8	115	248	534
12	E. Parkridge Av.	s/o Hidden Valley Pkwy.	Residential	70.2	45	98	210
13	Lincoln Av.	s/o River Rd.	Residential	73.4	74	159	342
14	Lincoln Av.	s/o Rincon St.	Light/General Industrial	73.4	74	160	345
15	Lincoln Av.	s/o Railroad St.	Light Industrial (Residential)	73.8	79	171	369
16	Lincoln Av.	s/o Pomona Rd.	Commercial	74.6	89	193	415
17	Second St.	w/o Parkridge Av.	Residential	72.4	43	93	201
18	Second St.	e/o Parkridge Av.	Residential	71.5	38	81	176
19	Second St.	w/o Pacific Av.	Residential	71.9	40	86	186
20	Second St.	e/o Pacific Av.	Residential/SP:Residential	72.1	41	89	191
21	Second St.	w/o Mountain Av.	Residential/SP:Industrial	72.4	43	93	200
22	Second St.	e/o Mountain Av.	Residential/SP:Industrial	70.5	48	103	221
23	Second St.	e/o Dwy. 8	SP:Industrial	70.5	48	103	221
24	Second St.	w/o Hamner Av.	SP:Industrial/Commercial	71.1	52	112	242
25	First St.	w/o Parkridge Av.	Residential	73.3	50	108	233
26	First St.	e/o Parkridge Av.	SP:Residential/Industrial	71.3	54	116	250
27	First St.	e/o Dwy. 1	Residential/SP:Industrial	71.3	54	116	250
28	First St.	e/o Mountain Av.	SP:Res./Commercial	68.2	RW	72	156
29	First St.	w/o Hamner Av.	SP:Commercial (Residential)	68.5	RW	75	163
30	Hidden Valley Pkwy.	w/o E. Parkridge Av.	Residential	74.2	95	205	441
31	Hidden Valley Pkwy.	e/o E. Parkridge Av.	Residential	74.4	99	213	458

TABLE 7-3: OPENING YEAR WITHOUT PROJECT CONDITIONS NOISE CONTOURS

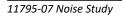
² The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.



ID	Road	Segment	Adjacent Planned (Existing)	CNEL at Nearest Adjacent	107 231 59 127 RW RW RW 57 RW 70 RW 70 RW 70 RW 70 RW 8W 63 136 127 274 116 250 104 224 117 252 46 98 75 161 75 162 80 172 90 194 44 94 38 83 41 88 42 90 44 94 58 125 58 125 58 125 58 125 62 134		
	Nuau	Segment	Land Use ¹	Land Use			60 dBA CNEL
1	River Rd.	s/o Corydon St.	Residential	75.0	107	231	498
2	River Rd.	s/o Lincoln Av.	Residential	74.4	59	127	274
3	Parkridge Av.	n/o Second St.	Residential	61.5	RW	RW	38
4	Parkridge Av.	s/o Second St.	Residential	66.7	RW	57	122
5	Parkridge Av.	s/o Lincoln Av.	Residential	68.0	RW	70	151
6	Pacific Av.	s/o Second St.	Residential/SP:Residential	54.8	RW	RW	RW
7	Mountain Av.	n/o Hamner Av.	SP:Commercial/Vacant	72.3	63	136	293
8	Hamner Av.	s/o Third St.	SP:Commercial	75.5	127	274	590
9	Hamner Av.	s/o Second St.	Commercial	74.9	116	250	539
10	Hamner Av.	s/o First St.	SP:Commercial	74.2	104	224	484
11	Hamner Av.	s/o Hidden Valley Pkwy.	SP:Commercial	74.9	117	252	542
12	E. Parkridge Av.	s/o Hidden Valley Pkwy.	Residential	70.2	46	98	211
13	Lincoln Av.	s/o River Rd.	Residential	73.4	75	161	346
14	Lincoln Av.	s/o Rincon St.	Light/General Industrial	73.5	75	162	348
15	Lincoln Av.	s/o Railroad St.	Light Industrial (Residential)	73.9	80	172	371
16	Lincoln Av.	s/o Pomona Rd.	Commercial	74.7	90	194	417
17	Second St.	w/o Parkridge Av.	Residential	72.4	44	94	202
18	Second St.	e/o Parkridge Av.	Residential	71.6	38	83	178
19	Second St.	w/o Pacific Av.	Residential	72.0	41	88	189
20	Second St.	e/o Pacific Av.	Residential/SP:Residential	72.2	42	90	194
21	Second St.	w/o Mountain Av.	Residential/SP:Industrial	72.5	44	94	203
22	Second St.	e/o Mountain Av.	Residential/SP:Industrial	71.8	58	125	269
23	Second St.	e/o Dwy. 8	SP:Industrial	71.8	58	125	270
24	Second St.	w/o Hamner Av.	SP:Industrial/Commercial	72.3	62	134	289
25	First St.	w/o Parkridge Av.	Residential	73.4	51	110	236
26	First St.	e/o Parkridge Av.	SP:Residential/Industrial	71.4	55	118	254
27	First St.	e/o Dwy. 1	Residential/SP:Industrial	71.4	54	117	252
28	First St.	e/o Mountain Av.	SP:Res./Commercial	69.1	RW	83	178
29	First St.	w/o Hamner Av.	SP:Commercial (Residential)	69.3	RW	86	185
30	Hidden Valley Pkwy.	w/o E. Parkridge Av.	Residential	74.2	96	206	444
31	Hidden Valley Pkwy.	e/o E. Parkridge Av.	Residential	74.4	99	213	459

TABLE 7-4: OPENING YEAR WITH PROJECT CONDITIONS NOISE CONTOURS

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



ID	Road	Segment	Adjacent Planned (Existing)	CNEL at Nearest Adjacent		22 263 70 152 70 152 70 RW 8W 85 14 95 14 95 14 95 14 95 14 95 14 95 14 95 15 313 31 283 12 241 32 284 50 128 34 181 34 181 34 181 34 181 34 181 34 181 34 181 35 96 42 91 45 99 48 103 415 96 46 99 48 104 54 115 50 130 57 123 51 132 54 132 54	
	Nudu	Segment	Land Use ¹	Land Use	70 dBA CNEL		60 dBA CNEL
1	River Rd.	s/o Corydon St.	Residential	75.8	122	263	567
2	River Rd.	s/o Lincoln Av.	Residential	75.6	70	152	327
3	Parkridge Av.	n/o Second St.	Residential 62.3		RW	RW	43
4	Parkridge Av.	s/o Second St.	Residential	69.3	RW	85	184
5	Parkridge Av.	s/o Lincoln Av.	Residential	70.0	44	95	206
6	Pacific Av.	s/o Second St.	Residential/SP:Residential	55.5	RW	RW	RW
7	Mountain Av.	n/o Hamner Av.	SP:Commercial/Vacant	70.9	51	109	234
8	Hamner Av.	s/o Third St.	SP:Commercial	76.3	145	313	674
9	Hamner Av.	s/o Second St.	Commercial	75.7	131	283	609
10	Hamner Av.	s/o First St.	SP:Commercial	74.6	112	241	519
11	Hamner Av.	s/o Hidden Valley Pkwy.	SP:Commercial	75.7	132	284	612
12	E. Parkridge Av.	s/o Hidden Valley Pkwy.	Residential	72.0	60	128	277
13	Lincoln Av.	s/o River Rd.	Residential	74.2	84	181	391
14	Lincoln Av.	s/o Rincon St.	Light/General Industrial	74.2	84	181	391
15	Lincoln Av.	s/o Railroad St.	Light Industrial (Residential)	74.7	90	195	419
16	Lincoln Av.	s/o Pomona Rd.	Commercial	75.5	102	221	475
17	Second St.	w/o Parkridge Av.	Residential	73.0	48	103	222
18	Second St.	e/o Parkridge Av.	Residential	72.2	42	91	195
19	Second St.	w/o Pacific Av.	Residential	72.6	45	96	207
20	Second St.	e/o Pacific Av.	Residential/SP:Residential	72.8	46	99	214
21	Second St.	w/o Mountain Av.	Residential/SP:Industrial	73.1	48	104	224
22	Second St.	e/o Mountain Av.	Residential/SP:Industrial	71.3	54	115	249
23	Second St.	e/o Dwy. 8	SP:Industrial	71.3	54	115	249
24	Second St.	w/o Hamner Av.	SP:Industrial/Commercial	72.0	60	130	279
25	First St.	w/o Parkridge Av.	Residential	74.2	57	123	265
26	First St.	e/o Parkridge Av.	SP:Residential/Industrial	72.1	61	132	283
27	First St.	e/o Dwy. 1	Residential/SP:Industrial	72.1	61	132	283
28	First St.	e/o Mountain Av.	SP:Res./Commercial	69.1	RW	83	179
29	First St.	w/o Hamner Av.	SP:Commercial (Residential)	69.4	RW	87	187
30	Hidden Valley Pkwy.	w/o E. Parkridge Av.	Residential	75.1	109	235	505
31	Hidden Valley Pkwy.	e/o E. Parkridge Av.	Residential	75.3	113	244	526

TABLE 7-5: HORIZON YEAR WITHOUT PROJECT CONDITIONS NOISE CONTOURS

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



ID	Road	Sogment	Adjacent Planned (Existing)	CNEL at Nearest Adjacent	Distance to Confrom Centerline (70 dBA 65 dBA 6 70 dBA 65 dBA 6 123 264 1 123 264 1 71 152 1 RW RW 8 45 96 1 RW 86 1 45 96 1 RW 8 146 146 314 1 133 286 1 133 288 6 60 129 1 85 183 1 91 196 1 103 222 48		
שו	KUdu	Segment	Land Use ¹	Land Use			60 dBA CNEL
1	River Rd.	s/o Corydon St.	Residential	75.8	123	264	569
2	River Rd.	s/o Lincoln Av.	Residential	75.6	71	152	328
3	Parkridge Av.	n/o Second St.	Residential	62.4	RW	RW	43
4	Parkridge Av.	s/o Second St.	Residential	69.3	RW	86	185
5	Parkridge Av.	s/o Lincoln Av.	Residential	70.1	45	96	207
6	Pacific Av.	s/o Second St.	Residential/SP:Residential	55.5	RW	RW	RW
7	Mountain Av.	n/o Hamner Av.	SP:Commercial/Vacant	72.8	68	146	315
8	Hamner Av.	s/o Third St.	SP:Commercial	76.3	146	314	676
9	Hamner Av.	s/o Second St.	Commercial	75.7	133	286	616
10	Hamner Av.	s/o First St.	SP:Commercial	75.0	118	254	547
11	Hamner Av.	s/o Hidden Valley Pkwy.	SP:Commercial	75.8	133	288	620
12	E. Parkridge Av.	s/o Hidden Valley Pkwy.	Residential	72.0	60	129	278
13	Lincoln Av.	s/o River Rd.	Residential	74.3	85	183	394
14	Lincoln Av.	s/o Rincon St.	Light/General Industrial	74.3	85	183	394
15	Lincoln Av.	s/o Railroad St.	Light Industrial (Residential)	74.7	91	196	422
16	Lincoln Av.	s/o Pomona Rd.	Commercial	75.5	103	222	478
17	Second St.	w/o Parkridge Av.	Residential	73.1	48	104	223
18	Second St.	e/o Parkridge Av.	Residential	72.3	43	92	198
19	Second St.	w/o Pacific Av.	Residential	72.7	45	98	210
20	Second St.	e/o Pacific Av.	Residential/SP:Residential	72.9	47	101	217
21	Second St.	w/o Mountain Av.	Residential/SP:Industrial	73.2	49	106	227
22	Second St.	e/o Mountain Av.	Residential/SP:Industrial	72.4	63	136	294
23	Second St.	e/o Dwy. 8	SP:Industrial	72.4	64	137	295
24	Second St.	w/o Hamner Av.	SP:Industrial/Commercial	73.0	70	150	323
25	First St.	w/o Parkridge Av.	Residential	74.3	58	124	268
26	First St.	e/o Parkridge Av.	SP:Residential/Industrial	72.2	62	133	287
27	First St.	e/o Dwy. 1	Residential/SP:Industrial 72.2		61	132	285
28	First St.	e/o Mountain Av.	SP:Res./Commercial	69.9	RW	93	200
29	First St.	w/o Hamner Av.	SP:Commercial (Residential)	70.1	45	96	207
30	Hidden Valley Pkwy.	w/o E. Parkridge Av.	Residential	75.1	109	236	508
31	Hidden Valley Pkwy.	e/o E. Parkridge Av.	Residential	75.3	114	245	527

TABLE 7-6: HORIZON YEAR WITH PROJECT CONDITIONS NOISE CONTOURS

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



7.2 EXISTING CONDITIONS PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

An analysis of existing traffic noise levels plus traffic noise generated by the proposed Project has been included in this report for consistency with the Project Traffic Impact Analysis report. However, the analysis of existing traffic noise levels plus traffic noise generated by the proposed Project scenario will not actually occur since the Project would not be fully constructed and operational until Year 2022 cumulative conditions. Therefore, no impact significance determinations are made based on existing plus Project conditions.

Table 7-1 shows the Existing without Project conditions CNEL noise levels. The Existing without Project exterior noise levels are expected to range from 53.0 to 74.8 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-2 shows the Existing with Project conditions will range from 53.0 to 74.8 dBA CNEL. Table 7-7 shows that the Project off-site traffic noise level increases will range from 0.0 to 2.6 dBA CNEL.



		CNEL at Adjacent Land Use (dBA) ¹		Noise- Sensitive		
ID	Road	Segment	No Project	With Project	Project	Land Use?
1	River Rd.	s/o Corydon St.	74.3	74.3	0.0	Yes
2	River Rd.	s/o Lincoln Av.	74.0	74.0	0.0	Yes
3	Parkridge Av.	n/o Second St.	60.9	61.0	0.1	Yes
4	Parkridge Av.	s/o Second St.	64.5	64.6	0.1	Yes
5	Parkridge Av.	s/o Lincoln Av.	66.7	66.8	0.1	Yes
6	Pacific Av.	s/o Second St.	53.2	53.2	0.0	Yes
7	Mountain Av.	n/o Hamner Av.	68.9	71.6	2.8	No
8	Hamner Av.	s/o Third St.	74.9	74.9	0.0	No
9	Hamner Av.	s/o Second St.	74.2	74.3	0.1	No
10	Hamner Av.	s/o First St.	73.1	73.6	0.5	No
11	Hamner Av.	s/o Hidden Valley Pkwy.	74.2	74.3	0.1	No
12	E. Parkridge Av.	s/o Hidden Valley Pkwy.	69.7	69.8	0.0	Yes
13	Lincoln Av.	s/o River Rd.	72.7	72.8	0.1	Yes
14	Lincoln Av.	s/o Rincon St.	72.5	72.5	0.1	No
15	Lincoln Av.	s/o Railroad St.	73.0	73.1	0.1	Yes
16	Lincoln Av.	s/o Pomona Rd.	73.5	73.5	0.1	No
17	Second St.	w/o Parkridge Av.	70.4	70.4	0.1	Yes
18	Second St.	e/o Parkridge Av.	69.8	69.9	0.2	Yes
19	Second St.	w/o Pacific Av.	70.3	70.4	0.2	Yes
20	Second St.	e/o Pacific Av.	70.6	70.7	0.2	Yes
21	Second St.	w/o Mountain Av.	71.0	71.1	0.1	Yes
22	Second St.	e/o Mountain Av.	69.3	70.9	1.6	Yes
23	Second St.	e/o Dwy. 8	69.3	70.9	1.7	No
24	Second St.	w/o Hamner Av.	70.8	72.0	1.2	No
25	First St.	w/o Parkridge Av.	72.5	72.6	0.1	Yes
26	First St.	e/o Parkridge Av.	70.4	70.5	0.1	Yes
27	First St.	e/o Dwy. 1	70.4	70.5	0.1	Yes
28	First St.	e/o Mountain Av.	67.7	68.7	1.0	Yes
29	First St.	w/o Hamner Av.	68.0	68.9	0.9	Yes
30	Hidden Valley Pkwy.	w/o E. Parkridge Av.	73.6	73.6	0.0	Yes
31	Hidden Valley Pkwy.	e/o E. Parkridge Av.	73.9	74.0	0.0	Yes

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

¹ The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use. Values rounded to the nearest one-tenth.



7.3 OPENING YEAR 2022 PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-3 presents the Opening Year 2022 without Project conditions CNEL noise levels. The Opening Year without Project exterior noise levels are expected to range from 54.7 to 75.4 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography.

Table 7-4 shows the Opening Year with Project conditions will range from 54.7 to 75.4 dBA CNEL. Table 7-8 shows that the Project off-site traffic noise level increases will range from 0.0 to 2.0 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-2, land uses adjacent to the study area roadway segments would experience *less than significant* noise level impacts due to unmitigated Project-related traffic noise levels.



				L at Adja		Noise-	Threshold	
ID	Road	Segment		d Use (dl	-	Sensitive	Threshold	
			No Project	With Project	Project Addition	Land Use?	Exceeded? ²	
1	River Rd.	s/o Corydon St.	75.0	75.0	0.0	Yes	No	
2	River Rd.	s/o Lincoln Av.	74.4	74.4	0.0	Yes	No	
3	Parkridge Av.	n/o Second St.	61.4	61.5	0.1	Yes	No	
4	Parkridge Av.	s/o Second St.	66.6	66.7	0.1	Yes	No	
5	Parkridge Av.	s/o Lincoln Av.	68.0	68.0	0.0	Yes	No	
6	Pacific Av.	s/o Second St.	54.8	54.8	0.0	Yes	No	
7	Mountain Av.	n/o Hamner Av.	70.1	72.3	2.2	No	No	
8	Hamner Av.	s/o Third St.	75.4	75.5	0.0	No	No	
9	Hamner Av.	s/o Second St.	74.8	74.9	0.1	No	No	
10	Hamner Av.	s/o First St.	73.8	74.2	0.4	No	No	
11	Hamner Av.	s/o Hidden Valley Pkwy.	74.8	74.9	0.1	No	No	
12	E. Parkridge Av.	s/o Hidden Valley Pkwy.	70.2	70.2	0.0	Yes	No	
13	Lincoln Av.	s/o River Rd.	73.4	73.4	0.1	Yes	No	
14	Lincoln Av.	s/o Rincon St.	73.4	73.5	0.1	No	No	
15	Lincoln Av.	s/o Railroad St.	73.8	73.9	0.0	Yes	No	
16	Lincoln Av.	s/o Pomona Rd.	74.6	74.7	0.0	No	No	
17	Second St.	w/o Parkridge Av.	72.4	72.4	0.0	Yes	No	
18	Second St.	e/o Parkridge Av.	71.5	71.6	0.1	Yes	No	
19	Second St.	w/o Pacific Av.	71.9	72.0	0.1	Yes	No	
20	Second St.	e/o Pacific Av.	72.1	72.2	0.1	Yes	No	
21	Second St.	w/o Mountain Av.	72.4	72.5	0.1	Yes	No	
22	Second St.	e/o Mountain Av.	70.5	71.8	1.3	Yes	No	
23	Second St.	e/o Dwy. 8	70.5	71.8	1.3	No	No	
24	Second St.	w/o Hamner Av.	71.1	72.3	1.2	No	No	
25	First St.	w/o Parkridge Av.	73.3	73.4	0.1	Yes	No	
26	First St.	e/o Parkridge Av.	71.3	71.4	0.1	Yes	No	
27	First St.	e/o Dwy. 1	71.3	71.4	0.1	Yes	No	
28	First St.	e/o Mountain Av.	68.2	69.1	0.9	Yes	No	
29	First St.	w/o Hamner Av.	68.5	69.3	0.8	Yes	No	
30	Hidden Valley Pkwy.	w/o E. Parkridge Av.	74.2	74.2	0.0	Yes	No	
31	Hidden Valley Pkwy.	e/o E. Parkridge Av.	74.4	74.4	0.0	Yes	No	

TABLE 7-8: UNMITIGATED OPENING YEAR WITH PROJECT TRAFFIC NOISE IMPACTS

¹ The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use. Values rounded to the nearest one-tenth.

² Significance Criteria (Section 4).

7.4 HORIZON YEAR 2040 PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-5 presents the Horizon Year 2040 without Project conditions CNEL noise levels. The Horizon Year without Project exterior noise levels are expected to range from 55.4 to 76.3 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography.

Table 7-6 shows the Horizon Year with Project conditions will range from 55.4 to 76.3 dBA CNEL. Table 7-9 shows that the Project off-site traffic noise level increases will range from 0.0 to 1.8 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-2, land uses adjacent to the study area roadway segments would experience *less than significant* noise level impacts due to unmitigated Project-related traffic noise levels.



				L at Adja		Noise-		
ID	Road	Segment	Segment		Sensitive Land			
			No Project	With Project	Project Addition	Use?	Exceeded? ²	
1	River Rd.	s/o Corydon St.	75.8	75.8	0.0	Yes	No	
2	River Rd.	s/o Lincoln Av.	75.6	75.6	0.0	Yes	No	
3	Parkridge Av.	n/o Second St.	62.3	62.4	0.1	Yes	No	
4	Parkridge Av.	s/o Second St.	69.3	69.3	0.0	Yes	No	
5	Parkridge Av.	s/o Lincoln Av.	70.0	70.1	0.0	Yes	No	
6	Pacific Av.	s/o Second St.	55.5	55.5	0.0	Yes	No	
7	Mountain Av.	n/o Hamner Av.	70.9	72.8	1.9	No	No	
8	Hamner Av.	s/o Third St.	76.3	76.3	0.0	No	No	
9	Hamner Av.	s/o Second St.	75.7	75.7	0.1	No	No	
10	Hamner Av.	s/o First St.	74.6	75.0	0.3	No	No	
11	Hamner Av.	s/o Hidden Valley Pkwy.	75.7	75.8	0.1	No	No	
12	E. Parkridge Av.	s/o Hidden Valley Pkwy.	72.0	72.0	0.0	Yes	No	
13	Lincoln Av.	s/o River Rd.	74.2	74.3	0.1	Yes	No	
14	Lincoln Av.	s/o Rincon St.	74.2	74.3	0.1	No	No	
15	Lincoln Av.	s/o Railroad St.	74.7	74.7	0.0	Yes	No	
16	Lincoln Av.	s/o Pomona Rd.	75.5	75.5	0.0	No	No	
17	Second St.	w/o Parkridge Av.	73.0	73.1	0.0	Yes	No	
18	Second St.	e/o Parkridge Av.	72.2	72.3	0.1	Yes	No	
19	Second St.	w/o Pacific Av.	72.6	72.7	0.1	Yes	No	
20	Second St.	e/o Pacific Av.	72.8	72.9	0.1	Yes	No	
21	Second St.	w/o Mountain Av.	73.1	73.2	0.1	Yes	No	
22	Second St.	e/o Mountain Av.	71.3	72.4	1.1	Yes	No	
23	Second St.	e/o Dwy. 8	71.3	72.4	1.1	No	No	
24	Second St.	w/o Hamner Av.	72.0	73.0	1.0	No	No	
25	First St.	w/o Parkridge Av.	74.2	74.3	0.1	Yes	No	
26	First St.	e/o Parkridge Av.	72.1	72.2	0.1	Yes	No	
27	First St.	e/o Dwy. 1	72.1	72.2	0.0	Yes	No	
28	First St.	e/o Mountain Av.	69.1	69.9	0.7	Yes	No	
29	First St.	w/o Hamner Av.	69.4	70.1	0.7	Yes	No	
30	Hidden Valley Pkwy.	w/o E. Parkridge Av.	75.1	75.1	0.0	Yes	No	
31	Hidden Valley Pkwy.	e/o E. Parkridge Av.	75.3	75.3	0.0	Yes	No	

TABLE 7-9: UNMITIGATED HORIZON YEAR WITH PROJECT TRAFFIC NOISE IMPACTS

¹ The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use. Values rounded to the nearest one-tenth.

² Significance Criteria (Section 4).

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8 SENSITIVE RECEIVER LOCATIONS

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

Sensitive receiver locations in the Project study area include residential uses, as described below. Other sensitive land uses in the Project study area that are located at greater distances than those identified in this noise study will experience lower noise levels than those presented in this report due to the additional attenuation from distance and the shielding of intervening structures.

- R1: Located approximately 20 feet north of the Project site, R1 represents existing residential homes and outdoor living areas (e.g., backyards) east of Pacific Avenue and south of Second Street. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment.
- R2: Location R2 represents the existing residential home located west of the Project site at roughly 10 feet, on the south side of Second Street. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment.
- R3: Location R3 represents existing residential homes on the north side of Second Street at approximately 92 feet north of the Project site. A 24-hour noise measurement near this location, L2, is used to describe the existing ambient noise environment.
- R4: Location R4 represents the existing residential home located roughly 87 feet southeast of the Project site, on the east side of Mountain Avenue. A 24-hour noise measurement near this location, L5, is used to describe the existing ambient noise environment.
- R5: Located approximately 61 feet east of the Project site, R5 represents existing residential homes on the east side of Mountain Avenue. A 24-hour noise measurement was taken near this location, L5, to describe the existing ambient noise environment.
- R6: Location R6 represents the existing residential homes located east of the Project site at roughly 10 feet on the south side of First Street. A 24-hour noise measurement was taken near this location, L6, to describe the existing ambient noise environment.
- R7: Location R7 represents the existing residential homes located south of the Project site at roughly 112 feet on the south side of First Street. A 24-hour noise measurement was taken near this location, L6, to describe the existing ambient noise environment.



- R8: Located approximately 91 feet west of the Project site, R8 represents existing residential homes on the west side of Pacific Avenue. A 24-hour noise measurement was taken near this location, L6, to describe the existing ambient noise environment.
- R9: Location R9 represents the existing residential homes located west of the Project site at roughly 105 feet on the west of Pacific Avenue. A 24-hour noise measurement was taken near this location, L7, to describe the existing ambient noise environment.
- R10: Location R10 represents the existing residential homes located west of the Project site at roughly 86 feet on the west side of Pacific Avenue. A 24-hour noise measurement was taken near this location, L8, to describe the existing ambient noise environment.



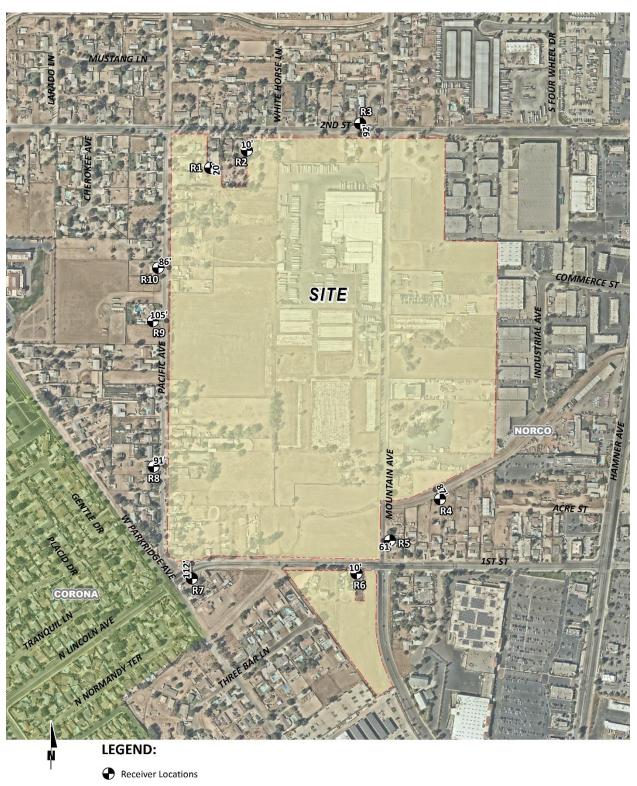


EXHIBIT 8-A: SENSITIVE RECEIVER LOCATIONS

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



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9 OPERATIONAL NOISE IMPACTS

This section analyzes the potential stationary-source operational noise impacts at the nearby receiver locations, identified in Section 8, resulting from operation of the proposed Palomino Business Park Project. Exhibit 9-A identifies the representative receiver locations and noise source locations used to assess the operational noise levels.

9.1 **OPERATIONAL NOISE SOURCES**

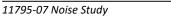
At the time this noise analysis was prepared, the future tenants of the proposed Project were unknown. The on-site Project-related noise sources are expected to include: idling trucks, delivery truck activities, backup alarms, refrigerated containers or reefers, as well as loading and unloading of dry goods, roof-top air conditioning units, and parking lot vehicle movements. This noise analysis is intended to describe noise level impacts associated with the expected typical operational activities at the Project site.

9.2 **REFERENCE NOISE LEVELS**

To estimate the Project operational noise impacts, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with the development of the proposed Project. This section provides a detailed description of the reference noise level measurements shown on Table 9-1 used to estimate the Project operational noise impacts. It is important to note that the following Projected noise levels assume the worst-case noise environment with the idling trucks, delivery truck activities, backup alarms, refrigerated containers or reefers, as well as loading and unloading of dry goods, roof-top air conditioning units, and parking lot vehicle movements all operating simultaneously. These noise level impacts will likely vary throughout the day.

9.2.1 ROOF-TOP AIR CONDITIONING UNITS

To assess the impacts created by the roof-top air conditioning units at the Project buildings, reference noise levels measurements were taken over a four-day total duration at the Santee Walmart on July 27th, 2015. Located at 170 Town Center Parkway in the City of Santee, the noise level measurements describe multiple mechanical roof-top air conditioning units on the roof of an existing Walmart store. The reference noise level represents a Lennox SCA120 series 10-ton model packaged air conditioning unit. Using the uniform reference distance of 50 feet, the reference noise level is 57.2 dBA L_{eq}. The operating conditions of the reference noise level measurement reflect peak summer cooling requirements with measured temperatures approaching 96 degrees Fahrenheit (°F) with average daytime temperatures of 82°F. The roof-top air condition units were observed to operate the most during the daytime hours for a total of 39 minutes per hour. The noise attenuation provided by a parapet wall is not reflected in this reference noise level measurement.





9.2.2 TRUCK IDLING, DELIVERIES, BACKUP ALARMS, UNLOADING/LOADING, AND DOCKING

Short-term reference noise level measurements were collected on Wednesday, January 7th, 2015, by Urban Crossroads, Inc. at the Motivational Fulfillment & Logistics Services distribution facility located at 6810 Bickmore Avenue in the City of Chino. The noise level measurements represent the typical weekday dry goods logistics warehouse operation in a single building, of roughly 285,000 square feet, with a loading dock area on the western side of the building façade. Up to ten trucks were observed in the loading dock area including a combination of tractor trailer semi-trucks, two-axle delivery trucks, and background forklift operations.

The unloading/docking activity noise level measurement was taken over a fifteen-minute period and represents multiple noise sources taken from the center of loading dock activities generating a reference noise level of 62.8 dBA L_{eq} at a uniform reference distance of 50 feet. At this measurement location, the noise sources associated with employees unloading a docked truck container included the squeaking of the truck's shocks when weight was removed from the truck, employees playing music over a radio, as well as a forklift horn and backup alarm. In addition, during the noise level measurement a truck entered the loading dock area and proceeded to reverse and dock in a nearby loading bay, adding truck engine and air brakes noise.

9.2.3 TRUCK IDLING, BACKUP ALARMS, UNLOADING/LOADING, REFRIGERATED CONTAINERS OR REEFERS

On Wednesday, January 7th, 2015, Urban Crossroads, Inc. collected short-term operational noise level measurements at the Nature's Best distribution facility located at 16081 Fern Avenue in the City of Chino. Operations at the Nature's Best distribution facility measurements represent the typical weekday logistics warehouse activities with both dry goods and cold storage from a single building, of approximately 397,000 square feet, with loading dock areas located on both sides of the building. To describe the loading dock activities, a reference noise level measurement was collected to represent the truck idling/reefer activity.

During the fourteen-minute truck idling/reefer activity reference noise level measurement, approximately 20 delivery trucks were docked, idling, or parked in the northern loading dock area. The truck idling/reefer activity reference noise level measurement was taken in the center of the loading dock activity area, and represents multiple concurrent noise sources resulting in a combined noise level of 65.7 dBA L_{eq} at a uniform distance of 50 feet.

Specifically, the truck idling/reefer activity reference noise level measurement represents one truck located approximately 30 feet from the noise level meter with another truck passing by to park roughly 20 feet away, both with their engines idling. Throughout the reference noise level measurement, a separate docked and running reefer truck was located approximately 50 feet east of the measurement location. Additional background noise sources included truck pass-by noise, truck drivers talking to each other next to docked trucks, and air brake release noise when trucks parked.



9.2.4 PARKING LOT VEHICLE MOVEMENTS (WAREHOUSE/INDUSTRIAL USE)

To determine the noise levels associated with warehouse and industrial use parking lot vehicle movements, Urban Crossroads collected reference noise level measurements over a 24-hour period on May 17, 2017 at the parking lot for the Panasonic Avionics Corporation in the City of Lake Forest. The peak hour of activity measured over the 24-hour noise level measurement period occurred between 12:00 p.m. to 1:00 p.m., or the typical lunch hour for employees working in the area. The measured reference noise level at 50 feet from parking lot vehicle movements was measured at 41.7 dBA L_{eq}. The parking lot noise levels are mainly due to cars pulling in and out of spaces during peak lunch hour activity and employees talking. Noise associated with parking lot vehicle movements is expected to operate for the entire hour (60 minutes).

9.2.5 PARKING LOT VEHICLE MOVEMENTS (COMMERCIAL USE)

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

9.2.6 DRIVE-THROUGH SPEAKERPHONE

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



9.2.7 GAS STATION ACTIVITY

To describe the potential noise level impacts created by the gas station of the proposed Project uses, a reference noise level measurement was collected on Tuesday, April 26th, 2016 at an ARCO gas station located at 6501 Quail Hill Parkway in the City of Irvine. The reference noise level measurement includes six cars fueling at once, car doors closing, engines starting, fuel pump TV sounds, and background car pass-by events within a three-minute period. At a uniform reference noise level noise level distance of 50 feet, the reference noise level is 48.2 dBA L_{eq}.

Project	Noise Source	Duration	Dist. From	Noise Source	Hourly Activity	Noise Leve	el (dBA L _{eq})
Land Use	Noise Source	(hh:mm:ss)	Source (Feet)	Height (Feet)	(Mins) ¹	@ Ref. Distance	@ 50 Feet
All	Roof-Top Air Conditioning Units ²	96:00:00	5'	5'	39	77.2	57.2
	Truck Unloading/Docking Activity ³	00:15:00	30'	8'	60	67.2	62.8
Warehousing/ Industrial	Truck IdIe/Reefer Activity ⁴	00:15:00	30'	8'	60	70.1	62.8 65.7 38.2
	Parking Lot Vehicle Movements ⁵	01:00:00	10'	5'	60	52.2	38.2
	Parking Lot Vehicle Movements ⁶	00:15:00	5'	5'	60	60.1	40.1
Commercial	Drive-Through Speakerphone ⁷	02:00:00	15'	3'	60	62.0	51.5
	Gas Station Activity ⁸	00:03:00	5'	5'	60	68.2	48.2

 TABLE 9-1:
 REFERENCE NOISE LEVEL MEASUREMENTS

¹ Anticipated duration (minutes within the hour) of noise activity during typical hourly conditions expected at the Project site based on the reference noise level measurement activity.

² As measured by Urban Crossroads, Inc. on 7/27/2015 at the Santee Walmart located at 170 Town Center Parkway.

³ Reference noise level measurements were collected from the existing operations of the Motivational Fulfillment & Logistics Services distribution facility located at 6810 Bickmore Avenue in the City of Chino on Wednesday, January 7, 2015.

⁴ Reference noise level measurements were collected from the existing operations of the Nature's Best Distribution Facility located at 16081 Fern Avenue in the City of Chino on 1/7/2015.

⁵ As measured by Urban Crossroads, Inc. on 5/17/2017 at the Panasonic Avionics Corporation parking lot in the City of Lake Forest at typical lunch hour (12:00 p.m. to 1:00 p.m.).

⁶ As measured by Urban Crossroads, Inc. on 5/30/2012 by Urban Crossroads, Inc. at the Laguna Niguel Walmart at 27470 Alicia Parkway.

⁷ As measured by Urban Crossroads, Inc. on 12/19/2014 at a Panera Bread drive-thru in the City of Brea.

⁸ As measured by Urban Crossroads, Inc. on 4/26/2016 at an ARCO gas station at 6501 Quail Hill Parkway in the City of Irvine.



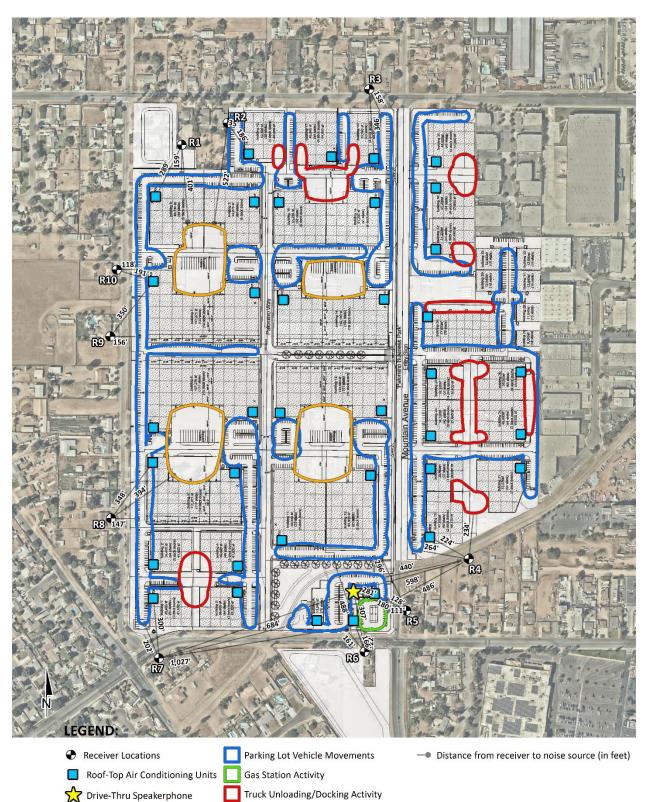


EXHIBIT 9-A: OPERATIONAL NOISE SOURCE AND RECEIVER LOCATIONS



Truck Idle/Reefer Activity (Cold Storage)

9.3 PROJECT OPERATIONAL NOISE LEVELS

Using the reference noise levels to represent the proposed Project operations that include idling trucks, delivery truck activities, backup alarms, refrigerated containers or reefers, as well as loading and unloading of dry goods, roof-top air conditioning units, and parking lot vehicle movements, Urban Crossroads, Inc. calculated the operational source noise levels that are expected to be generated at the Project site and the Project-related noise level increases that would be experienced at each of the sensitive receiver locations. The operational noise level calculations, shown on Table 9-2, account for the distance attenuation provided due to geometric spreading when sound from a localized stationary source (i.e., a point source) propagates uniformly outward. Hard site conditions are used for point source noise levels that attenuate (or decrease) at a rate of 6 dBA for each doubling of distance. The basic noise attenuation equation shown below is used to calculate the distance attenuation based on a reference noise level (SPL₁):

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

Where SPL_2 is the resulting noise level after attenuation, SPL_1 is the source noise level, D_2 is the distance to the reference sound pressure level (SPL_1), and D_1 is the distance to the receiver location. Line sources are modeled assuming soft site conditions, which equates to 4.5 dBA per doubling of distance. This is less than that assumed for point sources within the Project site of 6 dBA and likely overstates the noise levels generated by line sources. Table 9-2 shows the individual operational noise levels of each noise source at each of the nearby sensitive receiver locations. As indicated on Table 9-2, the unmitigated Project-only operational noise levels will range from 29.1 to 49.7 dBA Leq at the sensitive receiver locations.



Receiver Location ¹	Air Conditioning Unit (Roof-Top)	Truck Unloading/Docking Activity	Truck Idle/Reefer Activity	Parking Lot Vehicle Movements (Industrial)	Parking Lot Vehicle Movements (Commercial)	Drive-Through Speakerphone	Gas Station Activity	Combined Operational Noise Levels (dBA L _{eq})
R1	34.9	_3	29.9	28.2	_3	_3	_3	36.7
R2	39.0	_3	27.7	41.3	_3	_3	_3	43.4
R3	27.8	_3	_3	23.1	_3	_3	_3	29.1
R4	36.3	49.4	_3	23.8	21.2	17.5	28.4	49.7
R5	34.0	_3	_3	22.8	31.9	23.9	41.3	42.5
R6	34.8	41.5	_3	18.4	29.9	27.8	40.5	44.8
R7	30.1	_3	_3	26.1	17.4	25.3	21.9	33.0
R8	32.7	_3	30.0	28.9	_3	_3	_3	35.6
R9	28.7	_3	_3	28.3	_3	_3	_3	31.5
R10	35.0	_3	_3	30.8	_3	_3	_3	36.4

TABLE 9-2: UNMITIGATED PROJECT-ONLY OPERATIONAL NOISE LEVELS

² Reference noise sources as shown on Table 9-1. Individual noise source calculations are provided in Appendix 9.1.

³ Receiver does not have a direct line-of-sight to the noise source and/or is located at too great a distance for the noise source to substantively increase the combined Project operational noise level.

Table 9-3 shows the operational noise levels associated with Palomino Business Park Project will satisfy the 55 dBA Leq daytime City of Norco exterior noise level standards. However, the unmitigated exterior noise levels at receiver location R4 will exceed the 45 dBA Leq nighttime exterior noise standard. Therefore, the unmitigated Project-related operational noise level impacts are considered *potentially significant* impacts, and mitigation is required.



_ ·	Noise Level	Threshold Exceeded? ³			
Receiver Location ¹	at Receiver Locations (dBA L _{eq}) ²	Daytime (55 dBA L _{eq})	Nighttime (45 dBA L _{eq})		
R1	36.7	No	No		
R2	43.4	No	No		
R3	29.1	No	No		
R4	49.7	No	Yes		
R5	42.5	No	No		
R6	44.8	No	No		
R7	33.0	No	No		
R8	35.6	No	No		
R9	31.5	No	No		
R10	36.4	No	No		

TABLE 9-3: UNMITIGATED OPERATIONAL NOISE LEVEL COMPLIANCE

² Estimated Project operational noise levels as shown on Table 9-2.

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

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

Project operational noise mitigation in the form of 10-foot high noise barriers as outlined in the Executive Summary and shown on Exhibit 9-A, are identified to reduce the *potentially significant* impacts at receiver location R4.

Table 9-4 shows the mitigated daytime operational noise levels of each noise source at each of the nearby sensitive receiver locations. As indicated on Table 9-4, the mitigated daytime Project-only operational noise levels will range from 29.1 to 44.8 dBA L_{eq} at the sensitive receiver locations. Table 9-5 shows the mitigated daytime operational noise levels associated with Palomino Business Park Project will satisfy the City of Norco daytime exterior noise level standards at all receiver locations. Therefore, the mitigated Project-related operational noise level impacts are considered *less than significant* impacts with mitigation.

Table 9-6 shows the mitigated nighttime operational noise levels of each noise source at each of the nearby sensitive receiver locations. As indicated on Table 9-6, the mitigated nighttime Project-only operational noise levels will range from 29.1 to 44.8 dBA L_{eq} at the sensitive receiver locations. Table 9-7 shows the mitigated nighttime operational noise levels associated with Palomino Business Park Project will satisfy the City of Norco nighttime exterior noise level standards at all receiver locations. Therefore, the mitigated Project-related operational noise level impacts are considered *less than significant* impacts with mitigation.



Receiver Location ¹	Air Conditioning Unit (Roof-Top)	Truck Unloading/Docking Activity	Truck Idle/Reefer Activity	Parking Lot Vehicle Movements (Industrial)	Parking Lot Vehicle Movements (Commercial)	Drive-Through Speakerphone	Gas Station Activity	Combined Operational Noise Levels (dBA L _{eq})
R1	34.9	_3	29.9	28.2	_3	_3	_3	36.7
R2	39.0	_3	27.7	41.3	_3	_3	_3	43.4
R3	27.8	_3	_3	23.1	_3	_3	_3	29.1
R4	36.3	43.3	_3	23.8	21.2	17.5	28.4	44.3
R5	34.0	_3	_3	22.8	31.9	23.9	41.3	42.5
R6	34.8	41.5	_3	18.4	29.9	27.8	40.5	44.8
R7	30.1	_3	_3	26.1	17.4	25.3	21.9	33.0
R8	32.7	_3	30.0	28.9	_3	_3	_3	35.6
R9	28.7	_3	_3	28.3	_3	_3	_3	31.5
R10	35.0	_3	_3	30.8	_3	_3	_3	36.4

TABLE 9-4: MITIGATED DAYTIME PROJECT-ONLY OPERATIONAL NOISE LEVELS

² Reference noise sources as shown on Table 9-1. Individual noise source calculations are provided in Appendix 9.1.

³ Receiver does not have a direct line-of-sight to the noise source and/or is located at too great a distance for the noise source to substantively increase the combined Project operational noise level.

Receiver	Mitigated Noise Level	Threshold Exceeded? ³
Location ¹	at Receiver Locations (dBA L _{eq}) ²	Daytime (55 dBA L _{eq})
R1	36.7	No
R2	43.4	No
R3	29.1	No
R4	44.3	No
R5	42.5	No
R6	44.8	No
R7	33.0	No
R8	35.6	No
R9	31.5	No
R10	36.4	No

TABLE 9-5: MITIGATED DAYTIME OPERATIONAL NOISE LEVEL COMPLIANCE

¹ See Exhibit 9-A for the receiver and noise source locations.

² Mitigated Project operational noise levels as shown on Table 9-4.

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

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



Receiver Location ¹	Air Conditioning Unit (Roof-Top)	Truck Unloading/Docking Activity	Truck Idle/Reefer Activity	Parking Lot Vehicle Movements (Industrial)	Parking Lot Vehicle Movements (Commercial)	Drive-Through Speakerphone	Gas Station Activity	Combined Operational Noise Levels (dBA L _{eq})
R1	34.9	_3	29.9	28.2	_3	_3	_3	36.7
R2	39.0	_3	27.7	41.3	_3	_3	_3	43.4
R3	27.8	_3	_3	23.1	_3	_3	_3	29.1
R4	36.3	43.3	_3	23.8	21.2	17.5	28.4	44.3
R5	34.0	_3	_3	22.8	31.9	23.9	41.3	42.5
R6	34.8	41.5	_3	18.4	29.9	27.8	40.5	44.8
R7	30.1	_3	_3	26.1	17.4	25.3	21.9	33.0
R8	32.7	_3	30.0	28.9	_3	_3	_3	35.6
R9	28.7	_3	_3	28.3	_3	_3	_3	31.5
R10	35.0	_3	_3	30.8	_3	_3	_3	36.4

TABLE 9-6: MITIGATED NIGHTTIME PROJECT-ONLY OPERATIONAL NOISE LEVELS

² Reference noise sources as shown on Table 9-1. Individual noise source calculations are provided in Appendix 9.1.

³ Receiver does not have a direct line-of-sight to the noise source and/or is located at too great a distance for the noise source to substantively increase the combined Project operational noise level.

Receiver	Mitigated Noise Level	Threshold Exceeded? ³
Location ¹	at Receiver Locations (dBA L _{eq}) ²	Nighttime (45 dBA L _{eq})
R1	36.7	No
R2	43.4	No
R3	29.1	No
R4	44.3	No
R5	42.5	No
R6	44.8	No
R7	33.0	No
R8	35.6	No
R9	31.5	No
R10	36.4	No

TABLE 9-7: MITIGATED NIGHTTIME OPERATIONAL NOISE LEVEL COMPLIANCE

¹ See Exhibit 9-A for the receiver and noise source locations.

² Mitigated Project operational noise levels as shown on Table 9-6.

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

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



9.4 PROJECT OPERATIONAL NOISE LEVEL CONTRIBUTIONS

To describe the Project operational noise level contributions, the Project operational noise levels are combined with the existing ambient noise levels measurements for the nearby receiver locations potentially impacted by Project operational noise sources. Since the units used to measure noise, decibels (dB), are logarithmic units, the Project-operational and existing ambient noise levels cannot be combined using standard arithmetic equations. (5) Instead, they must be logarithmically added using the following base equation:

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

Where "SPL1," "SPL2," etc. are equal to the sound pressure levels being combined, or in this case, the Project-operational and existing ambient noise levels. The difference between the combined Project and ambient noise levels describe the Project noise level contributions to the existing ambient noise environment. Noise levels that would be experienced at receiver locations when Project-source noise is added to the daytime and nighttime ambient conditions are presented below. As indicated on Tables 9-8 and 9-9, the Project will generate an unmitigated daytime operational noise level increase of up to 0.3 dBA L_{eq} and a nighttime operational noise level increase of up to 0.5 dBA L_{eq} at the nearby receiver locations. The Project-related daytime and nighttime operational noise level increase significance criteria presented in Table 4-2, and therefore, the Project-related noise level contributions at the sensitive receiver locations will be *less than significant*.

Receiver Location ¹	Total Unmitigated Project Operational Noise Level ²	Measurement Location ³	Reference Ambient Noise Levels⁴	Combined Project and Ambient ⁵	Project Increase ⁶	Threshold ⁷	Threshold Exceeded? ⁷
R1	36.7	L1	68.2	68.2	0.0	1.5	No
R2	43.4	L1	68.2	68.2	0.0	1.5	No
R3	29.1	L2	60.9	60.9	0.0	3.0	No
R4	49.7	L5	61.8	62.1	0.3	3.0	No
R5	42.5	L5	61.8	61.9	0.1	3.0	No
R6	44.8	L6	65.7	65.7	0.0	1.5	No
R7	33.0	L6	65.7	65.7	0.0	1.5	No
R8	35.6	L6	65.7	65.7	0.0	1.5	No
R9	31.5	L7	56.0	56.0	0.0	5.0	No
R10	36.4	L8	54.4	54.5	0.1	5.0	No

¹ See Exhibit 9-A for the sensitive receiver locations.

² Total Project operational noise levels as shown on Table 9-3.

³ Reference noise level measurement locations as shown on Exhibit 5-A.

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

⁵ Represents the combined ambient conditions plus the Project activities.

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

⁷ Significance Criteria as defined in Section 4.



Receiver Location ¹	Total Unmitigated Project Operational Noise Level ²	Measurement Location ³	Reference Ambient Noise Levels⁴	Combined Project and Ambient⁵	Project Increase ⁶	Threshold ⁷	Threshold Exceeded? ⁷
R1	36.7	L1	65.2	65.2	0.0	1.5	No
R2	43.4	L1	65.2	65.2	0.0	1.5	No
R3	29.1	L2	58.0	58.0	0.0	5.0	No
R4	49.7	L5	59.2	59.7	0.5	5.0	No
R5	42.5	L5	59.2	59.3	0.1	5.0	No
R6	44.8	L6	62.5	62.6	0.1	3.0	No
R7	33.0	L6	62.5	62.5	0.0	3.0	No
R8	35.6	L6	62.5	62.5	0.0	3.0	No
R9	31.5	L7	53.8	53.8	0.0	5.0	No
R10	36.4	L8	49.8	50.0	0.2	5.0	No

TABLE 9-9: UNMITIGATED PROJECT NIGHTTIME NOISE LEVEL CONTRIBUTIONS

¹ See Exhibit 9-A for the sensitive receiver locations.

² Total Project operational noise levels as shown on Table 9-3.

³ Reference noise level measurement locations as shown on Exhibit 5-A.

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

⁵ Represents the combined ambient conditions plus the Project activities.

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

⁷ Significance Criteria as defined in Section 4.

9.5 **OPERATIONAL VIBRATION IMPACTS**

To assess the potential vibration impacts from truck haul trips associated with operational activities the Caltrans vibration perception threshold of 0.04 in/sec PPV is used. Truck vibration levels are dependent on vehicle characteristics, load, speed, and pavement conditions. Typical vibration levels for the Palomino Business Park heavy truck activity at normal traffic speeds will approach 0.004 in/sec PPV at 25 feet based on the FTA *Transit Noise Impact and Vibration Assessment.* (4) Trucks transiting on site will be travelling at very low speeds so it is expected that delivery truck vibration impacts at nearby homes will satisfy the 0.04 in/sec PPV threshold, and therefore, will be *less than significant*.



10 CONSTRUCTION IMPACTS

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

10.1 CONSTRUCTION NOISE LEVELS

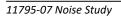
Noise generated by the Project construction equipment will include a combination of trucks, power tools, concrete mixers, and portable generators that when combined can reach high levels. The number and mix of construction equipment is expected to occur in the following stages:

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

This construction noise analysis was prepared using reference noise level measurements taken by Urban Crossroads, Inc. to describe the typical construction activity noise levels for each stage of Project construction. The construction reference noise level measurements represent a list of typical construction activity noise levels. Noise levels generated by heavy construction equipment can range from approximately 68 dBA to more than 80 dBA when measured at 50 feet. However, these noise levels diminish with distance from the construction site at a rate of 6 dBA per doubling of distance. For example, a noise level of 80 dBA measured at 50 feet from the noise source to the receiver would be reduced to 74 dBA at 100 feet from the source to the receiver, and would be further reduced to 68 dBA at 200 feet from the source to the receiver. The construction stages used in this analysis are consistent with the *Palomino Business Park Air Quality Impact Analysis* prepared by Urban Crossroads, Inc. (24)

10.2 CONSTRUCTION REFERENCE NOISE LEVELS

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





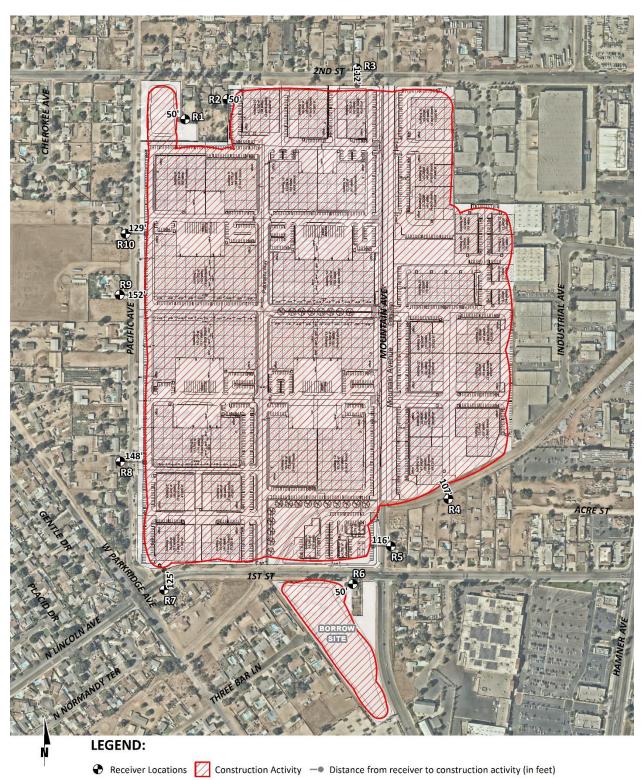


EXHIBIT 10-A: CONSTRUCTION NOISE SOURCE AND RECEIVER LOCATIONS



ID	Noise Source	Duration (h:mm:ss)	Reference Distance From Source (Feet)	Reference Noise Levels @ Reference Distance (dBA L _{eq})	Reference Noise Levels @ 50 Feet (dBA L _{eq}) ⁷
1	Truck Pass-Bys & Dozer Activity ¹	0:01:15	30'	63.6	59.2
2	Dozer Activity ¹	0:01:00	30'	68.6	64.2
3	Construction Vehicle Maintenance Activities ²	0:01:00	30'	71.9	67.5
4	Foundation Trenching ²	0:01:01	30'	72.6	68.2
5	Rough Grading Activities ²	0:05:00	30'	77.9	73.5
6	Framing ³	0:02:00	30'	66.7	62.3
7	Dozer Pass-By ⁴	0:00:32	30'	84.0	79.6
8	Concrete Mixer Truck Movements ⁵	0:01:00	50'	71.2	71.2
9	Concrete Paver Activities ⁵	0:01:00	30'	70.0	65.6
10	Concrete Mixer Pour & Paving Activities ⁵	0:01:00	30'	70.3	65.9
11	Concrete Mixer Backup Alarms & Air Brakes ⁵	0:00:20	50'	71.6	71.6
12	Concrete Mixer Pour Activities ⁵	1:00:00	50'	67.7	67.7
13	Forklift, Jackhammer, & Metal Truck Bed Loading ⁶	0:02:06	50'	67.9	67.9

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

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

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

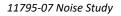
⁴ As measured by Urban Crossroads, Inc. on 10/30/15 during grading operations within an industrial construction site located in the City of Ontario.

⁵ Reference noise level measurements were collected from a nighttime concrete pour at an industrial construction site, located at 27334 San

Bernardino Avenue in the City of Redlands, between 1:00 a.m. to 2:00 a.m. on 7/1/15.

⁶ As measured by Urban Crossroads, Inc. on 9/9/16 during demolition activities at 41 Corporate Park in Irvine.

⁷ Reference noise levels are calculated at 50 feet using a drop off rate of 6 dBA per doubling of distance (point source).





10.3 CONSTRUCTION NOISE ANALYSIS

Using the reference construction equipment noise levels, calculations of the Project construction noise level impacts at the nearby sensitive receiver locations were completed. Tables 10-2 to 10-7 present the short-term construction noise levels for each stage of construction. Table 10-8 provides a summary of the construction noise levels by stage at the nearby noise-sensitive receiver locations. Based on the stages of construction, the noise impacts associated with the proposed Project are expected to create temporarily high noise levels at the nearby receiver locations. To assess the worst-case construction noise levels, this analysis shows the highest noise impacts when the equipment with the highest reference noise level is operating at the closest point from the edge of construction activity to each receiver location. The noise analysis for each stage of construction represents multiple pieces of construction equipment operating simultaneously and continuously, and only the highest reference noise sources for each stage are used in the analysis. This is also representative of actual construction activities since all equipment will not operate from a single point.

	Reference Noise Level @ 50 Feet (dBA L _{eq})			
Truck Pass-Bys	59.2			
Dozer Activity				64.2
Forklift, Jackhar	nmer, & Metal Tr	uck Bed Activitie	es	67.9
ŀ	lighest Reference	e Noise Level at 5	0 Feet (dBA L _{eq}):	67.9
Receiver Location	Distance to Primary Construction Activity (Feet) ²	Distance Attenuation (dBA L _{eq}) ³	Estimated Noise Barrier Attenuation (dBA L _{eq}) ⁴	Construction Noise Level (dBA L _{eq})
R1	50'	0.0	0.0	67.9
R2	50'	0.0	0.0	67.9
R3	112'	-7.0	0.0	60.9
R4	107'	-6.6	0.0	61.3
R5	116'	-7.3	0.0	60.6
R6	50'	0.0	0.0	67.9
R7	125'	-8.0	0.0	59.9
R8	148'	-9.4	0.0	58.5
R9	152'	-9.7	0.0	58.2
R10	129'	-8.2	0.0	59.7

TABLE 10-2:	DEMOLITION EQUIPMENT NOISE LEVELS
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¹ Reference construction noise level measurements taken by Urban Crossroads, Inc.

 $^{\rm 2}$ Distance from the nearest point of construction activity to the nearest receiver.

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

	Reference Noise Level @ 50 Feet (dBA L _{eq})			
Truck Pass-Bys	& Dozer Activity			59.2
Dozer Activity				64.2
Dozer Pass-By				79.6
ŀ	Highest Reference	e Noise Level at 5	50 Feet (dBA L _{eq}):	79.6
Receiver Location	Distance to Primary Construction Activity (Feet) ²	Distance Attenuation (dBA L _{eq}) ³	Estimated Noise Barrier Attenuation (dBA L _{eq}) ⁴	Construction Noise Level (dBA L _{eq})
R1	50'	0.0	0.0	79.6
R2	50'	0.0	0.0	79.6
R3	112'	-7.0	0.0	72.6
R4	107'	-6.6	0.0	73.0
R5	116'	-7.3	0.0	72.3
R6	50'	0.0	0.0	79.6
R7	125'	-8.0	0.0	71.6
R8	148'	-9.4	0.0	70.1
R9	152'	-9.7	0.0	69.9
R10	129'	-8.2	0.0	71.3

TABLE 10-3: SITE PREPARATION EQUIPMENT NOISE LEVELS

 $^{\rm 1}$ Reference construction noise level measurements taken by Urban Crossroads, Inc.

 $^{\rm 2}$ Distance from the nearest point of construction activity to the nearest receiver.

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



	Reference Noise Level @ 50 Feet (dBA L _{eq})			
Truck Pass-Bys	& Dozer Activity			59.2
Dozer Activity				64.2
Rough Grading	Activities			73.5
ŀ	lighest Reference	e Noise Level at 5	60 Feet (dBA L _{eq}):	73.5
Receiver Location	Distance to Primary Construction Activity (Feet) ²	Distance Attenuation (dBA L _{eq}) ³	Estimated Noise Barrier Attenuation (dBA L _{eq}) ⁴	Construction Noise Level (dBA L _{eq})
R1	50'	0.0	0.0	73.5
R2	50'	0.0	0.0	73.5
R3	112'	-7.0	0.0	66.5
R4	107'	-6.6	0.0	66.9
R5	116'	-7.3	0.0	66.2
R6	50'	0.0	0.0	73.5
R7	125'	-8.0	0.0	65.5
R8	148'	-9.4	0.0	64.0
R9	152'	-9.7	0.0	63.8
R10	129'	-8.2	0.0	65.2

TABLE 10-4: GRADING EQUIPMENT NOISE LEVELS

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

 $^{\rm 2}$ Distance from the nearest point of construction activity to the nearest receiver.

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



	Reference Noise Level @ 50 Feet (dBA L _{eq})			
Construction Ve	hicle Maintenan	ce Activities		67.5
Foundation Trer	nching			68.2
Framing				62.3
ŀ	lighest Reference	e Noise Level at 5	60 Feet (dBA L _{eq}):	68.2
Receiver Location	Distance to Primary Construction Activity (Feet) ²	Distance Attenuation (dBA L _{eq}) ³	Estimated Noise Barrier Attenuation (dBA L _{eq}) ⁴	Construction Noise Level (dBA L _{eq})
R1	50'	0.0	0.0	68.2
R2	50'	0.0	0.0	68.2
R3	112'	-7.0	0.0	61.2
R4	107'	-6.6	0.0	61.6
R5	116'	-7.3	0.0	60.9
R6	50'	0.0	0.0	68.2
R7	125'	-8.0	0.0	60.2
R8	148'	-9.4	0.0	58.7
R9	152'	-9.7	0.0	58.5
R10	129'	-8.2	0.0	59.9

TABLE 10-5: BUILDING CONSTRUCTION EQUIPMENT NOISE LEVELS

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

 $^{\rm 2}$ Distance from the nearest point of construction activity to the nearest receiver.

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



	Reference Const	ruction Activity ¹		Reference Noise Level @ 50 Feet (dBA L _{eq})
Construction Ve	ehicle Maintenan	ce Activities		67.5
Framing				62.3
l	Highest Reference	e Noise Level at 5	60 Feet (dBA L _{eq}):	67.5
Receiver Location	Distance to Primary Construction Activity (Feet) ²	Distance Attenuation (dBA L _{eq}) ³	Estimated Noise Barrier Attenuation (dBA L _{eq}) ⁴	Construction Noise Level (dBA L _{eq})
R1	50'	0.0	0.0	67.5
R2	50'	0.0	0.0	67.5
R3	112'	-7.0	0.0	60.5
R4	107'	-6.6	0.0	60.9
R5	116'	-7.3	0.0	60.2
R6	50'	0.0	0.0	67.5
R7	125'	-8.0	0.0	59.5
R8	148'	-9.4	0.0	58.0
R9	152'	-9.7	0.0	57.8
R10	129'	-8.2	0.0	59.2

TABLE 10-6: ARCHITECTURAL COATING EQUIPMENT NOISE LEVELS

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

 $^{\rm 2}$ Distance from the nearest point of construction activity to the nearest receiver.

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



	Reference Noise Level @ 50 Feet (dBA L _{eq})			
Concrete Mixer	Truck Movement	s		71.2
Concrete Paver	Activities			65.6
Concrete Mixer	Pour & Paving A	ctivities		65.9
Concrete Mixer	Backup Alarms &	k Air Brakes		71.6
Concrete Mixer	Pour Activities			67.7
ŀ	lighest Reference	e Noise Level at 5	50 Feet (dBA L _{eq}):	71.6
Receiver Location	Distance to Primary Construction Activity (Feet) ²	Distance Attenuation (dBA L _{eq}) ³	Estimated Noise Barrier Attenuation (dBA L _{eq}) ⁴	Construction Noise Level (dBA L _{eq})
R1	50'	0.0	0.0	71.6
R2	50'	0.0	0.0	71.6
R3	112'	-7.0	0.0	64.6
R4	107'	-6.6	0.0	65.0
R5	116'	-7.3	0.0	64.3
R6	50'	0.0	0.0	71.6
		0.0	0.0	63.6
R7	125'	-8.0	0.0	05.0
R7 R8	125' 148'	-8.0 -9.4	0.0	62.2

TABLE 10-7: PAVING EQUIPMENT NOISE LEVELS

 $^{\rm 1}$ Reference construction noise level measurements taken by Urban Crossroads, Inc.

 $^{\rm 2}$ Distance from the nearest point of construction activity to the nearest receiver.

 $^{\rm 3}$ Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

 $^{\rm 4}$ Estimated barrier attenuation from existing barriers/berms in the Project study area.

10.4 CONSTRUCTION NOISE THRESHOLDS OF SIGNIFICANCE

The construction noise analysis shows that the highest construction noise levels will occur when construction activities take place at the closest point from primary Project construction activity to each of the nearby receiver locations. As shown on Table 10-8, the unmitigated construction noise levels are expected to range from 57.8 to 79.6 dBA L_{eq} at the nearby receiver locations.



	Construction Noise Level (dBA L _{eq})						
Receiver Location ¹	Demolition	Site Preparation	Grading	Building Construction	Architectural Coating	Paving	Highest Activity Noise Levels ²
R1	67.9	79.6	73.5	68.2	67.5	71.6	79.6
R2	67.9	79.6	73.5	68.2	67.5	71.6	79.6
R3	60.9	72.6	66.5	61.2	60.5	64.6	72.6
R4	61.3	73.0	66.9	61.6	60.9	65.0	73.0
R5	60.6	72.3	66.2	60.9	60.2	64.3	72.3
R6	67.9	79.6	73.5	68.2	67.5	71.6	79.6
R7	59.9	71.6	65.5	60.2	59.5	63.6	71.6
R8	58.5	70.1	64.0	58.7	58.0	62.2	70.1
R9	58.2	69.9	63.8	58.5	57.8	61.9	69.9
R10	59.7	71.3	65.2	59.9	59.2	63.4	71.3

TABLE 10-8: UNMITIGATED CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY (DBA LEQ)

¹ Noise receiver locations are shown on Exhibit 10-A.

² Estimated construction noise levels during peak operating conditions.

To evaluate whether the Project will generate potentially significant short-term noise levels at off-site sensitive receiver locations a construction-related the NIOSH noise level threshold of 85 dBA L_{eq} is used as acceptable thresholds for construction noise at the nearby sensitive receiver locations. Table 10-9 shows the highest construction noise levels at the potentially impacted receiver locations are expected to approach 79.6 dBA L_{eq} and will satisfy the NIOSH 85 dBA L_{eq} significance threshold during temporary Project construction activities. The noise impact due to unmitigated Project construction noise levels is, therefore, considered a *less than significant* impact at all nearby sensitive receiver locations.



	Const	Construction Noise Levels (dBA L _{eq})					
Receiver Location ¹	Highest Construction Noise Levels ²	Threshold ³	Threshold Exceeded? ⁴				
R1	79.6	85	No				
R2	79.6	85	No				
R3	72.6	85	No				
R4	73.0	85	No				
R5	72.3	85	No				
R6	79.6	85	No				
R7	71.6	85	No				
R8	70.1	85	No				
R9	69.9	85	No				
R10	71.3	85	No				

TABLE 10-9: CONSTRUCTION EQUIPMENT NOISE LEVEL COMPLIANCE (DBA LEQ)

¹ Noise receiver locations are shown on Exhibit 10-A.

² Estimated construction noise levels during peak operating conditions, as shown on Table 10-8.

³ Construction noise thresholds as shown on Table 4-2.

⁴ Do the estimated Project construction noise levels satisfy the construction noise level threshold?

10.5 CONSTRUCTION VIBRATION IMPACTS

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

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

Ground-borne vibration levels resulting from construction activities occurring within the Project site were estimated by data published by the Federal Transit Administration. Construction activities that would have the potential to generate low levels of ground-borne vibration within the Project site include grading. Using the vibration source level of construction equipment provided on Table 6-8 and the construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts. Table 10-10 presents the expected Project related vibration levels at the nearby receiver locations.

At distances ranging from 50 to 152 feet from Project construction activities, construction vibration velocity levels are expected to approach 0.03 in/sec PPV and will remain below the



Caltrans threshold of 0.04 in/sec PPV at all receiver locations, as shown on Table 10-10. Therefore, the Project-related vibration impacts are considered *less than significant* during the construction activities at the Project site.

Further, the Project-related construction vibration levels do not represent levels capable of causing building damage to nearby residential homes. The FTA identifies construction vibration levels capable of building damage ranging from 0.12 to 0.5 in/sec PPV. (4) The peak Project-construction vibration levels shown on Table 10-10, approaching 0.03 in/sec PPV, are below the FTA vibration levels for building damage at the residential homes near the Project site. Moreover, the impacts at the site of the closest sensitive receivers are unlikely to be sustained during the entire construction period, but will occur rather only during the times that heavy construction equipment is operating adjacent to the Project site perimeter.

	Distance to	Receiver PPV Levels (in/sec) ²					The second second	Threehold
Receiver ¹ Primary Const. Activity (Feet)		Small Bulldozer	Jack- hammer	Loaded Trucks	Large Bulldozer	Peak Vibration	Threshold (in/sec PPV)	Threshold Exceeded? ³
R1	50'	0.001	0.012	0.027	0.031	0.031	0.04	No
R2	50'	0.001	0.012	0.027	0.031	0.031	0.04	No
R3	112'	0.000	0.004	0.008	0.009	0.009	0.04	No
R4	107'	0.000	0.004	0.009	0.010	0.010	0.04	No
R5	116'	0.000	0.004	0.008	0.009	0.009	0.04	No
R6	50'	0.001	0.012	0.027	0.031	0.031	0.04	No
R7	125'	0.000	0.003	0.007	0.008	0.008	0.04	No
R8	148'	0.000	0.002	0.005	0.006	0.006	0.04	No
R9	152'	0.000	0.002	0.005	0.006	0.006	0.04	No
R10	129'	0.000	0.003	0.006	0.008	0.008	0.04	No

TABLE 10-10: PROJECT CONSTRUCTION VIBRATION LEVELS

¹ Receiver locations are shown on Exhibit 10-A.

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

³ Does the vibration level exceed the maximum acceptable vibration threshold?

10.6 SOIL IMPORT/EXPORT ACTIVITIES

The Project is anticipated to include soil import and export within the Project site boundaries as a part of Project construction. Activities are anticipated to be primarily located as indicated on Exhibit 10-A, within the Project site boundaries, with additional off-site haul truck movements transporting soil to and from areas of the Project site, such as from the southern basin to the northern portion of the Project site. However, these off-site activities are anticipated to be less intensive than the highest reference noise level measurements used to model primary Project construction activities at closer distances to nearby sensitive receiver locations, and as such, would result in equal or lesser noise and vibration impacts. Therefore, impacts related to soil import/export activities will be *less than significant*.



11 REFERENCES

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- 6. Environmental Protection Agency Office of Noise Abatement and Control. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. March 1974. EPA/ONAC 550/9/74-004.
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- 11. Office of Planning and Research. State of California General Plan Guidelines. October 2017.
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- 15. California Department of Transportation. *Transportation and Construction Vibration Guidance Manual.* September 2013.
- 16. **Riverside County Airport Land Use Commission.** *Riverside County Airport Land Use Compatibility Plan Policy Document.* October 2004.
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- 21. California Department of Transportation Environmental Program, Office of Environmental Engineering. Use of California Vehicle Noise Reference Energy Mean Emission Levels (Calveno REMELs) in FHWA Highway Traffic Noise Prediction. September 1995. TAN 95-03.
- 22. **California Department of Transportation.** *Traffic Noise Attenuation as a Function of Ground and Vegetation Final Report.* June 1995. FHWA/CA/TL-95/23.
- 23. **County of Riverside, Office of Industrial Hygiene.** *Requirements for Determining and Mitigating Traffic Noise Impacts to Residential Structures.* April 2015.
- 24. Urban Crossroads, Inc. Palomino Business Park Air Quality Impact Analysis. July 2019.



12 CERTIFICATION

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed Palomino Business Park Project. The information contained in this noise study report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 336-5979.

Bill Lawson, P.E., INCE Principal URBAN CROSSROADS, INC. 260 E. Baker Street, Suite 200 Costa Mesa, CA 92626 (949) 336-5979 blawson@urbanxroads.com



EDUCATION

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

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

PROFESSIONAL REGISTRATIONS

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

PROFESSIONAL AFFILIATIONS

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

PROFESSIONAL CERTIFICATIONS

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



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APPENDIX 3.1:

CITY OF NORCO MUNICIPAL CODE



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Chapter 9.07 NOISE REGULATIONS

Sections:

- 9.07.010 Purpose, intent and findings.
 9.07.020 Exemptions.
 9.07.030 Definitions.
 9.07.040 General sound level standards.
 9.07.050 Sound level measurement methodology.
 9.07.060 Special sound sources standards.
 9.07.070 Violations and penalties.
 9.07.080 Duty to cooperate.
- * Prior ordinance history: Ord. 590.

9.07.010 Purpose, intent and findings.

The City Council finds, determines and declares that this chapter has been amended based upon the following facts and purposes:

(1) At certain levels, sound becomes noise and may jeopardize the health, safety or general welfare of Norco City residents and degrade their quality of life. The City Council of Norco hereby declares that noise shall be regulated in the manner described herein. This code is intended to establish City of Norco standards regulating noise. This code is not intended to establish thresholds of significance for the purpose of any analysis required by the California Environmental Quality Act and no such thresholds are hereby established. (Ord. 979 Sec. 1, 2014)

9.07.020 Exemptions.

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

A. Facilities owned or operated by or for a governmental agency;

- B. Capital improvement projects of a governmental agency;
- C. The maintenance or repair of public properties;

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

E. Public or private schools and school-sponsored activities;

F. Agricultural operations provided such operations are carried out in a manner consistent with accepted industry standards. This exemption includes, without limitation, sound emanating from all equipment used

during such operations, whether stationary or mobile;

City Sanctioned Events. The provisions of this title shall not apply to those reasonable sounds G. emanating from occasional public and private outdoor or indoor gatherings that require a City permit, public dances, shows, bands, sporting and entertainment events conducted and in compliance with such permit;

Η. City and other public agency sponsored events;

Ι. Private construction projects involving no more than one unit located within one-quarter of a mile from an inhabited dwelling; provided, that:

1. Construction does not occur between the hours of 7:00 p.m. and 7:00 a.m., Monday through Friday and 7:00 p.m. and 8:00 a.m., on Saturday and Sunday, unless specified by permit;

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

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

Heating, exhaust, and air conditioning equipment; L.

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

The discharge of firearms consistent with all state laws; N.

Sounds produced by any domestic animals and livestock, specifically including dogs and roosters; О.

Ρ. Construction-related single events or continuous events subject to a permit issued by the City of Norco. (Ord. 979 Sec. 1, 2014)

9.07.030 Definitions.

As used in this code, the following terms shall have the following meanings:

"Audio equipment" means a television, stereo, radio, tape player, compact disc player, MP3 player, Α. iPod or other similar device.

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

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

2. "Maximum sound level (L_{max})" means the maximum sound level measured on a sound level meter.

C. "Governmental agency" means the United States, the State of California, Riverside County, City of Norco, any city within Riverside County, any special district within Riverside County or any combination of these agencies. 92

Chapter 9.07 NOISE REGULATIONS

D. "Land use permit" means a discretionary permit issued by the City of Norco pursuant to Title <u>18</u>.

E. "Motor vehicle" means a vehicle that is self-propelled.

F. "Motor vehicle sound system" means a stereo, radio, tape player, compact disc player, MP3 player, iPod or other similar device.

G. "Noise" means any loud, discordant or disagreeable sound.

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

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

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

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

L. "Sensitive receptor" means a land use that is identified as sensitive to noise in the noise element of the Riverside County general plan, as applicable to the City of Norco, or the Norco Municipal Code, including, but not limited to, residences, schools, hospitals, churches, rest homes, cemeteries or public libraries.

M. "Sound amplifying equipment" means a loudspeaker, microphone, megaphone or other similar device.

N. "Sound level meter" means an instrument meeting the standards of the American National Standards Institute for Type 1 or Type 2 sound level meters or an instrument that provides equivalent data. (Ord. 979 Sec. 1, 2014)

9.07.040 General sound level standards.

No person shall create any sound, or allow the creation of any sound, on any property that causes the exterior sound level on any other occupied property to exceed the sound level standards set forth in Table 1 or that violates the special sound source standards set forth in Section <u>9.07.060</u>.

Table 1

Sound Level Standards (dB L

max)

			Maximum Decibel Level		
Land Use	Land Use Designation Name	Density	7 am—10 pm	10 pm—7 am	
Community	Estate Density Residential	2 ac	55	45	
Development	Very Low Density Residential	1 ac	55	45	
	Low Density Residential	1/2 ac	55	45	
	Medium Density Residential	2—5	55	45	

			Maxir	num Decibel Level
Land Use	Land Use Designation Name	Density	7 am—10 pm	10 pm—7 am
	Medium High Density Residential	5—8	55	45
	High Density Residential	8—14	55	45
	Very High Density Residential	14—20	55	45
	Highest Density Residential	20+	55	45
	Retail Commercial		65	55
	Office Commercial		65	55
	Tourist Commercial		65	55
	Community Center		65	55
	Light Industrial		75	55
	Heavy Industrial		75	75
	Business Park		65	45
	Public Facility		65	45
	Specific Plan—Residential		65	45
	Specific Plan—Commercial		55	55
	Specific Plan—Light Industrial		65	55
	Specific Plan—Heavy Industrial		75	55
	Estate Density Residential	2 ac	55	45
Rural Community	Very Low Density Residential	1 ac	55	45
Community	Low Density Residential	1/2 ac	55	45
	Rural Residential	5 ac	45	45
Rural	Rural Mountainous	10 ac	45	45
	Rural Desert	10 ac	45	45
Agriculture	Agriculture	10 ac	45	45
	Conservation		45	45
Open Space	Conservation Habitat		45	45
Open Space	Recreation		45	45
	Rural	20 ac	45	45

(Ord. 979 Sec. 1, 2014)

9.07.050 Sound level measurement methodology.

If the sound standard being applied is measured in decibels, then sound level measurements pursuant to this section shall be required to establish a violation of this chapter. If the sound standard being applied is not measured in decibels, then sound level measurements are not required to establish a violation of this chapter. Sound level measurements may be made anywhere within the boundaries of an occupied property. The actual location of a sound level measurement shall be at the discretion of the enforcement officials identified in Section <u>9.07.080</u>. Sound level measurements shall be made with a sound level meter. Immediately before a measurement is made, the sound level meter shall be calibrated utilizing an acoustical calibrator meeting the standards of the American National Standards Institute. Following a

Chapter 9.07 NOISE REGULATIONS

sound level measurement, the calibration of the sound level meter shall be reverified. Sound level meters and calibration equipment shall be certified annually. (Ord. 979 Sec. 1, 2014)

9.07.060 Special sound sources standards.

The general sound level standards set forth in Section <u>9.07.040</u> apply to sound emanating from all sources, including the following special sound sources, and the person creating, or allowing the creation of, the sound is subject to the requirements of that section. The following special sound sources are also subject to the following additional standards, the failure to comply with which constitutes separate violations of this chapter:

- A. Motor Vehicles.
 - 1. Off-Highway Vehicles.

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

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

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

B. Power Tools and Equipment. No person shall operate any power tools or equipment between the hours of 10:00 p.m. and 8:00 a.m. such that the power tools or equipment are audible to the human ear inside an inhabited dwelling other than a dwelling in which the power tools or equipment may be located. No person shall operate any power tools or equipment at any other time such that the power tools or equipment are audible to the human ear at a distance greater than 100 feet from the power tools or equipment. Sound level measurements may be used, but are not required to establish a violation of this subsection.

C. Audio Equipment. No person shall operate any audio equipment, whether portable or not, between the hours of 10:00 p.m. and 8:00 a.m. such that the equipment is audible to the human ear inside an inhabited dwelling other than a dwelling in which the equipment may be located. No person shall operate any audio equipment, whether portable or not, at any other time such that the equipment is audible to the human ear at a distance greater than 100 feet from the equipment. Sound level measurements may be used, but are not required to establish a violation of this subsection.

D. Sound Amplifying Equipment and Live Music. No person shall install, use or operate sound amplifying equipment, or perform, or allow to be performed, live music unless such activities comply with the

following requirements. To the extent that these requirements conflict with any conditions of approval attached to an underlying land use permit, these requirements shall control:

1. Sound amplifying equipment or live music is prohibited between the hours of 10:00 p.m. and 8:00 a.m.

2. Sound emanating from sound amplifying equipment or live music at any other time shall not be audible to the human ear at a distance greater than 100 feet from the equipment or music.

Sound level measurements may be used, but are not required to establish a violation of this subsection. (Ord. 979 Sec. 1, 2014)

9.07.070 Violations and penalties.

A. Violation of the provisions of this chapter may be enforced pursuant to the enforcement provisions set forth in Title <u>1</u>, including Chapter <u>1.04</u>, General Penalties; Chapter <u>20.40</u>, Enforcement and Penalties; Chapter <u>3.34</u>, Civil Penalties; or Chapter <u>18.48</u>, Enforcement, Legal Procedures and Penalties.

B. The fine schedule for a violation of this chapter enforced pursuant to Chapter <u>1.04</u>, General Penalties, shall be in the amount of:

- 1. Two hundred dollars for the first violation;
- 2. Four hundred dollars for a second violation occurring within three years of the first violation; or
- 3. Six hundred dollars for a third violation occurring within three years of the first violation.

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

D. The City Manager or his designee may reduce the fines set forth in subsection (B) or (C) of this section in the event he or she finds that the violation is not likely to reoccur, the violator cooperated with enforcement officials in attempting to enforce the provisions of this chapter and resolve the issues giving rise to the violation, the actions of the violator giving rise to the violation were not malicious and were not taken in deliberate disregard of the provisions of this chapter, and the ends of justice would not be served by imposing the full fine. (Ord. 979 Sec. 1, 2014)

9.07.080 Duty to cooperate.

No person shall refuse to cooperate with, or obstruct, the enforcement officials identified in Section <u>9.07.080</u> when they are engaged in the process of enforcing the provisions of this chapter. This duty to cooperate may require a person to extinguish a sound source so that it can be determined whether sound emanating from the source violates the provisions of this chapter. (Ord. 979 Sec. 1, 2014)

Mobile Version

APPENDIX 5.1:

STUDY AREA PHOTOS



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JN:11795 Study Area Photos



L1 East 33, 54' 33.860000", 117, 34' 15.490000"



L1 North 33, 54' 33.860000", 117, 34' 15.490000"



L1 South 33, 54' 33.860000", 117, 34' 15.490000"



L1 West 33, 54' 33.860000", 117, 34' 15.490000"



L2 East 33, 54' 35.450000", 117, 34' 0.350000"



L2 North 33, 54' 35.420000", 117, 34' 0.410000"

JN:11795 Study Area Photos



L2 South 33, 54' 35.370000", 117, 34' 0.440000"



L2 West 33, 54' 35.420000", 117, 34' 0.410000"



L3 East 33, 54' 27.270000", 117, 34' 0.550000"



L3 Northeast 33, 54' 27.280000", 117, 34' 0.520000"



L3 South 33, 54' 27.270000", 117, 34' 0.550000"



L3 West 33, 54' 27.280000", 117, 34' 0.520000"



L4 East 33, 54' 18.790000", 117, 34' 0.930000"



L4 North 33, 54' 18.830000", 117, 34' 0.460000"



L4 South 33, 54' 18.820000", 117, 34' 0.460000"



L4 West 33, 54' 18.870000", 117, 34' 0.460000"



L5 East 33, 54' 10.830000", 117, 34' 0.900000"



L5 North 33, 54' 10.770000", 117, 34' 0.900000"



L5 South 33, 54' 10.830000", 117, 34' 0.900000"



L5 West 33, 54' 10.830000", 117, 34' 0.900000"



L6 East 33, 54' 7.420000", 117, 34' 14.500000"



L6 North 33, 54' 7.410000", 117, 34' 14.500000"



L6 South 33, 54' 7.430000", 117, 34' 14.530000"



L6 West 33, 54' 7.390000", 117, 34' 14.500000"



L7 East 33, 54' 21.800000", 117, 34' 17.330000"



L7 North 33, 54' 21.830000", 117, 34' 17.350000"



L7 South 33, 54' 21.850000", 117, 34' 17.380000"



L7 West 33, 54' 21.830000", 117, 34' 17.410000"



L8 East 33, 54' 29.270000", 117, 34' 17.350000"



L8 North 33, 54' 29.270000", 117, 34' 17.380000"



L8 South 33, 54' 29.260000", 117, 34' 17.300000"



L8 West 33, 54' 29.240000", 117, 34' 17.300000"

APPENDIX 5.2:

NOISE LEVEL MEASUREMENT WORKSHEETS

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						24-Ho	24-Hour Noise Level		Measurement Summary	ummary						
Date: Project:	<i>Date:</i> Tuesday, November 13, 2018 <i>Project:</i> Palomino Business Park	vvember 13, Jsiness Park	2018		Location:		L1 - Located north of the Project site on Second Street, near existing residential homes.	e Project site es.	e on Second S	itreet, near	Meter:	Meter: Piccolo I			JN: Analyst:	: 11795 : R. Saber
							Hourly L _{eq} dBA R	dBA Readings	eadings (unadjusted)							
85.0 80.0																
										\mathbb{H}						
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Timeframe	Hour	L eq	L max	L min	L1%	L2%	L5%	78%	125%	150%	%067	195%	7667	L eq	Adj.	Adj. L eq
	0	58.0	80.8	48.6	68.0	65.0	60.0	59.0	56.0	55.0	52.0	51.0	50.0	58.0	10.0	68.0
	7	57.8	79.7	50.4	68.0	65.0	59.0	58.0	56.0	55.0	52.0	52.0	51.0	57.8	10.0	67.8
	2	59.5	85.8	50.2	70.0	68.0	63.0	59.0	55.0	54.0	52.0	52.0	51.0	59.5	10.0	69.5
Night	m '	62.0	84.1	51.0	73.0	71.0	68.0	65.0	58.0	55.0	53.0	52.0	51.0	62.0	10.0	72.0
	4	65.4	87.5	52.9	76.0	73.0	70.0	69.0	63.0	58.0	55.0	55.0	54.0	65.4	10.0	75.4
	ഗ	69.69 66.6	97.4	54.9	78.0 	75.0	72.0	71.0	67.0	62.0	57.0 -2.0	56.0	55.0	69.6 66.6	10.0	79.6
	9	69.9 60 0	93.5 07.7	54.3	78.0	76.0	/3.0	0.27	/0.0/	65 0	59.U	55.0	56.U	69.9 60 0	0.0T	9.9/ 0.03
	~ ∝	00.0 68.6	07.70 88 88	1.2C	78.0	75.0	0.67	71.0	0.60	0.50	20.0 56.0	0.00 0.01	04.0 53 ()	00.00 68.6		00.0 68.6
	o o	67.8	91.5	51.0	76.0	74.0	72.0	71.0	67.0	63.0	55.0	53.0	52.0	67.8	0.0	67.8
	10	67.6	89.6	49.3	78.0	74.0	72.0	70.0	67.0	63.0	55.0	53.0	51.0	67.6	0.0	67.6
	11	68.1	92.9	49.0	78.0	75.0	72.0	71.0	67.0	63.0	55.0	53.0	51.0	68.1	0.0	68.1
	12	69.2	95.1	50.5	78.0	76.0	72.0	71.0	68.0	64.0	55.0	53.0	52.0	69.2	0.0	69.2
۲ay	13	70.8	91.3	53.2	80.0	77.0	74.0	72.0	70.0	67.0	61.0	59.0	56.0	70.8	0.0	70.8
	14	70.2	90.4	53.2	79.0	77.0	74.0	72.0	70.0	67.0	60.0	58.0	55.0	70.2	0.0	70.2
	15	69.1	89.7	50.2	78.0	76.0	73.0	72.0	0.69	66.0	57.0	55.0	53.0	69.1	0.0	69.1
	16	6.69	96.5	51.0	78.0	75.0	73.0	71.0	68.0	65.0 62.0	57.0	55.0	53.0	6.69 6. E.	0.0	6.99
	1/	67.8 65.8	86.7	49.5 49.5	75.0	73.0	0.27	0.17	67.0 65.0	0.50	53.0	0.86 52.0	51.0	67.8 65.8	0.0	67.8 65.8
	19	65.4	91.5	52.6	74.0	71.0	69.0	68.0	64.0	59.0	55.0	54.0	53.0	65.4	5.0	70.4
Evening	20	63.9	83.5	53.0	73.0	71.0	69.0	68.0	63.0	58.0	55.0	54.0	54.0	63.9	5.0	68.9
	21	62.4	81.0	51.0	72.0	71.0	68.0	67.0	60.0	56.0	53.0	53.0	52.0	62.4	5.0	67.4
Night	22	64.5	92.6	46.9	71.0	0.69	66.0	63.0	56.0	54.0	51.0	50.0	48.0	64.5	10.0	74.5
	23	57.7	77.8	46.7	69.0	67.0	62.0	59.0	55.0	53.0	51.0	50.0	48.0	57.7	10.0	67.7
Timeframe	Hour	L _{eq}	L max	L _{min}	11%	L2%	L5%	<i>87</i> %	L25%	150%	%067	767 762	%667		L _{eq} (dBA)	
Day	MIN	65.8 20.0	86.7	49.0	0.5/	/3.0	74.0	69.0 73.0	0.29 70.0	59.0	53.0	52.0	51.0	24-Hour	Daytime	Nighttime
L	ÎVIAX	/U.8	5.0K	23.2	80.0	0.77	74.0	12.0	/0.0	00	0.10	0.93	0.0C			
Energy	Energy Average	68.8 5	AV6	Average:	0.//	7.6/	12.4	1.1/	6.79	64.1 70.0	50.3 10.3	54.5 12.0	7.25	67.3	68.2	65.2
Evening	Max	65.4	81.U 91.5	53.0	74.0	71.0	0.80 69.0	67.U 68.0	60.U 64.0	59.0 59.0	55.0	54.0	54.0		24-Hour CNEL (dBA)	dBA)
Energy	Energy Average	64.1	Ave	Average:	73.0	71.0	68.7	67.7	62.3	57.7	54.3	53.7	53.0			
	Min	57.7	77.8	46.7	68.0	65.0	59.0	58.0	55.0	53.0	51.0	50.0	48.0			
INIGNT	Мах	6.99	97.4	54.9	78.0	76.0	73.0	72.0	70.0	67.0	59.0	57.0	56.0		12.3	
Energy	Energy Average	65.2	Ave	Average:	72.3	69.9	65.9	63.9	59.6	57.0	53.6	52.8	51.6			

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במנכי -		Palomino Business Park				ווטווופא טוו אפרטוומ אוופפו.	colla sureel.								Analyst:	:: R. Saber
Project: F	Palomino Bu						Hourly L _{eq} dBA		Readings (unadjusted)							
(A8A) 7500 7000 7000 7000 7000 7000 7000 700																
pourly L _{eq} 46.000000000000000000000000000000000000	9.12	23:9	<i>t</i> .722	0'T9	2.29	6.0 3	6.62	2.0 3	6.00	9.19	9'T9	0.29	20.9	6.92	0.82	4.42
0.00	0	1 2	en -	4 5	- 9	7 8	9 10	Γ	11 12 1. Hour Reginning	13 14	15 16	5 17	18 19	20	21 22	23
Timeframe	Hour	L	L	L	11%	12%	15%	18%	-8	150%	%061	195%	%661	Γ	Adi	Adi. L
	0	51.6	71.4	44.9	58.0	57.0	54.0	53.0	51.0	50.0	47.0	47.0	46.0	51.6	10.0	61.6
	-	52.7	71.2	46.4	63.0	59.0	55.0	54.0	51.0	50.0	48.0	47.0	47.0	52.7	10.0	62.7
Night	7 6	53.9 57.4	۲.2/ م م	46.4 48 5	64.U 66.0	61.0 64.0	0./c	50.0 61.0	53.0 56.0	54.0	48.U 51 D	48.0 51.0	47.0 50.0	53.9 57.4	10.0	63.9
	04	58.9	77.1	51.8	69.0	0.70 66.0	62.0	0.09	57.0	56.0	53.0	53.0	52.0	58.9	10.0	6.89
	n D	61.0 62.2	76.4	51.7 53.1	70.0 72.0	68.0 70.0	66.0 67.0	64.0 66.0	59.0 61.0	58.0 58.0	55.0 56.0	55.0 55.0	54.0 54.0	61.0 62.2	10.0	72.2
	7	6.09	80.8	51.5	71.0	0.69	65.0	64.0	59.0	57.0	54.0	54.0	53.0	6.09	0.0	6.09
	∞ c	62.4 E0 2	91.2 75 7	49.7 40.6	71.0	68.0 67.0	65.0 64 0	64.0 62.0	58.0	55.0	53.0	52.0	51.0	62.4 E0 2	0.0	62.4 E0.2
	ر 10	5.9.9	78.7	49.1	0.07 69.0	07.0 68.0	0. 1 .0 66.0	02.0 64.0	58.0	55.0	52.0	52.0	51.0	5.9.9	0.0	5.9.9 59.9
	11	60.2	78.8	49.2	70.0	68.0	65.0	63.0	58.0	55.0	52.0	51.0	50.0	60.2	0.0	60.2
Day	12	6.09	79.0	47.3	72.0	0.69	66.0	64.0 67.0	59.0	56.0	52.0	52.0	50.0	60.9	0.0	6.09
	13 14	63.1 63.1	6.68 80.0	50.3 52.3	74.0 74.0	0.69.U 72.0	0.00 68.0	0.co 66.0	62.0	0.7 c 58.0	54.0 54.0	53.U 54.0	52.U 53.0	61.6 63.1	0.0	61.6 63.1
	15	61.6	85.7	51.1	70.0	0.69	66.0	65.0	60.0	57.0	54.0	53.0	52.0	61.6	0.0	61.6
	16	62.4	82.8	49.5	73.0	71.0	67.0	65.0	60.0	57.0	54.0	53.0	51.0	62.4	0.0	62.4
	17	62.0 60.2	85.5 79.7	50.5 48.6	72.0	69.0 69.0	66.0 65.0	64.0 63.0	58.0	56.0	53.0	52.0 51.0	51.0 50.0	62.0 60.7	0.0	62.0 60.2
	19	59.9	82.2	49.6	71.0	68.0	64.0	61.0	56.0	55.0	52.0	51.0	50.0	59.9	5.0	64.9
Evening	20	56.9	76.0	48.1	66.0	64.0	61.0	59.0	55.0	54.0	51.0	51.0	49.0	56.9	5.0	61.9
	21	58.0	81.7	48.1	68.0 	65.0	60.0	58.0	54.0	52.0	50.0	49.0	49.0	58.0	5.0	63.0
Night	22	57.8 E4.4	82.7	45.6 44 E	70.0	66.0 E0.0	59.0 E 6 0	56.0 E E O	53.0	51.0	48.0	48.0	47.0	57.8	10.0	67.8
Timeframe	Hour	L ea	01.7	L min	0.10 L1%	13.0 L 2 %	0.00	0.00 78%	125%	0:00	%067	L95%	0.64	+ · + ·	L ea (dBA)	
Day	Min	59.3	75.7	47.3	0.69 2.1.0	67.0	64.0	62.0 66.0	57.0	54.0	51.0	51.0	50.0	24-Hour		Nighttime
Fnerøv Average	Average	61.4 61.4	Average		71.2	0.27	00.U 65.8	60.U	02.U 58.8	0.05	52 q	57 3	51.2			
Fvening	Min	56.9			66.0	64.0	60.0	58.0	54.0	52.0	50.0	49.0	49.0	60.0	60.9	58.0
0 1	Max	59.9 - 2	82.2	49.6	71.0	68.0	64.0	61.0 	56.0	55.0	52.0	51.0	50.0	2,	24-Hour CNEL (dBA)	(dBA)
Energy Average	Average	58.4 E1 6	Average	age: AAE	68.3 59 A	65.7 57 0	61.7 54.0	59.3 52 0	55.0	53.7	51.0	50.3	49.3			
Night	Max	0.1c 62.2	7 1. Z 82. 7	44.5 53.1	72.0	0.7c	0.4c 67.0	0.25.U 66.0	0.1.C 61.0	58.0	47.0 56.0	40.0 55.0	45.0 54.0		65.2	~ '
Energy Average	lverage	58.0	Average:	age:	65.9	63.3	59.8	58.3	54.8	53.1	50.3	50.0	49.1			

						24-Ho	24-Hour Noise Level		Measurement Summary	mmary						
Date: T Project: P	Tuesday, November 13, Palomino Business Park	Tuesday, November 13, 2018 Palomino Business Park	.018		Location:	L3 - Locatec uses within	l on Mountai the Project s	L3 - Located on Mountain Avenue near uses within the Project site boundaries.	L3 - Located on Mountain Avenue near existing industrial uses within the Project site boundaries.	dustrial	Meter:	Meter: Piccolo I			JN: Analyst:	11795 R. Saber
							Hourly L _{eq} d	Hourly L _{eq} dBA Readings (unadjusted)	(unadjusted)							
				Т.8 9.	8.6	8.8	0.1	T.8	9:8	2.01	5.0					
00000	9't	2.82	7:29	9 59 59								.9 	.464.	9.29	6.28	T.85
	0	1 2	- M	4 5	9	7 8	- - -	10 11	12 13	14	15 16	17	18 19	20	21 22	23
								Hour Be	Hour Beginning							
Timeframe	Hour	L eq	L _{max}	L _{min}	L1%	L2%	L5%	%87	L25%	720%	%067	195%	%667	L eq	Adj.	Adj. L _{eq}
	0	54.6	81.0	46.7	58.0	57.0	56.0	55.0	53.0	52.0	50.0	49.0	48.0	54.6	10.0	64.6
	1	57.1	80.8	48.2	66.0	60.0	57.0	56.0	54.0	53.0	50.0	50.0	49.0	57.1	10.0	67.1
Nicht	2 0	58.2 62 4	83.0	49.5 E2.0	68.0 74.0	62.0 72.0	58.0 66.0	57.0	55.0	54.0	51.0	51.0	50.0	58.2 67 4	10.0	68.2 72 4
ואוצוור	0 4	65.6	1.00	0.26	77.0	76.0	0.60	02.U 68.0	0.00	0.76	57.0	56.0	55.0	02.4 65.6	10.01	75.6
	ιυ	68.1	84.4	56.0	0.67	78.0	75.0	73.0	64.0	60.0	58.0	57.0	57.0	68.1	10.0	78.1
	9	69.8	86.1	55.7	81.0	79.0	77.0	75.0	66.0	60.0	57.0	57.0	56.0	69.8	10.0	79.8
	r 0	68.8 57 F	89.7 of 2	54.3	80.0	78.0	74.0	74.0	64.0 52.0	59.0	56.0	55.0	55.0	68.8 67 F	0.0	68.8 67 F
	xoo	6./0 0.73	85.3 27 E	8.2c 8.2c	0.67	0.77	72.0	71.0	63.U	58.0	55.U	54.U	54.U	6./d 0.73	0.0	6./0 0.73
	و 10	07.0 67.7	c./o 80.8	52.9	0. <i>e1</i>	0.77.0	74.0	72.0	0.10 63.0	57.0	54.0	54.0 54.0	53.0	07.7	0.0	67.7
	11	68.1	90.7	52.4	79.0	77.0	75.0	73.0	63.0	57.0	54.0	54.0	53.0	68.1	0.0	68.1
Dav	12	68.1	84.2	54.3	79.0	77.0	75.0	73.0	64.0	58.0	56.0	55.0	55.0	68.1	0.0	68.1
624	13	68.6 36.3	84.4	52.5	79.0	78.0 76.0	75.0	74.0	66.0	59.0	55.0	55.0	54.0	68.6 70.2	0.0	68.6 70.5
	14 15	70.2 60 2	86.1 95 6	53.1	80.0	0.67	76.0	74.0	69.0 67.0	61.0 50.0	56.0 55.0	55.0 55.0	54.0	70.2	0.0	70.2 60 2
	16	69.4	84.3	54.3	79.0	78.0	76.0	75.0	07.0 68.0	0.ec 61.0	56.0	55.0	55.0	69.4	0.0	69.4
	17	67.7	84.2	53.8	78.0	77.0	75.0	73.0	65.0	59.0	55.0	55.0	54.0	67.7	0.0	67.7
	18	64.7	84.8	53.1	76.0	74.0	71.0	68.0	60.0	57.0	55.0	54.0	54.0	64.7	0.0	64.7
Evening	19	64.6 67.6	85.9 82.2	54.4 5.1 2	77.0 75.0	72.0	70.0 66.0	66.0 62 0	59.0 58.0	57.0 57.0	56.0 56.0	55.0 55.0	55.0 55.0	64.6 62.6	5.0 7	69.6 67.6
0	21	62.0	82.5	54.2	74.0	72.0	65.0	61.0	58.0	56.0	55.0	55.0	55.0	62.0	5.0	67.0
Niaht	22	58.3	7.77	53.0	67.0	63.0	60.0	59.0	57.0	56.0	54.0	54.0	54.0	58.3	10.0	68.3
INIBILL	23	58.1	82.0	52.5	67.0	62.0	59.0	58.0	56.0	55.0	54.0	53.0	53.0	58.1	10.0	68.1
Timeframe	Hour	L eq	L max		L1%	L2%	L5%	78%	L25%	150%	790%	L95%	۲ <u>9</u> 9%		L _{eq} (dBA)	
Day	Max	04.7 70.2	84.2 90.8	54.3	/0.0 80.0	79.0 79.0	0.17	08.U 75.0	0.00	61.0 61.0	56.0	55.0	55.0	24-Hour	Daytime	Nighttime
Energy Average	verage	68.3	Average		78.9	77.3	74.8	72.8	64.4	58.5	55.2	54.6	54.1	202	5 7 5	C 7 J
Evening	Min	62.0	82.5	54.2	74.0	72.0	65.0	61.0	58.0	56.0	55.0	55.0	55.0	00.1	0''0	04.0
	Max	64.6	85.9	54.4	77.0	75.0	70.0	66.0	59.0	57.0	56.0	55.0	55.0	24-1	24-Hour CNEL (dBA)	IBA)
Energy Average	verage	63.2		Average:	75.3	73.0	67.0	63.0	58.3	56.7	55.7	55.0	55.0			
Night	Min	54.6 60 °	7.77 96.1	46.7 56.0	58.0	57.0 70.0	56.0 77.0	55.0 75.0	53.0 66.0	52.0 60.0	50.0	49.0 57.0	48.0 57 0		71.5	
Energy Average	Verage	64.3	ao.1 Aver	Average:	0.18 70.8	67.7	64.3	62.6	58.1	56.2	53.9	53.4	52.8)	
	2			, ,												

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Project:																
							Hourly L _{eq} dBA R	BA Readings	eadings (unadjusted)							
(A8b) p9- 750.0 657.0 65																
		9. 9.	£.62	9'E9 2'T9	6.Eð	6.0a	6.62	0.29	7.123 7.123	6 [.] E9	0.44.0	8.13	4.0 3	8.76	<mark>6.</mark> 73	$+ \square$
	67	23													TS	25
	- 0	1 2	- M	4 5	9	7 8	9 1	10 11	12 13	3 14	15 16	17	18 19	20	21 22	23
								Hour Beginning	ginning							
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	%87	L25%	720%	%067	<i>%56</i> 7	%667	L eq	Adj.	Adj. L _{eq}
	0	49.1	71.3	41.4	54.0	53.0	51.0	50.0	48.0	47.0	44.0	44.0	43.0	49.1	10.0	59.1
	1 ~	52.1 53.6	75.7 74.8	42.1 44 7	63.0 63.0	55.0 58.0	53.0 55.0	52.0 54.0	49.0 52 0	47.0 50.0	44.0 48.0	44.0 47.0	43.0 46.0	52.1 53.6	10.0	62.1 63.6
Night	1 0	59.3	83.2	48.3	71.0	0.02 69.0	62.0	58.0	54.0	53.0	50.0	50.0	49.0	59.3	10.0	69.3
)	4	61.7	81.4	49.3	74.0	72.0	68.0	65.0	56.0	55.0	52.0	52.0	51.0	61.7	10.0	71.7
	ъ ч	63.6 63.3	80.3 79.8	52.2 51.6	74.0	73.0 72.0	70.0	68.0 68.0	60.0 61.0	56.0 56.0	54.0 53.0	53.0	53.0 52.0	63.6 63.3	10.0	73.6
	2	62.4	79.2	48.1	73.0	72.0	69.0	67.0	59.0	54.0	51.0	50.0	49.0	62.4	0.0	62.4
	8	60.9	7.77	47.2	72.0	70.0	68.0	66.0	58.0	52.0	49.0	48.0	48.0	60.9	0.0	6.09
	6	59.9 24 -	81.8	46.8	71.0	0.09	66.0 22.2	64.0	55.0 	51.0	48.0	48.0	47.0	59.9	0.0	59.9
	11 11	61.5 62.0	8.6/ 84.6	45.5 45.5	72.0	71.0	68.0 68.0	60.U 67.0	59.0	52.0 52.0	48.U 48.0	48.U 47.0	47.0 46.0	6.10 62.0	0.0	6.10 62.0
	12	61.7	78.1	43.4	72.0	71.0	68.0	67.0	59.0	52.0	48.0	48.0	46.0	61.7	0.0	61.7
γa λ	13	63.4	84.0	48.6	73.0	72.0	0.69	68.0	62.0	56.0	51.0	50.0	49.0	63.4	0.0	63.4
	15 15	63.9 64.0	2.9/ 8/1 9	48.7 46.4	74.0	72.0	70.0	69.U 68.1	63.0 62.0	54.0 54.0	51.0 50.0	0.02	49.0 47.0	63.9 64 0	0.0	63.9
	16	64.0	82.5	47.4	73.0	72.0	70.0	1.00 69.0	63.0	55.0	51.0	50.0	49.0	64.0	0.0	64.0
	17	61.8	78.1	48.9	72.0	70.0	68.0	67.0	59.0	54.0	51.0	50.0	49.0	61.8	0.0	61.8
	18	60.4	79.5	48.7	72.0	70.0	66.0	64.0	56.0	53.0	51.0	50.0	49.0	60.4	0.0	60.4
Evening	61 02	57.3	2.08	4.74 46.2	70.0	68.0 67.0	64.0 62.0	60.U 58.0	0.42 72.0	50.0 50.0	51.U 48.0	0.02 48.0	49.0	57.3	0.2	63.6 62.3
D	21	57.9	82.4	45.8	69.0	66.0	62.0	58.0	52.0	50.0	47.0	47.0	46.0	57.9	5.0	62.9
Night	22	51.9	72.3	43.8	63.0	57.0	54.0	53.0	50.0	48.0	46.0	45.0	44.0	51.9	10.0	61.9
Timoframo	23	52.3	76.3	42.6	62.0	57.0	54.0 1 Ee/	53.0 1 <i>00/</i>	51.0	49.0	46.0	45.0	44.0	52.3	10.0 In (ABA)	62.3
	Min	59.9	- max 77.7	- min 43.4	71.0	69.0	66.0	64.0	55.0	51.0	48.0	47.0	46.0		con l ba -	
υаγ	Max	64.0	84.9	48.9	74.0	72.0	70.0	69.0	63.0	56.0	51.0	50.0	49.0	24-Hour	Daytime	Nighttime
Energy	Energy Average	62.4		Average:	72.4	70.9	68.3	66.8	59.4	53.4	49.8	49.0	47.9	61 U	61 8	6 03
Evening	Min	57.3 58.6	79.9 7 /	45.8 47 5	69.0 70.0	66.0 68.0	62.0 64.0	58.0 60.0	52.0 55.0	50.0 53.0	47.0 51.0	47.0 50.0	46.0 19.0	0.10	-14	
Energy	Aver	58.0		Average:	69.7	67.0	62.7	58.7	53.0	51.0	48.7	48.3	47.3			
Night		49.1	71.3		54.0	53.0	51.0	50.0	48.0	47.0	44.0	44.0	43.0		66.2	
Energy	Energy Average	63.6 59.2	83.2 Ave	Average:	74.0 66.4	73.0 62.9	70.0	68.0 57.9	61.0 53.4	56.0	54.0 48.6	53.0 48.1	53.0 47.2			
10	-0					2112					,		!			

Date: Project:		Tuesday, November 13, 2018 Palomino Business Park	2018		Location:	L6 - Located Street near	l at the sout existing resi	L6 - Located at the southern Project site boundary on First Street near existing residential and industrial uses.	site bounda ıdustrial use	ry on First 's.	Meter:	Meter: Piccolo I			JN: Analyst:	11795 R. Saber
							Hourly L _{eq}	Hourly L _{eq} dBA Readings (unadjusted)	(unadjusted)							
A8) 75.0 75.0 75.0																
ר _{יי} (מ 1,000 ריין (מ				8.							. 2.		0.6		Ľ	
	++	÷ع 9	6.09	۷9	·S9	8 .53	·99	•S9	1 1 1 1 1 1 1 1 1 1	·99	29 99	. '79	9 [.] E9	<mark>S'79</mark>	6°.2	6.
	:' TS	95													.S	' † S
	-	1 2	- M	4 5	9	7 8	- ნ	10 11	12 1	13 14	15 16	17	18 19	20	21 22	23
								Hour Be	Hour Beginning							
Timeframe	Hour	L eq	L _{max}	L _{min}	L1%	L2%	72%	%8 7	L25%	<i>150%</i>	%067	762%	%667	L _{eq}	Adj.	Adj. L _{eq}
	0	51.7	69.8	43.4	63.0	0.03	26.0	54.0	49.0	47.0	45.0	44.0	43.0	51.7	10.0	61.7
	- ,	53.6	74.7	42.8	65.0 C3 0	63.0 CT 0	58.0	56.0	50.0	47.0	45.0	45.0	43.0	53.6	10.0	63.6 26.3
Night	7 0	5.02 60.0	6.// C 07	44.b 77 7	0./d 60.0	0.60	07.0 66.0	0.93 0.73	0.22 61.0	49.0 54.0	47.U	46.0	45.0	50.3 60.0	10.0	50.3 70.0
INIBILL	5 T	وں. ورج R	79.2 87.8	47.7 49.0	03-0 75 0	00.0 72.0	00.0 70.0	0.co 0.69	0.10 0.10	54.U 62.D	0.UC 54.0	49.U 52 D	48.U	6.00 65.8	10.0	75.8
	ιυ	67.3	86.0	52.5	0.27	74.0	71.0	0.07 70.0	66.0	64.0 64.0	58.0	56.0	54.0	67.3	10.0	77.3
	9	65.7	84.0	52.6	74.0	72.0	0.69	68.0	66.0	63.0	58.0	56.0	54.0	65.7	10.0	75.7
	2	64.5	82.9	51.9	73.0	71.0	68.0	68.0	65.0	62.0	56.0	55.0	53.0	64.5	0.0	64.5
	8	63.8	77.3	50.6	72.0	70.0	68.0	67.0	64.0	61.0	54.0	53.0	51.0	63.8	0.0	63.8
	6	66.3	91.2	48.0	74.0	71.0	68.0	66.0	63.0	60.0	53.0	52.0	50.0	66.3	0.0	66.3
	10	65.0	90.8	49.0	72.0	71.0	0.69	67.0	64.0	61.0	55.0	53.0	51.0	65.0	0.0	65.0
	11	65.4	87.3	49.8	75.0	72.0	69.0	67.0	64.0	62.0	55.0	54.0	51.0	65.4	0.0	65.4
Day	12	64.8 61.3	87.1 00 5	48.6 F1 F	74.0	71.0 0 CT	68.0	67.0	64.0	61.0	55.0 F6.0	53.0	50.0	64.8 CF 2	0.0	64.8 6F 2
	CT 1	03.5 66.0	0.00 86.6	50.1	76.0	73.0	0.60	68.0 68.0	65.0	62.0 62.0	56.0	0.4.0 54.0	51.0	0.60 0.66.0	0.0	66.0 66.0
	15	66.7	88.2	50.5	77.0	73.0	70.0	68.0 68.0	65.0	63.0	56.0	54.0	52.0	66.7	0.0	66.7
	16	67.2	94.8	51.9	76.0	73.0	69.0	68.0	65.0	63.0	57.0	55.0	53.0	67.2	0.0	67.2
	17	64.7	84.4	50.2	72.0	71.0 0.05	68.0	67.0	64.0	62.0	56.0	54.0	52.0	64.7	0.0	64.7 50.0
	10	0.60	2.16	49.4	0.77	0.27	000	0/.0	03.0	00.0	04.U	0.55	0.10	0.60	0.0	0.60
Evening	20	0.00 62.5	07.4 86.5	40.9 48.3	71.0	0.07	07.0 66.0	00.0 65.0	02.0 61.0	57.0	51.0	50.0 50.0	0.0c 49.0	03.0 62.5	5.0	00.0 67.5
	21	65.7	90.9	46.1	75.0	70.0	66.0	64.0	59.0	54.0	49.0	48.0	47.0	65.7	5.0	70.7
Night	22	57.9	77.2	45.2	68.0	66.0	64.0	62.0	56.0	51.0	48.0	47.0	46.0	57.9	10.0	67.9
INIGUL	23	54.9	76.5	44.0	65.0	64.0	60.0	58.0	51.0	48.0	46.0	45.0	45.0	54.9	10.0	64.9
Timeframe	Hour	L eq	L _{max}	L _{min}	L1%	L2%	L5%	78%	L25%	150%	%061	<i>195%</i>	%661		L _{eq} (dBA)	
Day	Min	63.8	77.3	48.0 51.0	72.0	70.0	68.0 70.0	66.0 C 0.0	63.0 CF 0	60.0	53.0	52.0	50.0	24-Hour	Daytime	Nighttime
Fnerøv /		03.0	1	Average:	74.3	717	68.7	00:0 67.3	64.7	61.6	55.3	53.7	51.5			
5	Min	62.5	86.5	46.1	71.0	0.69	66.0	64.0	59.0	54.0	49.0	48.0	47.0	64./	65.7	6.2 0
Evening	Max	65.7	90.9	48.9	75.0	70.0	67.0	66.0	62.0	59.0	53.0	52.0	50.0	24-	24-Hour CNEL (dBA)	(BA)
Energy	Energy Average	64.1	Ave	Average:	73.0	69.7	66.3	65.0	60.7	56.7	51.0	50.0	48.7			
Night	Min Max	51.7 67 3	69.8 87.8	42.8 57.6	63.0 77 0	60.0 74.0	56.0 71.0	54.0 70.0	49.0 66.0	47.0 64.0	45.0 58.0	44.0 56.0	43.0 54.0		69.8	
Energy	Energy Average	62.5	Avei	Average:	69.2	67.1	64.0	62.3	57.4	53.9	50.1	48.9	47.6		1	

24-Hour Noise Level Measurement Summary

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						18	24-Hou	24-Hour Noise Level Measurement Summary	svel Mea	suremen.	Measurement Summary	λ.							
Date: T Project: P	Date: Tuesday, November 13, 2018 Project: Palomino Business Park	ovember 13 Jsiness Pari	3, 2018 k		Γοርሮ	Location: ^{L8} exi	- Locateu v isting resid	La - Located west of the Pri- existing residential homes.	Project sut		Avenue nec		Meter: Piccolo I	colo I			Ana	JN: 11795 Analyst: R. Sab	11795 R. Saber
								Hourly L _{eq} dBA F	BA Reading	teadings (unadjusted)	ed)								
A8b) 70.07 0.07 0.07 0.07																			
												Ţ							
			0.	Z .1	0.9	6't	<mark>8.7</mark> 8		9.2	7 .	5:9 6:5	·29	8.2	<u>S'1</u>	<mark>5.0</mark>	8.	S		6.
	TS	TS.	τς	75		7 5	S	725	S ZS	23			is I			23	23	TS.	23
0.00	0	1 2	ο - -	- 4	5 - 0	-	- ∞ -	9 1(10 11	12	13 14	4 15	16	17 1	18 19	20	21	22	23
									Hour	Hour Beginning									
Timeframe	Hour	L ea	L max	L min	11%	%	L2%	L5%	78%	125%	T20%	%06T %		195%	%667	L ea	Adj.		Adj. L _{ea}
	0	51.3	78.0	45.6	54.0	0.	53.0	52.0	52.0	50.0	49.0	-		47.0	46.0	51.3	10.0		61.3
	-	51.7	68.9	46.5		0.	55.0	54.0	53.0	52.0	51.0		49.0	48.0	48.0	51.7	10.0		61.7
	2	51.6	58.5	47.1	55.0	0.	55.0	54.0	53.0	52.0	51.0		49.0	48.0	48.0	51.6	10.0		61.6
Night	ς γ	54.0	78.2	49.3	59.0	0. 0	56.0 -0.0	55.0	54.0	53.0	52.0		51.0	50.0	50.0 -0.0	54.0	10.0		64.0 22 -
	4 r	54.7	72.8	49.1	64.0	o. c	59.0	56.0	55.0	53.0	52.0		51.0	51.0	50.0	54.7	10.0		64.7 67.0
	n u	56.0	74.9	50.7	65.0		62.0	57.0	56.0	55.0	54.0 54.0		53.U 52.0	52.0 52.0	52.U 51.0	56.0	10.0		66.0 66.0
	7	54.9	75.6	47.7	64.0	0.	60.0	56.0	55.0	53.0	52.0		0.0	49.0	49.0	54.9	0.0		54.9
	∞	57.8	82.5	46.3	68.0	0.	64.0	57.0	53.0	50.0	49.0		47.0	47.0	47.0	57.8	0.0		57.8
	6	52.2	75.5	45.9	61.0	0.	57.0	53.0	51.0	50.0	49.0		47.0	47.0	46.0	52.2	0.0		52.2
	10	52.5	72.8	44.7	63.0	0.	58.0	54.0	53.0	50.0	49.0		47.0	47.0	46.0	52.5	0.0		52.5
	11 ;	55.6	79.2	44.3	68.0 66.0	o c	65.0 61.0	57.0 EE 0	53.0	50.0	48.0		46.0	45.0	45.0 45.0	55.6	0.0		55.6 E2 4
Day	13	55.9	74.0	44.9	66.0 66.0	o o	011.0 63.0	0.00	58.0	55.0	52.0		o o	48.0	46.0	55.9	0.0		55.9
	14	56.5	78.1	46.8	68.0	0.	65.0	60.0	57.0	53.0	52.0		49.0	49.0	48.0	56.5	0.0		56.5
	15	62.1	80.6	47.9	76.0	0.	71.0	67.0	64.0	57.0	53.0		50.0	49.0	48.0	62.1	0.0		62.1
	16 17	55.8	77.2	48.4	67.0 67.0	<u>o</u> c	64.0	58.0	56.0	53.0	51.0		50.0	50.0	49.0	55.8	0.0		55.8 54 F
	1/ 18	54.3 54.3	73.9	447	03.0 63.0		60.0 59.0	56.0	55.0	53.0 53.0	52.0		50.0	49.0 50.0	49.0 49.0	54.3 54.3	0.0		54.3 54.3
	19	55.0	77.4	49.3	63.0	0.	59.0	56.0	55.0	54.0			51.0	51.0	50.0	55.0	5.0		60.0
Evening	20	53.8	75.0	47.9	61.0	0.0	57.0	55.0	54.0	53.0	52.0		50.0	49.0	49.0	53.8	5.0		58.8 50.5
	17	C.CC	0.0/ 7.07	41.0 16 F	+		0.00	0.00	0.4.0	0.25	0.10	+	49.0	49.0	40.0	C.CC	0.0		C.0C
Night	22 23	2.1.5	83.3	46.8		. c	55.0	54.0	52.0 53.0	51.0	50.0		40.0	47.0	40.0 47.0	53.9	10.0		63.9
Timeframe	Hour	L ea	L _{max}	L _{min}		%	L2%	L5%	%8 7	L25%				195%	%667		L _{ea} (dBA)	BA)	
, eu	Min	52.2	72.8	44.3	61.0	0.	57.0	53.0	51.0	50.0			46.0	45.0	45.0	71-Hour	Dautimo		Nichttime
۲ay	Мах	62.1	82.5	48.5		0.	71.0	67.0	64.0	57.0	53.0		50.0	50.0	49.0	10011-4-2	השאנוו		אוווווכ
Energy Average	verage	56.4	A	Average:		ω.	62.3	57.4	55.3	52.3	50.7		48.4	47.9	47.3	С С	56.0		23, 20
Evening	Min Max	53.5 55.0	75.0	47.6 49.3	61.0 63.0	0.0	57.0 59.0	55.0 56.0	54.0 55.0	52.0 54.0	51.0		49.0 51.0	49.0 51.0	48.0 50.0	77	HO	EL (GBA)	0.0
Energy Av	Average	54.1		Average:		.7	58.0	55.3	54.3	53.0	52.0		50.0	49.7	49.0				
Night	Min	51.2				0.	53.0	52.0	52.0	50.0	49.0		48.0	47.0	46.0		A NA	Q	
	Max	56.0	83.3	51.4	+	1.0	62.0 F C 7	57.0	56.0	55.0	54.0	_	53.0	52.0	52.0 48.7		5	D	
Energy Average	verage	53.8	¥	Average:	58./		56./	54./	53.8	52.4	51.4	t 49.9	. م	49.2	48./				

						24-Ho	24-Hour Noise Level N	evel Meas	urement	Aeasurement Summary						
Date: Project:	Tuesday, N ⁱ Palomino B	<i>Date:</i> Tuesday, November 13, 2018 <i>oject:</i> Palomino Business Park	018		Location:	L8 - Locate existing res	L8 - Located west of the Projec existing residential homes.	ojec	on Pacific /	t site on Pacific Avenue near	Meter	Meter: Piccolo I			JN: Analyst:	11795 R. Saber
							Hourly L _{eq}	Hourly L _{eq} dBA Readings (unadjusted)	(unadjuste	d)						
b°22.0 b°7.0 } Γ°ª						L. 2										
Houri 45.0 40.0	\$.74	7.74 8.74	9.64	2.22 6.02	S.L2	29 6.02	0.02	5.94	<mark>2.64</mark>	2.22	5.02	9:9S	27.4	6.02	48.5	4.84
35.(0	1	- m	4 - -	9	2	ნ	10 11	12	13 14	15	16 17	18 19	20	21 22	23
								Т	our Beginning							
Timeframe	Hour	L eq	L _{max}	L min	L1%	12%	L5%	78%	125%	150%	%061	767	%661	L eq	Adj.	Adj. L _{eq}
	0	47.4	70.6	42.9	51.0	50.0	49.0	49.0	47.0	46.0	44.0	44.0	43.0	47.4	10.0	57.4
	7	47.7	61.9	43.2	52.0	51.0	49.0	49.0	48.0	47.0	45.0	45.0	44.0	47.7	10.0	57.7
Night	2 0	47.8 40.6	58.4 65.2	43.8 45.0	52.0	51.0	50.0	49.0 50.0	48.0	47.0	46.0	45.0	44.0	47.8 40.6	10.0	57.8 50.6
ואוצווור	0 4	49.0 50.9	03.2 66.3	45.9 46.6	0.66	56.0	53.0	52.0	50.0	40.0	47.0	47.0	40.0	49.0 50.9	10.01	0.95 60.9
	υ.	52.7	6.9	47.7	62.0	59.0	55.0	53.0	51.0	50.0	49.0	49.0	48.0	52.7	10.0	62.7
	9	51.5	66.2	46.5	60.0	58.0	54.0	53.0	51.0	49.0	48.0	48.0	47.0	51.5	10.0	61.5
	~ 0	50.9	69.2 65 5	44.8	61.0 30.0	57.0	53.0	52.0	50.0	49.0	46.0	46.0	45.0	50.9	0.0	50.9
	∞ ⊂	62.7 E0.0	95.6 67 4	44.0	70.0	66.0 E E O	61.0 E2 0	58.0	50.0	48.0	45.0	45.0	44.0	62.7 E0.0	0.0	62.7 E0.0
	بع 10	49.5	66.3	43.3 42.9	0.8c	56.0	53.0 53.0	52.0 52.0	0.0c 49.0	48.0	40.0 44.0	45.0	44.0 43.0	0.0c 49.5	0.0	0.0c 49.5
	11	52.4	72.1	41.9	61.0	59.0	56.0	55.0	53.0	48.0	44.0	43.0	42.0	52.4	0.0	52.4
Dav	12	49.2	65.9	41.9	58.0	56.0	53.0	52.0	49.0	47.0	44.0	43.0	42.0	49.2	0.0	49.2
	13	52.7	70.2 70.6	44.2 12 0	61.0 61.0	60.0 50 0	57.0 56.0	56.0 55.0	52.0	50.0	47.0	46.0	45.0	52.7 52.7	0.0	52.7 52.7
	15	50.5	67.7	42.7	61.0 61.0	59.0	55.0	53.0	49.0	47.0	45.0	45.0	43.0	50.5	0.0	50.5
	16	51.4	72.7	44.3	61.0	59.0	55.0	53.0	49.0	48.0	46.0	46.0	45.0	51.4	0.0	51.4
	17	56.6 E2 2	70.7	46.1	64.0	63.0 61 0	61.0 E7.0	60.0 EE 0	57.0	54.0	49.0	48.0	47.0 45.0	56.6	0.0	56.6
	19	51.4	2.07	45.1	61.0	59.0	54.0	52.0	50.0	49.0	47.0	47.0	46.0	51.4	5.0	56.4
Evening	20	50.9	70.0	45.3	61.0	59.0	54.0	52.0	49.0	48.0	46.0	46.0	46.0	50.9	5.0	55.9
	21	52.2	76.2	43.9	63.0 52.0	61.0	57.0	54.0	49.0	47.0	46.0	45.0	44.0	52.2	5.0	57.2 -0 -
Night	77 73	48.5 48.4	68.U 73.6	42.4 41.8	0.92 56.0	0.02 0.72	0.13	49.0	47.0	46.0	44.U	44.U 43.D	43.0	48.5 48.4	10.01	5.82 58.4
Timeframe	Hour	L ea	L max	L min	5000 L1%	J2:0 L2%	L5%	78%	L25%	150%	%061	195%	%661	1.01	L ea (dBA)	1.00
Dav	Min	49.2	62.9	41.9	58.0	56.0	53.0	52.0	49.0	47.0	44.0	43.0	42.0	24-Hour	Davtime	Nighttime
	Max	62.7	95.6	46.1	70.0	66.0	61.0	60.0	57.0	54.0	49.0	48.0	47.0			
Energy	Energy Average	54.8	AVe	Average:	61.3 C1 0	59.3	8.cc	54.4	50.9	48./	45.7	45.3	44.2	53.1	54.4	49.8
Evening	Max	50.9 52.2	76.2	43.9 45.3	61.U 63.0	61.0	54.0 57.0	52.0 54.0	49.0 50.0	47.0	46.U 47.0	45.0	44.0 46.0	24-	24-Hour CNEL (dBA)	(BA)
Energy.	Energy Average	51.5		Average:	61.7	59.7	55.0	52.7	49.3	48.0	46.3	46.0	45.3			
Night	Min	47.4 52.7	58.4 72.6	41.8 7 7 7	51.0	50.0	49.0 FF 0	48.0	47.0 51.0	46.0	44.0	43.0	42.0		57.5	
Fnergy	Fnerøv Average	49.8	Ave.	47.7 Average:	02.U 56.2	54.0	51.2	50.7	0.1C	47.6	49.0	45.9	40.0			
5	0			5	1	5		1]

U:\Uclobs_11600-12000_11700\11795\Fieldwork\11795_L8_Summary



APPENDIX 7.1:

OFF-SITE TRAFFIC NOISE CONTOURS

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	FH	WA-RD-77-108	HIGHW	AY NO	DISE PF	REDICTI	ON MO	DDEL			
Road Nam	io: Existing W ne: River Rd. nt: s/o Corydo					Project Job N		Palom 11795	ino		
	SPECIFIC IN	NPUT DATA							L INPUT	S	
Highway Data				S	ite Con	ditions	(Hard :	= 10, So	oft = 15)		
Average Daily	, ,	24,406 vehicle	es					Autos:	15		
	Percentage:	10%				dium Tru			15		
	lour Volume:	2,441 vehicle	s		He	avy Truc	cks (3+	Axles):	15		
	hicle Speed:	45 mph		V	ehicle l	Mix					
Near/Far La	ne Distance:	52 feet			Vehi	icleType		Day	Evening	Night	Daily
Site Data						-	Autos:	76.3%		12.6%	
Ba	rrier Height:	0.0 feet				edium Ti		73.3%		17.6%	
Barrier Type (0-W		0.0			ŀ	leavy Ti	ucks:	84.4%	3.2%	12.5%	2.33%
Centerline Di		50.0 feet		N	oise Sc	ource El	evatio	ns (in fe	eet)		
Centerline Dist.		50.0 feet				Autos	s: 0	.000	,		
Barrier Distance		0.0 feet			Mediur	n Truck	s: 2	.297			
Observer Height	Above Pad): ad Elevation:	5.0 feet			Heav	y Trucks	s: 8	.004	Grade Ad	ljustment	0.0
	ad Elevation: ad Elevation:	0.0 feet 0.0 feet		1.	ane Fa	uivalent	Distar	nce (in	feet)		
	Road Grade:	0.0%				Auto		.000			
	Left View:	-90.0 degree	25		Mediur	n Truck	s: 42	.794			
	Right View:	90.0 degree			Heav	y Truck	s: 42	.814			
FHWA Noise Mod	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Distan		Finite		Fres		Barrier Att		rm Atten
Autos:	68.46			0.88		-1.20		-4.65		000	0.00
Medium Trucks:	79.45			0.91		-1.20		-4.87		000	0.00
Heavy Trucks:	84.25			0.91		-1.20		-5.43	0.0	000	0.00
Unmitigated Nois VehicleType	Lea Peak Ho		-	a Eve		1.00	Night		l dn	0	NEL
Autos:			67.8	Y LVE	65.5	Ley	61.	3	69.3		69.
Medium Trucks:			66.7		63.7		61.		69.1	-	69.
Heavy Trucks:	69	9.7	68.1		59.9		61.	1	69.1	1	69.
Vehicle Noise:	74	4.2	72.4		68.3		66.	.1	74.0	D	74.
Centerline Distan	ce to Noise C	ontour (in feet)							1	
			1.1.1.1	70 dE	3A		dBA	6	0 dBA		dBA
			Ldn: VFI :	92 96			98 08		427 448		920 964
		CI	VĽL.	90		20	50		++0		704

	FHW	A-RD-77-108	HIG	HWAY N	OISE PR	EDICT	ION MO	DEL			
Scenario: Existing	g With	nout Project				Project	Name:	Palom	ino		
Road Name: River R	d.					Job N	umber:	11795			
Road Segment: s/o Lind	coln A	ν.									
SITE SPECIFIC	C INF	PUT DATA							L INPUT	s	
Highway Data				S	ite Cond	litions	(Hard =	10, So	oft = 15)		
Average Daily Traffic (Ad	t): 1	3,235 vehicle	s					Autos:	15		
Peak Hour Percentag	e:	10%			Med	lium Tri	ucks (2 /	Axles):	15		
Peak Hour Volum	e: ·	1,324 vehicles	5		Hea	vy Tru	cks (3+ /	Axles):	15		
Vehicle Spee	d:	45 mph		L.	ehicle N	liv					
Near/Far Lane Distanc	e:	10 feet		-		iix cleType		Day	Evening	Night	Daily
Site Data					VCIIIC		Autos:	76.3%		12.6%	
Barrier Heigh		0.0 feet			Me	dium T		73.3%		17.6%	
Barrier Type (0-Wall, 1-Bern		0.0 reet				eavy T		84.4%		12.5%	
Centerline Dist. to Barrie		30.0 feet		L							
Centerline Dist. to Observe		30.0 feet		^	loise So				eet)		
Barrier Distance to Observe		0.0 feet				Auto		000			
Observer Height (Above Pag		5.0 feet			Medium			297			
Pad Elevatio	·	0.0 feet			Heavy	/ Truck	s: 8.	004	Grade Ad	justment.	0.0
Road Elevatio		0.0 feet		L	ane Equ	ivalen	Distan	ce (in	feet)		
Road Grad	le:	0.0%				Auto	s: 30.	000	,		
Left Vie	w:	-90.0 degree	s		Medium	Truck	s: 29.	704			
Right Vie	w:	90.0 degree			Heavy	/ Truck	s: 29.	733			
FHWA Noise Model Calcula	tions			-							
VehicleType REMEL		Traffic Flow	Dis	stance	Finite I	Road	Fresr	nel	Barrier Att	en Ber	m Atten
Autos: 68	.46	-0.99		3.22		-1.20		-4.49	0.0	000	0.00
Medium Trucks: 79	.45	-12.99		3.29		-1.20		-4.86	0.0	000	0.00
Heavy Trucks: 84	.25	-16.94		3.28		-1.20		-5.77	0.0	000	0.00
Unmitigated Noise Levels (-		/						
VehicleType Leq Peak				Leq Ev		Leq	Night		Ldn		VEL
Autos:	69.5		67.5		65.2		61.0		69.0		69.
Medium Trucks:	68.5	-	66.4		63.4		61.4		68.9		69.
Heavy Trucks:	69.4		67.9		59.6		60.8		68.9		69.
Vehicle Noise:	73.9		72.1		68.0		65.9	9	73.	7	74.
Centerline Distance to Nois	e Col	ntour (in feet,)								
				70 d			dBA	6	60 dBA		dBA
			Ldn:	53		1	14		245	5	28
			VFI :	55			19		257		53

Tuesday, July 02, 2019

Road Nan	io: Existing Wi ne: Parkridge A nt: n/o Second					oject Na ob Num			no		
SITE Highway Data	SPECIFIC IN	IPUT DATA		Sito	Conditio				L INPUT	s	
Average Daily Peak Hour Peak H Ve	Traffic (Adt): Percentage: lour Volume: hicle Speed: ne Distance:	2,296 vehicles 10% 230 vehicles 25 mph 10 feet			Mediun	n Truck Trucks	4 s (2 A (3+ A	lutos: xles):	15 15 15 <i>Evening</i>	Night	Dailv
Site Data Ba Barrier Type (0-W	rrier Height: /all, 1-Berm):	0.0 feet 0.0				Auto m Truci /y Truci	ks:	76.3% 73.3% 34.4%	11.0% 9.2%	12.6% 17.6% 12.5%	5.79
Ro	to Observer: to Observer:	30.0 feet 30.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degrees		M Lan	edium Tr Heavy Tr e Equiva	Autos: rucks: rucks: alent Di Autos:	0.0 2.2 8.0	00 97 04 e (in f	Grade Ad	iustmen	t: 0.0
FHWA Noise Mod		-	Distant		Heavy Tr		29.7		De mie e Arr		
VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL 58.73 70.80 77.97	Traffic Flow -6.04 -18.05 -21.99	3	9 F 8.22 8.29 8.28	-1	.20 .20 .20 .20	-	9/ -4.49 -4.86 -5.77	0.0	en Be 000 000 000	rm Atter 0.0 0.0 0.0
Unmitigated Nois VehicleType	e Levels (with Lea Peak Hou			enuati Eveni		Leg Nig	ht		Ldn		NEL
Autos: Medium Trucks: Heavy Trucks:	54 54 58	.7 52 .8 52 .1 56	.8 .7 .5		50.4 49.7 48.3	Loy Mg	46.2 47.7 49.5		54.2 55.2 57.5	2	54 55 57
Vehicle Noise: Centerline Distan			.2		54.3		52.8		60.6	6	60
			In:	0 dBA 7 7		65 dB/ 15 16	4	6	0 dBA 33 34	1	5 dBA 71 74

	FHV	VA-RD-77-108 HI	GHWAY I	NOISE PI	REDICTI	ON MODE	L			
Road Nam	io: Existing Wit ne: Parkridge A nt: s/o Second	v.				Name: Pal umber: 11				
SITE	SPECIFIC IN	PUT DATA			N	OISE MO	DEL INPL	JTS		
Highway Data				Site Con	ditions ('Hard = 10	, Soft = 15))		
Average Daily	Traffic (Adt):	3,068 vehicles				Au	tos: 15			
Peak Hour	Percentage:	10%				icks (2 Axle				
Peak H	lour Volume:	307 vehicles		He	avy Truc	ks (3+ Axle	əs): 15			
Ve	hicle Speed:	40 mph	ŀ	Vehicle	Mix					
Near/Far La	ne Distance:	36 feet	-		icleType	Da	y Evenin	g Nic	nht D	aily
Site Data			-				.3% 11.0	•		.88%
Ba	rrier Height:	0.0 feet		Me	edium Tr	ucks: 73	.3% 9.2	% 17	.6% 5	.79%
Barrier Type (0-W		0.0		ŀ	leavy Tr	ucks: 84	.4% 3.2	% 12	.5% 2	.33%
Centerline Di	st. to Barrier:	44.0 feet	ł	Noise Sr	urce Ek	evations (in foot)			
Centerline Dist.	to Observer:	44.0 feet	F		Autos					
Barrier Distance	to Observer:	0.0 feet		Modiu	n Trucks					
Observer Height ((Above Pad):	5.0 feet			v Trucks			Δdiustr	nent: 0.0	h
Pi	ad Elevation:	0.0 feet			·			, lajaotin		
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent	Distance	(in feet)			
	Road Grade:	0.0%			Autos	: 40.460)			
	Left View:	-90.0 degrees		Mediu	m Trucks					
	Right View:	90.0 degrees		Heav	ry Trucks	: 40.262	2			
FHWA Noise Mod	el Calculations	s								
VehicleType	REMEL	Traffic Flow	Distance	Finite		Fresnel	Barrier.	Atten	Berm A	tten
Autos:	66.51	-6.83	1.2	28	-1.20	-4.	61	0.000	(0.000
Medium Trucks:	77.72	-18.83	1.3	31	-1.20	-4.	87	0.000	(0.000
Heavy Trucks:	82.99	-22.78	1.3	31	-1.20	-5.	50	0.000	(0.000
Unmitigated Nois			rrier attei	nuation)						
VehicleType	Leq Peak Hou		,	vening	Leq I	0	Ldn		CNEL	
Autos:	59.			55.4		51.2		9.3		59.7
Medium Trucks:	59.			53.8		51.9		9.3		59.6
Heavy Trucks:	60.			50.6		51.7		9.8		59.9
Vehicle Noise:	64.	.5 62.	7	58.5		56.4	6	64.2		64.5
Centerline Distan	ce to Noise Co	ontour (in feet)				i.				
				dBA	65 c		60 dBA		55 dB/	1
		Ldr		18	3		84		182	
		CNEL		19	4	1	88		190	

Tuesday, July 02, 2019

	FH\	WA-RD-77-108 HI	GHWAY	NOISE PR	REDICTION	N MOD	EL			
	io: Existing W				Project Na			no		
	e: Parkridge /				Job Num	ber: 1	1795			
Road Segmer	nt: s/o Lincoln	Av.								
	SPECIFIC IN	IPUT DATA							5	
Highway Data				Site Con	ditions (H	ard = 1	0, So	ft = 15)		
Average Daily	Traffic (Adt):	5,059 vehicles				A	utos:	15		
Peak Hour	Percentage:	10%			dium Truck			15		
Peak H	our Volume:	506 vehicles		He	avy Trucks	(3+ Ax	(les):	15		
Ve	hicle Speed:	40 mph		Vehicle I	Mix					
Near/Far La	ne Distance:	36 feet			icleType	D	ay	Evening	Night	Daily
Site Data					Aut	os: 7	6.3%	11.0%	12.6%	91.88%
Bai	rier Height:	0.0 feet		Me	edium Truc	ks: 7	3.3%	9.2%	17.6%	5.79%
Barrier Type (0-W	all, 1-Berm):	0.0		ŀ	leavy Truc	ks: 8	4.4%	3.2%	12.5%	2.33%
Centerline Dis		44.0 feet		Noise So	ource Elev	ations	(in fe	et)		
Centerline Dist.		44.0 feet			Autos:	0.00	0	,		
Barrier Distance		0.0 feet		Mediur	n Trucks:	2.29	97			
Observer Height (,	5.0 feet		Heav	v Trucks:	8.00)4	Grade Adj	iustment	0.0
	ad Elevation:	0.0 feet								
	ad Elevation:	0.0 feet		Lane Eq	uivalent D			eet)		
I	Road Grade:	0.0%			Autos:	40.46				
	Left View:	-90.0 degrees			n Trucks:	40.24				
	Right View:	90.0 degrees		Heav	y Trucks:	40.26	62			
FHWA Noise Mode										
VehicleType	REMEL		Distance	Finite		Fresne		Barrier Atte		m Atten
Autos:	66.51	-4.65	1.2		-1.20		1.61	0.0		0.00
Medium Trucks:	77.72		1.3		-1.20		1.87	0.0		0.00
Heavy Trucks:	82.99		1.3		-1.20	-{	5.50	0.0	00	0.00
Unmitigated Noise			-						-	
21	Leq Peak Hou			vening	Leq Nig			Ldn 61.4		NEL 61.
Autos:	61 61			57.6 56.0		53.4 54.1		61.4		
Medium Trucks:	61			56.0 52.7		54.1 53.9		61.5		61. 62.
Heavy Trucks: Vehicle Noise:	62			52.7 60.6		53.9 58.6		66.4		62.
			.Ծ	60.6		58.6		66.4	•	66.
Centerline Distance	ce to Noise C	ontour (in feet)	70	dBA	65 dB	A	6	0 dBA	55	dBA
		1 d		25	55		0	118		253
		CNE		27	57			123	-	265
		ONL			57				-	

FH	WA-RD-77-108 HI	GHWAY	NOISE PR	REDICTIC	N MOD	EL			
Scenario: Existing W Road Name: Pacific Av Road Segment: s/o Secon	. ,			Project N Job Nui			no		
SITE SPECIFIC I	NPUT DATA			NC	DISE M	ODEI		s	
Highway Data			Site Con	ditions (F	lard = 1	10, So	ft = 15)		
Average Daily Traffic (Adt):	386 vehicles				А	utos:	15		
Peak Hour Percentage:	10%		Me	dium Truc	ks (2 A)	des):	15		
Peak Hour Volume:	39 vehicles		He	avy Truck	s (3+ A)	des):	15		
Vehicle Speed:	25 mph		Vehicle	Mix					
Near/Far Lane Distance:	10 feet			icleType	L	Day	Evening	Night	Daily
Site Data						6.3%	11.0%	•	91.88
Barrier Height:	0.0 feet		Me	edium Tru	cks: 7	3.3%	9.2%	17.6%	5.799
Barrier Type (0-Wall, 1-Berm):	0.0		ŀ	leavy Tru	cks: 8	4.4%	3.2%	12.5%	2.33
Centerline Dist. to Barrier:	30.0 feet		Noise C	ource Ele		() fo	-4		
Centerline Dist. to Observer:	30.0 feet		Noise Sc	Autos:			et)		
Barrier Distance to Observer:	0.0 feet			n Trucks:					
Observer Height (Above Pad):	5.0 feet						Grade Ad	iustmont	
Pad Elevation:	0.0 feet		Heav	y Trucks:	8.0	04	Graue Au	Jusuneni	0.0
Road Elevation:	0.0 feet		Lane Eq	uivalent l	Distance	e (in f	eet)		
Road Grade:	0.0%			Autos:	30.0	00			
Left View:	-90.0 degrees		Mediu	m Trucks:	29.7	04			
Right View:	90.0 degrees		Heav	y Trucks:	29.7	33			
FHWA Noise Model Calculation	ns								
VehicleType REMEL	Traffic Flow	Distance	Finite	Road	Fresne	el I	Barrier Att	en Ber	m Atter
Autos: 58.73	3 -13.79	3.	22	-1.20	,	4.49	0.0	000	0.00
Medium Trucks: 70.80	-25.79	3.	29	-1.20	-	4.86	0.0	000	0.00
Heavy Trucks: 77.97	-29.74	3.	28	-1.20	-	5.77	0.0	000	0.00
Unmitigated Noise Levels (with		1	,						
VehicleType Leq Peak Ho			Evening	Leq N			Ldn		VEL
	7.0 45.		42.6		38.4		46.5		46.
	7.1 45.	-	41.9		40.0		47.4		47.
	0.3 48.	-	40.6		41.7		49.8	-	49.
	3.2 51.	4	46.6		45.0		52.9	9	53.
Centerline Distance to Noise C	Contour (in feet)	7/) dBA	65 dl	54	0	0 dBA	FF	dBA
	Ldr		2	5	571	0	10 10		и <u>ы</u> м 22
	CNFI		2	5			10	-	23
	SNEL	-	-	5					

Tuesday, July 02, 2019

	r Av. IPUT DATA 8,345 vehicles 10% 835 vehicles 40 mph 36 feet 0.0 feet 0.0 feet 44.0 feet 44.0 feet 44.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0 geet 0.0 geet 0	95		Me Hea Vehicle I Vehi Me Heav Lane Equ Mediur	ditions (H dium Truck avy Trucks Mix cleType Aut edium Truc leavy Truc eavy Truc autos: n Trucks: uivalent D Autos: n Trucks:	Date Auto Auto Start (3+ Axlet (3+ Axlet 0000 basic 0000 2.297 8.004	DEL INPU' Soft = 15) os: 15 ys): 15 y Evening 3% 9.2% 4% 3.2% n feet) Grade A (in feet) (in feet)	Nigh 5 12.6 5 17.6 5 12.5	6% 91.88 6% 5.79 5% 2.33
C IN (t): (c): (c): (c): (c): (c): (c): (c): (c	PUT DATA 8,345 vehicles 10% 835 vehicles 40 mph 36 feet 0.0 feet 0.0 feet 44.0 feet 44.0 feet 0.0 degree 90.0 degree	95		Me Hea Vehicle I Vehi Me Heav Lane Equ Mediur	ditions (H dium Truck avy Trucks Mix cleType Aut edium Truc leavy Truc eavy Truc autos: n Trucks: uivalent D Autos: n Trucks:	ard = 10, Autu (3 + Axle (3 + Axle)) (3 + Axle (3 + Axle (3 + Axle (3 + Axle)) (3 + Axle (3 + Axle)) (3 + Axle)) (3 + Axle) (3 + Axle)) (3 + Axle) (3 + Axle)) (3 + Axle) (3 + Axle)) (3 + Axle))	Soft = 15) os: 15 is): 15 y Evening 3% 11.0% 3% 9.2% 4% 3.2% m feet) Grade A	Nigh 5 12.6 5 17.6 5 12.5	6% 91.889 6% 5.799 5% 2.339
(t): ie: ie: ie: ie: ie: ie: ie: ie	8,345 vehicle 10% 835 vehicles 40 mph 36 feet 0.0 geet 0.0 g	95		Me Hea Vehicle I Vehi Me Heav Lane Equ Mediur	ditions (H dium Truck avy Trucks Mix cleType Aut edium Truc leavy Truc eavy Truc autos: n Trucks: uivalent D Autos: n Trucks:	ard = 10, Autu (3 + Axle (3 + Axle)) (3 + Axle (3 + Axle (3 + Axle (3 + Axle)) (3 + Axle (3 + Axle)) (3 + Axle)) (3 + Axle) (3 + Axle)) (3 + Axle) (3 + Axle)) (3 + Axle) (3 + Axle)) (3 + Axle))	Soft = 15) os: 15 is): 15 y Evening 3% 11.0% 3% 9.2% 4% 3.2% m feet) Grade A	Nigh 5 12.6 5 17.6 5 12.5	6% 91.889 6% 5.799 5% 2.339
) e: d: e: nt: n): er: er: er: d): er: er: er: w:	10% 835 vehicles 40 mph 36 feet 0.0 feet 0.0 feet 44.0 feet 44.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0 geet 0.0 degree	95		Me Hea Vehicle I Vehi Me Heav Lane Equ Mediur	dium Truck avy Trucks Mix icleType Aut edium Truc leavy Truc nurce Elev Autos: n Trucks: uivalent D Autos: n Trucks:	Autor Autor (3+ Axlesing (3+	os: 15 is): 15 y Evening 3% 11.0% 3% 9.2% 4% 3.2% n feet) Grade A (in feet)	5 12.6 5 17.6 5 12.5	6% 91.889 6% 5.799 5% 2.339
) e: d: e: nt: n): er: er: er: d): er: er: er: w:	10% 835 vehicles 40 mph 36 feet 0.0 feet 0.0 feet 44.0 feet 44.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0 geet 0.0 degree	95		Hei Vehicle I Vehi Me H Noise Sc Mediur Heav Lane Equ Mediur	avy Trucks Mix cleType Aut edium Truc leavy Truc nuce Elev Autos: n Trucks: y Trucks: uivalent D Autos: n Trucks:	(3+ Axle (3+ Axle) Day os: 76. ks: 73. ks: 84. ations (ii 0.000 2.297 8.004 (istance (40.460	ss): 15 ss): 15 y Evening 3% 11.0% 3% 9.2% 4% 3.2% n feet) Grade A (in feet)	5 12.6 5 17.6 5 12.5	6% 91.889 6% 5.799 5% 2.339
e: d: ne: n): er: er: er: d): wn: le: w:	835 vehicles 40 mph 36 feet 0.0 feet 0.0 feet 44.0 feet 44.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degree	25		Hei Vehicle I Vehi Me H Noise Sc Mediur Heav Lane Equ Mediur	avy Trucks Mix cleType Aut edium Truc leavy Truc nuce Elev Autos: n Trucks: y Trucks: uivalent D Autos: n Trucks:	(3+ Axle Da os: 76. ks: 73. ks: 84. ations (ii 0.000 2.297 8.004 istance (40.460	y Evening 3% 11.0% 3% 9.2% 4% 3.2% n feet) Grade A (in feet)	5 12.6 5 17.6 5 12.5	6% 91.889 6% 5.799 5% 2.339
d: ne: n): er: er: er: er: d): nn: nn: le: w:	40 mph 36 feet 0.0 feet 0.0 feet 44.0 feet 44.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0 feet 90.0 degree	25		Vehicle I Vehi Me H Noise Sc Mediur Heav Lane Equ Mediur	Mix icleType Aut adium Truc leavy Truc nurce Elev Autos: n Trucks: y Trucks: uivalent Di Autos: n Trucks:	Daj os: 76. ks: 73. ks: 84. 0.000 2.297 8.004 istance (40.460	y Evening 3% 11.0% 3% 9.2% 4% 3.2% n feet) Grade A (in feet)	5 12.6 5 17.6 5 12.5	6% 91.889 6% 5.799 5% 2.339
nt: n): er: er: d): nn: nn: le: w:	36 feet 0.0 feet 44.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0 % -90.0 degree			Vehi Me F Noise Sc Mediur Heav Lane Equ Mediur	cleType Aut edium Truc deavy Truc burce Elev Autos: n Trucks: y Trucks: uivalent D Autos: n Trucks:	os: 76. ks: 73. ks: 84. ations (in 0.000 2.297 8.004 istance (40.460	3% 11.0% 3% 9.2% 4% 3.2% n feet) Grade A (in feet)	5 12.6 5 17.6 5 12.5	6% 91.889 6% 5.799 5% 2.339
nt: n): er: er: d): on: le: w:	0.0 feet 0.0 44.0 feet 44.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degree 90.0 degree			Me F Noise So Mediur Heav Lane Equ Mediur	Aut edium Truc leavy Truc purce Elev Autos: n Trucks: y Trucks: uivalent D Autos: n Trucks:	os: 76. ks: 73. ks: 84. ations (in 0.000 2.297 8.004 istance (40.460	3% 11.0% 3% 9.2% 4% 3.2% n feet) Grade A (in feet)	5 12.6 5 17.6 5 12.5	6% 91.889 6% 5.799 5% 2.339
n): er: er: er: d): on: w: w:	0.0 44.0 feet 44.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0 feet 90.0 degree			F Noise Sc Mediur Heav Lane Equ Mediur	edium Truc leavy Truc purce Elev Autos: n Trucks: y Trucks: uivalent D Autos: n Trucks:	ks: 73. ks: 84. 0.000 2.297 8.004 istance (40.460	3% 9.2% 4% 3.2% n feet) Grade A (in feet)	5 17.6 5 12.5	6% 5.79% 5% 2.33%
n): er: er: er: d): on: w: w:	0.0 44.0 feet 44.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0 feet 90.0 degree			F Noise Sc Mediur Heav Lane Equ Mediur	leavy Truc ource Elev Autos: n Trucks: y Trucks: y Trucks: uivalent D Autos: n Trucks:	ks: 84. ations (ii 0.000 2.297 8.004 istance (40.460	4% 3.2% n feet) Grade A (in feet)	5 12.5	5% 2.33%
n): er: er: er: d): on: w: w:	0.0 44.0 feet 44.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0 feet 90.0 degree			Noise Sc Mediur Heav Lane Equ Mediur	Autos: n Trucks: y Trucks: uivalent Dr Autos: n Trucks:	ations (ii 0.000 2.297 8.004 istance (40.460	n feet) Grade A (in feet)		
er: er: d): on: on: le: w:	44.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degree			Mediur Heav Lane Equ Mediur	Autos: m Trucks: y Trucks: uivalent D Autos: m Trucks:	0.000 2.297 8.004 istance (40.460	Grade A	djustme	ent: 0.0
er: d): on: on: le: W:	0.0 feet 5.0 feet 0.0 feet 0.0% -90.0 degree			Mediur Heav Lane Equ Mediur	Autos: m Trucks: y Trucks: uivalent D Autos: m Trucks:	0.000 2.297 8.004 istance (40.460	Grade A	djustme	ent: 0.0
d): on: on: le: w:	5.0 feet 0.0 feet 0.0% -90.0 degree 90.0 degree		-	Heav	n Trucks: y Trucks: uivalent D Autos: n Trucks:	2.297 8.004 istance (40.460	Grade A	djustme	ent: 0.0
n: n: le: w:	0.0 feet 0.0 feet 0.0% -90.0 degree 90.0 degree		-	Heav	y Trucks: u ivalent D Autos: n Trucks:	8.004 istance (40.460	Grade A	djustme	ent: 0.0
n: le: w:	0.0 feet 0.0% -90.0 degree 90.0 degree		-	Lane Equ	uivalent D Autos: m Trucks:	istance (40.460	(in feet)	ajuouni	
le: w:	0.0% -90.0 degree 90.0 degree		-	Mediur	Autos: n Trucks:	40.460)		
w:	-90.0 degree 90.0 degree				n Trucks:				
	90.0 degree					40.241			
w:	0	es		Hoay					
				neav	y Trucks:	40.262			
tion	s								
	Traffic Flow	Dista	ance	Finite		Fresnel	Barrier A		Berm Atten
6.51	-2.48		1.2		-1.20	-4.6		.000	0.00
7.72			1.3		-1.20	-4.8		.000	0.00
2.99	-18.43		1.3	31	-1.20	-5.8	50 0	.000	0.00
	out Topo and			,					
Ηοι			Leq E	vening	Leq Nig		Ldn		CNEL
64		62.1		59.8		55.6	63		64.
									64.
				00					64.
68	.8 6	67.0		62.8		60.8	68	.6	68.
e Co	ontour (in feet))				_		_	
		∟				A			55 dBA
		Ldn:	- 3		76		164		354 370
5	63 64 68	63.3 64.7 68.8 se Contour (in feet	63.3 61.2 64.7 63.1	63.3 61.2 64.7 63.1 68.8 67.0 Se Contour (in feet) 270 Ldn:	63.3 61.2 58.2 64.7 63.1 54.9 68.8 67.0 62.8 se Contour (in feet)	63.3 61.2 58.2 64.7 63.1 54.9 68.8 67.0 62.8 se Contour (in feet) 70 dBA 65 dB	63.3 61.2 58.2 56.2 64.7 63.1 54.9 56.1 68.8 67.0 62.8 60.8 se Contour (in feet) 70 dBA 65 dBA	63.3 61.2 58.2 56.2 63 64.7 63.1 54.9 56.1 64 68.8 67.0 62.8 60.8 68 se Contour (in feet) 70 dBA 65 dBA 60 dBA Ldn: 35 76 164	63.3 61.2 58.2 56.2 63.7 64.7 63.1 54.9 56.1 64.1 68.8 67.0 62.8 60.8 68.6 se Contour (in feet) 70 dBA 65 dBA 60 dBA

	FHV	VA-RD-77-108	HIGHWA	Y NOISE	PREDICT	ION MOD	EL			
Road Nam	o: Existing Wi e: Hamner Av nt: s/o Third S	. '				Name: P umber: 1		0		
SITE	SPECIFIC IN	IPUT DATA			N	IOISE M	ODEL	INPUTS	5	
Highway Data				Site C	conditions	(Hard = 1	10, Sof	t = 15)		
Average Daily	Traffic (Adt):	34,293 vehicl	es			A	utos:	15		
Peak Hour	Percentage:	10%			Medium Tra	ucks (2 A)	xles):	15		
Peak H	our Volume:	3,429 vehicle	s		Heavy Truc	cks (3+ A)	xles):	15		
Ve	hicle Speed:	40 mph		Vehic	le Mix					
Near/Far La	ne Distance:	73 feet			ehicleType		Day	Evening	Night	Daily
Site Data				-			6.3%	11.0%	•	91.88%
Bai	rier Height:	0.0 feet			Medium Ti	rucks: 7	3.3%	9.2%	17.6%	5.79%
Barrier Type (0-W		0.0			Heavy Ti	rucks: 8	84.4%	3.2%	12.5%	2.33%
Centerline Dis	. ,	55.0 feet		Noior	Source El	ovotiono	(in for	41		
Centerline Dist.	to Observer:	55.0 feet		NOISE	Auto:			:()		
Barrier Distance	to Observer:	0.0 feet		140	dium Truck:					
Observer Height (Above Pad):	5.0 feet			eavy Truck			Grade Adj	ustmont	0.0
Pa	ad Elevation:	0.0 feet			eavy muck	s. 0.0	04 (siaue Auj	usunem.	0.0
Roa	ad Elevation:	0.0 feet		Lane	Equivalent	Distance	e (in fe	et)		
1	Road Grade:	0.0%			Autos	s: 41.4	46			
	Left View:	-90.0 degre	es	Me	dium Truck	s: 41.2	32			
	Right View:	90.0 degre	es	н	eavy Truck	s: 41.2	53			
FHWA Noise Mode	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Distan	ce Fir	ite Road	Fresne	el E	arrier Atte	en Ber	m Atten
Autos:	66.51	3.66		1.12	-1.20	-	4.67	0.0	00	0.000
Medium Trucks:	77.72	-8.35		1.15	-1.20	-	4.87	0.0	00	0.000
Heavy Trucks:	82.99	-12.29		1.15	-1.20	-	5.38	0.0	00	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier a	ttenuatio	n)					
	e Levels (with Leq Peak Hou			q Evenin	g Leq	Night	1	Ldn		IEL
VehicleType Autos:	Leq Peak Hou 70	Ir Leq Day	/ Le 68.1	q Evening 6	g Leq. 5.7	61.6	l	69.6	i	70.0
VehicleType Autos: Medium Trucks:	Leq Peak Hou 70 69	IT Leq Day .1 .3	/ Le 68.1 67.2	q Evening 6 6	2 Leq 5.7 4.2	61.6 62.2	1	69.6 69.6	1	70.0 70.0
VehicleType Autos: Medium Trucks: Heavy Trucks:	Leq Peak Hou 70 69 70	ir Leq Day .1 .3 .7	/ Le 68.1 67.2 69.1	q Evenin 6 6 6	y Leq 5.7 4.2).9	61.6 62.2 62.1	1	69.6 69.6 70.1		70.0 70.0 70.3
VehicleType Autos: Medium Trucks:	Leq Peak Hou 70 69	ir Leq Day .1 .3 .7	/ Le 68.1 67.2	q Evenin 6 6 6	2 Leq 5.7 4.2	61.6 62.2		69.6 69.6		70.0 70.0 70.3
VehicleType Autos: Medium Trucks: Heavy Trucks:	Leq Peak Hou 70 69 70 74	Ir Leq Day .1 .3 .7 .8	/ Le 68.1 67.2 69.1 73.0	q Evening 6: 6: 6: 6: 6:	5.7 4.2 0.9 3.8	61.6 62.2 62.1 66.7		69.6 69.6 70.1 74.6	i i i	70.0 70.0 70.3 74.9
VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	Leq Peak Hou 70 69 70 74	rr Leq Day .1 .3 .7 .8 Dontour (in feet	/ Le 68.1 67.2 69.1 73.0	q Evenin 6 6 6 6 6 70 dBA	g Leq 5.7 4.2 0.9 3.8	61.6 62.2 62.1 66.7	60	69.6 69.6 70.1 74.6	55	70.0 70.0 70.3 74.9 dBA
VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	Leq Peak Hou 70 69 70 74	IT Leq Day .1 .3 .7 .8 Dontour (in feet	/ Le 68.1 67.2 69.1 73.0	q Evening 6: 6: 6: 6: 6:	2 Leq 5.7 4.2 0.9 3.8 65 2	61.6 62.2 62.1 66.7	60	69.6 69.6 70.1 74.6	55	70.0 70.0 70.3 74.9

Tuesday, July 02, 2019

	FHV	VA-RD-77-108	HIGHW	AY NOI	SE PREDIC	TION M	ODEL			
Scenario:	Existing Wi	thout Project			Proje	ct Name	: Palomi	no		
Road Name:	Hamner Av				Job	Number	: 11795			
Road Segment:	s/o Second	St.								
	ECIFIC IN	IPUT DATA		01					s	
Highway Data				Site	Condition	s (Hard		,		
Average Daily Tra	. ,	29,539 vehicl	es				Autos:	15		
Peak Hour Pe	•	10%			Medium 1			15		
Peak Hou		2,954 vehicle	s		Heavy Tr	ucks (3-	Axles):	15		
	le Speed:	40 mph		Vel	icle Mix					
Near/Far Lane	Distance:	73 feet			VehicleTyp)e	Day	Evening	Night	Daily
Site Data						Autos:	76.3%	11.0%	12.6%	91.889
Barrie	r Heiaht:	0.0 feet			Medium	Trucks:	73.3%	9.2%	17.6%	5.799
Barrier Type (0-Wall,	1-Berm):	0.0			Heavy	Trucks:	84.4%	3.2%	12.5%	2.33
Centerline Dist. t		55.0 feet		No	se Source	Elevatio	ons (in fe	et)		
Centerline Dist. to		55.0 feet			Aut	os: I	0.000			
Barrier Distance to		0.0 feet		٨	ledium Truc	ks:	2.297			
Observer Height (Ab	,	5.0 feet			Heavy Truc	ks:	8.004	Grade Ad	iustment	: 0.0
	Elevation:	0.0 feet		-						
	Elevation:	0.0 feet		Lar	e Equivale			eet)		
	ad Grade:	0.0%			Aut		1.446			
	Left View:	-90.0 degre		Λ.	ledium Truc		1.232			
Ri	ight View:	90.0 degre	es		Heavy Truc	KS: 4	1.253			
FHWA Noise Model (-								
	REMEL	Traffic Flow	Distar		inite Road			Barrier Att		m Atten
Autos:	66.51	3.01		1.12	-1.20		-4.67	0.0		0.00
Medium Trucks:	77.72	-9.00		1.15	-1.20		-4.87		000	0.00
Heavy Trucks:	82.99	-12.94		1.15	-1.20)	-5.38	0.0	000	0.00
Unmitigated Noise L					- í I				-	
	q Peak Hou			eq Even		q Night		Ldn		NEL
Autos:	69		67.5 66 E		65.1	60		68.9		69.
Medium Trucks:	68 70		66.5 68.5		63.5 60.2		.6 .4	69.0 69.5		69. 69.
Heavy Trucks: Vehicle Noise:	70		72.3		68.2	66		73.9		69. 74.
Centerline Distance	to Noise Cr							70.0		
containine Distance			,	70 dB/	6	5 dBA	6	0 dBA	55	dBA
			Ldn:	100		216		465		002

	FHV	VA-RD-77-108 I	HIGHV	VAY N	OISE PF	REDICTIC	ON MO	DEL			
	o: Existing Wi e: Hamner Av					Project N Job Nu			no		
	nt: s/o First St.					300 140	mber.	11/95			
SITE	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data				S	ite Con	ditions (l	Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	22,937 vehicles	3					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Truc	:ks (2 /	Axles):	15		
Peak H	our Volume:	2,294 vehicles			He	avy Truck	:s (3+ A	Axles):	15		
Ve	hicle Speed:	40 mph		L.	ehicle l	Mix					
Near/Far La	ne Distance:	73 feet		-		icleType		Dav	Evening	Night	Daily
Site Data								76.3%			91.889
Pa	rier Height:	0.0 feet			Me	edium Tru	cks:	73.3%	9.2%	17.6%	
ва Barrier Type (0-W	•	0.0 feet				leavy Tru		84.4%		12.5%	
Centerline Di		55.0 feet									
Centerline Dist.		55.0 feet		۸	loise Sc	ource Ele			eet)		
Barrier Distance		0.0 feet				Autos:		000			
Observer Height (5.0 feet			Mediur	n Trucks:	2.	297			
	ad Elevation:	0.0 feet			Heav	y Trucks:	8.	004	Grade Ad	justment.	0.0
	d Elevation:	0.0 feet		1	ane Fa	uivalent l	Distan	ce (in :	feet)		
	Road Grade:	0.0 reet		-	ane Ly	Autos:		446	000		
	Left View:	-90.0 degree:			Modiu	n Trucks:		232			
	Right View:	90.0 degree				y Trucks:		253			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atten
Autos:	66.51	1.91		1.12		-1.20		-4.67	0.0	000	0.00
Medium Trucks:	77.72	-10.09		1.15		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	82.99	-14.04		1.15		-1.20		-5.38	0.0	000	0.00
Unmitigated Noise	e Levels (with	out Topo and b									
VehicleType	Leq Peak Hou			Leq Ev		Leq N			Ldn		VEL
Autos:	68		6.4		64.0		59.8		67.8		68.
Medium Trucks:	67		5.4		62.4		60.5		67.9		68.
Heavy Trucks:	68		7.4		59.1		60.3		68.4		68.
Vehicle Noise:	73		1.2		67.1		65.0)	72.8	3	73.
Centerline Distand	ce to Noise Co	ontour (in feet)		70 d	БЛ	65 d	D۸	6	0 dBA	55	dBA
		,	dn:	85		182			393		ивя 47
		CN		89		102			412		47 87
		CN	LL.	99		19			412	8	07

Tuesday, July 02, 2019

Scenario: Exist Road Name: Ham Road Segment: s/o H	ner Av.	,				Project N Job Nur			ino		
SITE SPECI	IC IN	PUT DATA			<u></u>					S	
Highway Data					Site Con	ditions (F	lard :		,		
Average Daily Traffic (29,221 vehicles	5					Autos:			
Peak Hour Percent	•	10%				dium Truc					
Peak Hour Volu	ıme:	2,922 vehicles			Hea	avy Truck	s (3+	Axles):	15		
Vehicle Sp	eed:	40 mph		-	Vehicle I	Aix					
Near/Far Lane Dista	nce:	73 feet		F		cleType		Day	Evening	Night	Daily
Site Data				-		Au	tos:	76.3%	11.0%	12.6%	91.889
Barrier Hei	abt	0.0 feet			Me	dium Tru	cks:	73.3%	9.2%	17.6%	5.79%
Barrier Type (0-Wall, 1-Be		0.0			H	leavy Tru	cks:	84.4%	3.2%	12.5%	2.33%
Centerline Dist. to Ba	rrier:	55.0 feet		-	Noise So	uree Eler	(atio	no (in f	no.41		
Centerline Dist. to Obse	rver:	55.0 feet		-	Noise 30	Autos:			eel)		
Barrier Distance to Obse	rver:	0.0 feet			1 4 m - Fr	Autos: n Trucks:		.000			
Observer Height (Above F	Pad):	5.0 feet					-	.297	Grade Ad	livetment	
Pad Eleva	tion:	0.0 feet			neav	y Trucks:	0	.004	Grade Au	jusunem	. 0.0
Road Eleva	tion:	0.0 feet		l l	Lane Equ	iivalent E	Distar	nce (in	feet)		
Road Gr	ade:	0.0%		ſ		Autos:	41	.446			
Left V	liew:	-90.0 degrees	6		Mediur	n Trucks:	41	.232			
Right V	'iew:	90.0 degrees	6		Heav	Y Trucks:	41	.253			
FHWA Noise Model Calcu	lations	:									
VehicleType REM	EL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	66.51	2.96		1.1	2	-1.20		-4.67	0.0	000	0.00
Medium Trucks:	77.72	-9.04		1.1	5	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	82.99	-12.99		1.1	5	-1.20		-5.38	0.0	000	0.00
Unmitigated Noise Levels	(with	out Topo and b	arri	er atter	nuation)						
VehicleType Leq Pe	ak Hou	r Leq Day		Leq E	vening	Leq N	ight		Ldn	C	NEL
Autos:	69.	4 6	7.4		65.0		60.	9	68.9	9	69.
Medium Trucks:	68.		6.5		63.5		61.	5	68.9	9	69.
Heavy Trucks:	70.	0 6	8.4		60.2		61.	4	69.4	4	69.
Vehicle Noise:	74.	1 7	2.3		68.1		66.	0	73.	9	74.
Centerline Distance to No	ise Co	ntour (in feet)									
					dBA	65 dE		(60 dBA		dBA
											95
		L CN	dn:		00 04	214 225			462 484	-	95 042

	FHV	VA-RD-77-108 H	IIGHWA	Y N	OISE PF	REDICTIC	ON MO	DEL			
Road Nan	rio: Existing Wi ne: E. Parkridg nt: s/o Hidden	e Av.				Project N Job Nu			no		
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				S	Site Con	ditions (l	Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	7,784 vehicles	5				/	Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Truc	:ks (2 A	xles):	15		
Peak H	lour Volume:	778 vehicles			He	avy Truck	:s (3+ A	(xles):	15		
Ve	hicle Speed:	45 mph		L.	ehicle l	Mix					
Near/Far La	ne Distance:	36 feet		-		icleType		Day	Evening	Night	Daily
Site Data								76.3%	~	12.6%	
Ba	rrier Heiaht:	0.0 feet			Me	edium Tru	cks:	73.3%	9.2%	17.6%	5.79%
Barrier Type (0-W		0.0			ŀ	leavy Tru	cks:	84.4%	3.2%	12.5%	2.33%
Centerline Di	ist. to Barrier:	44.0 feet		٨	loise Sc	ource Ele	vation	s (in fe	et)		
Centerline Dist.	to Observer:	44.0 feet		F		Autos:		000			
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks:		297			
Observer Height	(Above Pad):	5.0 feet				v Trucks:		04	Grade Ad	iustment	: 0.0
	ad Elevation:	0.0 feet				,			,		
	ad Elevation:	0.0 feet		L	ane Eq	uivalent l		· ·	leet)		
	Road Grade:	0.0%				Autos:					
	Left View:	-90.0 degrees				n Trucks:					
	Right View:	90.0 degrees	6		Heav	y Trucks:	40.2	262			
FHWA Noise Mod											
VehicleType	REMEL	Traffic Flow	Distanc		Finite		Fresn	-	Barrier Att		m Atten
Autos:		-3.29		1.28		-1.20		-4.61	0.0		0.00
Medium Trucks:		-15.30		1.31		-1.20		-4.87	0.0		0.00
Heavy Trucks:		-19.24		1.31		-1.20		-5.50	0.0	000	0.00
Unmitigated Nois											
VehicleType	Leq Peak Hou			q Ev	ening	Leq N			Ldn	-	NEL
Autos:			3.3		60.9		56.7		64.7		65.
Medium Trucks:			2.1		59.1		57.2		64.6		64.9
Heavy Trucks: Vehicle Noise:		-	3.6 7.8		55.3 63.8		56.5 61.6		64.6 69.4		64. 69.
					00.0		01.0		03.4	•	05.
Centerline Distan	ce to Noise Co	ontour (in feet)		70 d	BA	65 d	BA	6	0 dBA	55	dBA
		1	dn:	40		87		<u>ـــــّ</u>	186		102
		CN		42		91			195		121
		0.1				0.					

Tuesday, July 02, 2019

FHV	VA-RD-77-108	HIGHW	AY NO	ISE PF	EDICTIO	и мо	DEL			
Existing Wi	thout Project				Project N	ame:	Palomi	ino		
Lincoln Av.					Job Nun	nber:	11795			
s/o River R	d.									
ECIFIC IN	IPUT DATA								s	
			Si	te Con	ditions (H					
affic (Adt):	20,087 vehicle	es						15		
	10%									
r Volume:	2,009 vehicles	5		Hea	avy Trucks	s (3+)	Axles):	15		
	40 mph		Ve	hicle I	Nix					
Distance:	36 feet			Vehi	cleType		Day	Evening	Night	Daily
					Au	tos:	76.3%	11.0%	12.6%	91.88%
r Heiaht:	0.0 feet			Ме	dium Truc	:ks:	73.3%	9.2%	17.6%	5.79%
1-Berm):	0.0			H	leavy Truc	cks:	84.4%	3.2%	12.5%	2.33%
			No	oise So	urce Elev	ation	s (in fe	eet)		
					Autos:	0.	000	,		
				Mediur	n Trucks:	2.	297			
,				Heav	v Trucks:	8.	004	Grade Ad	justment	: 0.0
			Lá	ine Equ				leet)		
ight View:	90.0 degree	es		Heav	y Trucks:	40.	262			
	-									
		Distar		Finite		Fresi				rm Atten
										0.00
										0.00
					-1.20		-5.50	0.0	000	0.00
		-					-			
1	1.7		eq Eve		Leq Ni		4			NEL 67.
							-		-	67.
									-	68.
	-			58.7 66.6			·			72.
				20.0		51.4	-	72.		12.
			70 dF	24	65 dE	24	F	0 dBA	55	dBA
		Ldn:	64	24	137			295		335
	Lincoln Av. s/o River R ECIFIC IN iffic (Adl): roentage: r Volume: le Speed: Distance: r Height: 1-Berm): to Barrier: Observer: Observer: Observer: Observer: Distance: Elevation: ad Grade: Left View: Calculation REMEL 66.51 77.72 82.99 evels (with g Peak Hoo. 67 67 68 72	s/o River Rd. ECIFIC INPUT DATA Iffic (Adt): 20,087 vehicle: creantage: 10% I/Volume: 2,009 vehicle: le Speed: 40 mph Distance: 36 feet I - Berm): 0.0 feet I-Berm): 0.0 for Barrier: 44.0 feet Observer: 44.0 feet Observer: 44.0 feet Observer: 44.0 feet Observer: 44.0 feet Doserver: 0.0 feet Elevation:	Lincoln Av. \$\% River Rd. ECIFIC INPUT DATA ECIFIC INPUT DATA ffic (Adt): 20,087 vehicles rcentage: 10% 20,098 vehicles le Speed: 40 mph Distance: 36 feet r Height: 0.0 feet r Hold: Fillow Distant f 65.1 1.34 r 7.7 2 - 10.67 r Height: 0.7 9 66.0 f 7.9 66.0 f 7.9 66.0 f 7.2 65.0 f 8.5 67.0 f 7.0 f 7	Lincoln Av. \$0 River Rd. ECIFIC INPUT DATA ECIFIC INPUT DATA S0 River Rd. ECIFIC INPUT DATA S1 ECIFIC INPUT DATA S2 ECIFIC INPUT DATA S3 ECIFIC INPUT S3	Lincoln Av. s/o River Rd. Site Con- site Circl INPUT DATA Site Con- site Circle INPUT DATA ECIFIC INPUT DATA Site Con- site Circle Input Circl	Lincoln Av. s/o River Rd. Job Num. S/o River Rd. ECIFIC INPUT DATA NO ECIFIC INPUT DATA Site Conditions (f. Medium Truck: Volume: 2,009 vehicles Medium Truck: Heavy Truck: Vehicle Mix // Sopeed: 40 mph Medium Truck: Vehicle Mix // Sopeed: 40 mph Vehicle Mix // Sopeed: 40 mph Medium Truck: Vehicle Type // Height: 0.0 feet Medium Truck: Vehicle Type // Soperver: 0.0 feet Medium Truck: Heavy Truck: Hea	Lincoln Av. s/o River Rd. Job Number: So River Rd. ECIFIC INPUT DATA NOISE I Site Conditions (Hard = fific (Adt): NOISE I Site Conditions (Hard = fific (Adt): echo: Medium Trucks (2, Volume: Medium Trucks (2, Heavy Trucks (3+, Vehicle Mix Is Speed: 40 mph Vehicle Mix Is Barno: 0.0 feet Medium Trucks: 1-Berm): 0.0 Koise Source Elevation Observer: Modium Trucks: Observer: 0.0 feet Modium Trucks: Autos: Ic Barno: 0.0 feet Medium Trucks: Autos: Observer: 0.0 feet Medium Trucks: 8. Elevation: 0.0 feet Heavy Trucks: 8. Elevation: 0.0 feet Lane Equivalent Distance Finite Road Fress 66.51 1.34 1.28 1.20 evels (without Topo and barrier attenuation) grews (without Topo and barrier attenuation) Leg Night Gr.9 66.0 63.6 59. 66.5 67.0 58.7 59.3 59.3 72.7 70.8 66.6 64.4	Lincoln Av. Job Number: 11795 s/o River Rd. Job Number: 11795 Sor River Rd. Site Conditions (Hard = 10, Sc International Conditions) ECIFIC INPUT DATA Site Conditions (Hard = 10, Sc International Conditions) stift (Adt): 20,087 vehicles uffic (Adt): 00,087 vehicles vehicle X Medium Trucks (2 Axles): Volume: 2,009 vehicles le Speed: 40 mph Vehicle Mix Day r Height: 0.0 feet 1-Berm): 0.0 to Barrier: 44.0 feet Dobserver: 0.0 feet Dobserver: 0.0 feet Elevation: 0.0 feet Elevation: 0.0 feet Left View: 90.0 degrees Medium Trucks: 2.297 Heavy Trucks: 40.261 1.131 1.20 ett View: 90.0 degrees Elevation: 0.0 feet Lane Equivalent Distance (Internation) Gef.51 1.34 1.20 ett View: 90.0	Lincoln Av. s/o River Rd. Job Number: 11795 EciFic INPUT DATA NOISE MODEL INPUT Site Conditions (Hard = 10, Soft = 15) Bite Conditions (Hard = 10, Soft = 15) Autos:: 15 Iffic (Adi): 20,087 vehicles fific (Adi): 20,093 vehicles Autos:: 15 Iffic Adip: 20,093 vehicles Autos:: 15 Iffic Adip: 20,093 vehicles Autos:: 76.3% 11.0% Volume: 2, 2009 vehicles Vehicle Type Day Evening Isseed: 40 mph Vehicle Type Day Evening Observer: 3.0 0 feet Vehicle Type Day Evening Observer: 4.0 feet Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adit Observer: 4.0 feet Medium Trucks: 40.261 Lane Equivalent Distance (in feet) Autos: 40.460 Left View: 90.0 degrees Medium Trucks: 40.261 Lane Equivalent Distance (in feet) Autos: 40.460 Left View: 90.0 degrees Finite Road Fresnel Barrier Att G65.1 1.34 1.20 -4.61 0.0 Cevels (without Topo and barrier attenuation) Leg Nage Left 65.6 67.0	Lincoln Av. s/o River Rd. Job Number: 11795 EciFic INPUT DATA NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 16) Grienage: 10% uffic (Adi): 20,087 vehicles Autos: 15 reentage: 10% Medium Trucks (2 Axles): 15 Volume: 2,009 vehicles Heavy Trucks (3 A xkes): 15 Vehicle Mix Day Evening Night Medium Trucks: 78.3% 11.0% 12.8% r Height: 0.0 feet Medium Trucks: 73.3% 9.2% 17.6% Observer: 0.0 feet Moise Source Elevations (in feet) Moise Source Elevations (in feet) Observer: 0.0 feet Autos: 0.000 Gade adjustment Elevation: 0.0 feet Autos: 0.000 Autos: 0.001 Distance Finite Road Fresnel Barrier Atten Berlier Atten Elevation: 0.06 63.6 59.4 67.4 Grade Ling Veinces Se.9 66.0

	FH\	WA-RD-77-108	HIGH	WAY NO	DISE PF	REDICTIC	N MO	DEL			
	io: Existing Wi					Project N			ino		
Road Nan	e: Lincoln Av.					Job Nu	mber:	11795			
Road Segme	nt: s/o Rincon	St.									
	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data				S	te Con	ditions (F	lard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	19,004 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10%			Mee	dium Truc	:ks (2 /	Axles):	15		
Peak H	lour Volume:	1,900 vehicles			Hea	avy Truck	s (3+ /	Axles):	15		
Ve	hicle Speed:	40 mph		V	ehicle I	Mix					
Near/Far La	ne Distance:	36 feet		-		icleType		Dav	Evening	Night	Daily
Site Data					-		itos:	76.3%	•		91.889
Ba	rrier Height:	0.0 feet			Me	edium Tru	cks:	73.3%	9.2%	17.6%	5.799
Barrier Type (0-W	•	0.0			F	leavy Tru	cks:	84.4%	3.2%	12.5%	2.339
Centerline Di		44.0 feet									
Centerline Dist.	to Observer:	44.0 feet		N	oise So	ource Ele			eet)		
Barrier Distance	to Observer:	0.0 feet				Autos:		000			
Observer Height	(Above Pad):	5.0 feet				n Trucks:		297	Grade Ad	i untro nt	
P	ad Elevation:	0.0 feet			Heav	y Trucks:	8.	004	Grade Ad	Justinent	. 0.0
Ro	ad Elevation:	0.0 feet		Lá	ane Equ	uivalent I	Distan	ce (in i	feet)		
	Road Grade:	0.0%				Autos:	40.	460			
	Left View:	-90.0 degree	s		Mediur	n Trucks:	40.	241			
	Right View:	90.0 degree	s		Heav	y Trucks:	40.	262			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atten
Autos:	66.51	1.09		1.28		-1.20		-4.61	0.0	000	0.00
Medium Trucks:	77.72	-10.91		1.31		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	82.99	-14.86		1.31		-1.20		-5.50	0.0	000	0.00
Unmitigated Nois	e Levels (with	out Topo and I	barrie	r attenu	ation)						
VehicleType	Leq Peak Hou			Leq Eve		Leq N			Ldn		NEL
Autos:	67		65.7		63.3		59.2		67.2		67.
Medium Trucks:			64.8		61.8		59.8		67.2		67.
Heavy Trucks:			6.7		58.5		59.7		67.		67.
Vehicle Noise:			70.6		66.4		64.3	3	72.3	2	72.
Centerline Distan	ce to Noise Co	ontour (in feet)		70.15		05.0		1 ,			
			L	70 dE	5A	65 dl 132		6	0 dBA 284		dBA
			_dn: IEL:	61 64		132			284 298		612 641

Average Daily Traffic (Adt): 21,585 vehicles Autos: 15 Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Peak Hour Volume: 2,159 vehicles Heavy Trucks (3+ Axles): 15 Vehicle Speed: 40 mph Vehicle Type Day Evening Night Daily Site Data Autos: 76,86 7.9% 1.0% 1.2.5% 2.33 Barrier Type (0-Wall, 1-Berm): 0.0 feet Medium Trucks: 73,3% 9.2% 17.6% 5.7% Barrier Type (0-Wall, 1-Berm): 0.0 feet Moles Source Elevations (in feet) Centerline Dist. to Dserver: 4.0 feet Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.04 Grade Adjustment: 0.0 Barrier Dist. to Dserver: 0.0 feet Autos: 0.00 Medium Trucks: 4.0.0 Road Elevation: 0.0 feet Autos: 0.00 Autos: 0.00 Autos: 0.00 Road Grade: 0.0% Autos: 40.460 Heavy Trucks: </th <th></th> <th>FHW</th> <th>A-RD-77-108</th> <th>HIGH</th> <th>WAY</th> <th>NOISE PI</th> <th>REDICT</th> <th>ION MO</th> <th>DEL</th> <th></th> <th></th> <th></th>		FHW	A-RD-77-108	HIGH	WAY	NOISE PI	REDICT	ION MO	DEL					
Highway Data Site Conditions (Hard = 10, Soft = 15) Average Daily Traffic (Adt): 21,585 vehicles Autos: 15 Peak Hour Percentage: 10% Autos: 15 Peak Hour Volume: 2,159 vehicles Medium Trucks (24 Axles): 15 Vehicle Speed: 40 mph Yehicle Speed: 40 mph Near/Far Lane Distance: 36 feet Vehicle Type Day Levening Night Daily Barrier Height: 0.0 feet Heavy Trucks: 76.3% 11.0% 12.6% 91.86% Barrier Dist. to Barrier: 44.0 feet Medium Trucks: 73.3% 9.2% 17.6% 5.79% Centerline Dist. to Observer: 44.0 feet Noise Source Elevations (in feet) Autos: 0.000 Barrier Jist (Adiver Pad): 5.0 feet Heavy Trucks: 8.04 Grade Adjustment: 0.0 Barrier Distance to Observer: 0.0 feet Autos: 0.000 Medium Trucks: 2.297 Pad Elevation: 0.0 feet Road Grade: 0.0% Autos: 0.000	Road Nam	e: Lincoln Av.	,							no				
Average Delly Traffic (Adt): 21,585 vehicles Autos: 15 Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Peak Hour Volume: 2,159 vehicles Heavy Trucks (3+ Axles): 15 Vehicle Speed: 40 mph Vehicle Type Day Evening Night Daily Site Data Autos: 6.6 fet Vehicle Type Day Evening Night Daily Site Data Autos: 6.7 % 5.79 Heavy Trucks: 84.4% 3.2% 12.5% 2.33 Centerline Dist. to Dserver: 44.0 feet Autos: 0.00 Medium Trucks: 0.297 Heavy Trucks: 84.4% 3.2% 12.5% 2.33 Observer Height (Above Pad): 5.0 feet Autos: 0.00 Medium Trucks: 0.00 Medium Trucks: 0.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0 Road Elevation: 0.0 feet Autos: 40.460 Medium Trucks: 40.460 Road Elevation:: 0.09 Degrees Finite Road <	SITE	SPECIFIC IN	PUT DATA				ľ	NOISE N	NODE	L INPUT	S			
Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Peak Hour Volume: 2,159 vehicles Heavy Trucks (3+ Axles): 15 Vehicle Speed: 40 mph Vehicle Type Day Levning Night Daly Site Data Autos: 76.3% 11.0% 12.5% 91.8% Barrier Type (Owalt, 1-Berm): 0.0 teet Autos: 76.3% 11.0% 12.5% 52.33 Centerline Dist. to Barrier: 44.0 feet Autos: 0.000 Medium Trucks: 2.297 12.5% 2.33 Observer: 0.0 feet Autos: 0.000 Medium Trucks: 40.460 Medium Trucks: 40.460 Road Elevation: 0.0 feet Left View: 90.0 degrees Heavy Trucks: 40.262 40.000 0.000 0.000 VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Medium Trucks: 77.7 1.33 1.20 -4.67 0.000 0.000	Highway Data					Site Conditions (Hard = 10, Soft = 15)								
Peak Hour Volume: 2,159 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 36 feet Vehicle Mix Vehicle Mix Site Data Vehicle Mix Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 44.0 feet Centerline Dist. to Observer: 44.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees Right View: 90.0 degrees Right View: 90.0 degrees FHWA Noise Model Calculations 1.65 VehicleType Earlier Road VehicleType Left View: 90.0 degrees -1.20 FHWA Noise Model Calculations Finite Road VehicleType Leq Day Leq Day Leq Day Leq Day Leq Day Leq Day Leq Day Leg Day Leq Evening VehicleType Leq Day UehicleType Leg Day <	Average Daily	Traffic (Adt):	21,585 vehicle	es					Autos:	15				
Vehicle Speed: 40 mph 36 feet Vehicle Mx Site Data Autos: 76.3% 11.0% 12.6% 91.88 Barrier Type (0-Wall, 1-Berm): 0.0 feet Medium Trucks: 73.3% 9.2% 17.6% 57.9% Barrier Type (0-Wall, 1-Berm): 0.0 feet Medium Trucks: 73.3% 9.2% 17.6% 57.9% Barrier Type (0-Wall, 1-Berm): 0.0 feet Modise Source Elevations (in feet) 2.33 Centerline Dist. to Dserver: 4.0 feet Autos: 0.000 Medium Trucks: 73.2% 12.5% 2.33 Observer Height: (Move Pad): 5.0 feet Autos: 0.000 Medium Trucks: 0.00 Road Elevation: 0.0 feet Autos: 40.460 Image: Autos: 40.460 Road Grade: 0.0% Autos: 40.460 Image: Autos: 40.460 Heavy Trucks: 40.261 Heavy Trucks: 40.262 Image: Autos: 40.460 WehicleType REMEL Traffic Flow Distance Finite Road Fresnel	Peak Hour	Percentage:	10%			Medium Trucks (2 Axles): 15								
Near/Far Lane Distance: 36 fet Venicle Nix Day Evening Night Daily Site Data Autos: 76.3% 11.0% 12.5% 91.8% Barrier Type (0-Wall, 1-Berm): 0.0 feet Medium Trucks: 73.3% 12.5% 5.78% Centerline Dist. to Barrier: 44.0 feet Autos: 0.000 12.5% 2.33% Deserver Height (Above Pad): 5.0 feet Autos: 0.000 Medium Trucks: 8.004 Grade Adjustment: 0.0 Barrier Distance to Observer: 0.0 feet Autos: 0.000 Medium Trucks: 8.004 Grade Adjustment: 0.0 Road Elevation: 0.0 feet Autos: 40.460 Medium Trucks: 40.460 Road Grade: 0.0% Left View: 90.0 degrees Heavy Trucks: 40.262 Finite Road Fresnel Barrier Atten Berm Atten Medium Trucks: 66.51 1.65 1.26 -1.20 -4.67 0.000 0.000 Medium Trucks: 77.72 -10.36 1.31	Peak H	lour Volume:	2,159 vehicle	S		He	avy Tru	cks (3+ A	Axles):	15				
Near/Far Lane Distance: 36 feet VehicleType Day Evening Night Daily Site Data Autos: 76.3% 11.0% 12.6% 91.88% Barrier Height: 0.0 Centerline Dist. to Diserver: 0.0 Noise Noise Noise Noise Noise Noise Noise Noise Noise Stance Barrier Type (0-Wall, 1-Berm): 0.0 0 feet Medium Trucks: 73.3% 9.2% 17.6% 5.7.9% 12.5% 2.333 Centerline Dist. to Doserver: 0.0 feet Autos: 0.000 Medium Trucks: 2.2.97 Observer Height (Above Pad): 5.0 feet Autos: 0.004 Medium Trucks: 0.00 Road Elevation: 0.0 feet Autos: 40.460 Autos: 40.460 Road Grade: 0.0% Autos: 40.460 Autos: 40.460 Heavy Trucks: 40.460 Fresnel Barrier Atten Bern Atten Autos: 66.51 1.65 1.28 -1.20 </td <td>Ve</td> <td>hicle Speed:</td> <td>40 mph</td> <td></td> <td></td> <td>Vahiala</td> <td>Miy</td> <td></td> <td></td> <td></td> <td></td> <td></td>	Ve	hicle Speed:	40 mph			Vahiala	Miy							
Site Data Autos: 76.3% 11.0% 12.6% 91.86 Barrier Height: 0.0 Get Medium Trucks: 77.3% 11.0% 12.6% 91.86 Barrier Type (0-Wall, 1-Bern): 0.0 Noise Source Elevations (in feet) Noise Source Elevations (in feet) Centerline Dist. to Barrier: 44.0 feet Noise Source Elevations (in feet) Autos: 0.00 Diserver Height (Above Pad): 5.0 feet Medium Trucks: 2.297 Disto Barrier: 0.0 Road Grade: 0.0% Left View: -90.0 degrees Finite Road Fresnel Barrier Atten Berrier Atten Wohse Model Calculations Vehicle Type REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berrier Atten Autos: 66.51 1.65 1.28 -1.20 -4.61 0.000 0.00 Medium Trucks: 77.7 -10.36 1.31 -1.20 -5.50 0.000 0.00 Medium Trucks: 67.5 65.3 62.3 63.9 59.	Near/Far La	ne Distance:	36 feet					<u>م</u>	Dav	Evenina	Night	Dailv		
Barrier Height: 0.0 feet Barrier Type (0-Wail, 1-Berm): 0.0 Centerline Dist. to Barrier: 44.0 feet Centerline Dist. to Observer: 44.0 feet Barrier Distance to Observer: 44.0 feet Road Grade: 0.0% Pad Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees Right View: 90.0 degrees FHWA Notse Model Calculations Traffic Flow VehicleType Traffic Flow Distance: 7.7.2 -10.36 1.31 -12.0 -4.61 Medium Trucks: 82.9 VehicleType Leq Veak VehicleType Leq Day Lage Evening Leq Veak Autos: 66.51 1.65 1.26 -12.0 -4.61 0.000 Medium Trucks: 82.99 -14.30 1.31 -1.20 -5.50 0.0000 0.000	Site Data									•	· ·			
Barrier Type (IV-Wall, 1-Berm): 0.0 Heavy Trucks: 84.4% 3.2% 12.5% 2.33 Centerline Dist. to Diserver: 44.0 feet Autos: 0.000 Noise Source Elevations (in feet) Autos: 0.000 Barrier Type (IV-Wall, 1-Berry): 0.0 feet Autos: 0.000 Medium Trucks: 2.297 Observer: 0.0 feet Autos: 6.040 Medium Trucks: 2.297 Road Elevation: 0.0 feet Autos: 40.460 Medium Trucks: 40.460 Keither View: 90.0 degrees Medium Trucks: 40.460 Medium Trucks: 40.241 WehiceType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bern Atten Autos: 66.51 1.26 1.20 -4.61 0.000 0.000 Medium Trucks: 77.72 -10.36 1.31 -1.20 -4.67 0.000 0.000 Unnitigated Noise Levels (without Topo and barrier attenuation) Userbiologype Leg Deak Hour Leg Devining Leg Right			0.0.4			м						5.79%		
Darker Type (Full Matrix 44.0 feet Centerline Dist. to Darrier: 44.0 feet Barrier Distance to Observer: 0.0 feet Barrier Distance to Observer: 0.0 feet Barrier Distance to Observer: 0.0 feet Pad Elevation: 0.0 feet Road Grade: 0.0 feet Road Grade: 0.0 feet Road Grade: 0.0 feet Left View: -90.0 degrees Right View: -90.0 degrees PHWA Noise Model Calculations Distance Vehicle Type REMEL Traffic Flow Distance Heavy Trucks: 82.9 Heavy Trucks: 82.9 Vehicle Type Leq Nethout Topo and barrier attenuation) Urhitigated Noise Levels (without Topo and barrier attenuation) -5.50 Urhitighted Noise: 68.2 66.3 63.9 68.4 67.5 68.2 66.3 68.3 67.3 Medium Trucks: 73.0 Tots: 68.8 67.5		•												
Noise Source Levations (in feet) Autos: 0.000 Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Elevation: 0.0 feet Road Elevation: 0.0 feet Road Calculation: 0.0 feet Left View: -90.0 degrees Right View: 90.0 degrees Right View: 90.0 degrees VehicleType Traffic Flow Distance VehicleType REMEL Traffic Flow Mates: 66.51 1.65 1.28 -1.20 -4.61 0.000 Medium Trucks: 77.7 -10.36 1.31 -1.20 -4.67 0.000 0.00 Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Evening Leq Night VehicleType Leq Revels 63.3 63.9 55.7 67.7 Medium Trucks: 67.5 65.3 62.3 6														
Barrier Distance to Observer: 0.0 feet Autos: 0.000 Observer Height (Above Pad): 5.0 feet Medium Trucks: 2.297 Pad Elevation: 0.0 feet Heavy Trucks: 8.004 Grade Adjustment: 0.0 Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) 0.006 Road Grade: 0.0% Autos: 40.460 Left View: 90.0 degrees Medium Trucks: 40.460 FHWA Noise Model Calculations Distance Finite Road Fresnel Barrier Atten Bern Atten Autos: 66.51 1.65 1.28 -1.20 -4.61 0.000 0.000 Medium Trucks: 82.99 -14.30 1.31 -1.20 -5.50 0.000 0.000 Unnitigated Noise Levels (without Topo and barrier attenuation) Vehicle Type Leg Davin Stance 68.3 63.9 59.7 67.7 68. Medium Trucks: 67.3 68.3 63.9 59.7 67.7 68. Medium Trucks:						Noise S				eet)				
Observer Height (Above Pad): 5.0 feet Medium Trucks: 2.297 Pad Elevation: 0.0 feet Heavy Trucks: 8.004 Grade Adjustment: 0.0 Road Glevation: 0.0 feet Lare Equivalent Distance (in feet) Autos: 40.460 Left View: -90.0 degrees Medium Trucks: 40.241 Heavy Trucks: 40.262 FHWA Noise Model Calculations Vehicle Type Remut Trucks: 1.20 -4.61 0.000 0.00 Vehicle Type REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Autos: 66.51 1.26 -1.20 -4.61 0.000 0.00 Medium Trucks: 77.72 -10.36 1.31 -1.20 -5.50 0.000 0.00 Medium Trucks: 82.99 -14.30 1.31 -1.20 -5.50 0.000 0.00 Medium Trucks: 68.2 66.3 63.9 59.7 67.7 68. Medium Trucks: 67.5 65.3 59.0 </td <td></td>														
Pad Elevation: 0.0 feet Heavy Trucks: 8.004 Grade Adjustment: 0.0 Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Autos: 40.60 Road Crade 0.0% Lane Equivalent Distance (in feet) Autos: 40.241 Right View: 90.0 degrees Heavy Trucks: 40.241 WehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Autos: 66.51 1.65 1.28 -1.20 -4.61 0.000 0.00 Medium Trucks: 77.72 -10.36 1.31 -1.20 -5.50 0.000 0.00 Unnitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Evening Leq Right Ldn CNEL Autos: 68.2 66.3 63.9 59.7 67.7 68. Medium Trucks: 67.5 65.3 62.3 60.4 67.8 68. VehicleType Leq Reak Hour Leq Day Leq Evening Evening <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>														
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Left View: -90.0 degrees Medium Trucks: 40.241 Right View: 90.0 degrees Heavy Trucks: 40.262 FHWA Noise Model Calculations Emitte Road Fresnel Barrier Atten Bernier Atten VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bernier Atten Autos: 66.51 1.65 1.28 -1.20 -4.61 0.000 0.00 Medium Trucks: 77.72 -10.36 1.31 -1.20 -4.67 0.000 0.00 Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Revening Leq Kight Ldn CNEL Autos: 68.2 66.3 63.9 59.7 67.7 68. Medium Trucks: 67.5 65.3 26.2 68.3 68.4 68.4 68.8 67.8 68.8 67.8 68.8 64.9 72.7 73 Centerline Distance to Noise Contour (in feet) Emiter Interline Distance to Noise Contour (in feet) Cod BA 6			0.0 feet			Lane Eq	uivalen	t Distan	ce (in t	feet)				
Right View 90.0 degrees Heavy Trucks: 40.262 FHWA Noise Model Calculations Heavy Trucks: 40.262 VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Autos: 66.51 1.65 1.20 -4.61 0.000 0.000 Medium Trucks: 77.72 -10.36 1.31 -1.20 -5.50 0.000 0.000 Unnitigated Noise Levels (without Topo and barrier attenuation) Leq Deak Hour Leq Day Leq Revining Leq Night Ldn CNEL VehicleType Lag Peak Hour Leq Day Lag Second 67.7 68. Medium Trucks: 67.5 65.3 62.3 60.4 67.8 68. Heavy Trucks: 68.8 67.3 59.0 60.2 63.3 68.9 60.4 67.8 68.8 Heavy Trucks: 67.3.0<		Road Grade:	0.0%				Auto	s: 40.	460					
FHWA Noise Model Calculations Distance Finite Road Fresnel Barrier Atten Berm Atten VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Autos: 66.51 1.65 1.26 -1.20 -4.61 0.000 0.00 Medium Trucks: 77.72 -10.36 1.31 -1.20 -4.67 0.000 0.00 Heavy Trucks: 82.99 -14.30 1.31 -1.20 -5.50 0.000 0.00 Unntitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leg Peak Hour Leg Day Leg Evening Leg Night Ldn CNEL Autos: 68.2 66.3 63.9 59.7 67.7 68. Medium Trucks: 67.5 65.3 59.0 60.2 68.3 68. Heavy Trucks: 67.5 65.3 59.0 60.2 68.3 68. Vehicle Noise: 73.0 71.1 66.9 64.9 72.7		Left View:	-90.0 degree	es		Mediu	m Truck	s: 40.	241					
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Autos: 66.51 1.65 1.28 -1.20 -4.61 0.000 0.00 Medium Trucks: 77.72 -10.36 1.31 -1.20 -4.67 0.000 0.00 Heavy Trucks: 82.99 -14.30 1.31 -1.20 -5.50 0.000 0.00 Unmitigated Noise Levels (without Topo and barrier attenuation) Leq Reak Hour Leq Day Leq Reak Hour CNEL VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Medium Trucks: 61.5 66.3 63.9 59.7 67.7 68. Heavy Trucks: 61.5 66.3 62.9 60.2 68.3 68. Vehicle Noise: 73.0 71.1 66.9 64.9 72.7 73. Centerline Distance to Noise Contour (in feet)		Right View:	90.0 degree	es		Heav	/y Truck	is: 40.	262					
Autos: 66.51 1.65 1.28 -1.20 -4.61 0.000 0.00 Medium Trucks: 77.72 -10.36 1.31 -1.20 -4.61 0.000 0.00 Heavy Trucks: 82.99 -14.30 1.31 -1.20 -5.50 0.000 0.00 Unmitigated Noise Levels (without Top onal barrier attenuation) Unmitigated Noise Levels (without Top and barrier attenuation) Unmitigated Noise Levels (without Top and barrier attenuation) CNEL Autos: 68.2 66.3 63.9 59.7 67.7 68. Medium Trucks: 67.5 65.3 62.3 60.4 67.8 68. Heavy Trucks: 67.5 65.3 59.0 60.2 68.3 68. Vehicle Noise: 73.0 71.1 66.9 64.9 72.7 73. Centerline Distance to Noise Contour (in feet) Image: Content (in feet)	FHWA Noise Mod	el Calculations												
Medium Trucks: 77.72 -10.36 1.31 -1.20 -4.87 0.000 0.000 Heavy Trucks: 82.99 -14.30 1.31 -1.20 -5.50 0.000 0.000 Unmitigated Noise Levels (without Topo and barrier attenuation) -1.20 -5.50 0.000 0.000 VehicleType Leq Deak Hour Leq Day Leq Revining Leq Night Ldn CNEL Autos: 68.2 66.3 63.9 59.7 67.7 68. Medium Trucks: 67.5 65.3 62.3 60.4 67.8 68. Heavy Trucks: 68.8 67.3 59.0 62.2 68.3 68. Vehicle Noise: 73.0 71.1 66.9 64.9 72.7 73. Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 67 144 309 666 66 66	VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresr	nel	Barrier Atte	en Ber	m Atten		
Heavy Trucks: 82.99 -14.30 1.31 -1.20 -5.50 0.000 0.000 Unnitigated Noise Levels (without Topo and barrier attenuation) Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Mutos: 68.2 66.3 63.9 59.7 67.7 68.8 Medium Trucks: 67.5 65.3 62.3 60.4 67.8 68.8 Heavy Trucks: 68.8 67.3 59.0 60.2 68.3 68.8 Vehicle Noise: 73.0 71.1 66.9 64.9 72.7 73.5 Centerline Distance to Noise Contour (in feet)												0.00		
Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Vehicle Type Leq Night Ldn CNEL Autos: 68.2 66.3 63.9 59.7 67.7 68. Medium Trucks: 67.5 65.3 62.3 60.4 67.8 68.8 Heavy Trucks: 68.8 67.3 59.0 60.2 68.3 68. Vehicle Noise: 73.0 71.1 66.9 64.9 72.7 73. Centerline Distance to Noise Contour (in feet)	Medium Trucks:	77.72	-10.36		1.3	31	-1.20		-4.87	0.0	00	0.00		
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 68.2 66.3 63.9 59.7 67.7 68. Medium Trucks: 67.5 65.3 62.3 60.4 67.8 68. Heavy Trucks: 67.5 65.3 59.0 60.2 68.3 68. Vehicle Noise: 73.0 71.1 66.9 64.9 72.7 73. Centerline Distance to Noise Contour (in feet)	Heavy Trucks:	82.99	-14.30		1.3	31	-1.20		-5.50	0.0	00	0.000		
Autos: 68.2 66.3 63.9 59.7 67.7 68. Medium Trucks: 67.5 65.3 62.3 60.4 67.8 68. Heavy Trucks: 68.8 67.3 59.0 60.2 68.3 68. Vehicle Noise: 73.0 71.1 66.9 64.9 72.7 73. Centerline Distance to Noise Contour (in feet) Image: Contour (in feet) Image: Contour (in feet) Image: Contour (in feet) Image: Contour (in feet) Ldn: 67 144 309 666						,								
Medium Trucks: 67.5 65.3 62.3 60.4 67.8 68. Heavy Trucks: 68.8 67.3 59.0 60.2 68.3 68. Vehicle Noise: 73.0 71.1 66.9 69.9 72.7 73. Centerline Distance to Noise Contour (in feet)					Leq E		,							
Heavy Trucks: 68.8 67.3 59.0 60.2 68.3 68.8 Vehicle Noise: 73.0 71.1 66.9 64.9 72.7 73. Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 67 144 309 666														
Vehicle Noise: 73.0 71.1 66.9 64.9 72.7 73. Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 67 144 309 666			-											
Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 67 144 309 666	· · ·											68.4 73.0		
70 dBA 65 dBA 60 dBA 55 dBA Ldn: 67 144 309 666	Centerline Distan	-)										
	2				70	dBA	65	dBA	6	0 dBA	55	dBA		
CNEL: 70 150 324 698				Ldn:	(67	1	44		309	6	66		
			CI	VEL:		70	1	50		324	6	98		

	FH	WA-RD-77-108	HIGH	NAY NO	DISE PI	REDICTIO	N MO	DEL			
Road Nam	io: Existing W le: Lincoln Av. nt: s/o Pomon	. ,				Project N Job Nur			no		
SITE	SPECIFIC IN	NPUT DATA				NC	ISE N	IODEI		S	
Highway Data				S	ite Con	ditions (H	lard =	10, So	ft = 15)		
Average Daily	Traffic (Adt):	24,057 vehicle	s				/	Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Truc	ks (2 A	xles):	15		
Peak H	lour Volume:	2,406 vehicles	6		He	avy Truck	s (3+ A	xles):	15		
Ve	hicle Speed:	40 mph		V	ehicle	Miv					
Near/Far La	ne Distance:	36 feet				icleType		Day	Evening	Night	Daily
Site Data					VCII			76.3%	11.0%	12.6%	
	rrier Height:	0.0 feet			М	edium Tru		73.3%	9.2%	17.6%	5.79%
Barrier Type (0-W		0.0				leavy Tru	cks:	84.4%	3.2%	12.5%	2.33%
Centerline Dis		44.0 feet									
Centerline Dist.		44.0 feet		N	oise So	ource Ele		•	et)		
Barrier Distance		0.0 feet				Autos:		000			
Observer Height (5.0 feet				m Trucks:		297			
• •	ad Flevation:	0.0 feet			Heav	ry Trucks:	8.0	004	Grade Adj	ustment	0.0
	ad Elevation:	0.0 feet		Li	ane Eq	uivalent L	Distand	e (in f	eet)		
	Road Grade:	0.0%				Autos:	40.4	160			
	Left View:	-90.0 degree	s		Mediu	m Trucks:	40.2	241			
	Right View:	90.0 degree			Heav	y Trucks:	40.2	262			
FHWA Noise Mod	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el I	Barrier Att	en Ber	m Atten
Autos:	66.51	2.12		1.28		-1.20		-4.61	0.0	000	0.000
Medium Trucks:	77.72	-9.89		1.31		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	82.99	-13.83		1.31		-1.20		-5.50	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	r attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Day		Leq Eve	ening	Leq N	ight		Ldn	C	VEL
Autos:	68	3.7	66.7		64.4		60.2		68.2	2	68.7
Medium Trucks:	•.		65.8		62.8		60.8		68.3		68.6
Heavy Trucks:			67.7		59.5		60.7		68.7		68.9
Vehicle Noise:	73	3.4	71.6		67.4		65.4		73.2	2	73.5
Centerline Distant	ce to Noise C	ontour (in feet)					-			
			∟	70 dE		65 dE		6	0 dBA		dBA
			Ldn:	72		154			333		16
		CI	VEL:	75		162			348	7	50

Tuesday, July 02, 2019

Tuesday, July 02, 2019

Tuesday, July 02, 2019

120

	FHV	/A-RD-77-108 H	IGHWAY	NOISE PE	REDICTION	MODEL		i i
	o: Existing Wi	thout Project				me: Palon		
	e: Second St.				Job Num	ber: 11795		
Road Segmer	nt: w/o Parkrid	ge Av.						
	SPECIFIC IN	PUT DATA					L INPUTS	
Highway Data				Site Con	ditions (Ha	ard = 10, S	oft = 15)	
Average Daily	Traffic (Adt):	9,969 vehicles				Autos	15	
Peak Hour	Percentage:	10%			dium Truck			
Peak H	our Volume:	997 vehicles		He	avy Trucks	(3+ Axles)	: 15	
	hicle Speed:	35 mph		Vehicle I	Mix			
Near/Far Lar	ne Distance:	10 feet		Veh	icleType	Day	Evening	Night Daily
Site Data					Aut	os: 76.3%	6 11.0%	12.6% 91.88%
Bar	rier Height:	0.0 feet		Me	edium Truc	ks: 73.3%	6 9.2%	17.6% 5.79%
Barrier Type (0-W	•	0.0		ŀ	leavy Truc	ks: 84.4%	6 3.2%	12.5% 2.33%
Centerline Dis		30.0 feet		Noise So	ource Eleva	ations (in i	eet)	
Centerline Dist.		30.0 feet			Autos:	0.000	,	
Barrier Distance		0.0 feet		Mediur	n Trucks:	2.297		
Observer Height (,	5.0 feet		Heav	y Trucks:	8.004	Grade Adju	stment: 0.0
	d Elevation:	0.0 feet		Long Er	uivalent Di	iatanaa (in	fa a 4)	
	ad Elevation: Road Grade:	0.0 feet 0.0%	-	Lane Eq	Autos:	30.000	leel)	
ŗ	Left View:	-90.0 degrees		Modiu	n Trucks:	29.704		
	Right View:	90.0 degrees			y Trucks:	29.733		
FHWA Noise Mode	el Calculation	5						
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atter	n Berm Atten
Autos:	64.30	-1.13	3.2	22	-1.20	-4.49	0.00	0.00
Medium Trucks:	75.75	-13.13	3.2	29	-1.20	-4.86	0.00	0.00
Heavy Trucks:	81.57	-17.08	3.2	28	-1.20	-5.77	0.00	0.00
Unmitigated Noise				,				
	Leq Peak Hou			vening	Leq Nig		Ldn	CNEL
Autos: Medium Trucks:	65 64			60.9 59.6		56.7 57.6	64.7 65.0	65.
Heavy Trucks:	64 66			59.6 56.8		57.6 58.0	65.0 66.0	65. 66.
Vehicle Noise:	70			56.8 64.1		58.0 62.2	70.1	56. 70.
Centerline Distance				04.1		02.2	70.1	70.
Centerinie Distanc	e lo noise co	nitour (in feet)	70	dBA	65 dB/	4	60 dBA	55 dBA
		1 d		30	65	· .	141	303
		CNE		32	68		147	317

	FHW	/A-RD-77-108	HIGH	IWAY N	OISE PR	EDICTI	ON MO	DEL			
Scenario: Exist Road Name: Seco	ond St.					Project I Job Ni					
Road Segment: e/o F											
SITE SPECI	FIC IN	PUT DATA							L INPUT	S	
Highway Data				3	Site Cond	ditions (Hard =	10, Se			
Average Daily Traffic (Adt):	8,712 vehicle	es					Autos:	15		
Peak Hour Percent		10%				lium Tru					
Peak Hour Volu	ıme:	871 vehicle	s		Hea	avy Truc	ks (3+)	Axles):	15		
Vehicle Sp		35 mph			/ehicle N	lix					
Near/Far Lane Dista	nce:	10 feet		-		cleType		Dav	Evening	Night	Daily
Site Data							utos:	76.3%		12.6%	
Barrier He	iaht [.]	0.0 feet			Me	dium Tri	ucks:	73.3%	9.2%	17.6%	5.79
Barrier Type (0-Wall, 1-Be	•	0.0			н	leavy Tri	ucks:	84.4%	3.2%	12.5%	2.33
Centerline Dist. to Ba		30.0 feet				-					
Centerline Dist. to Obse		30.0 feet		٨	loise So				eet)		
Barrier Distance to Obse		0.0 feet				Autos		000			
Observer Height (Above F		5.0 feet				n Trucks		297			
Pad Eleva		0.0 feet			Heavy	/ Trucks	: 8.	004	Grade Ad	ljustment.	: 0.0
Road Eleva		0.0 feet		L	ane Equ	iivalent	Distan	ce (in	feet)		
Road Gr		0.0%				Autos		000	,		
/ eft \		-90.0 degree	20		Mediun	1 Trucks		704			
Right \	/iew:	90.0 degree			Heavy	/ Trucks		733			
FHWA Noise Model Calcu	lations	;									
VehicleType REM	EL	Traffic Flow	Dis	stance	Finite I		Fresi		Barrier At	ten Ber	m Atter
	64.30	-1.71		3.22		-1.20		-4.49		000	0.00
	75.75	-13.72		3.29		-1.20		-4.86		000	0.00
Heavy Trucks:	81.57	-17.66		3.28	1	-1.20		-5.77	0.0	000	0.00
Unmitigated Noise Levels					· _						
VehicleType Leq Pe				Leq Ev		Leq I			Ldn	-	NEL
Autos:	64.		62.6		60.3		56.		64.		64
Medium Trucks:	64.		62.0		59.0		57.0		64.		64
Heavy Trucks:	66.		64.5		56.2		57.4		65.	-	65
Vehicle Noise:	69.	-	67.9		63.6		61.0	6	69.	5	69
Centerline Distance to No	oise Co	ntour (in feet)					-			
			L	70 d		65 c		6	60 dBA		dBA
			Ldn:	28		60			128		77
			NFI :	29		62			134		89

Tuesday, July 02, 2019

Road Nan	rio: Existing Wi ne: Second St. ent: w/o Pacific	,					Name: I umber: ·				
	SPECIFIC IN	IPUT DATA		_						5	
Highway Data				3	Site Con	aitions	•		,		
Average Daily	, ,	9,776 vehicle	es					Autos:			
	Percentage:	10% 978 vehicle:	_				ucks (2 A cks (3+ A				
	Hour Volume:		S		Hea	avy iru	CKS (3+ A	(xies):	15		
	ehicle Speed: ane Distance:	35 mph		۷	/ehicle l	Nix					
Near/Far La	ane Distance:	10 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						,	Autos:	76.3%	5 11.0%	12.6%	91.88
Ba	rrier Height:	0.0 feet				edium T		73.3%		17.6%	5.79
Barrier Type (0-V	Vall, 1-Berm):	0.0			H	leavy T	rucks:	84.4%	3.2%	12.5%	2.33
Centerline D	ist. to Barrier:	30.0 feet			Voise So	urce F	levation	s (in f	eet)		
Centerline Dist.	to Observer:	30.0 feet		-		Auto		000			
Barrier Distance	to Observer:	0.0 feet			Mediur	n Truck		97			
Observer Height	(Above Pad):	5.0 feet				y Truck		04	Grade Adj	ustment	: 0.0
-	ad Elevation:	0.0 feet									
	ad Elevation:	0.0 feet		L	ane Equ			· ·	feet)		
	Road Grade:	0.0%				Auto					
	Left View:	-90.0 degree				n Truck					
	Right View:	90.0 degree	es		Heav	y Truck	s: 29.7	33			
FHWA Noise Moa	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar		Finite		Fresn		Barrier Atte		m Atter
Autos:		-1.21		3.22		-1.20		-4.49	0.0		0.00
Medium Trucks:		-13.22		3.29		-1.20		-4.86	0.0		0.00
Heavy Trucks:	81.57	-17.16		3.28	3	-1.20		-5.77	0.0	00	0.0
Unmitigated Nois								r			
VehicleType	Leq Peak Hou			eq Ev	rening	Leq	Night		Ldn		NEL
Autos:			63.1		60.8		56.6		64.6		65
Medium Trucks:	• ·		62.5		59.5		57.5		64.9		65
Heavy Trucks:		-	65.0		56.7		57.9		66.0		66
Vehicle Noise:			68.4		64.1		62.1		70.0		70
Centerline Distan	ce to Noise Co	ontour (in feet)					-			
			ட	70 d			dBA	6	60 dBA		dBA
			Ldn:	30	1	6	4		139	2	99
			VFI :	31		-	57		145		13

	FHV	VA-RD-77-108	HIGHW	AY N	NOISE PF	REDICTI	ON MOI	DEL			
Scenario: Ex Road Name: Se Road Segment: e/o	cond St.	,					Name: F umber: 1		ino		
SITE SPEC	IFIC IN	PUT DATA				N	OISE N	IODE	L INPUT	s	
Highway Data					Site Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily Traffic	(Adt):	10,473 vehicle	s					Autos:	15		
Peak Hour Perce	entage:	10%			Mee	dium Tru	icks (2 A	xles):	15		
Peak Hour V	olume:	1,047 vehicles			Hea	avy Truc	ks (3+ A	xles):	15		
Vehicle 3	Speed:	35 mph			Vehicle I	114					
Near/Far Lane Dis	stance:	10 feet		+		cleType		Day	Evening	Night	Daily
Site Data					VCIII			76.3%	~	12.6%	
Barrier H	loight	0.0 feet			Me	edium Tr	ucks:	73.3%	9.2%	17.6%	5.79%
Barrier Type (0-Wall, 1-		0.0			H	leavy Tr	ucks:	84.4%	3.2%	12.5%	2.33%
Centerline Dist. to E		30.0 feet		-	Noise So	uree El	ovetion	/in 6	a.41		
Centerline Dist. to Ob	server:	30.0 feet		Ľ	NUISE 30	Autos			el)		
Barrier Distance to Ob	server:	0.0 feet			Madium	n Trucks					
Observer Height (Above	e Pad):	5.0 feet				y Trucks			Grade Ad	liustmon	t: 0.0
Pad Ele	vation:	0.0 feet			Tieav	y mucha	. 0.u	/04	Orade Ha	justition	0.0
Road Ele	vation:	0.0 feet		1	Lane Equ	uivalent	Distanc	e (in	feet)		
Road	Grade:	0.0%				Autos	: 30.0	000			
Lef	t View:	-90.0 degree	s		Mediur	n Trucks	3: 29.7	04			
Righ	t View:	90.0 degree	S		Heav	y Trucks	: 29.7	733			
FHWA Noise Model Cal	culations	s									
VehicleType RE	MEL	Traffic Flow	Distar	nce	Finite	Road	Fresn	el	Barrier At	ten Be	rm Atten
Autos:	64.30	-0.91		3.2	2	-1.20		4.49	0.0	000	0.00
Medium Trucks:	75.75	-12.92		3.2	-	-1.20		4.86		000	0.00
Heavy Trucks:	81.57	-16.86		3.2	8	-1.20		-5.77	0.0	000	0.00
Unmitigated Noise Leve											
<i>,</i> , ,	Peak Hou	1 1		eq E	vening	Leq I			Ldn	-	NEL
Autos:	65.		3.4		61.1		56.9		64.		65
Medium Trucks:	64.		62.8		59.8		57.8		65.:	-	65.
Heavy Trucks:	66.	-	5.3		57.0		58.2		66.	-	66.4
Vehicle Noise:	70.	.6 6	68.7		64.4		62.4		70.3	3	70.6
Centerline Distance to	Noise Co	ontour (in feet)									
					dBA	65 0		6	60 dBA		5 dBA
			dn:						145		313
			IFI :	-	1 3	6			145		327

Tuesday, July 02, 2019

	FH\	VA-RD-77-108	HIGHW	AY NOISE	PREDICTIO	ON MODI	EL			
Scenario	: Existing Wi	thout Project			Project I	<i>lame:</i> Pa	alomin	0		
Road Name	e: Second St.				Job NL	mber: 11	795			
Road Segmen	t: w/o Mounta	ain Av.								
SITE S Highway Data	PECIFIC IN	IPUT DATA		Site C	N conditions (INPUT	S	
Average Daily T	roffic (Adt):	11.456 vehicl	20	0.000	ionanaene (itos:	15		
Peak Hour F	. ,	10%	55		Medium Tru			15		
	our Volume:	1.146 vehicle	s.		Heavy Truc			15		
	icle Speed:	35 mph	0				,.			
Near/Far Lan		10 feet			le Mix	-	1	1		
				V	/ehicleType			Evening	Night	Daily
Site Data				_			6.3%	11.0%	12.6%	
Barr	rier Height:	0.0 feet			Medium Tri		3.3%	9.2%	17.6%	
Barrier Type (0-Wa		0.0			Heavy Tri	ICKS: 84	4.4%	3.2%	12.5%	2.339
Centerline Dist		30.0 feet		Noise	Source Ele	vations	(in fee	et)		
Centerline Dist. to		30.0 feet			Autos	0.00	0	,		
Barrier Distance to		0.0 feet		Me	dium Trucks	2.29	7			
Observer Height (A	,	5.0 feet		H	eavy Trucks	8.00	4 0	Grade Adj	ustment	: 0.0
	d Elevation:	0.0 feet								
	d Elevation:	0.0 feet		Lane	Equivalent			et)		
R	oad Grade:	0.0%			Autos					
	Left View:	-90.0 degre			dium Trucks					
	Right View:	90.0 degre	es	H	eavy Trucks	29.73	33			
FHWA Noise Mode		-								
VehicleType	REMEL	Traffic Flow	Distan		ite Road	Fresnel		Barrier Atte		rm Atten
Autos:	64.30	-0.52		3.22	-1.20		1.49	0.0		0.00
Medium Trucks:	75.75	-12.53		3.29	-1.20		1.86	0.0		0.00
Heavy Trucks:	81.57	-16.47		3.28	-1.20	-5	5.77	0.0	00	0.00
VehicleType					<u>´</u>	Undert		l dn		NFI
Autos:	Leq Peak Hou 65		63.8	eq Evening	y Leq N 1.5	11gnt 57.3	1	Lan 65.3	-	INEL 65.
Medium Trucks:	65		63.2		1.5	58.2		65.6		65
Heavy Trucks:	67		65.6		7.4	58.6		66.6		66.
Vehicle Noise:	70		69.1		1.8	62.8		70.7		71.
			1							
Centerline Distance	e to Noise Co	ontour (in feet								
Centerline Distance	e to Noise Co	ontour (in feet	, 	70 dBA	65 a	BA	60) dBA	55	dBA
Centerline Distance	e to Noise Co	ontour (in feet	, Ldn:	70 dBA 33	65 c			0 dBA 154		dBA 332

	FHV	VA-RD-77-108 H	ligh	IWAY NO	OISE PF	REDICTIO	ON MO	DEL			
Scenar	io: Existing Wi	thout Project				Project I	lame: I	Palom	no		
Road Nam	e: Second St.					Job Nu	mber: *	11795			
Road Segme	nt: e/o Mountai	in Av.									
	SPECIFIC IN	PUT DATA							L INPUT	s	
Highway Data				s	ite Con	ditions (Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	12,190 vehicles	5					Autos:	15		
Peak Hour	Percentage:	10%			Mee	dium Tru	cks (2 A	xles):	15		
Peak H	lour Volume:	1,219 vehicles			Hea	avy Truck	(3+ A	xles):	15		
Ve	hicle Speed:	35 mph		V	ehicle l	Mix					
Near/Far La	ne Distance:	36 feet		-		icleType	1	Day	Evening	Night	Daily
Site Data					1011			76.3%			91.889
Po	rrier Height:	0.0 feet			Me	edium Tru	icks:	73.3%		17.6%	5.79%
Barrier Type (0-W	•	0.0 1001			F	leavy Tru	icks:	84.4%	3.2%	12.5%	2.339
Centerline Di		44.0 feet				,					
Centerline Dist.		44.0 feet		N	loise So	ource Ele			eet)		
Barrier Distance		0.0 feet				Autos.		000			
Observer Height		5.0 feet				n Trucks.		297			
	ad Flevation:	0.0 feet			Heav	y Trucks.	8.0	004	Grade Ad	justment	0.0
Ro	ad Elevation:	0.0 feet		L	ane Equ	uivalent	Distand	e (in i	feet)		
	Road Grade:	0.0%				Autos.	40.4	160	,		
	Left View:	-90.0 degrees	s		Mediur	n Trucks.	40.2	241			
	Right View:	90.0 degrees			Heav	y Trucks.	40.2	262			
FHWA Noise Mod	el Calculation:	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	64.30	-0.25		1.28		-1.20		-4.61	0.0	000	0.00
Medium Trucks:	75.75	-12.26		1.31		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	81.57	-16.21		1.31		-1.20		-5.50	0.0	000	0.00
Unmitigated Nois	e Levels (with	out Topo and b	arrie	er attenu	uation)						
VehicleType	Leq Peak Hou	1 1		Leq Ev		Leq N			Ldn		VEL
Autos:	64.		2.2		59.8		55.6		63.6		64.
Medium Trucks:	63.		1.5		58.4		56.5		63.9		64.
Heavy Trucks:			3.9		55.7		56.9		64.9		65.
Vehicle Noise:		- •	7.4		63.1		61.1		69.0)	69.
Centerline Distan	ce to Noise Co	ontour (in feet)		70.1							
			. L	70 di		65 d		6	0 dBA		dBA
			.dn: IEL:	38		81			174 182		75 93
				39		85					

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL Project Name: Palomino Job Number: 11795 Scenario: Existing Without Project Road Name: Second St. Road Segment: e/o Dwy. 8 SITE SPECIFIC INPUT DATA NOISE MODEL INPUTS Highway Data Site Conditions (Hard = 10, Soft = 15) Autos: 15 Average Daily Traffic (Adt): 12,190 vehicles Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Peak Hour Volume: 1,219 vehicles Heavy Trucks (3+ Axles): 15 Vehicle Speed: 35 mph Vehicle Mix Near/Far Lane Distance: 36 feet pe Day Evening Night Daily Autos: 76.3% 11.0% 12.6% 91.88% VehicleType Site Data Medium Trucks: 73.3% 9.2% 17.6% 5.79% Barrier Height: Barrier Type (0-Wall, 1-Berm): 0.0 feet 0.0 Heavy Trucks: 84.4% 3.2% 12.5% 2.33% Centerline Dist. to Barrier: Centerline Dist. to Observer: 44.0 feet Noise Source Elevations (in feet) 44.0 feet 0.000 Autos: Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297 Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.004 Grade Adjustment: 0.0 Pad Elevation: 0.0 feet Lane Equivalent Distance (in feet) Road Elevation: 0.0 feet Autos: Medium Trucks: 40.460 40.241 Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees Heavy Trucks: 40.262 FHWA Noise Model Calculations VehicleType REMEL
 MEL
 Traffic Flow
 Distance
 Finite Road

 64.30
 -0.25
 1.28
 -1.20
 Fresnel Barrier Atten Berm Atten Autos Medium Trucks: 75.75 -12.26 1.31 -1.20 -4.87 0.000 Heavy Trucks: 81.57 -16.21 1.31 -1.20 -5.50 0.000 Unmitigated Noise Levels (without Topo and barrier attenuation) Leq Night 55.6
 VehicleType
 Leq Peak Hour
 Leq Day
 Leq Evening

 Autos:
 64.1
 62.2
 59.8
 Ldn CNEL 63.6 Medium Trucks: 63.6 61.5 58.4 56.5 63.9 55.7 Heavy Trucks: 65.5 63.9 56.9 64.9 Vehicle Noise: 69.2 67.4 63.1 61.1 69.0

70 dBA

38

39

Ldn:

CNEL:

65 dBA

81

85

60 dBA

174

182

Scenario: Existing Without Project Road Name: Project Name: Palomino Job Number: 11795 Road Segment: Wolfset Mamer Av. Job Number: 11795 Site Specific INPUT DATA NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15) Average Daily Traffic (Adt): 17,237 vehicles Autos: 15 Peak Hour Porentage: 10% Medium Trucks (2 Axles): 15 Vehicle Speed: 35 mph Heavy Trucks (3+ Axles): 15 Vehicle Max Vehicle Max Vehicle Max Site Data Autos: 76.3% 11.0% 12.6% Barrier Height: 0.0 feet Medium Trucks: 73.3% 9.2% 17.6% Barrier Type (0-Wail, 1-Berm): 0.0 Feet Autos: 76.3% 11.0% 12.6% Centerline Dist. to Observer: 4.0 feet Autos: 0.000 Medium Trucks: 2.297 Observer Height (Abov Pad): 5.0 feet Heavy Trucks: 8.04 Grade Adjustment: 0 Pad Elevation: 0.0 feet Lane Equivalent Distance (in feet) Heavy Trucks: 8.04G Grade Adjustment: 0 Road Grade: 0.0% Autos: 4.0460 4.0460 4.0460
Road Segment: Wio Hammer Av. SITE SPECIFIC INPUT DATA NOISE MODEL INPUTS Highway Data Site Conditions (Hard = 10, Soft = 15) Average Daily Traffic (Adt): 17.237 vehicles Autos: 15 Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Peak Hour Volume: 1,724 vehicles Heavy Trucks (34 Axles): 15 Vehicle Speed: 35 mph Vehicle Mix Near/Far Lane Distance: 36 feet Vehicle Mix Site Data Autos:: 73.3% 9.2% 17.6% Barrier Type (0-Wall, 1-Berm): 0.0 feet Medium Trucks: 73.3% 9.2% 17.6% Centerline Dist. to Dbserver: 0.0 feet Medium Trucks: 8.44% 3.2% 12.5% Deserver Height (Above Pad): 5.0 feet Autos:: 0.00 Medium Trucks: 8.004 Gobserver: 0.0 feet Heavy Trucks: 8.004 Grade Adjustment: 0 Pad Elevation: 0.0 feet Lane Equivalent Distance (in feet) Lane Equivalent Distance (in feet)
SITE SPECIFIC INPUT DATA NOISE MODEL INPUTS Highway Data Site Conditions (Hard = 10, Soft = 15) Average Daily Traffic (Adt): 17,237 vehicles Peak Hour Percentage: 10% Vehicle Speed: 35 mph Vehicle Speed: 35 mph Vehicle Speed: 36 feet Vehicle Type Day Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 44.0 feet Barrier Distance to Observer: 0.0 feet Barrier Distance to Observer: 0.0 feet Pad Elevation: 0.0 feet Rode Elevation: 0.0 feet Autos: 0.00 Heavy Trucks: 8.004 Grade Elevation: 0.0 feet
Highway Data Site Conditions (Hard = 10, Soft = 15) Average Daily Traffic (Adt): 17.237 vehicles Autos: 15 Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Peak Hour Volume: 1,724 vehicles Medium Trucks (2 Axles): 15 Vehicle Speed: 35 mph Heavy Trucks (3 + Axles): 15 Site Data Vehicle Type Day Evening Night 11 Barrier Height: 0.0 feet Medium Trucks: 73.3% 9.2% 17.6% Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 44.0 feet Noise Source Elevations (in feet) Barrier Distance to Observer: 0.0 feet Medium Trucks: 0.000 Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297 Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.004 Grade Adjustment: Road Elevation: 0.0 feet Lane Equivalent Distance (in feet)
Average Daily Traffic (Adt): 17,237 vehicles Average Daily Traffic (Adt): 17,237 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,724 vehicles Vehicle Speed: 35 mph Near/Far Lane Distance: 36 feet Site Data Autos: 15 Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 44.0 feet Autos: 0.0 leet Barrier Height: 0.0 leet Deserver Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Roda Elevation: 0.0 feet
Barier Height: 0.0 10% Barrier Height: 0.0 10% Barrier Jype (0-Wail, 1-Berm): 0.0 12.6% Centerline Dist. to Observer: 44.0 feet Barrier Jistance to Observer: 0.0 feet Barrier Jost and Elevation: 5.0 feet Peak Hour Precention: 0.0 feet Barrier Jist. to Observer: 0.0 feet Barrier Jost and Barrier Jost and Barrier 4edynt: 0.0 feet Barrier Jype (0-Wail, 1-Berm): 0.0 feet Barrier Jost and Barrier 4edynt: 0.0 feet Barrier Jost and Barrier 4edynt: 0.0 feet Barrier Jype (0-Wail, 1-Berm): 0.0 feet Barrier Jost and Barrier: 44.0 feet Barrier Jost and Barrier: 44.0 feet Barrier Jost and Barrier: 0.0 feet Barrier Jost ande Elevation: </th
Beak Hour Volume: 1,724 vehicles Vehicle Speed: 35 mph Near/Far Lane Distance: 36 feet Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Dasrier: 44.0 feet Barrier Distance to Observer: 0.0 feet Barrier Distance to Observer: 0.0 feet Pad Elevation: 0.0 feet Barrier Distance to Observer: 0.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet
Vehicle Speed: 35 mph Near/Far Lane Distance: 36 feet Site Data Vehicle Type Day Evening Night 10 Barrier Height: 0.0 feet Medium Trucks: 7.3% 9.2% 17.6% 17.6% Barrier Type (0-Wall, 1-Berm): 0.0 Medium Trucks: 7.3% 9.2% 17.6% 17.6% Barrier Type (0-Wall, 1-Berm): 0.0 Medium Trucks: 7.3% 9.2% 17.6% 17.6% Barrier Jost to Observer: 0.0 leet Molse Source Elevations (in feet) 100 100 Observer Height (Above Pad): 5.0 leet Autos: 0.00 100 Pad Elevation: 0.0 leet Heavy Trucks: 8.04 Grade Adjustment: 0 Road Elevation: 0.0 leet Lane Equivalent Distance (in feet) 100
Near/Far Lane Distance: 36 feet Venicle Mix Day Evening Night I Site Data Autos: 76.3% 11.0% 12.6% 9 Barrier Height: 0.0 feet Medium Trucks: 73.3% 9.2% 17.6% 9 Barrier Type (0-Wall, 1-Berm): 0.0 100 12.6% 9 Centerline Dist. to Barrier: 44.0 feet Heavy Trucks: 8.4% 3.2% 12.5% 9 Barrier Dist. to Doserver: 44.0 feet Noise Source Elevations (in feet) 10.0% 12.5%
Near/Far Lane Distance: 36 feet VehicleType Day Evening Night 1 Site Data Autos: 76.3% 11.0% 12.6% Barrier Height: 0.0 feet Medium Trucks: 73.3% 9.2% 17.6% Barrier Type (0-Wall, 1-Berm): 0.0 feet Noise Source Elevations (in feet) Centerline Dist. to Diserver: 4.0 feet Noise Source Elevations (in feet) Barrier Tistance to Observer: 0.0 feet Medium Trucks: 2.297 Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.04 Grade Adjustment: Pad Elevation: 0.0 feet Lane Equivalent Distance (in feet)
Site Data Autos: 76.3% 11.0% 12.6% 9 Barrier Height: 0.0 feet Medium Trucks: 73.3% 9.2% 17.6% 9 Barrier Type (0-Wall, 1-Berm): 0.0 Heavy Trucks: 73.3% 9.2% 17.6% 9 Centerline Dist. to Dbserver: 44.0 feet Noise Source Elevations (in feet) Autos: 0.000 Deserver Height (Above Pad): 5.0 feet Autos: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0 Pad Elevation: 0.0 feet Lane Equivalent Distance (in feet) Lane Equivalent Distance (in feet)
Barrier Type (J-Wall, 1-Berm): 0.0 Heavy Trucks: 84.4% 3.2% 12.5% Centerline Dist. to Diserver: 44.0 feet Noise Source Elevations (in feet) Centerline Dist. to Observer: 44.0 feet Autos: 0.000 Barrier Tyse for the point of the po
Barrier Type (0-Wall, 1-Bern): 0.0 Heavy Trucks: 84.4% 3.2% 12.5% Centerline Dist. to Darrier: 44.0 feet Noise Source Elevations (in feet) Centerline Dist. to Diserver: 40.0 feet Autos: 0.000 Barrier Distance to Observer: 0.0 feet Autos: 0.000 Deserver Height (Above Pad): 5.0 feet Medium Trucks: 8.04 Grade Adjustment: 0 Road Elevation: 0.0 feet Lane Equivalent Distance (in feet)
Centerline Dist. to Barrier: 44.0 feet Noise Source Elevations (in feet) Centerline Dist. to Observer: 44.0 feet Autos: 0.000 Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297 Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.004 Grade Adjustment: Pad Elevation: 0.0 feet Lane Equivalent Distance (in feet)
Centerline Dist. to Observer: 44.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Contentine Dist. to Observer: 44.0 feet Medium Trucks: 2.297 Heavy Trucks: 8.004 Contentine Dist. to Observer: 44.0 feet Medium Trucks: 2.297 Heavy Trucks: 8.004 Contentine Dist. to Observer: 44.0 feet Medium Trucks: 2.297 Heavy Trucks: 8.004 Contentine Dist. to Observer: 44.0 feet Medium Trucks: 2.297 Heavy Trucks: 8.004 Contentine Dist. to Observer: 44.0 feet Medium Trucks: 2.297 Heavy Trucks: 8.004 Contentine Dist. to Observer: 44.0 feet Medium Trucks: 2.297 Heavy Trucks: 8.004 Contentine Dist. to Observer: 44.0 feet Medium Trucks: 44.0 feet Medi
Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297 Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.004 Grade Adjustment: 0 Pad Elevation: 0.0 feet Lane Equivalent Distance (in feet) Lane Equivalent Distance (in feet)
Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.004 Grade Adjustment: 0 Pad Elevation: 0.0 feet Lane Equivalent Distance (in feet) 0
Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Lane Equivalent Distance (in feet)
Road Grade: 0.0% Autos: 40.460
Left View: -90.0 degrees Medium Trucks: 40.241
Right View: 90.0 degrees Heavy Trucks: 40.262
FHWA Noise Model Calculations
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm
Autos: 64.30 1.25 1.28 -1.20 -4.61 0.000
Medium Trucks: 75.75 -10.75 1.31 -1.20 -4.87 0.000
Heavy Trucks: 81.57 -14.70 1.31 -1.20 -5.50 0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNE
Autos: 65.6 63.7 61.3 57.1 65.1
Medium Trucks: 65.1 63.0 60.0 58.0 65.4
Heavy Trucks: 67.0 65.4 57.2 58.4 66.4
Vehicle Noise: 70.7 68.9 64.6 62.6 70.5
Centerline Distance to Noise Contour (in feet)
70 dBA 65 dBA 60 dBA 55 dB
Ldn: 47 102 220 473
CNEL: 49 107 230 495

EHWA-BD-77-109 HIGHWAY NOISE PREDICTION MODE

Tuesday, July 02, 2019

Centerline Distance to Noise Contour (in feet)

Tuesday, July 02, 2019

Tuesday, July 02, 2019

122

0.000

0.000

0.000

64.1

64.2

65.1

69.3

55 dBA

375

393

	FHV	VA-RD-77-108 H	IIGHWAY	NOISE	PREDICTIO			
	o: Existing Wi	thout Project				ame: Palon		
Road Nam					Job Nur	nber: 11795	5	
Road Segmer	nt: w/o Parkrid	ge Av.						
	SPECIFIC IN	IPUT DATA					EL INPUTS	
Highway Data				Site C	onditions (H	ard = 10, S	oft = 15)	
Average Daily	Traffic (Adt):	16,397 vehicles	6			Autos	: 15	
Peak Hour	Percentage:	10%			Aedium Truck			
Peak H	our Volume:	1,640 vehicles		ŀ	Heavy Trucks	(3+ Axles)	: 15	
	hicle Speed:	35 mph		Vehicl	e Mix			
Near/Far Lar	ne Distance:	10 feet		V	ehicleType	Day	Evening	Night Daily
Site Data					Aut	os: 76.3%	6 11.0%	12.6% 91.889
Bar	rier Height:	0.0 feet		1	Medium Truc	ks: 73.3%	6 9.2%	17.6% 5.79
Barrier Type (0-W	all, 1-Berm):	0.0			Heavy Truc	ks: 84.4%	6 3.2%	12.5% 2.33
Centerline Dis		30.0 feet		Noise	Source Elev	ations (in	feet)	
Centerline Dist.		30.0 feet			Autos:	0.000	,	
Barrier Distance		0.0 feet		Med	ium Trucks:	2.297		
Observer Height (J	,	5.0 feet		He	avy Trucks:	8.004	Grade Adju	stment: 0.0
	d Elevation:	0.0 feet		1			6	
	ad Elevation:	0.0 feet		Lane	Equivalent D Autos:	30.000	leel)	
r	Road Grade: Left View:	0.0%		Mag	ium Trucks:	29.704		
	Right View:	-90.0 degrees 90.0 degrees			avy Trucks:	29.704		
FHWA Noise Mode	- Calculation	•						
VehicleType	REMEL	Traffic Flow	Distance	Fini	te Road	Fresnel	Barrier Atte	n Berm Atter
Autos:	64.30	1.03	3.	22	-1.20	-4.49	0.00	0.00
Medium Trucks:	75.75	-10.97	3.	29	-1.20	-4.86	0.00	0.00
Heavy Trucks:	81.57	-14.92	3.	28	-1.20	-5.77	0.00	0.00
Unmitigated Noise					<i>,</i>	-		
	Leq Peak Hou			Evening			Ldn	CNEL
Autos:	67		5.4	63		58.8	66.9	67.
Medium Trucks:	66		4.7	61		59.8	67.2	67.
Heavy Trucks:	68		7.2	59		60.2	68.2	68.
Vehicle Noise:	72		0.7	66	.3	64.4	72.2	72.
Centerline Distance	e to Noise Co	ontour (in feet)	7/) dBA	65 dB	Α	60 dBA	55 dBA
		1	dn:	42	91	~	196	422
		CN		42	95		205	422
		014			55		200	

FH	WA-RD-77-108 H	IGHWA	Y NOIS	PREDICTI	ON MOI	DEL			
Scenario: Existing W Road Name: First St.	ithout Project				Name: I umber: '		ino		
Road Segment: e/o Parkrid	lge Av.			300 14	umber.	11793			
SITE SPECIFIC II	NPUT DATA						L INPUT	s	
Highway Data			Site	Conditions	(Hard =	10, Sc	oft = 15)		
Average Daily Traffic (Adt):	15,837 vehicles					Autos:	15		
Peak Hour Percentage:	10%			Medium Tru	icks (2 A	(xles):	15		
Peak Hour Volume:	1,584 vehicles			Heavy Truc	:ks (3+ A	(xles):	15		
Vehicle Speed:	35 mph		Vohi	cle Mix					
Near/Far Lane Distance:	36 feet			VehicleType		Day	Evening	Night	Daily
Site Data						76.3%		12.6%	
			-	, Medium Tr		73.3%		17.6%	
Barrier Height:	0.0 feet			Heavy Tr		84.4%		12.5%	
Barrier Type (0-Wall, 1-Berm):	0.0			neavy n	uono.	04.470	0.270	12.070	2.00
Centerline Dist. to Barrier:	44.0 feet		Nois	e Source El	evation	s (in fe	eet)		
Centerline Dist. to Observer:	44.0 feet			Autos	s: 0.0	000			
Barrier Distance to Observer:	0.0 feet		Me	dium Trucks	s: 2.2	297			
Observer Height (Above Pad):	5.0 feet		F	leavy Trucks	s: 8.0	004	Grade Ad	justment.	0.0
Pad Elevation:	0.0 feet		1	Faultistant	Distant	(!)	(4)		
Road Elevation:	0.0 feet		Lane	Equivalent			reet)		
Road Grade:	0.0%			Autos					
Left View:	-90.0 degrees			dium Trucks					
Right View:	90.0 degrees		F	leavy Trucks	s: 40.2	262			
FHWA Noise Model Calculation									
VehicleType REMEL	Traffic Flow	Distanc		nite Road	Fresn		Barrier Att		m Attei
Autos: 64.30			1.28	-1.20		-4.61		000	0.0
Medium Trucks: 75.75			1.31	-1.20		-4.87		000	0.0
Heavy Trucks: 81.57			1.31	-1.20		-5.50	0.0	000	0.0
Unmitigated Noise Levels (with		-							
VehicleType Leq Peak Ho			Evenin		Night		Ldn		VEL
	5.3 63			0.9	56.7		64.8		65
	1.7 62			9.6	57.6		65.		65
	6.6 65		-	6.8	58.0		66.1		66
).4 68	.6	6	i4.2	62.3	<i>i</i>	70.1		70
Centerline Distance to Noise C	ontour (in feet)	-	0 dBA	05	dBA		0 dBA	57	dBA
	Lo		45		ава 6	6	208		ава 47
				9					
	CNF		47	10			217		67

Tuesday, July 02, 2019

. .	= :										
Scenario: Road Name:		thout Project				Project N Job Nu			ino		
Road Segment:						JOD INU	nber.	11/95			
*	,										
SITE SP Highway Data	ECIFIC IN	IPUT DATA			Site Con				L INPUTS	S	
* /	K	15.837 vehicle	-	-	one oon	unions (i		Autos:	,		
Average Daily Tra Peak Hour Pe	. ,	10%	s		Mo	dium Truc					
Peak Hour Pe	•	1.584 vehicles				avy Truck					
	le Speed:	35 mph					5 (5+7	1/1/03/.	15		
Near/Far Lane		36 feet			Vehicle I						
Neal/Fai Lane	Distance.	30 Teel			Vehi	cleType		Day	Evening	Night	Daily
Site Data							itos:	76.3%		12.6%	
Barrie	r Height:	0.0 feet				edium Tru		73.3%		17.6%	
Barrier Type (0-Wall,	1-Berm):	0.0			ŀ	leavy Tru	cks:	84.4%	3.2%	12.5%	2.33%
Centerline Dist. t	o Barrier:	44.0 feet			Noise Sc	wrce Fle	vation	s (in fi	oet)		
Centerline Dist. to	Observer:	44.0 feet		- F		Autos		000			
Barrier Distance to	Observer:	0.0 feet			Mediur	n Trucks:		297			
Observer Height (Ab	ove Pad):	5.0 feet				v Trucks:		004	Grade Adj	ustment	0.0
Pad	Elevation:	0.0 feet				,			,		
	Elevation:	0.0 feet			Lane Eq				feet)		
	ad Grade:	0.0%				Autos:		460			
	eft View:	-90.0 degree				n Trucks:		241			
Ri	ght View:	90.0 degree	S		Heav	y Trucks:	40.	262			
FHWA Noise Model (Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresr	nel	Barrier Atte	en Ber	m Atten
Autos:	64.30	0.88		1.2	В	-1.20		-4.61	0.0	00	0.00
Medium Trucks:	75.75	-11.12		1.3	1	-1.20		-4.87	0.0	00	0.00
Heavy Trucks:	81.57	-15.07		1.3	1	-1.20		-5.50	0.0	00	0.00
Unmitigated Noise L	evels (with	out Topo and	barrier a	atten	uation)						
VehicleType Le	q Peak Hou	ır Leq Day	Le	eq E	vening	Leq N	light		Ldn	-	NEL
	65	.3 6	3.3		60.9		56.7	7	64.8	5	65.
Autos:	64	.7 6	62.6		59.6		57.6	6	65.1		65.
Autos: Medium Trucks:		· ·	35.1		56.8		58.0)	66.1		66.3
	66	.6 t			64.2		62.3	3	70.1		70.
Medium Trucks:	66 70	-	68.6		04.2						
Medium Trucks: Heavy Trucks:	70	.4 6			04.2						
Medium Trucks: Heavy Trucks: Vehicle Noise:	70	.4 6		70 (65 d	BA	6	60 dBA	55	dBA
Medium Trucks: Heavy Trucks: Vehicle Noise:	70	.4 (in feet)		70 d	dBA	65 d. 96		ť	60 dBA 208		dBA 147

	FHV	VA-RD-77-108	HIGHV	VAY N	IOISE PR	EDICTI	ON MOI	DEL			
Road Nam	io: Existing Wi e: First St. nt: e/o Mounta	,				Project I Job Nu	Name: F Imber: 1		no		
SITE	SPECIFIC IN	IPUT DATA				N	OISE N	IODE	L INPUTS	S	
Highway Data				5	Site Cond	ditions (Hard =	10, Sc	ft = 15)		
Average Daily	Traffic (Adt):	8,581 vehicl	es				1	Autos:	15		
Peak Hour	Percentage:	10%			Med	lium Tru	cks (2 A	xles):	15		
Peak H	lour Volume:	858 vehicle	s		Hea	avy Truc	ks (3+ A	xles):	15		
Ve	hicle Speed:	35 mph			Vehicle N	<i>li</i> v					
Near/Far La	ne Distance:	36 feet		Ľ,		cleType		Day	Evening	Night	Daily
Site Data								76.3%	•	•	91.88%
Bai	rrier Height:	0.0 feet			Me	dium Tri	ucks:	73.3%	9.2%	17.6%	5.79%
Barrier Type (0-W		0.0			н	leavy Tri	ucks:	84.4%	3.2%	12.5%	2.33%
Centerline Di	. ,	44.0 feet			Noise So	urco Ek	vation	in fa	of)		
Centerline Dist.	to Observer:	44.0 feet		-	10/36 30	Autos			eij		
Barrier Distance	to Observer:	0.0 feet			Modium	1 Trucks					
Observer Height (Above Pad):	5.0 feet				/ Trucks			Grade Adj	ustmont	. 0 0
Pa	ad Elevation:	0.0 feet						-		usunoni	. 0.0
Roa	ad Elevation:	0.0 feet		L	Lane Equ	iivalent	Distand	e (in t	eet)		
	Road Grade:	0.0%				Autos	: 40.4	160			
	Left View:	-90.0 degre	es		Medium	n Trucks	: 40.2	241			
	Right View:	90.0 degre	es		Heavy	/ Trucks	: 40.2	262			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite I	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	64.30	-1.78		1.28	3	-1.20		4.61	0.0	00	0.00
Medium Trucks:	75.75	-13.78		1.31		-1.20		4.87	0.0	00	0.000
Heavy Trucks:	81.57	-17.73		1.31	1	-1.20		-5.50	0.0	00	0.00
Unmitigated Nois											
VehicleType	Leq Peak Hou	, ,		Leq Ev	•	Leq I			Ldn		NEL
Autos:	62		60.6		58.3		54.1		62.1		62.
Medium Trucks:	62		59.9		56.9		55.0		62.4		62.
Heavy Trucks:	63	-	62.4		54.2		55.4		63.4		63.6
Vehicle Noise:	67	.7	65.9		61.5		59.6		67.4		67.
Centerline Distand	ce to Noise Co	ontour (in feet)	_		_		_			
				70 d	1BA	65 c	IBA	6	0 dBA	55	dBA
			Ldn: VEL:	30 31		64 67			138 144		97 11

Tuesday, July 02, 2019

	FHV	VA-RD-77-108	HIGHWA		SE PREDICTI	ON MO	DEL			
		thout Project			Project			no		
Road Name:					Job Ni	imber:	11795			
Road Segment.	: w/o Hamne	r Av.								
	PECIFIC IN	IPUT DATA							5	
Highway Data				Site	Conditions (Hard =	10, So	ft = 15)		
Average Daily Tr	raffic (Adt):	9,185 vehicl	es				Autos:	15		
Peak Hour P	ercentage:	10%			Medium Tru			15		
	ur Volume:	919 vehicle	s		Heavy Truc	ks (3+ A	Axles):	15		
	cle Speed:	35 mph		Veh	icle Mix					
Near/Far Lane	e Distance:	36 feet			VehicleType		Day	Evening	Night	Daily
Site Data					A	utos:	76.3%	11.0%	12.6%	91.88%
Barri	ier Height:	0.0 feet			Medium Tr	ucks:	73.3%	9.2%	17.6%	5.79%
Barrier Type (0-Wa	ll, 1-Berm):	0.0			Heavy Tr	ucks:	84.4%	3.2%	12.5%	2.33%
Centerline Dist.		44.0 feet		Noi	se Source Ele	vation	s (in fe	et)		
Centerline Dist. to		44.0 feet			Autos	: 0.0	000			
Barrier Distance to		0.0 feet		N	ledium Trucks	: 2.2	297			
Observer Height (A	bove Pad): I Elevation:	5.0 feet			Heavy Trucks	: 8.0	004	Grade Adj	iustment	0.0
	l Elevation:	0.0 feet 0.0 feet		Lan	e Equivalent	Distan	co (in f	ioof)		
	ad Grade:	0.0 feet		Lan	Autos			eel)		
A.	Left View:	-90.0 deare	00		ledium Trucks					
F	Right View:	90.0 degre			Heavy Trucks					
FHWA Noise Model	Calculation	s								
VehicleType	REMEL	Traffic Flow	Distan	ce A	inite Road	Fresn	iel i	Barrier Atte	en Ber	m Atten
Autos:	64.30	-1.48		1.28	-1.20		-4.61	0.0	00	0.00
Medium Trucks:	75.75	-13.49		1.31	-1.20		-4.87	0.0	00	0.00
Heavy Trucks:	81.57	-17.43		1.31	-1.20		-5.50	0.0	00	0.00
Unmitigated Noise							-		T	
,,	eq Peak Hou	1.1.7		q Even				Ldn		NEL
Autos:	62		60.9		58.5	54.4		62.4		62.
Medium Trucks:	62		60.2 62.7		57.2	55.3 55.7		62.7 63.7		63.
Heavy Trucks: Vehicle Noise:	64				54.5					63.
	68	.0	66.2		61.8	59.9	,	67.7		68.
	4- M-1 0									
Centerline Distance	to Noise Co	ontour (in feet	<i>,</i>	70 dBA	65 0	IBA	6	0 dBA	55	dBA
	to Noise Co	ontour (in feet	<i>,</i>	70 dBA 31	65 0		6	0 dBA 144		dBA

	FHV	VA-RD-77-108	HIGHW	AY NO	OISE PF	REDICTIC	ON MO	DEL			
	c: Existing With the second se second second se					Project N			no		
	e: Hidden Val					Job Nu	mber:	11795			
Road Segmen	t: w/o E. Park	ridge Av.									
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				S	ite Con	ditions (l	Hard =	10, Sc	oft = 15)		
Average Daily	raffic (Adt):	20,852 vehicle	S					Autos:	15		
Peak Hour I	Percentage:	10%			Mee	dium Truc	:ks (2 /	(xles)	15		
Peak He	our Volume:	2,085 vehicles			Hea	avy Truck	:s (3+ A	(xles)	15		
	nicle Speed:	45 mph		v	ehicle l	Nix					
Near/Far Lar	e Distance:	52 feet		-		cleType		Day	Evening	Night	Daily
Site Data							itos:	76.3%			91.889
Bar	rier Height:	0.0 feet			Me	edium Tru	cks:	73.3%	9.2%	17.6%	5.79%
Barrier Type (0-Wa	•	0.0			F	leavy Tru	cks:	84.4%	3.2%	12.5%	2.33%
Centerline Dis		50.0 feet		_							
Centerline Dist. t	o Observer:	50.0 feet		N	loise So	ource Ele			eet)		
Barrier Distance t	o Observer:	0.0 feet				Autos:		000			
Observer Height ()	Above Pad):	5.0 feet				n Trucks:		297	Grade Ad		
Pa	d Elevation:	0.0 feet			Heav	y Trucks:	8.	004	Grade Adj	usuneni	0.0
Roa	d Elevation:	0.0 feet		L	ane Equ	uivalent l	Distan	ce (in i	feet)		
F	Road Grade:	0.0%				Autos:	43.	000			
	Left View:	-90.0 degree	5		Mediur	n Trucks:	42.	794			
	Right View:	90.0 degree	5		Heav	y Trucks:	42.	814			
FHWA Noise Mode	Calculation:	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresr	el	Barrier Att	en Ber	m Atten
Autos:	68.46	0.99		0.88		-1.20		-4.65	0.0	000	0.00
Medium Trucks:	79.45	-11.02		0.91		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-14.97		0.91		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and L									
	Leq Peak Hou			eq Ev		Leq N			Ldn		VEL
Autos:	69.		7.2		64.8		60.6		68.6		69.
Medium Trucks:	68.		6.0		63.0		61.0		68.5		68.
Heavy Trucks:	69.		7.5		59.2		60.4		68.5		68.
Vehicle Noise:	73	-	1.7		67.7		65.5		73.3	3	73.
Centerline Distanc	e to Noise Co	ontour (in feet)		= .							
		,		70 di		65 di 178		e	0 dBA 384		dBA
			dn: EL:	83							28
		CN	EL:	87		187	r		403	8	68

Tuesday, July 02, 2019

Scenario: Exis Road Name: Hidd Road Segment: e/o B	len Vall	ey Pkwy.				Project N Job Nui			ino		
SITE SPECI	FIC IN	PUT DATA							L INPUT	s	
Highway Data					Site Con	ditions (H	lard =	: 10, So	oft = 15)		
Average Daily Traffic (Adt):	22,594 vehicle	s					Autos:	15		
Peak Hour Percen	tage:	10%			Mee	dium Truc	:ks (2 .	Axles):	15		
Peak Hour Vol	ume:	2,259 vehicles			Hea	avy Truck	s (3+.	Axles):	15		
Vehicle Sp	eed:	45 mph		-	Vehicle I	Ai~					
Near/Far Lane Dista	ance:	52 feet				cleType		Day	Evening	Night	Daily
Site Data							itos:	76.3%	•	12.6%	
Barrier He	iaht:	0.0 feet			Me	dium Tru	cks:	73.3%	9.2%	17.6%	5.79%
Barrier Type (0-Wall, 1-B		0.0			H	leavy Tru	cks:	84.4%	3.2%	12.5%	2.33%
Centerline Dist. to Ba	rrier:	50.0 feet		F	Noise So	urce Ele	vation	s (in fe	eet)		
Centerline Dist. to Obse	erver:	50.0 feet		F		Autos:		000	,		
Barrier Distance to Obse	erver:	0.0 feet			Mediur	n Trucks:		297			
Observer Height (Above I	Pad):	5.0 feet				v Trucks:		004	Grade Ac	liustment	0.0
Pad Eleva	ation:	0.0 feet								,	
Road Eleva	ation:	0.0 feet			Lane Equ	livalent I	Distan	ce (in	feet)		
Road G	rade:	0.0%				Autos:	43.	.000			
Left	/iew:	-90.0 degree	s		Mediur	n Trucks:	42	794			
Right	/iew:	90.0 degree	s		Heav	y Trucks:	42	.814			
FHWA Noise Model Calcu											
VehicleType REM		Traffic Flow	Dis	stance	Finite		Fresi		Barrier At		rm Atten
Autos:	68.46	1.33		0.8	-	-1.20		-4.65		000	0.00
Medium Trucks:	79.45	-10.67		0.9		-1.20		-4.87		000	0.00
Heavy Trucks:	84.25	-14.62		0.9		-1.20		-5.43	0.	000	0.00
Unmitigated Noise Level											
	ak Hou			Leq E	vening	Leq N	·		Ldn		NEL
Autos:	69.		67.5		65.1		60.	-	69.		69.
Medium Trucks:	68.		6.3		63.3		61.4	-	68.	-	69.
Heavy Trucks:	69.		67.8		59.6		60.	-	68.	-	68.
Vehicle Noise:	73.	9 7	2.0		68.0		65.	В	73.	6	73.
Centerline Distance to No	oise Co	ntour (in feet)		70	-10.4	05."	24		0.404		
			_ L		dBA 37	65 dE 188		e	60 dBA		dBA
									405		373
			dn: IFI :	-	12	186			405		916

	FH\	NA-RD-77-108 I	IIGHWAY	NOISE PI	REDICT	ION MODE	iL		
Road Nam	io: Existing Wi e: River Rd. nt: s/o Corydor					Name: Pa lumber: 11			
SITE	SPECIFIC IN	IPUT DATA			ľ	IOISE MO	DEL INPUT	s	
Highway Data				Site Con	ditions	(Hard = 10), Soft = 15)		
Average Daily	Traffic (Adt):	24,819 vehicles	3			Au	tos: 15		
• •	Percentage:	10%		Me	dium Tr	ucks (2 Axl	es): 15		
Peak H	lour Volume:	2,482 vehicles		He	avy Tru	cks (3+ Axl	es): 15		
Ve	hicle Speed:	45 mph					-		
	ne Distance:	52 feet		Vehicle				Allertat	Delle
Site Data				ven	icleType		, 0	Night	Daily
Site Data					ر edium T		.3% 11.0%	12.6%	92.01% 5.69%
	rrier Height:	0.0 feet					.3% 9.2%	17.6%	
Barrier Type (0-W	. ,	0.0			Heavy T	rucks: 84	.4% 3.2%	12.5%	2.30%
Centerline Dis		50.0 feet		Noise Se	ource E	levations (in feet)		
Centerline Dist.		50.0 feet			Auto	s: 0.000	2		
Barrier Distance		0.0 feet		Mediu	m Truck	s: 2.297	7		
Observer Height (,	5.0 feet		Heav	v Truck	s: 8.004	4 Grade Ad	ljustment.	0.0
	ad Elevation:	0.0 feet		Lana Fr		Distance	(in fact)		
	ad Elevation:	0.0 feet		Lane Eq		t Distance	. ,		
1	Road Grade:	0.0%			Auto				
	Left View:	-90.0 degrees			m Truck				
	Right View:	90.0 degrees	3	Heav	ry Truck	s: 42.81	4		
FHWA Noise Mode		-							
VehicleType	REMEL	Traffic Flow	Distance		Road	Fresnel	Barrier Att		m Atten
Autos:	68.46	1.75		.88	-1.20			000	0.000
Medium Trucks:	79.45	-10.34	0	.91	-1.20			000	0.000
Heavy Trucks:	84.25	-14.28	0	.91	-1.20	-5.	.43 0.0	000	0.000
Inmitigated Noise									
	e Levels (with								
VehicleType	Leq Peak Hou	Ir Leq Day	Leq	Evening	Leq	Night	Ldn		VEL
VehicleType Autos:	Leq Peak Hou 69	ur Leq Day	Leq 7.9	Evening 65.5	Leq	61.4	69.4	4	69.8
VehicleType Autos: Medium Trucks:	Leq Peak Hou 69 68	ur Leq Day 1.9 6 1.8 6	Leq 7.9 6.7	Evening 65.5 63.7	Leq	61.4 61.7	69.4 69.	4	69.8 69.5
VehicleType Autos: Medium Trucks: Heavy Trucks:	Leq Peak Hou 69 68 69	ur Leq Day 0.9 6 0.8 6 0.7 6	Leq 7.9 6.7 8.1	Evening 65.5 63.7 59.9	Leq	61.4 61.7 61.1	69.4 69. 69.	4 1 1	69.8 69.5 69.3
VehicleType Autos: Medium Trucks:	Leq Peak Hou 69 68	ur Leq Day 0.9 6 0.8 6 0.7 6	Leq 7.9 6.7	Evening 65.5 63.7	Leq	61.4 61.7	69.4 69.	4 1 1	69.8 69.5 69.3
VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	Leq Peak Hou 69 68 69 74	Ir Leq Day 0.9 6 0.8 6 0.7 6 0.3 7	Leq 7.9 6.7 8.1 2.4	Evening 65.5 63.7 59.9 68.4		61.4 61.7 61.1 66.2	69.4 69. 69. 74.0	4 1 1 0	69.8 69.5 69.3 74.3
VehicleType Autos: Medium Trucks: Heavy Trucks:	Leq Peak Hou 69 68 69 74	Image: Leq Day Leq Day .9 6 .8 6 .7 6 .3 7 pontour (in feet) 7	Leq 7.9 6.7 8.1 2.4	Evening 65.5 63.7 59.9 68.4 0 dBA	65	61.4 61.7 61.1 66.2 dBA	69. 69. 69. 74.0 60 dBA	4 1 1 0 55	69.8 69.5 69.3 74.3 dBA
VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	Leq Peak Hou 69 68 69 74	Image: Leq Day Leq Day .9 6 .8 6 .7 6 .3 7 pontour (in feet) 7	Leq 7.9 6.7 8.1 2.4 70 dn:	Evening 65.5 63.7 59.9 68.4	65	61.4 61.7 61.1 66.2	69.4 69. 69. 74.0	4 1 1 0 55	69.8 69.5 69.3 74.3

Tuesday, July 02, 2019

	FH	WA-RD-77-108	HIGHW	AY NC	ISE PF	REDICTIO	ом мо	DEL			
	o: Existing W e: River Rd. nt: s/o Lincoln					Project I Job Nu			no		
SITE	SPECIFIC IN	NPUT DATA				N	OISE I	NODE	L INPUT	s	
Highway Data				Si	te Con	ditions (Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	13,441 vehicl	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	cks (2 /	Axles):	15		
Peak H	our Volume:	1,344 vehicle	s		He	avy Truc	ks (3+)	Axles):	15		
	hicle Speed:	45 mph		Ve	hicle l	Mix					
Near/Far Lar	ne Distance:	10 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						A	utos:	76.3%	11.0%	12.6%	92.00%
Bar	rier Height:	0.0 feet			Me	edium Tru	ucks:	73.3%	9.2%	17.6%	5.70%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Tru	ucks:	84.4%	3.2%	12.5%	2.30%
Centerline Dis		30.0 feet		N	oise Sc	ource Ele	evation	s (in fe	et)		
Centerline Dist.		30.0 feet				Autos	: 0.	000			
Barrier Distance		0.0 feet			Mediur	n Trucks	: 2.	297			
Observer Height (,	5.0 feet			Heav	y Trucks	: 8.	004	Grade Ad	justment	0.0
	ad Elevation: ad Elevation:	0.0 feet		1.	no Ea	uivalent	Dicton	co (in i	(aat)		
	a Elevation: Road Grade:	0.0 feet			ine Ly	Autos		000	eel)		
r	Left View:	0.0% -90.0 degre			Modiu	n Trucks		704			
	Right View:	90.0 degre				y Trucks		733			
FHWA Noise Mode	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Distar	се	Finite	Road	Fresi	nel	Barrier Att	en Bei	rm Atten
Autos:	68.46	-0.92		3.22		-1.20		-4.49	0.0	000	0.00
Medium Trucks:	79.45			3.29		-1.20		-4.86		000	0.00
Heavy Trucks:	84.25			3.28		-1.20		-5.77	0.0	000	0.00
Unmitigated Noise			-		/			-			
	Leq Peak Ho	1.1		eq Eve		Leq N			Ldn		NEL
Autos: Medium Trucks:			67.6 66.4		65.2 63.4		61.0 61.4		69.1 68.9		69. 69.
Heavy Trucks:			67.9		59.6		60.8	-	68.9		69.
Vehicle Noise:			72.1		68.1		65.9	· ·	73.7		74.
Centerline Distance	e to Noise C	ontour (in feet)								
				70 dE	8A	65 a	IBA	6	0 dBA	55	dBA
			Ldn:	53		11	4		246	Ę	530
			NFL:								

F	HWA-RD	77-108 H	IGHW/	AY NC	ISE PRI	EDICTIO	N MOI	DEL			
Scenario: Existing	With Proje	ct			I	Project N	ame: I	Palomi	no		
Road Name: Parkridg	e Av.					Job Nur	nber: '	11795			
Road Segment: n/o Seco	ond St.										
SITE SPECIFIC	INPUT D	АТА							L INPUT	s	
Highway Data				Si	te Cond	itions (H	lard =	10, Sc	oft = 15)		
Average Daily Traffic (Adt,	: 2,502	vehicles						Autos:	15		
Peak Hour Percentage	: 109	6			Med	ium Truc	ks (2 A	xles):	15		
Peak Hour Volume	: 250	vehicles			Hea	vy Truck	s (3+ A	(xles):	15		
Vehicle Speed	: 25	mph		Ve	ehicle M	iv					
Near/Far Lane Distance	: 10	feet				leType		Day	Evening	Night	Daily
Site Data								76.3%		12.6%	
Barrier Heigh	. 00	feet			Med	dium True	cks:	73.3%	9.2%	17.6%	5.319
Barrier Type (0-Wall, 1-Berm					He	avy Tru	cks:	84.4%	3.2%	12.5%	2.149
Centerline Dist. to Barrie		feet									
Centerline Dist. to Observe	r: 30.0	feet		N	oise Sol	Irce Elev			eet)		
Barrier Distance to Observe		feet				Autos:		000			
Observer Height (Above Pad	5.0	feet				Trucks:		297	Grade Ad	i colmont	
Pad Elevation	. 0.0	feet			Heavy	Trucks:	8.0	004	Grade Ad	usunem.	0.0
Road Elevation	. 0.0	feet		Lá	ne Equ	ivalent D	Distand	ce (in t	feet)		
Road Grade	e: 0.0	%				Autos:	30.0	000			
Left View	90.0	degrees			Medium	Trucks:	29.7	704			
Right View	. 90.0	degrees			Heavy	Trucks:	29.7	733			
FHWA Noise Model Calculati	ons										
VehicleType REMEL	Traffic	Flow	Distan	се	Finite F	Road	Fresn	el	Barrier Att	en Ber	m Atter
Autos: 58.	73	-5.64		3.22		-1.20		-4.49	0.0	000	0.00
Medium Trucks: 70.	80	-18.05		3.29		-1.20		-4.86	0.0	000	0.00
Heavy Trucks: 77.	97	-21.99		3.28		-1.20		-5.77	0.0	000	0.00
Unmitigated Noise Levels (w			nrrier a	ttenu	ation)						
VehicleType Leq Peak I		.eq Day		eq Eve	•	Leq Ni			Ldn		VEL
Autos:	55.1	53			50.8		46.6		54.6		55.
Medium Trucks:	54.8	52			49.7		47.7		55.2	-	55.
Heavy Trucks:	58.1	56	-		48.3		49.5		57.5		57
Vehicle Noise:	61.0	59	.3		54.5		52.9		60.3	7	61
Centerline Distance to Noise	Contour	(in feet)	1	70.15		05.15					
		1.		70 dE	8A	65 dE	3A	6	0 dBA		dBA
		Lo CNF		7		16 16			34 35		72 75

Sec					REDICTION		ine		
	b: Existing With e: Parkridge Av					me: Palom ber: 11795	ino		
	t: s/o Second S				300 Mum	067. 11795			
Ŷ	SPECIFIC INF				NOI	SE MODE		s	
Highway Data				Site Con	ditions (Ha	ard = 10, So	oft = 15)	-	
Average Daily	Traffic (Adt):	3,274 vehicles				Autos:	15		
Peak Hour	Percentage:	10%		Me	dium Truck	s (2 Axles):	15		
Peak He	our Volume:	327 vehicles		He	avy Trucks	(3+ Axles):	15		
Vel	nicle Speed:	40 mph	ŀ	Vehicle	Mix				
Near/Far Lar	ne Distance:	36 feet	-		icleType	Day	Evening	Night	Daily
Site Data					Auto	os: 76.3%	11.0%	12.6%	92.399
Bar	rier Height:	0.0 feet		M	edium Truck	ks: 73.3%	9.2%	17.6%	5.429
Barrier Type (0-Wa		0.0		I	Heavy Truck	ks: 84.4%	3.2%	12.5%	2.19%
Centerline Dis	t. to Barrier:	44.0 feet	-	Noise So	ource Eleva	ations (in fe	et)		
Centerline Dist. t	o Observer:	44.0 feet	ŀ		Autos:	0.000			
Barrier Distance t	o Observer:	0.0 feet		Mediu	m Trucks:	2.297			
Observer Height (/	,	5.0 feet		Heav	v Trucks:	8.004	Grade Ad	iustment	0.0
	d Elevation:	0.0 feet	-						
	d Elevation:	0.0 feet	-	Lane Eq	uivalent Di		reet)		
F	Road Grade:	0.0%			Autos:	40.460			
	Left View:	-90.0 degrees			m Trucks:	40.241			
	Right View:	90.0 degrees		Heav	y Trucks:	40.262			
FHWA Noise Mode	l Calculations								
VehicleType	REMEL	Traffic Flow D	istance	Finite		resnel	Barrier Att	en Ber	m Atten
Autos:	66.51	-6.52	1.2		-1.20	-4.61	0.0		0.00
Medium Trucks:	77.72	-18.83	1.3		-1.20	-4.87	0.0		0.00
Heavy Trucks:	82.99	-22.78	1.3	31	-1.20	-5.50	0.0	000	0.00
Unmitigated Noise			rier atter	nuation)					
<i>,</i>	Leq Peak Hour	1 ,	,	vening	Leq Nig		Ldn		VEL
Autos:	60.1			55.7		51.5	59.6		60.
Medium Trucks:	59.0			53.8		51.9	59.3		59.
Heavy Trucks:	60.3			50.6		51.7	59.8	-	59.
Vehicle Noise:	64.6	62.8		58.6		56.5	64.3	3	64.
Centerline Distanc	e to Noise Cor	ntour (in feet)							
			70	dBA	65 dBA	A (60 dBA		dBA
		Ldn: CNFL		18 19	40 42		86 90		84 93

	FHW	A-RD-77-108	HIGHV	VAY N	OISE PF	REDICTI	ON MOI	DEL			
	2: Existing Wit 2: Parkridge A 2: s/o Lincoln A	v. ,					Name: I umber: ·		ino		
	PECIFIC IN	PUT DATA				N	OISE N	10DE	L INPUT	S	
Highway Data				5	Site Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily T Peak Hour F Peak Ho	. ,	5,265 vehicle 10% 527 vehicles					/ icks (2 A :ks (3+ A		15 15 15		
Veh	icle Speed:	40 mph			/ehicle	Ai~					
Near/Far Lan	e Distance:	36 feet		Ľ		cleType		Dav	Evening	Night	Daily
Site Data				_	1011			76.3%	~	12.6%	
Par	rier Height:	0.0 feet			Me	edium Tr	ucks:	73.3%	9.2%	17.6%	5.56%
Barrier Type (0-Wa	•	0.0			ŀ	łeavy Tr	ucks:	84.4%	3.2%	12.5%	2.24%
Centerline Dis		44.0 feet		1	Voise So	urce El	evation	s (in fe	eet)		
Centerline Dist. te	o Observer:	44.0 feet				Autos		000	,		
Barrier Distance to	o Observer:	0.0 feet			Mediur	n Trucks	: 2.2	97			
Observer Height (A	Above Pad):	5.0 feet			Heav	y Trucks	: 8.0	04	Grade Ad	iustment	t: 0.0
Pa	d Elevation:	0.0 feet						-	,		
Roa	d Elevation:	0.0 feet		1	ane Eq				feet)		
R	oad Grade:	0.0%				Autos					
	Left View: Right View:	-90.0 degree 90.0 degree				n Trucks v Trucks					
FHWA Noise Mode	•	, i									
VehicleType	REMEL	Traffic Flow	Dista	2000	Finite	Pood	Fresn	0	Barrier Att	on Ro	rm Atten
Autos:	66.51	-4.46	Diste	1.28		-1.20		-4.61	Damer Au 0.0		0.000
Medium Trucks:	77.72	-16.66		1.31		-1.20		-4.87	0.0		0.000
Heavy Trucks:	82.99	-20.60		1.31		-1.20		-5.50	0.0		0.000
Unmitigated Noise	Levels (witho	out Topo and	barrier	atten	uation)						
VehicleType	Leq Peak Hou	Leq Day	·	Leq Ev	rening	Leq I	Night		Ldn	С	NEL
Autos:	62.	1 6	50.2		57.8		53.6		61.6	6	62.1
Medium Trucks:	61.	2 5	59.0		56.0		54.1		61.5	5	61.8
Heavy Trucks:	62.	5 (61.0		52.7		53.9		62.0)	62.1
Vehicle Noise:	66.	7 (64.9		60.7		58.6		66.5	5	66.8
Centerline Distance	e to Noise Co	ntour (in feet)									
			L	70 c		65 0		6	60 dBA		i dBA
			Ldn:	26	-	5			119		256
		Ch	IEL:	27	(5	8		124	2	268

Tuesday, July 02, 2019

Tuesday, July 02, 2019

	FH\	WA-RD-77-108	HIGH	WAY N	IOISE PF	EDICTIO	N MODE	EL			
Scenar	io: Existing Wi	ith Project				Project N	ame: Pa	llomin	0		
Road Nan	e: Pacific Av.					Job Nun	nber: 11	795			
Road Segme	nt: s/o Second	l St.									
	SPECIFIC IN	IPUT DATA							INPUT	S	
Highway Data					Site Con	ditions (H		· · · ·	,		
Average Daily	Traffic (Adt):	386 vehicl	es					itos:	15		
	Percentage:	10%				dium Truci		,	15		
	lour Volume:	39 vehicle	s		He	avy Trucks	s (3+ Ax	les):	15		
	hicle Speed:	25 mph		F	Vehicle I	Nix					
Near/Far La	ne Distance:	10 feet			Vehi	cleType	D	ay I	Evening	Night	Daily
Site Data						Au	tos: 76	6.3%	11.0%	12.6%	91.88%
Ra	rrier Height:	0.0 feet			Me	dium Truc	cks: 73	8.3%	9.2%	17.6%	5.79%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy Truc	cks: 84	1.4%	3.2%	12.5%	2.33%
Centerline Di		30.0 feet		1	Noise Sc	urce Elev	ations ('in fee	et)		
Centerline Dist.		30.0 feet		Γ		Autos:	0.00	0			
Barrier Distance		0.0 feet			Mediur	n Trucks:	2.29	7			
Observer Height	· · · ·	5.0 feet			Heav	v Trucks:	8.00	4 0	Grade Adj	iustment	0.0
	ad Elevation:	0.0 feet		H							
	ad Elevation:	0.0 feet		H	Lane Eq	ivalent D			et)		
	Road Grade:	0.0%				Autos:	30.00	-			
	Left View:	-90.0 degre				n Trucks:	29.70				
	Right View:	90.0 degre	es		Heav	y Trucks:	29.73	3			
FHWA Noise Mod		-									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite		Fresnel		arrier Atte		m Atten
Autos:	58.73	-13.79		3.2	-	-1.20		.49	0.0		0.00
Medium Trucks:	70.80			3.2	-	-1.20		.86	0.0		0.00
Heavy Trucks:	77.97			3.2	-	-1.20	-5	.77	0.0	00	0.00
Unmitigated Nois					<u> </u>					-	
VehicleType	Leq Peak Hou			Leq E	vening	Leq Ni		L	_dn 46.5		NEL
Autos: Medium Trucks:	47 47		45.0 45.0		42.6 41.9		38.4 40.0		46.5		46.9
			45.0 48.8		41.9 40.6		40.0 41.7		47.4		47.
Heavy Trucks: Vehicle Noise:	50		48.8 51.4		40.6		41.7		49.8		49.9
Centerline Distan					+0.0		.5.0		02.0		
Contenine Distan	10 10/38 0	undur (milleet	, 	70	dBA	65 dE	BA	60	dBA	55	dBA
			Ldn:		2	5			10		22
		C	VEL:		2	5			10		23
		C.	VEL.		<u>-</u>	5			IV.		20

	FHV	/A-RD-77-108	HIGH	IWAY N	OISE PR	EDICTI		EL			
Scenario: Exis	ting Wit	h Project				Project	Name: Pa	alomir	10		
Road Name: Mou	ntain A	v.				Job N	umber: 11	795			
Road Segment: n/o H	lamner	Av.									
SITE SPECI	FIC IN	PUT DATA					OISE MO			S	
Highway Data				5	Site Cond	ditions	(Hard = 1	0, Soi	ft = 15)		
Average Daily Traffic (Adt):	11,136 vehicle	s				AL	utos:	15		
Peak Hour Percent	tage:	10%			Med	lium Tru	ıcks (2 Ax	les):	15		
Peak Hour Vol	ume:	1,114 vehicles	5		Hea	avy Truc	:ks (3+ Ax	les):	15		
Vehicle Sp	eed:	40 mph		1	/ehicle N	Mix					
Near/Far Lane Dista	ance:	36 feet		-		cleType	D	av	Evening	Night	Dailv
Site Data					Vern			6.3%	11.0%	12.6%	
Barrier He	iaht:	0.0 feet			Me	dium Tr		3.3%	9.2%	17.6%	
Barrier Type (0-Wall, 1-Be		0.0			H	leavy Tr	ucks: 84	4.4%	3.2%	12.5%	5.31
Centerline Dist. to Ba		44.0 feet		_							
Centerline Dist. to Obse		44.0 feet		,	loise So		evations		et)		
Barrier Distance to Obse		0.0 feet				Autos					
Observer Height (Above I		5.0 feet			Mediun						
Pad Fleva		0.0 feet			Heavy	/ Trucks	s: 8.00)4 (Grade Adj	ustment:	0.0
Road Eleva		0.0 feet		L	ane Equ	iivalent	Distance	e (in fe	eet)		
Road G	rade:	0.0%				Autos	s: 40.46	50	1		
Left	view:	-90.0 degree	s		Mediun	n Trucks	s: 40.24	11			
Right \	View:	90.0 degree			Heavy	/ Trucks	s: 40.26	62			
FHWA Noise Model Calcu	lations	5									
VehicleType REM	1EL	Traffic Flow	Dis	stance	Finite I	Road	Fresnel	I E	Barrier Att	en Ber	m Atter
Autos:	66.51	-1.35		1.28	5	-1.20	-4	1.61	0.0	000	0.0
Medium Trucks:	77.72	-13.49		1.31		-1.20	-4	1.87	0.0	000	0.00
Heavy Trucks:	82.99	-13.61		1.31		-1.20	-5	5.50	0.0	000	0.00
Unmitigated Noise Level	s (witho	out Topo and	barri	er atten	uation)						
VehicleType Leq Pe				Leq Ev		Leq	Night		Ldn		VEL
Autos:	65.	-	63.3		60.9		56.7		64.7		65
Medium Trucks:	64.	-	62.2		59.2		57.2		64.6		65
Heavy Trucks:	69.		68.0		59.7		60.9		69.0		69
Vehicle Noise:	71.	-	70.0		64.8		63.5		71.4	ļ	71
Centerline Distance to No	oise Co	ntour (in feet)								
			L	70 a			dBA) dBA		dBA
			Ldn: VFL:	54 57			17 22		253 262		44 65

Tuesday, July 02, 2019

Scenario	Existing Wit	h Project				Proiect N	<i>lame:</i> Pal	omino			
	Hamner Av.						mber: 117				
Road Segment	s/o Third St										
	PECIFIC IN	PUT DATA						DEL INPU			
Highway Data				:	Site Con	ditions (l	lard = 10	, Soft = 15)			
Average Daily T	raffic (Adt):	34,706 vehicles					Au				
Peak Hour F		10%					ks (2 Axle	,			
Peak Ho	ur Volume:	3,471 vehicles			Hea	avy Truck	s (3+ Axle	es): 15			
	icle Speed:	40 mph		1	Vehicle I	Mix					
Near/Far Lan	e Distance:	73 feet		-		cleType	Da	y Evenin	a N	ight	Daily
Site Data							tos: 76	.3% 11.09	•	•	91.97%
Barr	ier Height:	0.0 feet			Me	edium Tru	cks: 73	.3% 9.29	% 1	7.6%	5.72%
Barrier Type (0-Wa		0.0			H	leavy Tru	cks: 84	.4% 3.29	% 1	2.5%	2.31%
Centerline Dist	to Barrier:	55.0 feet		-	Noiso Sa	urco Elo	vations (in foot)			
Centerline Dist. to	Observer:	55.0 feet		Ľ	10/30 00	Autos:		,			
Barrier Distance to	Observer:	0.0 feet			Modiur	n Trucks:					
Observer Height (A	bove Pad):	5.0 feet				v Trucks:			Adiust	ment	0.0
Pad	d Elevation:	0.0 feet							,		
Road	d Elevation:	0.0 feet		1	Lane Equ		Distance	,			
R	oad Grade:	0.0%				Autos:	41.446	-			
	Left View:	-90.0 degrees				n Trucks:		-			
	Right View:	90.0 degrees			Heav	y Trucks:	41.253	3			
FHWA Noise Model	Calculations	5									
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresnel	Barrier	Atten	Bern	n Atten
Autos:	66.51	3.71		1.12	-	-1.20	-4.	•••	0.000		0.00
Medium Trucks:	77.72	-8.35		1.15	-	-1.20	-4.	•••	0.000		0.00
Heavy Trucks:	82.99	-12.29		1.15	5	-1.20	-5.	38	0.000		0.00
Unmitigated Noise			arrier a	tten	uation)						
	eq Peak Hou			eq Ev	/ening	Leq N	•	Ldn		CN	
Autos:	70.				65.8		61.6	-	9.6		70.
Medium Trucks:	69.				64.2		62.2	-	9.6		70.0
Heavy Trucks:	70.				60.9		62.1		0.1		70.3
Vehicle Noise:	74.	8 73	.0		68.8		66.7	7	4.6		74.
Centerline Distance	e to Noise Co	ntour (in feet)									
				70 c		65 d		60 dBA		55 0	
		La		11		239 251		515 540		1,1 1.1	
		CNF									

	FHV	/A-RD-77-108	HIGHWA	Y NOISE F	PREDICTI	ON MOD	DEL			
Road Nam	 D: Existing Wit E: Hamner Av. Mathematical Stress of Second 					Name: P umber: 1		10		
SITE	SPECIFIC IN	PUT DATA			N	OISE M	ODEL	. INPUTS	5	
Highway Data				Site Co	nditions	(Hard = 1	10, Sof	ft = 15)		
Average Daily	Traffic (Adt):	29,591 vehicle	s			A	utos:	15		
Peak Hour	Percentage:	10%		М	edium Tru	icks (2 A	xles):	15		
Peak H	our Volume:	2,959 vehicles		н	eavy Truc	ks (3+ A	xles):	15		
Vei	nicle Speed:	40 mph		Vehicle	Mix					
Near/Far Lai	ne Distance:	73 feet			hicleType	1	Day	Evening	Night	Daily
Site Data				10			76.3%	11.0%	12.6%	
Par	rier Height:	0.0 feet		٨	/ledium Tr	ucks: 7	73.3%	9.2%	17.6%	5.82%
Barrier Type (0-W		0.0			Heavy Tr	ucks: 8	34.4%	3.2%	12.5%	2.47%
Centerline Dis	. ,	55.0 feet		Noice	Source El	ovetione	(in for	a.4)		
Centerline Dist.	o Observer:	55.0 feet		Noise	Autos			e()		
Barrier Distance	o Observer:	0.0 feet		Madi	um Trucks					
Observer Height (.	Above Pad):	5.0 feet			avy Trucks			Grade Adj	ustmont	0.0
Pa	d Elevation:	0.0 feet		пеа	ivy mucks	s. 0.0	04 (Slade Auj	usuneni.	0.0
Roa	d Elevation:	0.0 feet		Lane E	quivalent	Distanc	e (in fe	eet)		
F	Road Grade:	0.0%			Autos	s: 41.4	46			
	Left View:	-90.0 degree	s	Media	um Trucks	s: 41.2	32			
	Right View:	90.0 degree	S	Hea	vy Trucks	s: 41.2	53			
FHWA Noise Mode	Calculation:	5								
VehicleType	REMEL	Traffic Flow	Distan	ce Finite	e Road	Fresne	el E	Barrier Atte	en Beri	m Atten
Autos:	66.51	3.01		1.12	-1.20	-	4.67	0.0	00	0.00
Medium Trucks:	77.72	-8.96		1.15	-1.20	-	4.87	0.0	00	0.000
Heavy Trucks:	82.99	-12.70		1.15	-1.20	-	5.38	0.0	00	0.000
Unmitigated Noise	Levels (with			ttenuation))					
<i>,</i> ,	Leq Peak Hou			q Evening		Night		Ldn		VEL
Autos:	69.		67.5	65.1		60.9		68.9		69.4
Medium Trucks:	68.		6.6	63.6		61.6		69.0		69.3
Heavy Trucks:	70.		68.7	60.5		61.7		69.7		69.9
Vehicle Noise:	74.	3	72.4	68.3	2	66.2		74.0		74.3
Centerline Distand	e to Noise Co	ntour (in feet)								
Centerline Distanc	e to Noise Co			70 dBA	65 0) dBA		dBA
Centerline Distanc	e to Noise Co		dn: IFI :	70 dBA 102 107	65 c 21 23	19) dBA 472 494	1,0	dBA 018 065

Tuesday, July 02, 2019

	FH	WA-RD-77-108	HIGHW	VAY NO	DISE PF	REDICTIC	on Mo	DEL			
Road Nam	io: Existing W ne: Hamner A nt: s/o First SI	v. ,				Project N Job Nu			no		
	SPECIFIC II	NPUT DATA							L INPUT	s	
Highway Data				S	ite Con	ditions (l	Hard =	10, Sc	oft = 15)		
Average Daily	, ,	23,145 vehicl	es					Autos:	15		
	Percentage:	10%				dium Truc			15		
	lour Volume:	2,315 vehicle	s		He	avy Truck	(3+) (3+)	Axles):	15		
	hicle Speed:	40 mph		V	ehicle l	Nix					
Near/Far La	ne Distance:	73 feet			Vehi	icleType		Day	Evening	Night	Daily
Site Data						Aı	itos:	76.3%	11.0%	12.6%	91.05%
Ba	rrier Height:	0.0 feet			Me	edium Tru	icks:	73.3%	9.2%	17.6%	5.95%
Barrier Type (0-W	/all, 1-Berm):	0.0			F	leavy Tru	icks:	84.4%	3.2%	12.5%	3.00%
Centerline Di		55.0 feet		N	oise Sc	ource Ele	vation	s (in fe	et)		
Centerline Dist.		55.0 feet				Autos:		000			
Barrier Distance		0.0 feet			Mediur	n Trucks:	2.	297			
Observer Height	· · · ·	5.0 feet			Heav	y Trucks:	8.	004	Grade Ad	justment	: 0.0
	ad Elevation:	0.0 feet					D/	// /	(4)		
	ad Elevation:	0.0 feet		La	ane Equ	uivalent Autos:		ce (in 1 446	eet)		
	Road Grade: Left View:	0.0%			Madium	n Trucks:		446 232			
	Right View:	-90.0 degre 90.0 degre				y Trucks:		232 253			
FHWA Noise Mod	el Calculatior	ıs									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresi	nel	Barrier Att	en Be	rm Atten
Autos:	66.51	1.91		1.12		-1.20		-4.67	0.0	000	0.00
Medium Trucks:	77.72	-9.93		1.15		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	82.99	-12.92		1.15		-1.20		-5.38	0.0	000	0.00
Unmitigated Nois			barrier	attenu	ation)						
VehicleType	Leq Peak Ho			Leq Eve		Leq N			Ldn		NEL
Autos:			66.4		64.0		59.8		67.8		68.
Medium Trucks:			65.6		62.6		60.6		68.1		68.
Heavy Trucks:			68.5		60.3		61.4		69.5		69.
Vehicle Noise:			71.8		67.3		65.5	õ	73.3	3	73.
Centerline Distan	ce to Noise C	ontour (in feet)	70 dE		65 d	DA.	6	0 dBA	FF	dBA
			Ldn:	91	ом	65 a		0	423) 12
			Lan: NFL:	91		20			423		912
		Ci	*	55		20.	,		772		

F	HWA-RD-77-1	108 HIGI	HWAY NO	OISE PRI	EDICTION	MODEL			
Scenario: Existing	With Project			1	Project Na	me: Palo	nino		
Road Name: Hamner	Av.				Job Num	ber: 1179	5		
Road Segment: s/o Hidd	en Valley Pkw	y.							
SITE SPECIFIC	INPUT DAT	A					EL INPUT	S	
Highway Data			s	ite Cond	litions (Ha	ard = 10, 3	Soft = 15)		
Average Daily Traffic (Adt)	29,686 veh	nicles				Auto	s: 15		
Peak Hour Percentage	10%			Med	lium Truck:	s (2 Axles): 15		
Peak Hour Volume	2,969 vehi	cles		Hea	vy Trucks	(3+ Axles): 15		
Vehicle Speed	40 mph	1	W	ehicle M	iv				
Near/Far Lane Distance	73 feet		-		leTvpe	Dav	Evening	Night	Dailv
Site Data		-	-		Auto		\$	12.6%	
Barrier Height	0.0 fee	+		Med	dium Truck	ks: 73.3	% 9.2%	17.6%	5.74
Barrier Type (0-Wall, 1-Berm)		•		He	eavy Truck	ks: 84.4	% 3.2%	12.5%	2.43
Centerline Dist. to Barrier		+t	-						
Centerline Dist. to Observer			N	ioise Sol	urce Eleva		feet)		
Barrier Distance to Observer					Autos:	0.000			
Observer Height (Above Pad)					Trucks:	2.297			
Pad Elevation				Heavy	Trucks:	8.004	Grade Ac	justment.	0.0
Road Elevation			L	ane Equ	ivalent Di	stance (ii	1 feet)		
Road Grade	0.0%	-			Autos:	41.446			
Left View	-90.0 dec	arees		Medium	Trucks:	41.232			
Right View	90.0 deg	grees		Heavy	Trucks:	41.253			
FHWA Noise Model Calculati	ons				-				
VehicleType REMEL	Traffic Flo	w Dis	istance	Finite F	Road F	Fresnel	Barrier At	ten Ber	m Atter
Autos: 66.	51 3.	.03	1.12		-1.20	-4.6	7 0.	000	0.00
Medium Trucks: 77.		.01	1.15		-1.20	-4.8		000	0.00
Heavy Trucks: 82.	99 -12.	74	1.15		-1.20	-5.38	3 0.	000	0.00
Unmitigated Noise Levels (w		nd barri							
VehicleType Leq Peak H			Leq Ev		Leq Nig		Ldn	-	VEL
	69.5	67.5		65.1		60.9	69.		69
	68.7	66.5		63.5		61.6	69.		69
	70.2	68.7		60.4		61.6	69.		69
	74.3	72.4		68.2		66.2	74.	0	74
Centerline Distance to Noise	Contour (in f	eet)							
			70 d		65 dBA	4	60 dBA		dBA
		Ldn:	101	1	218		471		014
		CNEL:	106		229		493		061

Tuesday, July 02, 2019

Scenario:	Existing Wit	h Project				Project N	ame:	Palom	ino		
Road Name:						Job Nun	nber:	11795			
Road Segment:	s/o Hidden \	/alley Pkwy.									
	ECIFIC IN	PUT DATA			<u></u>					s	
Highway Data					Site Con	ditions (H					
Average Daily Tra		7,990 vehicle	s					Autos:	15		
Peak Hour Pe	•	10%				dium Truci					
Peak Hour	Volume:	799 vehicles			He	avy Trucks	s (3+ A	(xles)	15		
Vehicl	e Speed:	45 mph		F	Vehicle I	Mix					
Near/Far Lane	Distance:	36 feet		F	Vehi	cleType		Day	Evening	Night	Daily
Site Data						Au	tos:	76.3%	11.0%	12.6%	92.09%
Barrie	r Height:	0.0 feet			Me	edium Truc	cks:	73.3%	9.2%	17.6%	5.64%
Barrier Type (0-Wall,		0.0			ŀ	leavy Truc	cks:	84.4%	3.2%	12.5%	2.27%
Centerline Dist. t	o Barrier:	44.0 feet		F	Noise Sc	ource Elev	ation	s (in fe	et)		
Centerline Dist. to (Observer:	44.0 feet		F		Autos:		200			
Barrier Distance to (Observer:	0.0 feet			Mediur	n Trucks:		297			
Observer Height (Abo	ove Pad):	5.0 feet				y Trucks:		207	Grade Ad	iustment	: 0.0
Pad I	elevation:	0.0 feet									
Road E	levation:	0.0 feet			Lane Eq	uivalent D			feet)		
Roa	d Grade:	0.0%				Autos:	40.				
L	.eft View:	-90.0 degree	S		Mediur	n Trucks:	40.				
Ri	ght View:	90.0 degree	s		Heav	y Trucks:	40.:	262			
FHWA Noise Model C	alculations	:									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresr	iel	Barrier Att	en Ber	m Atten
Autos:	68.46	-3.17		1.2	-	-1.20		-4.61	0.0	000	0.00
Medium Trucks:	79.45	-15.30		1.3		-1.20		-4.87		000	0.00
Heavy Trucks:	84.25	-19.24		1.3	1	-1.20		-5.50	0.0	000	0.00
Unmitigated Noise Le											
,	q Peak Houi			Leq E	vening	Leq Ni			Ldn		NEL
Autos:	65		63.4		61.0		56.8		64.9	-	65.3
Medium Trucks:	64.3		62.1		59.1		57.2		64.6		64.9
Heavy Trucks:	65.		63.6		55.3		56.5		64.6		64.
Vehicle Noise:	69.	7 6	67.9		63.8		61.6	6	69.4	4	69.
Centerline Distance t	o Noise Co	ntour (in feet)									
			L		dBA	65 dE	BA	6	60 dBA		dBA
			dn:	4	0	87			188	4	04
			IFI :		12	91			197		24

	FHW	A-RD-77-108	HIGHW	AY N	OISE PF	REDICTIO	N MODEL			ĺ
Scenario: Road Name: Road Segment: :						Project N Job Nur	ame: Palo nber: 117			
	ECIFIC IN	PUT DATA						DEL INPUT	s	
Highway Data				S	Site Con	ditions (H	lard = 10,	Soft = 15)		
Average Daily Tra Peak Hour Per Peak Hour	centage:	21,119 vehicle 10% 2,112 vehicles				dium Truci avy Trucks		s): 15		
Vehicl	e Speed:	40 mph		L	ehicle l	Mix				
Near/Far Lane I	Distance:	36 feet		F		cleType	Dav	Evening	Night	Daily
Site Data				-			tos: 76.3		12.6%	
Barrie	r Heiaht:	0.0 feet			Me	edium Truc	cks: 73.3	9.2%	17.6%	5.51%
Barrier Type (0-Wall,		0.0			F	leavy Truc	cks: 84.4	4% 3.2%	12.5%	2.22%
Centerline Dist. te	o Barrier:	44.0 feet			loise So	urce Elev	ations (ir	feet)		
Centerline Dist. to C	Observer:	44.0 feet		Ē		Autos:	0.000			
Barrier Distance to C	Observer:	0.0 feet			Mediur	n Trucks:	2.297			
Observer Height (Abo	ove Pad):	5.0 feet				y Trucks:	8.004	Grade Ad	iustment:	0.0
Pad E	levation:	0.0 feet				·				
Road E	levation:	0.0 feet		L	ane Equ	uivalent D		n feet)		
	d Grade:	0.0%				Autos:	40.460			
L	.eft View:	-90.0 degree	s			n Trucks:	40.241			
Ri	ght View:	90.0 degree	s		Heav	y Trucks:	40.262			
FHWA Noise Model C	alculations	;								
VehicleType I	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresnel	Barrier Att	en Beri	m Atten
Autos:	66.51	1.57		1.28		-1.20	-4.6	1 0.0	000	0.000
Medium Trucks:	77.72	-10.67		1.31		-1.20	-4.8		000	0.000
Heavy Trucks:	82.99	-14.62		1.31		-1.20	-5.5	0 0.0	000	0.000
Unmitigated Noise Le	evels (witho	out Topo and I	oarrier a	atteni	uation)					
<i>,</i> ,	q Peak Houi	1 1		eq Ev	ening	Leq Ni	0	Ldn		VEL
Autos:	68.		6.2		63.8		59.6	67.7		68.
Medium Trucks:	67.		5.0		62.0		60.1	67.5	-	67.8
Heavy Trucks:	68.	-	7.0		58.7		59.9	68.0		68.
Vehicle Noise:	72.	7 7	0.9		66.8		64.6	72.5	5	72.8
Centerline Distance t	o Noise Co	ntour (in feet)								
				70 d		65 dE		60 dBA		dBA
			.dn:	64		138		298	-	43
		CN	EL:	67		145		313	6	74

Tuesday, July 02, 2019

	FH\	WA-RD-77-108	HIGHW	AY NO	ISE PR	EDICTIO	ON MO	DEL			
Scenari	o: Existing W	ith Project				Project I	Vame:	Palom	ino		
	e: Lincoln Av.					Job Nu	mber:	11795			
Road Segmer	nt: s/o Rincon	St.									
	SPECIFIC IN	NPUT DATA							l input	S	
Highway Data				Sit	e Con	ditions (Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	20,036 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Mee	dium Tru	cks (2 /	Axles):	15		
Peak H	our Volume:	2,004 vehicle	s		Hea	avy Truci	ks (3+ /	Axles):	15		
Vel	hicle Speed:	40 mph		Ve	hicle I	lix					
Near/Far Lar	ne Distance:	36 feet				cleType		Day	Evening	Night	Daily
Site Data						A	utos:	76.3%	11.0%	12.6%	92.29
Bar	rier Height:	0.0 feet			Me	dium Tru	icks:	73.3%	9.2%	17.6%	5.49%
Barrier Type (0-W	all, 1-Berm):	0.0			H	leavy Tru	icks:	84.4%	3.2%	12.5%	2.21%
Centerline Dis		44.0 feet		No	ise So	urce Ele	vation	s (in fe	eet)		
Centerline Dist.		44.0 feet				Autos	: 0.	000			
Barrier Distance		0.0 feet			Mediur	n Trucks	: 2.	297			
Observer Height (J	,	5.0 feet			Heav	Trucks	: 8.	004	Grade Ad	ljustment	: 0.0
	d Elevation:	0.0 feet									
	d Elevation:	0.0 feet		La	ne Equ	ivalent			teet)		
ŀ	Road Grade:	0.0%				Autos		460			
	Left View:	-90.0 degre				n Trucks		241			
	Right View:	90.0 degre	es		Heav	y Trucks	40.	262			
FHWA Noise Mode		_									
VehicleType	REMEL	Traffic Flow	Distar		Finite		Fresi		Barrier Att		rm Atten
Autos:	66.51			1.28		-1.20		-4.61		000	0.00
Medium Trucks:	77.72			1.31		-1.20		-4.87		000	0.00
Heavy Trucks:	82.99			1.31		-1.20		-5.50	0.0	000	0.00
Unmitigated Noise VehicleType	Levels (with Leg Peak Hou		-	ettenua eq Ever	- <u></u>	Leg N	Embed	1	l dn		NEL
Autos:			66.0	ey Evel	63.6	Leq	11grit 59.4	1	<u>Lun</u> 67.4		67.
Medium Trucks:			64.8		61.8		59.8	-	67.3		67.
Heavy Trucks:			66.7		58.5		59.7		67.3	-	67.
Vehicle Noise:			70.7		66.5		64.4		72.	-	72.
Centerline Distance	e to Noise C	ontour (in feet)								
				70 dB	A	05.4	DA	6	60 dBA	55	dBA
				70 UD.	4	65 d	DA		JO UDA	00	0.007
			Ldn:	62	4	13			288		620

	FHWA-	RD-77-108 HI	GHWAY I	NOISE PF	REDICTION	MODEL			
Scenario: Exist	ing With F	Project			Project Na	me: Palor	nino		
Road Name: Linco	oln Av.				Job Num	ber: 1179	5		
Road Segment: s/o F	tailroad St	t.							
SITE SPECII	IC INPL	JT DATA					EL INPUT	S	
Highway Data				Site Con	ditions (Ha	ard = 10, S	oft = 15)		
Average Daily Traffic (Adt): 22	,411 vehicles				Autos	: 15		
Peak Hour Percent	age:	10%		Me	dium Truck	s (2 Axles)	: 15		
Peak Hour Volu	ıme: 2,2	241 vehicles		He	avy Trucks	(3+ Axles)	: 15		
Vehicle Sp	eed:	40 mph	ŀ	Vehicle I	Mix				
Near/Far Lane Dista	nce:	36 feet	ŀ		icleType	Day	Evening	Night	Daily
Site Data					Aut	,		12.6%	
Barrier He	abt.	0.0 feet		Me	edium Truc			17.6%	5.589
Barrier Type (0-Wall, 1-Be	•	0.0		F	leavy Truc	ks: 84.49	% 3.2%	12.5%	2.25
Centerline Dist. to Ba		44.0 feet	ļ						
Centerline Dist. to Obse		44.0 feet	ļ	Noise So	ource Elev		feet)		
Barrier Distance to Obse		0.0 feet			Autos:	0.000			
Observer Height (Above F		5.0 feet			n Trucks:	2.297			
Pad Eleva	,	0.0 feet		Heav	y Trucks:	8.004	Grade Ad	justment.	0.0
Road Eleva		0.0 feet	ŀ	Lane Eq	uivalent Di	stance (in	feet)		
Road Gr		0.0%	-		Autos:	40.460	,		
/ eft \		90.0 degrees		Mediur	n Trucks:	40.241			
Right \		90.0 degrees			y Trucks:	40.262			
FHWA Noise Model Calcu	lations								
VehicleType REM	EL Tr	affic Flow	Distance	Finite	Road	Fresnel	Barrier Att	en Ber	m Atter
Autos:	66.51	1.82	1.2	8	-1.20	-4.61	0.0	000	0.00
Medium Trucks:	77.72	-10.36	1.3	1	-1.20	-4.87	0.0	000	0.00
Heavy Trucks:	82.99	-14.30	1.3	1	-1.20	-5.50	0.0	000	0.00
Unmitigated Noise Levels				/					
	ak Hour	Leq Day		vening	Leq Nig		Ldn		VEL
Autos:	68.4	66.4		64.1		59.9	67.9		68.
Medium Trucks:	67.5	65.3	-	62.3		60.4	67.8	-	68.
Heavy Trucks:	68.8	67.3	-	59.0		60.2	68.3		68.
Vehicle Noise:	73.0	71.:	2	67.0		64.9	72.8	3	73
Centerline Distance to No	ise Conte	our (in feet)	1 -						
				dBA	65 dB	9	60 dBA		dBA
		Ldr. CNFI		67 70	145		312 327		72 04
					152				

Tuesday, July 02, 2019

Sconor	io: Existing Wi	th Project				Project N	ama [,] I	Palomi	ino		
	e: Lincoln Av.					Job Nun			110		
	nt: s/o Pomon					000 1101		11755			
	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data					Site Con	ditions (H	lard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	24,883 vehicl	es				,	Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Truci	ks (2 A	(xles)	15		
Peak H	lour Volume:	2,488 vehicle	s		He	avy Trucks	s (3+ A	(xles):	15		
Ve	hicle Speed:	40 mph		-	Vehicle I	Mix					
Near/Far La	ne Distance:	36 feet		-		cleType		Day	Evening	Night	Daily
Site Data							tos:	, 76.3%	11.0%	12.6%	92.15%
Ra	rrier Height:	0.0 feet			Me	edium Truc	cks:	73.3%	9.2%	17.6%	5.60%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy Truc	cks:	84.4%	3.2%	12.5%	2.26%
Centerline Di		44.0 feet			Noise Sc	ource Elev	ation	s (in fe	eet)		
Centerline Dist.		44.0 feet				Autos:	0.0	000			
Barrier Distance		0.0 feet			Mediur	n Trucks:	2.2	297			
Observer Height (,	5.0 feet			Heav	y Trucks:	8.0	004	Grade Ad	ljustment	: 0.0
	ad Elevation:	0.0 feet		-	1 E	dural and D			64		
	ad Elevation:	0.0 feet		-	Lane Eq	uivalent D			reet)		
	Road Grade:	0.0%				Autos:	40.4				
	Left View:	-90.0 degre				n Trucks:	40.2				
	Right View:	90.0 degre	es		Heav	y Trucks:	40.2	262			
FHWA Noise Mod											
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite		Fresn	-	Barrier Att		m Atten
Autos:	66.51	2.28		1.2	-	-1.20		-4.61		000	0.00
Medium Trucks:	77.72	-9.89		1.3		-1.20		-4.87		000	0.00
Heavy Trucks:	82.99	-13.83		1.3	1	-1.20		-5.50	0.0	000	0.00
Unmitigated Nois										1	
VehicleType	Leq Peak Hou			Leq E	vening	Leq Ni			Ldn		NEL
Autos:	68		66.9		64.5		60.3		68.		68.
Medium Trucks:	67		65.8		62.8		60.8		68.3		68.0
Heavy Trucks:	69	-	67.7		59.5		60.7		68.		68.9
Vehicle Noise:	73	.5	71.7		67.5		65.4		73.	2	73.
Centerline Distan	ce to Noise Ce	ontour (in feet)								
			L		dBA	65 dE		6	60 dBA		dBA
			Ldn:	7	2	156			335	7	22
			NFI :		- '6	163			351		57

	FHW	A-RD-77-108	HIGHW	AY N	OISE PF	REDICTIO	N MODE	L			
Scenario: Road Name: Road Segment:		,				Project N Job Nur	ame: Pal nber: 117				
SITE SP	ECIFIC IN	PUT DATA						DEL INPU	٢S		
Highway Data				S	Site Con	ditions (H	lard = 10	Soft = 15)			
Average Daily Tra Peak Hour Pe Peak Hou	rcentage:	10,520 vehicle 10% 1,052 vehicles				dium Truc avy Truck		es): 15			
Vehic	le Speed:	35 mph			(- - - -		-	-			
Near/Far Lane		10 feet		v	ehicle l	vix icleType	Da	y Evening	Nic	aht	Daily
Site Data					Ven			3% 11.0%			2.30%
Parrio	r Heiaht:	0.0 feet			Me	edium True	cks: 73	3% 9.2%	17	.6%	5.49%
Barrier Type (0-Wall,		0.0			ŀ	leavy Tru	cks: 84	4% 3.2%	12	2.5%	2.21%
Centerline Dist.	to Barrier:	30.0 feet			loise Sc	ource Elev	ations (i	n feet)			
Centerline Dist. to	Observer:	30.0 feet		-		Autos:	0.000	,			
Barrier Distance to	Observer:	0.0 feet			Modiu	n Trucks:	2.297				
Observer Height (Ab	ove Pad):	5.0 feet				v Trucks:	8.004		diustr	nent: 0	0.0
Pad	Elevation:	0.0 feet				·			-,		
Road	Elevation:	0.0 feet		L	ane Eq	uivalent D					
Roa	ad Grade:	0.0%				Autos:	30.000				
I	Left View:	-90.0 degree	s			n Trucks:	29.704				
R	ight View:	90.0 degree	S		Heav	y Trucks:	29.733	5			
FHWA Noise Model (
	REMEL	Traffic Flow	Dista		Finite		Fresnel	Barrier A		Berm	
Autos:	64.30	-0.87		3.22		-1.20	-4.		.000		0.000
Medium Trucks:	75.75	-13.13		3.29		-1.20	-4.		.000		0.000
Heavy Trucks:	81.57	-17.08		3.28		-1.20	-5.	77 0	.000		0.000
Unmitigated Noise L					· · ·				1		
	q Peak Hou	1 1		eq Ev	•	Leq Ni	•	Ldn		CNE	
Autos:	65.		63.5		61.1		56.9	64			65.4
Medium Trucks:	64.		62.6		59.6		57.6	65			65.3
Heavy Trucks: Vehicle Noise:	66. 70.	*	65.0 68.6		56.8 64.3		58.0 62.3	66 70			66.2 70.4
Centerline Distance					04.0		02.0	70			70.4
Centerime Distance	o worse Co	mour (in reet)		70 d	BA	65 dE	BA	60 dBA		55 dE	BA
			dn:	31		66		142		306	
		CN	IEL:	32	2	69		149		320	J

Tuesday, July 02, 2019

	FH\	WA-RD-77-108	HIGHW	AY NO	DISE PF	REDICTIO	N MC	DEL			
Scenari	o: Existing W	ith Project				Project N	lame:	Palomi	ino		
	e: Second St.					Job Nur	mber:	11795			
Road Segmen	nt: e/o Parkrid	lge Av.									
	SPECIFIC IN	NPUT DATA			_				L INPUT	s	
Highway Data				S	ite Con	ditions (H	lard =	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	9,675 vehicle	es					Autos:	15		
	Percentage:	10%				dium Truc					
Peak He	our Volume:	968 vehicle	S		He	avy Truck	s (3+	Axles):	15		
	hicle Speed:	35 mph		V	ehicle l	Mix					
Near/Far Lar	ne Distance:	10 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						Au	tos:	76.3%	11.0%	12.6%	92.68%
Bar	rier Height:	0.0 feet			Me	edium Tru	cks:	73.3%	9.2%	17.6%	5.21%
Barrier Type (0-Wa	all, 1-Berm):	0.0			ŀ	leavy Tru	cks:	84.4%	3.2%	12.5%	2.10%
Centerline Dis		30.0 feet		N	oise Sc	ource Elev	vatior	ns (in fe	eet)		
Centerline Dist. t		30.0 feet				Autos:	0	.000			
Barrier Distance t		0.0 feet			Mediur	n Trucks:	2	.297			
Observer Height (/	,	5.0 feet			Heav	y Trucks:	8	.004	Grade Ad	ljustment	: 0.0
	d Elevation:	0.0 feet							(4)		
	d Elevation:	0.0 feet		La	ane Equ	uivalent L			reet)		
F	Road Grade:	0.0%			Ma	Autos:		.000			
	Left View:	-90.0 degree				n Trucks:		.704 .733			
	Right View:	90.0 degree	es		neav	y Trucks:	29	.733			
FHWA Noise Mode		-									
VehicleType	REMEL	Traffic Flow	Distar		Finite		Fres		Barrier Att		rm Atten
Autos:	64.30			3.22		-1.20		-4.49		000	0.00
Medium Trucks: Heavy Trucks:	75.75 81.57			3.29 3.28		-1.20 -1.20		-4.86 -5.77		000 000	0.00
				0.00		-1.20		-5.77	0.0	000	0.00
Unmitigated Noise VehicleType	Leg Peak Ho		-	a ttenu eq Eve		Leg N	iaht		l dn	0	NEL
Autos	Ley reak 1100 65		63.1	Y LVC	60.8	Ley M	56.	6	64.0		65.
Medium Trucks:	64		62.0		59.0		57.		64.4	-	64.
Heavy Trucks:	66	5.0	64.5		56.2		57.		65.	5	65.
Vehicle Noise:	69	9.9	68.1		63.8		61.	8	69.	6	69.
Centerline Distanc	e to Noise C	ontour (in feet)								
				70 dE	BA	65 dE	BA	6	60 dBA		dBA
			Ldn:	28		61			131	-	283
		0	VFI:	30		64			138		296

F	HWA-RD-77-108	B HIGH	NAY NC	ISE PREDICT	ION MOI	DEL			
Scenario: Existing	With Project			Project	Name: I	Palomi	no		
Road Name: Second	St.			Job N	lumber: `	11795			
Road Segment: w/o Pacit	ic Av.								
SITE SPECIFIC	INPUT DATA							S	
Highway Data			Si	te Conditions	(Hard =	10, So	ft = 15)		
Average Daily Traffic (Adt).	10,946 vehicl	es				Autos:	15		
Peak Hour Percentage.	10%			Medium Tr	ucks (2 A	xles):	15		
Peak Hour Volume.	1,095 vehicle	s		Heavy Tru	cks (3+ A	xles):	15		
Vehicle Speed.	35 mph		14	ehicle Mix					
Near/Far Lane Distance.	10 feet		Ve	VehicleType		Day	Evening	Night	Daily
Site Data				,1		76.3%	11.0%	12.6%	
				Medium T		73.3%	9.2%	17.6%	5.179
Barrier Height				Heavy T		84.4%		12.5%	2.089
Barrier Type (0-Wall, 1-Berm)				neavy I	uona.	04.4/0	J.2 /0	12.3%	2.007
Centerline Dist. to Barrier			N	oise Source E	levation	s (in fe	et)		
Centerline Dist. to Observer				Auto	s: 0.0	000			
Barrier Distance to Observer	0.0 1001			Medium Truck	s: 2.2	297			
Observer Height (Above Pad)				Heavy Truck	s: 8.0	004	Grade Adj	iustment:	0.0
Pad Elevation									
Road Elevation	0.0 1001		Lä	ne Equivalen			eet)		
Road Grade	0.070			Auto					
Left View				Medium Truck					
Right View	90.0 degre	es		Heavy Truck	s: 29.1	733			
FHWA Noise Model Calculation									
VehicleType REMEL	Traffic Flow	Dist	ance	Finite Road	Fresn	-	Barrier Att	en Beri	m Atten
Autos: 64.3	-0.68		3.22	-1.20		-4.49	0.0	000	0.00
Medium Trucks: 75.7	5 -13.22		3.29	-1.20		-4.86	0.0	000	0.00
Heavy Trucks: 81.5	-17.16		3.28	-1.20		-5.77	0.0	000	0.00
Unmitigated Noise Levels (wi				,					
VehicleType Leq Peak h			Leq Eve		Night		Ldn		IEL
		63.7		61.3	57.1		65.1		65.
	64.6	62.5		59.5	57.5		64.9		65.
Heavy Trucks:	66.5	65.0		56.7	57.9		66.0)	66.
Vehicle Noise:	70.4	68.6		64.3	62.3		70.1		70.
Centerline Distance to Noise	Contour (in fee	t)							
			70 dE		dBA		0 dBA		dBA
		Ldn:	31	6	66		142	3	06
		NFI :	32		69		149		21

Tuesday, July 02, 2019

Scenario: Existing	1 \// i+4	Project				Project I	Jame'	Palom	ino		
Road Name: Second		reloject					mber:		IIIO		
Road Segment: e/o Pad		v.				000 142	mbor.	11795			
SITE SPECIFIC						N		IODE			
Highway Data					Site Con					-	
Average Daily Traffic (Ad	t): 1	1,643 vehicles	5				,	Autos:	15		
Peak Hour Percentag	e:	10%			Me	dium Tru	cks (2 A	(xles):	15		
Peak Hour Volum	e: '	1,164 vehicles			He	avy Truc	ks (3+ A	(xles):	15		
Vehicle Spee	d:	35 mph		F	Vehicle I	Miy					
Near/Far Lane Distanc	e:	10 feet		-		icleType		Day	Evening	Night	Daily
Site Data								76.3%	, v	12.6%	
		0.0 (Me	dium Tri		73.3%		17.6%	
Barrier Heigh Barrier Type (0-Wall, 1-Bern		0.0 feet 0.0				leavy Tru		84.4%		12.5%	
Centerline Dist. to Barrie	·	30.0 feet									
Centerline Dist. to Observe		30.0 feet		-	Noise Sc			<u> </u>	eet)		
Barrier Distance to Observe		0.0 feet				Autos		000			
Observer Height (Above Pag		5.0 feet				n Trucks		297			
Pad Elevatio	·	0.0 feet			Heav	y Trucks	: 8.0	004	Grade Adj	ustment	: 0.0
Road Elevatio	n:	0.0 feet			Lane Eq	uivalent	Distand	ce (in	feet)		
Road Grad		0.0%				Autos	: 30.0	000			
Left Vie	N:	-90.0 degrees	5		Mediur	n Trucks	: 29.1	704			
Right Vie	N:	90.0 degrees	5		Heav	y Trucks	29.	733			
FHWA Noise Model Calcula	tions										
VehicleType REMEL		Traffic Flow	Dis	tance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos: 64	.30	-0.41		3.2	2	-1.20		-4.49	0.0	00	0.00
Medium Trucks: 75	.75	-12.92		3.2	9	-1.20		-4.86	0.0	00	0.00
Heavy Trucks: 81	.57	-16.86		3.2	8	-1.20		-5.77	0.0	00	0.00
Unmitigated Noise Levels (vitho	ut Topo and b	arrie	er atter	nuation)						
VehicleType Leq Peak	Hour	Leq Day		Leq E	vening	Leq N	light		Ldn	-	NEL
Autos:	65.9		3.9		61.6		57.4		65.4		65.
Medium Trucks:	64.9		2.8		59.8		57.8		65.2		65.
Heavy Trucks:	66.8	3 6	5.3		57.0		58.2		66.3	i	66.
Vehicle Noise:	70.7	6	8.9		64.6		62.6		70.4		70.
Centerline Distance to Nois	e Col	ntour (in feet)									
					dBA	65 a		6	60 dBA		dBA
			dn:		2	69	3		149	3	20
		CN		-	14	72			156		35

FHV	NA-RD-77-108	HIGHW	AY NC	DISE PR	EDICTIO		_			
e: Second St.	,									
SPECIFIC IN	IPUT DATA				N	DISE MO	DEL INP	UTS		
			Si	ite Conc						
Traffic (Adt):	12,626 vehicle	es				Aut	os: 15			
Percentage:	10%			Mea	lium Tru	cks (2 Axle	s): 15			
our Volume:	1,263 vehicles	5		Hea	vy Truck	s (3+ Axle	s): 15			
nicle Speed:	35 mph		14	obiolo N	11.u					
ne Distance:	10 feet		V			Da	/ Eveni	na Nii	aht	Daily
			-	Venic				· ·	·	92.63%
				Mo						5.25%
										2.12%
. ,					,					2.1270
			N	oise So	urce Ele	vations (i	n feet)			
					Autos.	0.000				
				Medium	Trucks.	2.297				
,				Heavy	/ Trucks	8.004	Grade	Adjustr	nent:	0.0
			1.	ane Fau	ivalent	Distance (in feet)			
			_	ino Equ			,			
				Modium						
0	, i			,						
	-									
		Distan		Finite F					Berm	
										0.000
										0.000
					-1.20	-5.	~	0.000		0.000
			eq Eve	•	Leq N	•			CNI	
66										66.2
				60.2				65.6		65.9
67	.2	65.6		57.4		58.6		66.6		66.8
	.2									66.8 71.1
67 71	.2	65.6 69.3		57.4 65.0		58.6 63.0		66.6		71.1
67 71	.2 .1 ontour (in feet	65.6 69.3	70 dE	57.4 65.0	65 d	58.6 63.0 BA	60 dBA	66.6	55 d	71.1 /BA
67 71	.2 .1 ontour (in feet	65.6 69.3	70 dE 34 36	57.4 65.0	65 d 73 77	58.6 63.0 BA		66.6	55 d 33 35	71.1 /BA 9
	2: Existing WW 2: Second St. 2: Wo Mountant 2: Wo Mountant	2: Existing With Project 2: Second St. 4: Wo Mountain Av. SPECIFIC INPUT DATA Fraffic (Adi): 12,626 vehicle Percentage: 10% pur Volume: 1,263 vehicle nicle Speed: 35 mph pistance: 10 feet rier Height: 0.0 feet o Observer: 0.0 feet o Observer: 0.0 feet d Elevation: 0.0 feet d Elevation: 0.0 feet d Elevation: 0.0 feet d Above Pad): 5.0 feet d Elevation: 0.0 degree REMEL Traffic Flow 64.30 -0.07% 75.75 -12.53 81.57 -16.47 Levels (without Topo and Leg Pesk Hour Leg Day 66.3 -	2: Existing With Project 9: Second St. 12: Second St. 12: Wo Mountain Av. SPECIFIC INPUT DATA Traffic (Adt): 12,626 vehicles Percentage: 10% pur Volume: 1263 vehicles nicle Speed: 35 mph ne Distance: 10 feet rier Height: 0.0 feet to Observer: 30.0 feet to Observer: 30.0 feet to Observer: 0.0 feet d Elevation: 0.0 degrees REMEL Traffic Flow Distant 64:30 -0.07 75.75 81.57 -16.47 12.42.53 81.57 -16.47 12.42.64 Ley Peak Hour Ley Day Let 66.3 64.3 64.3 <td>Distance Non-trained 2: Existing With Project 9: Second St. 2: Second St. 12: 626 vehicles SPECIFIC INPUT DATA S Traffic (Adi): 12: 626 vehicles Percentage: 10% uv Volume: 1.263 vehicles nicle Speed: 35 mph V/ ue Distance: 10 feet Image: Second St. rier Height: 0.0 feet Image: Second St. vo Observer: 0.0 feet Image: Second St. vo Observer: 0.0 feet Image: Second St. o Observer: 0.0 feet Image: Second St. d Elevation: 0.0 feet Image: Second St. d Elevation: 0.0 feet Image: Second St. eft View: 90.0 degrees Image: Second St. r6:3 -0.07 3.22 r5:75 -12:53 3.29 81:57 -16:47 328 Levels (without Topo and barrier attenu Leq Eve 66:3 64:3</td> <td>Description Existing With Project 9: Second St. 5: SteeCond St. #: wio Mountain Av. Site Cond SPECIFIC INPUT DATA Site Cond Traffic (Adt): 12,626 vehicles Meci Percentage: 10% Meci our Volume: 1,263 vehicles Heei nicle Speed: 35 mph Vehicle Meci rier Height: 0.0 feet Meci nic o Observer: 30.0 feet Moise So to Observer: 30.0 feet Mecium d Elevation: 0.0 feet Lane Equ d Elevation: 0.0 feet Lane Equ d Elevation: 0.0 feet Heavy d Elevation: 0.0 feet Lane Equ Right View: 90.0 degrees Medium Right View: 90.0 degrees Medium Right View: 90.0 degrees Medium Right View: 90.0 degrees Stinte I 64:30 -0.07 3.29 81:57 -16.47 3.28 <</td> <td>Description Existing With Project Project N 21: Existing With Project Job Nu 22: Second St. Job Nu 23: Second St. Job Nu SPECIFIC INPUT DATA Site Conditions (Fredringe: 10% Medium True Fredringe: 10% Medium True Dur Volume: 1,2626 vehicles Medium True Percentage: 10% Medium True nicle Speed: 35 mph Vehicle Mix ve Distance: 10 feet WehicleType Autos: 0.0 feet o Observer: 0.0 feet Medium True o Observer: 0.0 feet Medium Trucks: d Elevation: 0.0 feet Heavy Trucks: d Elevation: 0.0 feet Lane Equivalent I 64.30 -0.07</td> <td>District Project Name: Paik 2: Existing With Project Job Number: 117 2: Second St. Job Number: 117 2: Second St. Job Number: 117 SPECIFIC INPUT DATA NOISE MOI Site Conditions (Hard = 10, Fredfic (Adt): 12,626 vehicles Percentage: 10% Medium Trucks (2 Axle Percentage: 10% wirle Distance: 10 feet Medium Trucks: 73.4 Autos: 76. rier Height: 0.0 feet Medium Trucks: 73.4 Noise Source Elevations (li to Observer: 0.0 feet Move Pad): 5.0 feet d Elevation: 0.0 feet d Elevation: 0.0 feet d Elevation: 0.0 feet d Elevation: 0.0 feet Left Weiw: 90.0 degrees Right View: 90.0 degrees Redium Trucks: 29.733 Heauy Trucks: 29.733 Heauy Trucks: 29.733 Heauy Trucks: 29.733 H</td> <td>e: Second St. Job Number: 11795 t: wik Mountain Av. Job Number: 11795 Ste Conditions (Hard = 10, Soft = 16 Freffic (Adt): 12,626 vehicles Percentage: 10% Site Conditions (Hard = 10, Soft = 16 Percentage: 10% Heavy Trucks (2 Axles): 15 Heavy Trucks (2 Axles): 15 Heavy Trucks (3 + Axles): 15 Heavy Trucks: 76.3% 11.0 Autos: 76.3% 11.0 Heavy Trucks: 84.4% 3.2 Heavy Trucks: 84.4% Heavy Trucks: 8</td> <td>Description Existing With Project Project Name: Palomino Job Number: 11795 Second St. Job Number: 11795 SPECIFIC INPUT DATA NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15) Site Conditions (Hard = 10, Soft = 15) Traffic (Adt): 12,626 vehicles Autos:: 15 Percentage: 10% Medium Trucks (2 Axles): 15 Day Volume: 12,626 vehicles Medium Trucks (2 Axles): 15 Percentage: 10 feet Vehicle Mix Autos: 76.3% 9.2% 17 12 rier Height: 0.0 feet Autos: 8.44% 3.2% 12 file armin: 0.0 feet Medium Trucks: 2.297 Above Pad): 5.0 feet Heavy Trucks: 8.004 Grade Adjust d Elevation: 0.0 feet Autos: 30.00 Medium Trucks: 2.97 Heavy Trucks: 29.00 degrees Medium Trucks: 2.973 4 d Elevation: 0.0 feet Autos: 30.00 4 d Elevation: 0.0 feet Heavy Trucks: 29.704 Heavy Trucks:</td> <td>Existing With Project Project Name: Palomino Job Number: 11795 Second St. Second St. Wolkuntain Av. NOISE MODEL INPUT S SpeCiFIC INPUT DATA NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15) Fraffic (Adi): 12,626 vehicles Percentage: 10% Mathematical Speed: 35 mph Vehicle Speed: 35 mph Vehicle Mix Autos: Vehicle Mix Autos: Vehicle Type Day Evening Noise Source Elevations (in feet) No Observer: 0.0 feet Moise Source Elevations (in feet) Autos: Autos: 0.000 Medium Trucks: 2.97 Above Pad): 5.0 feet d Elevation: 0.0 degrees Right View: 90.0 degrees Remit Tamper Heavy Trucks: 29.73 Heavy Trucks: 29.73 Heavy Trucks: 29.73</td>	Distance Non-trained 2: Existing With Project 9: Second St. 2: Second St. 12: 626 vehicles SPECIFIC INPUT DATA S Traffic (Adi): 12: 626 vehicles Percentage: 10% uv Volume: 1.263 vehicles nicle Speed: 35 mph V/ ue Distance: 10 feet Image: Second St. rier Height: 0.0 feet Image: Second St. vo Observer: 0.0 feet Image: Second St. vo Observer: 0.0 feet Image: Second St. o Observer: 0.0 feet Image: Second St. d Elevation: 0.0 feet Image: Second St. d Elevation: 0.0 feet Image: Second St. eft View: 90.0 degrees Image: Second St. r6:3 -0.07 3.22 r5:75 -12:53 3.29 81:57 -16:47 328 Levels (without Topo and barrier attenu Leq Eve 66:3 64:3	Description Existing With Project 9: Second St. 5: SteeCond St. #: wio Mountain Av. Site Cond SPECIFIC INPUT DATA Site Cond Traffic (Adt): 12,626 vehicles Meci Percentage: 10% Meci our Volume: 1,263 vehicles Heei nicle Speed: 35 mph Vehicle Meci rier Height: 0.0 feet Meci nic o Observer: 30.0 feet Moise So to Observer: 30.0 feet Mecium d Elevation: 0.0 feet Lane Equ d Elevation: 0.0 feet Lane Equ d Elevation: 0.0 feet Heavy d Elevation: 0.0 feet Lane Equ Right View: 90.0 degrees Medium Right View: 90.0 degrees Medium Right View: 90.0 degrees Medium Right View: 90.0 degrees Stinte I 64:30 -0.07 3.29 81:57 -16.47 3.28 <	Description Existing With Project Project N 21: Existing With Project Job Nu 22: Second St. Job Nu 23: Second St. Job Nu SPECIFIC INPUT DATA Site Conditions (Fredringe: 10% Medium True Fredringe: 10% Medium True Dur Volume: 1,2626 vehicles Medium True Percentage: 10% Medium True nicle Speed: 35 mph Vehicle Mix ve Distance: 10 feet WehicleType Autos: 0.0 feet o Observer: 0.0 feet Medium True o Observer: 0.0 feet Medium Trucks: d Elevation: 0.0 feet Heavy Trucks: d Elevation: 0.0 feet Lane Equivalent I 64.30 -0.07	District Project Name: Paik 2: Existing With Project Job Number: 117 2: Second St. Job Number: 117 2: Second St. Job Number: 117 SPECIFIC INPUT DATA NOISE MOI Site Conditions (Hard = 10, Fredfic (Adt): 12,626 vehicles Percentage: 10% Medium Trucks (2 Axle Percentage: 10% wirle Distance: 10 feet Medium Trucks: 73.4 Autos: 76. rier Height: 0.0 feet Medium Trucks: 73.4 Noise Source Elevations (li to Observer: 0.0 feet Move Pad): 5.0 feet d Elevation: 0.0 feet d Elevation: 0.0 feet d Elevation: 0.0 feet d Elevation: 0.0 feet Left Weiw: 90.0 degrees Right View: 90.0 degrees Redium Trucks: 29.733 Heauy Trucks: 29.733 Heauy Trucks: 29.733 Heauy Trucks: 29.733 H	e: Second St. Job Number: 11795 t: wik Mountain Av. Job Number: 11795 Ste Conditions (Hard = 10, Soft = 16 Freffic (Adt): 12,626 vehicles Percentage: 10% Site Conditions (Hard = 10, Soft = 16 Percentage: 10% Heavy Trucks (2 Axles): 15 Heavy Trucks (2 Axles): 15 Heavy Trucks (3 + Axles): 15 Heavy Trucks: 76.3% 11.0 Autos: 76.3% 11.0 Heavy Trucks: 84.4% 3.2 Heavy Trucks: 84.4% Heavy Trucks: 8	Description Existing With Project Project Name: Palomino Job Number: 11795 Second St. Job Number: 11795 SPECIFIC INPUT DATA NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15) Site Conditions (Hard = 10, Soft = 15) Traffic (Adt): 12,626 vehicles Autos:: 15 Percentage: 10% Medium Trucks (2 Axles): 15 Day Volume: 12,626 vehicles Medium Trucks (2 Axles): 15 Percentage: 10 feet Vehicle Mix Autos: 76.3% 9.2% 17 12 rier Height: 0.0 feet Autos: 8.44% 3.2% 12 file armin: 0.0 feet Medium Trucks: 2.297 Above Pad): 5.0 feet Heavy Trucks: 8.004 Grade Adjust d Elevation: 0.0 feet Autos: 30.00 Medium Trucks: 2.97 Heavy Trucks: 29.00 degrees Medium Trucks: 2.973 4 d Elevation: 0.0 feet Autos: 30.00 4 d Elevation: 0.0 feet Heavy Trucks: 29.704 Heavy Trucks:	Existing With Project Project Name: Palomino Job Number: 11795 Second St. Second St. Wolkuntain Av. NOISE MODEL INPUT S SpeCiFIC INPUT DATA NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15) Fraffic (Adi): 12,626 vehicles Percentage: 10% Mathematical Speed: 35 mph Vehicle Speed: 35 mph Vehicle Mix Autos: Vehicle Mix Autos: Vehicle Type Day Evening Noise Source Elevations (in feet) No Observer: 0.0 feet Moise Source Elevations (in feet) Autos: Autos: 0.000 Medium Trucks: 2.97 Above Pad): 5.0 feet d Elevation: 0.0 degrees Right View: 90.0 degrees Remit Tamper Heavy Trucks: 29.73 Heavy Trucks: 29.73 Heavy Trucks: 29.73

Tuesday, July 02, 2019

	FHV	VA-RD-77-108	HIGHW	AY NO	ISE PF	REDICTIO	и моі	DEL			
	 Existing Wite: Second St. t: e/o Mountai 					Project Na Job Nun			no		
	PECIFIC IN	PUT DATA								s	
Highway Data				Si	te Con	ditions (H	ard =	10, Sc	ft = 15)		
Average Daily 1	Traffic (Adt):	14,206 vehicle	es					Autos:	15		
Peak Hour I	•	10%				dium Truck		/	15		
	our Volume:	1,421 vehicles	6		He	avy Trucks	s (3+ A	xles):	15		
	icle Speed:	35 mph		Ve	hicle I	Mix					
Near/Far Lar	e Distance:	36 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						Aut	os:	76.3%	11.0%	12.6%	90.47%
Bar	rier Height:	0.0 feet				edium Truc		73.3%	9.2%	17.6%	
Barrier Type (0-Wa	all, 1-Berm):	0.0			ŀ	leavy Truc	:ks:	84.4%	3.2%	12.5%	3.95%
Centerline Dis		44.0 feet		No	oise So	ource Elev	ation	s (in fe	et)		
Centerline Dist. t		44.0 feet				Autos:		000			
Barrier Distance t		0.0 feet			Mediur	n Trucks:	2.2	297			
Observer Height (/	,	5.0 feet			Heav	y Trucks:	8.0	004	Grade Ad	iustment	0.0
	d Elevation: d Elevation:	0.0 feet 0.0 feet		12	no Fa	uivalent D	istan	o (in t	iaat)		
	oad Grade:	0.0 reet		La	ne Ly	Autos:	40.4		001)		
	Left View:	-90.0 degree	20		Mediur	n Trucks:	40.2				
	Right View:	90.0 degree			Heav	y Trucks:	40.2	262			
FHWA Noise Mode	Calculation:	5									
VehicleType	REMEL	Traffic Flow	Distar	се	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	64.30	0.34		1.28		-1.20		-4.61	0.0		0.00
Medium Trucks:	75.75	-11.75		1.31		-1.20		-4.87		000	0.00
Heavy Trucks:	81.57	-13.25		1.31		-1.20		-5.50	0.0	000	0.00
Unmitigated Noise			-		<u> </u>						
VehicleType Autos:	Leq Peak Hou 64		52.8	eq Eve	ning 60.4	Leq Ni	ght 56.2		Ldn 64.2		NEL 64.
Medium Trucks:	64.	-	52.0 52.0		59.0		57.0		64.4	-	64. 64.
Heavy Trucks:	68.	-	52.0 56.9		58.7		59.8		67.9		68.
Vehicle Noise:	71.		69.2		64.2		62.7		70.6		70.
Centerline Distanc	e to Noise Co	ontour (in feet)								
				70 dB	A	65 dB	A	6	0 dBA	55	dBA
			Ldn:	48		104			225	4	85

	FHV	/A-RD-77-108	IIGHW	VAY NO	DISE PR	REDICTIO	N MOL	DEL			
Scenario: Exis		h Project				Project Na			ino		
Road Name: Sec						Job Nun	nber: 1	1795			
Road Segment: e/o	Dwy. 8										
SITE SPECI	FIC IN	PUT DATA							L INPUT	S	
Highway Data				S	ite Con	ditions (H	ard =	10, Sc	oft = 15)		
Average Daily Traffic ('Adt):	14,550 vehicles	5					Autos:			
Peak Hour Percen	tage:	10%			Med	dium Truck	(2 A	xles):	15		
Peak Hour Vol	ume:	1,455 vehicles			Hea	avy Trucks	; (3+ A	xles):	15		
Vehicle Sp		35 mph		v	ehicle N	Nix					
Near/Far Lane Dista	ance:	36 feet		-		cleType		Day	Evening	Night	Daily
Site Data						Aut	os:	76.3%	11.0%	12.6%	90.69
Barrier He	iaht:	0.0 feet			Me	edium Truc	ks:	73.3%	9.2%	17.6%	5.45
Barrier Type (0-Wall, 1-B	•	0.0			h	leavy Truc	ks: t	84.4%	3.2%	12.5%	3.86
Centerline Dist. to Ba		44.0 feet			laiaa Ca	urce Elev	otions	in f	a.41		
Centerline Dist. to Obse	erver:	44.0 feet		N	oise 30	Autos:	0.0		el)		
Barrier Distance to Obse	erver:	0.0 feet				n Trucks:	2.2				
Observer Height (Above	Pad):	5.0 feet				y Trucks:	8.0		Grade Ad	iustmont	
Pad Eleva	ation:	0.0 feet			neav	y TTUCKS.	0.0	/04	Orade Ha	Justinent	0.0
Road Eleva	ation:	0.0 feet		L	ane Equ	uivalent D	istanc	e (in :	feet)		
Road G	rade:	0.0%				Autos:	40.4	160			
Left	View:	-90.0 degrees	5		Mediun	n Trucks:	40.2	241			
Right	View:	90.0 degrees	6		Heav	y Trucks:	40.2	262			
FHWA Noise Model Calc	ulations	5									
VehicleType REN	1EL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier At	en Ber	m Atter
Autos:	64.30	0.46		1.28		-1.20		4.61		000	0.00
Medium Trucks:	75.75	-11.75		1.31		-1.20		-4.87		000	0.00
Heavy Trucks:	81.57	-13.25		1.31		-1.20		-5.50	0.0	000	0.0
Unmitigated Noise Level	s (with	out Topo and b	arrier	attenu	ation)						
	ak Hou			Leq Ev		Leq Nig			Ldn		VEL
Autos:	64.		2.9		60.5		56.3		64.		64
Medium Trucks:	64.		2.0		59.0		57.0		64.4		64
Heavy Trucks:	68.	-	6.9		58.7		59.8		67.		68
Vehicle Noise:	71.	0 6	9.2		64.2		62.8		70.	7	70
Centerline Distance to N	oise Co	ntour (in feet)									_
				70 di		65 dB		6	60 dBA		dBA
		L CN	dn:	49 51		105 109			226 235		87
											06

Tuesday, July 02, 2019

Scenario:	Existing Wit	h Project				Project N	lama.	Palom	ino		
Road Name: 9		in Pilojeci				Job Nu			110		
Road Segment: \		r Av.				000 110		11755			
	ECIFIC IN	PUT DATA							L INPUT	rs	
Highway Data				5	Site Con	ditions (I	lard =	= 10, S	oft = 15)		
Average Daily Tral	ffic (Adt):	19,597 vehicles	;					Autos:	15		
Peak Hour Per	centage:	10%			Mee	dium Truc	:ks (2	Axles):	15		
Peak Hour	Volume:	1,960 vehicles			Hea	avy Truck	s (3+	Axles):	15		
Vehicle	e Speed:	35 mph		1	Vehicle I	Nix					
Near/Far Lane D	Distance:	36 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						AL	itos:	76.3%	5 11.0%	12.6%	91.009
Barrio	r Heiaht:	0.0 feet			Me	dium Tru	cks:	73.3%	9.2%	17.6%	5.549
Barrier Type (0-Wall,		0.0			H	leavy Tru	cks:	84.4%	3.2%	12.5%	3.479
Centerline Dist. to		44.0 feet		1	Voise So	urce Ele	vatior	ns (in f	eet)		
Centerline Dist. to C		44.0 feet				Autos:	0.	.000	,		
Barrier Distance to C		0.0 feet			Mediur	n Trucks:	2	297			
Observer Height (Abo	,	5.0 feet			Heav	v Trucks:	8	.004	Grade A	djustmen	t: 0.0
	levation:	0.0 feet		-	E		N-4		64		
	levation:	0.0 feet		-	Lane Equ	ivalent l			reet)		
	d Grade:	0.0%			1 4 m - 16 m	Autos: n Trucks:		.460 .241			
	eft View: ght View:	-90.0 degrees 90.0 degrees				n Trucks: y Trucks:		.241 .262			
FHWA Noise Model C	alculations	:									
VehicleType F	REMEL	Traffic Flow	Distar	псе	Finite	Road	Fres	nel	Barrier A	tten Be	rm Atten
Autos:	64.30	1.77		1.28	3	-1.20		-4.61	0.	.000	0.00
Medium Trucks:	75.75	-10.39		1.31	I	-1.20		-4.87	0.	.000	0.00
Heavy Trucks:	81.57	-12.43		1.31	I	-1.20		-5.50	0.	.000	0.00
	wale (with	out Topo and b	arrier a								
Unmitigated Noise Le									Ldn		NEL
VehicleType Leo	q Peak Hou	r Leq Day		eq Ev	/ening	Leq N	<u> </u>	_			
VehicleType Leo Autos:	g Peak Hou 66.	r Leq Day 1 6	4.2	eq Ev	61.8	Leq N	57.		65		
VehicleType Leo Autos: Medium Trucks:	Peak Hou 66. 65.	r Leq Day 1 6 5 6	4.2 3.3	eq Ev	61.8 60.3	Leq N	57. 58.	4	65	.8	66.
VehicleType Leo Autos: Medium Trucks: Heavy Trucks:	9 Peak Hou 66. 65. 69.	r Leq Day 1 6 5 6 2 6	4.2 3.3 7.7	eq Ev	61.8 60.3 59.5	Leq N	57. 58. 60.	4 7	65 68	.8 .7	66. 68.
VehicleType Lea Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	9 Peak Hou 66. 65. 69. 72.	r Leq Day 1 6 5 6 2 6 1 7	4.2 3.3	eq Ev	61.8 60.3	Leq N	57. 58.	4 7	65	.8 .7	66. 68.
VehicleType Leo Autos: Medium Trucks: Heavy Trucks:	9 Peak Hou 66. 65. 69. 72.	r Leq Day 1 6 5 6 2 6 1 7	4.2 3.3 7.7		61.8 60.3 59.5 65.4		57. 58. 60. 63.	4 7 9	65 68 71	.8 .7 .7	66. 68. 72.
VehicleType Lea Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	9 Peak Hou 66. 65. 69. 72.	r Leq Day 1 6 5 6 2 6 1 7 ntour (in feet)	4.2 3.3 7.7	70 a	61.8 60.3 59.5 65.4	65 di	57. 58. 60. 63.	4 7 9	65 68	.8 .7 .7 55	66. 66. 68. 72. 5 dBA

	FHV	VA-RD-77-108	HIGHWA	Y NOISE P	REDICT		DEL			
Scenario: Road Name: Road Segment:						Name: I umber: ·		no		
SITE SF	PECIFIC IN	IPUT DATA			N	IOISE N	IODE	L INPUT	S	
Highway Data				Site Col	nditions	(Hard =	10, Sc	oft = 15)		
Average Daily Tr	affic (Adt):	17,636 vehicle	s			,	Autos:	15		
Peak Hour Pe	ercentage:	10%			edium Tru		/	15		
Peak Hou	ır Volume:	1,764 vehicles		He	eavy Truc	cks (3+ A	(xles)	15		
Vehic	cle Speed:	35 mph		Vehicle	Mix					
Near/Far Lane	Distance:	10 feet			nicleType		Day	Evening	Night	Daily
Site Data							, 76.3%	11.0%	12.6%	92.45%
Barri	er Height:	0.0 feet		M	ledium Ti	rucks:	73.3%	9.2%	17.6%	5.38%
Barrier Type (0-Wal		0.0			Heavy Ti	ucks:	84.4%	3.2%	12.5%	2.17%
Centerline Dist.	to Barrier:	30.0 feet		Noise S	ource El	evation	s (in fe	et)		
Centerline Dist. to	Observer:	30.0 feet			Auto		000			
Barrier Distance to	Observer:	0.0 feet		Mediu	m Truck		297			
Observer Height (At	bove Pad):	5.0 feet			vy Truck		004	Grade Ad	iustment	0.0
Pad	Elevation:	0.0 feet						,		
Road	Elevation:	0.0 feet		Lane Eq	uivalent	Distanc	ce (in i	feet)		
Ro	ad Grade:	0.0%			Autos					
	Left View:	-90.0 degree	s	Mediu	m Truck					
F	Right View:	90.0 degree	s	Hea	vy Truck	s: 29.1	733			
FHWA Noise Model	Calculation	s								
FHWA Noise Model VehicleType	REMEL	s Traffic Flow	Distand		Road	Fresn		Barrier Atte	en Ber	m Atten
VehicleType Autos:	REMEL 64.30	Traffic Flow 1.38		3.22	-1.20		-4.49	0.0	000	0.000
VehicleType Autos: Medium Trucks:	REMEL 64.30 75.75	Traffic Flow 1.38 -10.97		3.22 3.29	-1.20 -1.20		-4.49 -4.86	0.0	000	0.000
VehicleType Autos:	REMEL 64.30	Traffic Flow 1.38		3.22	-1.20		-4.49	0.0	000	0.000
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise L	REMEL 64.30 75.75 81.57 evels (with	Traffic Flow 1.38 -10.97 -14.92 out Topo and	barrier at	3.22 3.29 3.28 tenuation)	-1.20 -1.20		-4.49 -4.86	0.0 0.0 0.0	000 000 000	0.000 0.000 0.000
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise L VehicleType	REMEL 64.30 75.75 81.57	Traffic Flow 1.38 -10.97 -14.92 out Topo and	barrier at	3.22 3.29 3.28	-1.20 -1.20 -1.20		-4.49 -4.86	0.0 0.0 0.0	000 000 000 <i>CI</i>	0.000 0.000 0.000
Vehicle Type Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise L Vehicle Type Autos:	REMEL 64.30 75.75 81.57 Levels (with eq Peak Hou 67	Traffic Flow 1.38 -10.97 -14.92 out Topo and I Ir Leq Day .7 6	barrier at Lei	3.22 3.29 3.28 tenuation) 7 Evening 63.4	-1.20 -1.20 -1.20 <i>Leq</i>	Night 59.2	-4.49 -4.86 -5.77	0.0 0.0 0.0 <i>Ldn</i> 67.2	000 000 000 <i>Cl</i>	0.000 0.000 0.000 VEL 67.7
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise L VehicleType	REMEL 64.30 75.75 81.57 evels (with eq Peak Hou	Traffic Flow 1.38 -10.97 -14.92 out Topo and I Ir Leq Day .7 6 .9 6	barrier at Lei 55.7 54.7	3.22 3.29 3.28 tenuation) g Evening 63.4 61.7	-1.20 -1.20 -1.20 <i>Leq</i>	Night 59.2 59.8	-4.49 -4.86 -5.77	0.0 0.0 0.0 <i>Ldn</i> 67.2 67.2	000 000 000 <i>C/</i>	0.000 0.000 0.000 VEL 67.7 67.5
Vehicle Type Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise L Vehicle Type Autos: Medium Trucks: Heavy Trucks:	REMEL 64.30 75.75 81.57 evels (with eq Peak Hou 67 66 68	Traffic Flow 1.38 -10.97 -14.92 out Topo and I Ir Leq Day .7 6 .9 6 .7 6	barrier at Lee 35.7 34.7 37.2	3.22 3.29 3.28 tenuation) g Evening 63.4 61.7 59.0	-1.20 -1.20 -1.20 <i>Leq</i>	Night 59.2 59.8 60.2	-4.49 -4.86 -5.77	0.0 0.0 0.0 <i>Ldn</i> 67.2 67.2 68.2		0.000 0.000 0.000 VEL 67.5 67.5
Vehicle Type Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise L Vehicle Type Autos: Medium Trucks:	REMEL 64.30 75.75 81.57 eq Peak Hou 67 66	Traffic Flow 1.38 -10.97 -14.92 out Topo and I Ir Leq Day .7 6 .9 6 .7 6	barrier at Lei 55.7 54.7	3.22 3.29 3.28 tenuation) g Evening 63.4 61.7	-1.20 -1.20 -1.20 <i>Leq</i>	Night 59.2 59.8	-4.49 -4.86 -5.77	0.0 0.0 0.0 <i>Ldn</i> 67.2 67.2		0.000 0.000 0.000 VEL 67.7 67.5 68.3
Vehicle Type Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise L Vehicle Type Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	REMEL 64.30 75.75 81.57 eevels (with eq Peak Hou 67 66 68 72	Traffic Flow 1.38 -10.97 -14.92 Out Topo and I Ir Leq Day .7 .6 .7 .6	barrier at Lee 55.7 54.7 57.2 70.8	3.22 3.29 3.28 tenuation) 7 Evening 63.4 61.7 59.0 66.5	-1.20 -1.20 -1.20 <i>Leq</i>	Night 59.2 59.8 60.2	-4.49 -4.86 -5.77	0.0 0.0 0.0 <i>Ldn</i> 67.2 67.2 68.2		0.000 0.000 0.000 VEL 67.7 67.5 68.3
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise L VehicleType Lu Autos: Medium Trucks: Heavy Trucks:	REMEL 64.30 75.75 81.57 eevels (with eq Peak Hou 67 66 68 72	Traffic Flow 1.38 -10.97 -14.92 out Topo and I Ir Leq Day .7 6 .7 6 .6 7 ontour (in feet)	barrier at Lei 35.7 34.7 37.2 70.8	3.22 3.29 3.28 tenuation) 7 Evening 63.4 61.7 59.0 66.5	-1.20 -1.20 -1.20 <i>Leq</i>	Night 59.2 59.8 60.2	-4.49 -4.86 -5.77	0.0 0.0 0.0 67.2 67.2 68.2 72.3	000 000 000 22 23	0.000 0.000 0.000 VEL 67.7 67.5 68.3
Vehicle Type Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise L Vehicle Type Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	REMEL 64.30 75.75 81.57 eevels (with eq Peak Hou 67 66 68 72	Traffic Flow 1.38 -10.97 -14.92 Out Topo and I I' Leq Day .7 .6 .7 Ontour (in feet)	barrier at Lee 55.7 54.7 57.2 70.8	3.22 3.29 3.28 tenuation) 7 Evening 63.4 61.7 59.0 66.5	-1.20 -1.20 -1.20 <i>Leq</i> 65	Night 59.2 59.8 60.2 64.5	-4.49 -4.86 -5.77	0.0 0.0 0.0 <i>Ldn</i> 67.2 67.2 68.2 72.3	000 000 22 23 33 55 4	0.000 0.000 VEL 67.7 67.5 68.3 72.6

Tuesday, July 02, 2019

Site Data Autos: 76.3% 11.0% 12.6% 92.5 Barrier Height: 0.0 feet Medium Trucks: 73.3% 9.2% 17.6% 5.3 Barrier Type (0-Wall, 1-Berm): 0.0 Medium Trucks: 73.3% 9.2% 17.6% 5.3 Barrier Distance Iobles to Barrier: 44.0 feet Moise Source Elevations (in feet) Noise Source Elevations (in feet) Centerline Dist. to Diserver: 0.0 feet Moise Source (in feet) Autos: 0.00 Deserver Height (Above Pad): 5.0 feet Medium Trucks: 2.297 Medium Trucks: 2.297 Road Grade: 0.0% Left View: 90.0 degrees Medium Trucks: 40.460 Kutos: Moise Model Calculations Medium Trucks: 40.261 Medium Trucks: 40.262 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Attin Medium Trucks: 75.75 -11.12 1.31 -1.20 -4.61 0.000 0.0		FH	WA-RD-77-108	HIGHW	AY NC	ISE PR	REDICTIO	N MC	DEL			
Road Segment: e/o Parkridge Av. SITE SPECIFIC INPUT DATA NOISE MODEL INPUTS Highway Data Site Conditions (Hard = 10, Soft = 15) Average Daily Traffic (Ad): 17.282 vehicles Autos: 15 Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Peak Hour Volume: 1.728 vehicles Vehicle (Type Day Evening Night Dail Vehicle Speed: 35 mph Vehicle Type Day Evening Night Dail Barrier Height: 0.0 feet Medium Trucks: 76.3% 11.0% 12.6% 22.1 Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Diserver: 0.0 feet Medium Trucks: 76.3% 11.0% 12.6% 22.1 Barrier Neght (Move Pad): 5.0 feet Medium Trucks: 84.4% 3.2% 12.5% 2.1 Barrier New: 90.0 degrees Finite Road Fresnel Barrier Atten Berrier Atten Road Elevation: 0.0 feet Finite Road Fresnel	Scenari	o: Existing W	ith Project				Project N	ame:	Palomi	ino		
SITE SPECIFIC INPUT DATA NOISE MODEL INPUTS Highway Data Site Conditions (Hard = 10, Soft = 15) Average Daily Traffic (Adt): 17,282 vehicles Autos:: 15 Peak Hour Porentage: 10% Medium Trucks (2 Avles): 15 Peak Hour Volume: 1,728 vehicles Autos:: 15 Heavy Trucks (3+ Avles): 15 Vehicle Speed: 35 mph Medium Trucks (2 Avles): 15 Heavy Trucks: 04 Avles): 15 Barrier Height: 0.0 feet Medium Trucks: 76.3% 11.0% 12.6% 92.5 Barrier Type (0-Wall, 1-Berm): 0.0 feet Moise Source Elevations (in feet) Autos:: 76.3% 11.0% 12.6% 2.1 Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.004 Grade Adjustment: 0.0 Pad Elevation: 0.0 feet Autos:: 10.00 Medium Trucks: 40.460 Road Elevation: 0.0 feet Autos:: 40.262 Heavy Trucks:: 40.262 4.61 0.000 Medium Trucks: 75.75 11.12 1.31 -1.20 <	Road Nam	e: First St.					Job Nur	nber:	11795			
Site Conditions (Hard = 10, Soft = 15) Average Daily Traffic (Adt): 17.282 vehicles Autos: 15 Peak Hour Porcentage: 10% Medium Trucks (2 Avies): 15 Peak Hour Volume: 1,728 vehicles Autos: 15 Vehicle Speed: 35 mph Medium Trucks (2 Avies): 15 Barrier Height: 0.0 feet Autos: 76.3% 11.0% 12.6% 92.5 Barrier Type (0-Wail, 1-Berm): 0.0 feet Medium Trucks: 73.3% 92.% 17.6% 5.3 Barrier Distance to Doserver: 4.0 feet Moles: 76.3% 11.0% 12.6% 92.5 Centerline Dist. to Barrier: 44.0 feet Moles: 0.00 Medium Trucks:: 2.297 Pad Elevation: 0.0 feet Noise Source Elevations (in feet) Natos: 0.00 Road Elevation: 0.0 feet Medium Trucks:: 40.261 Heavy Trucks:: 40.262 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel	Road Segmer	nt: e/o Parkrid	lge Av.									
Average Daily Traffic (Adt): 17,282 vehicles Autos: 15 Peak Hour Percentage: 10% Medium Trucks: 15 Peak Hour Volume: 1,728 vehicles Medium Trucks: 15 Vehicle Speed: 35 mph Heavy Trucks (3 Axles): 15 Site Data Autos: 76.3% 11.0% 2.6% Barrier Height: 0.0 feet Medium Trucks: 73.3% 9.2% 17.6% 5.3 Barrier Type (0:Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 4.0 feet Medium Trucks: 73.3% 9.2% 17.6% 5.3 Barrier Distance to Observer: 0.0 feet Medium Trucks: 0.00 Medium Trucks: 0.00 Medium Trucks: 0.00 Medium Trucks: 0.29 12.5% 2.1 Observer Height (Nove Pad): 5.0 feet Molse Source Elevations (in feet) Autos: 0.00 Medium Trucks: 0.04 Left View: 90.0 degrees Right View: 90.0 degrees Medium Trucks: 40.460 WehicleType REIMEL Traffic Flow		SPECIFIC IN	NPUT DATA								s	
Notes Medium Trucks (2 Axles): 15 Peak Hour Volume: 1,728 vehicles Heavy Trucks (3 Axles): 15 Vehicle Speed: 35 mph Heavy Trucks (3 Axles): 15 Near/Far Lane Distance: 36 feet Vehicle Type Day Evening Night Dai Site Data Autos: 76.3% 11.0% 12.6% 92.6 1.0% 50.76.3% 12.6% 92.6 2.1% 50.76.3% 12.6% 92.6 2.1% 50.76.3% 12.6% 92.6 2.1% 7.6% 5.3 Heavy Trucks: 84.4% 3.2% 12.6% 92.6 2.1 Noise Source Elevation: 0.0 teat Heavy Trucks: 84.4% 3.2% 12.6% 92.6 2.1 Noise Source Elevation: 0.0 teat Heavy Trucks: 84.4% 3.2% 12.6% 92.6 1.1.0% 1.2% 1.1.0% 1.2% 1.1.0% 1.2% 1.1.0% 1.2% 1.1.0% 1.2% 1.2% 1.1.0% 1.2% 1.2% 1.2% 1.2% 1.2% <td>Highway Data</td> <td></td> <td></td> <td></td> <td>SI</td> <td>te Con</td> <td>ditions (H</td> <td></td> <td></td> <td></td> <td></td> <td></td>	Highway Data				SI	te Con	ditions (H					
Peak Hour Volume: 1,728 vehicles Vehicle Speed: 35 mph Near/Far Lane Distance: 36 feet Vehicle Mix Site Data Autos: 76.3% 11.0% 12.6% 92.5 Barrier Height: 0.0 feet Medium Trucks: 73.3% 92% 17.6% 5.3 Barrier Height: 0.0 feet Medium Trucks: 73.3% 92% 17.6% 5.3 Barrier Jype (0-Wall, 1-Berm): 0.0 feet Medium Trucks: 73.3% 92% 17.6% 5.3 Barrier Distance to Observer: 44.0 feet Moise Source Elevations (in feet) Noise Source Elevations (in feet) Medium Trucks: 2.297 Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.004 Grade Adjustment: 0.0 Road Elevation: 0.0 feet Medium Trucks: 40.262 Medium Trucks: 40.262 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Attance Autos: 64.30 </td <td>,</td> <td>, ,</td> <td></td> <td>es</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	,	, ,		es								
Vehicle Speed: Near/Far Lane Distance: 35 mph 36 feet Vehicle Mix Vehicle Mix Vehicle Type Day Evening Night Day Site Data Autos: 76.3% 11.0% 12.6% 92.5 Barrier Height: 0.0 feet Medium Trucks: 73.3% 9.2% 17.6% 5.3 Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 44.0 feet Medium Trucks: 2.297 Centerline Dist. to Dserver: 0.0 feet Moles Source Elevations (in feet) Autos: 0.00 Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297 Pad Elevation: 0.0 feet Medium Trucks: 2.297 Road Grade: 0.0% Medium Trucks: 40.241 Left Iview: 90.0 degrees Medium Trucks: 40.241 Heavy Trucks: 75.75 -11.12 1.31 -1.20 -4.61 0.000 0.0 Medium Trucks: 75.75 -11.12 1.31 -1.20 -5.50 0.000 0.0 <		•							/			
Near/Far Lane Distance: 36 feet Vernice mix Night Day Evening Night Dai Site Data Autos: 76.3% 11.0% 12.6% 92.6 12.6% 92.6 12.6% 92.6 12.6% 92.6 12.6% 92.6 12.6% 92.6 12.6% 92.6 12.6% 92.6 12.6% 92.6 12.6% 92.6 12.6% 92.6 12.6% 92.6 12.6% 92.6 12.6% 92.6 12.6% 92.6 11.0% 12.6% 92.6 12.6% 92.6 12.6% 92.6 12.6% 92.6 12.6% 92.6 12.6% 92.6 11.0% 12.6% 92.6 12.6% 92.6 12.6% 92.6 12.6% 92.6 12.6% 92.6 12.6% 92.6 12.6% 92.6 12.6% 92.6 12.6% 92.6 12.6% 92.6 12.6% 92.6 12.6% 92.6 12.6% 92.6 12.6% 92.6 12.6% 92.6 12.6% 92.6	Peak H	our Volume:	1,728 vehicle	s		Hea	avy Truck	s (3+.	Axles):	15		
Site Data Vehicle /ype Day Eventually login Data Site Data Autos: 76.3% 11.0% 12.6% 2.5 Barrier Height: 0.0 feet Medium Trucks: 73.3% 9.2% 17.6% 5.3 Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 44.0 feet Heavy Trucks: 84.4% 3.2% 12.5% 2.1 Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.004 Grade Adjustment: 0.0 Pad Elevation: 0.0 feet Noise Source Elevations (in feet) Autos: 0.000 Road Grade: 0.0% Left View: -90.0 degrees Medium Trucks: 40.261 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berrier Atten Autos: 64.30 1.29 1.28 -1.20 -4.61 0.000 0.0 Medium Trucks: 75.75 -11.12 1.31 -12.0 -4.61 0.000 0.0					Ve	hicle I	/ix					-
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 44.0 feet Description Dist. to Barrier: 44.0 feet Barrier Distance to Observer: 40.0 feet Deserver Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Grade: 0.0% Left View: 90.0 degrees Right View: 90.0 degrees Right View: 90.0 degrees FHWA Noise Model Calculations VehicleType VehicleType REMEL Tartific Flow 12.9 1.29 1.28 1.20 -4.61 Medium Trucks: 75.75 1.12 1.31 -12.0 -4.61 Medium Trucks: 8.57 1.50 1.31 -12.0 -4.61 Medium Trucks: 65.7 63.7 61.3 57.1 5.20 Medium Trucks: 65.7 66.6 65.1 66.6<	Near/Far Lar	ne Distance:	36 feet			Vehi	cleType		Day	Evening	Night	Daily
Barrier Tregnt: 0.0 teet Heary Trucks: 84.4% 3.2% 12.5% 2.1 Centerline Dist. to Diserver: 44.0 feet Autos: 0.00 Meany Trucks: 84.4% 3.2% 12.5% 2.1 Deserver: 0.0 feet Autos: 0.000 Medium Trucks: 2.297 Deserver: 0.0 feet Autos: 8.004 Grade Adjustment: 0.0 Road Elevation: 0.0 feet Autos: 8.004 Grade Adjustment: 0.0 Left View: 90.0 degrees Medium Trucks: 40.261 Heavy Trucks: 40.261 FHWA Noise Model Calculations VehicleType REIMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bern Atten Berner Atten Berner Atten Berner Atten Meany Autos: VehicleType REIMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berner Atten Berner Atten Berner Atten Meany Autos: Autos: Actos: Actos: Actos: Actos: Actos:	Site Data						Au	tos:	76.3%	11.0%	12.6%	92.56%
Barrier Type (0-Wall, 1-Berm): 0.0 Heavy Trucks: 84.4% 3.2% 12.5% 2.1 Centerline Dist. to Desriver: 44.0 feet Noise Source Elevations (in feet) Autos: 0.0 Barrier Distance to Observer: 0.0 feet Autos: 0.0 Medium Trucks: 2.297 Observer Height (Above Pad): 5.0 feet Autos: 0.04 Grade Adjustment: 0.0 Road Elevation: 0.0 feet Autos: 0.040 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0 Medium Trucks: 40.262 FHWA Noise Model Calculations Ueit (View: 90.0 degrees Medium Trucks: 40.241 Medium Trucks: 75.75 -11.12 1.31 -1.20 -4.61 0.000 0.0 Medium Trucks: 75.75 -11.12 1.31 -1.20 -4.61 0.000 0.0 Medium Trucks: 81.57 -63.7 63.3 57.1 65.2 6 Medium Trucks: 66.6 65.1 56.8	Bar	rier Heiaht	0.0 feet			Ме	dium True	cks:	73.3%	9.2%	17.6%	5.319
Centerline Dist. to Observer: 44.0 feet Noise Source Levatons (in feet) Barrier Distance to Observer: 0.0 feet Autos: 0.000 Deserver Height (Above Pad) 5.0 feet Medium Trucks: 2.297 Pad Elevation: 0.0 feet Medium Trucks: 8.004 Grade Adjustment: 0.0 Road Grade 0.0% Lane Equivalent Distance (in feet) Lane Equivalent Distance (in feet) Medium Trucks: 40.262 FHWA Noise Model Calculations Finile Road Fresnel Barrier Atten Berner Atten VehicleType REMEL Traffic Flow Distance Finile Road Fresnel Barrier Atten Berner Atten Mutas: 64.30 1.29 1.28 -1.20 -4.61 0.000 0.0 Medium Trucks: 75.75 -11.12 1.31 -1.20 -4.67 0.000 0.0 Immitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Day Leq Day Leq Evening Leq Night Ldn CNEL Autos: 65.7 63.7 6	Barrier Type (0-W	all, 1-Berm):	0.0			H	leavy Tru	cks:	84.4%	3.2%	12.5%	2.149
Barrier Distance to Observer: 0.0 feet Autos: 0.00 Observer Height (Above Pad): 5.0 feet Medium Trucks: 2.297 Pad Elevation: 0.0 feet Medium Trucks: 2.297 Road Grade: 0.0% Autos: 4.0460 Left View: 90.0 degrees Autos: 40.460 VehicleType REIMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Autos: 64.30 1.29 1.28 -1.20 -4.61 0.000 0.0 Medium Trucks: 75.75 -11.12 1.31 -1.20 -4.61 0.000 0.0 Medium Trucks: 81.57 -15.07 1.31 -1.20 -5.50 0.000 0.0 Unitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Night Ldn CNEL Autos: 65.7 63.7 61.3 57.1 65.2 6 Medium Trucks: 65.7 65.1 56.8 58.0 <td></td> <td></td> <td></td> <td></td> <td>N</td> <td>oise So</td> <td>urce Elev</td> <td>vation</td> <td>s (in fe</td> <td>eet)</td> <td></td> <td></td>					N	oise So	urce Elev	vation	s (in fe	eet)		
Observer Height (Above Pad): 5.0 feet Pad Elevation: Medium Trucks: 2.297 Heavy Trucks: Grade Adjustment: 0.0 Road Elevation: 0.0 feet Heavy Trucks: 8.004 Grade Adjustment: 0.0 Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Lane Equivalent Distance (in feet) Road Grade: 0.0% Medium Trucks: 40.460 Left View: -90.0 degrees Medium Trucks: 40.262 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bermier Atten VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bermier Atten Medium Trucks: 75.75 -11.12 1.31 -1.20 -4.61 0.000 0.0 Medium Trucks: 81.57 -15.07 1.31 -1.20 -4.61 0.000 0.0 Medium Trucks: 65.7 63.7 61.3 57.1 65.2 6 Medium Trucks: <							Autos:	0.	000			-
Pad Elevation: 0.0 feet Heavy Tracks: 8.004 Gade Adjustment. 0.0 Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Lane Equiv						Mediur	n Trucks:	2.	297			
Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Road Grade: 0.0% Autos: 40.460 Left View: 90.0 degrees Medium Trucks: 40.241 WehicleType REIMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bernier Atten WehicleType REIMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bernier Atten Bernier Atten Medium Trucks: 75.75 -11.12 1.31 -1.20 -4.61 0.000 0.0 Heavy Trucks: 81.57 -15.07 1.31 -1.20 -5.50 0.000 0.0 Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leg Peak Hour Leg Day Leg Night Ldn CNEL Autos: 66.6 65.1 58.6 57.6 65.1 6 Medium Trucks: 70.5 68.7 64.4 62.4 70.2 7 Centerline Distance to Noise Contour (in feet)		,				Heav	v Trucks:	8.	004	Grade Ad	justment	: 0.0
Road Grade: 0.0% Autos: 40.460 Left View: -90.0 degrees Medium Trucks: 40.241 Heavy Trucks: 40.262 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bernier Atten VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bernier Atten Wedium Trucks: 75.75 -11.12 1.31 -1.20 -4.61 0.000 0.0 Medium Trucks: 75.75 -11.12 1.31 -1.20 -5.50 0.000 0.0 Medium Trucks: 81.57 -15.07 1.31 -1.20 -5.50 0.000 0.0 Umnitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 65.7 63.7 61.3 57.1 65.2 6 Medium Trucks: 66.6 65.1 56								N- 4	(!	(
Left View: -90.0 degrees Medium Trucks: 40.241 Right View: 90.0 degrees Heavy Trucks: 40.241 VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Att Autos: 64.30 1.29 1.28 -1.20 -4.61 0.000 0.0 Medium Trucks: 75.75 -11.12 1.31 -1.20 -4.61 0.000 0.0 Medium Trucks: 81.57 -15.07 1.31 -1.20 -6.50 0.000 0.0 Unnitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Pay Leq Digit Ldn CNEL Autos: 65.7 63.7 61.3 57.1 65.2 6 Medium Trucks: 66.6 65.1 56.8 58.0 66.1 6 Heavy Trucks: 66.6 65.1 56.8 56.0 6 6 6 Autos: 66.6 65.1 56.8 58.0 6					Li	ine Equ				reet)		
Right View: 90.0 degrees Heavy Trucks: 40.262 FHWA Noise Model Calculations Istance Finite Road Fresnel Barrier Atten Bern Att VehicleType REIMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bern Att Medium Trucks: 64.30 1.29 1.28 -1.20 -4.61 0.000 0.01 Medium Trucks: 81.57 -11.12 1.31 -1.20 -4.87 0.000 0.01 Unnitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leg Peak Hour Leg Day Leg Right Ldn CNEL Autos: 66.7 63.7 61.3 57.1 65.2 66 Medium Trucks: 66.6 65.1 56.8 58.0 66.1 66 Heavy Trucks: 66.6 65.1 56.8 58.0 66.1 66 Vehicle Noise: 70.5 68.7 64.4 62.4 70.2 7 Centerline Distance to Noise Contour (in feet)	ŀ		0.070			1 4 m all						
FHWA Noise Model Calculations FWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bern Atten Autos: 64.30 1.29 1.28 -1.20 -4.61 0.000 0.01 Medium Trucks: 75.75 -11.12 1.31 -1.20 -4.87 0.000 0.01 Imitigated Noise Levels (without Topo and barrier attenuation)												
VehicleType REMEL Traffic Flow Distance Finile Road Fresnel Barrier Atten Bern Atten Autos: 64.30 1.29 1.28 -1.20 -4.61 0.000 0.0 Medium Trucks: 75.75 -11.12 1.31 -1.20 -4.61 0.000 0.0 Heavy Trucks: 81.57 -15.07 1.31 -1.20 -5.50 0.000 0.0 Unnitigated Noise Levels (without Topo and barrier attenuation) - - - - - - - 5.7 0.000 0.0 VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 65.7 63.7 61.3 57.1 65.2 6 Heavy Trucks: 66.6 65.1 56.8 58.0 66.1 6 Vehicle Noise: 70.5 68.7 64.4 62.4 70.2 7 Centerline Distance to Noise Contour (in feet)	EHWA Noiso Mod	5	ě									
Autos: 64.30 1.29 1.28 -1.20 -4.61 0.000 0.1 Medium Trucks: 75.75 -11.12 1.31 -1.20 -4.61 0.000 0.0 Heavy Trucks: 75.75 -11.12 1.31 -1.20 -4.67 0.000 0.0 Umitigate Moise Levels (without Topo and barrier attruation) -5.50 0.000 0.0 WhicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 65.7 63.7 61.3 57.1 65.2 6 Medium Trucks: 66.6 65.1 56.8 58.0 66.1 6 Heavy Trucks: 66.6 65.1 56.8 58.0 66.1 6 Vehicle Noise: 70.5 68.7 64.4 62.4 70.2 7 Centerline Distance to Noise Contour (in feet) TO dBA 60 dBA 55 dBA Ldn: 46 98 211 456				Distar	nce	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Heavy Trucks: 81.57 -15.07 1.31 -1.20 -5.50 0.000 0.000 Unnitigated Noise Levels (without Topo and barrier attenuation) Leq Day Leq Evening Leq Night Ldn CNEL VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Medium Trucks: 65.7 63.7 61.3 57.6 65.1 66 Heavy Trucks: 66.6 65.1 56.8 58.0 66.1 66 Vehicle Noise: 70.5 68.7 64.4 62.4 70.2 7 Centerline Distance to Noise Contour (in feet)		64.30	1.29		1.28		-1.20			0.0	000	0.00
Withingted Noise Levels (without Topo and barrier attenuation) Unitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 65.7 63.7 61.3 57.1 65.2 66 Medium Tucks: 64.7 62.6 59.6 57.6 65.1 6 Heavy Trucks: 66.6 65.1 56.8 58.0 66.1 6 Vehicle Noise: 70.5 68.7 64.4 62.4 70.2 7 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 46 98 211 456	Medium Trucks:	75.75	-11.12		1.31		-1.20		-4.87	0.0	000	0.00
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 65.7 63.7 61.3 57.1 65.2 66 Medium Trucks: 64.7 62.6 59.6 57.6 65.1 66 Heavy Trucks: 66.6 65.1 56.8 58.0 66.1 66 Vehicle Noise: 70.5 68.7 64.4 62.4 70.2 7 Centerline Distance to Noise Contour (in feet)	Heavy Trucks:	81.57	-15.07		1.31		-1.20		-5.50	0.0	000	0.00
Autos: 65.7 63.7 61.3 57.1 65.2 6 Medium Trucks: 64.7 62.6 59.6 57.6 65.1 6 Heavy Trucks: 66.6 65.1 56.8 58.0 66.1 6 Vehicle Noise: 70.5 68.7 64.4 62.4 70.2 7 Centerline Distance to Noise Contour (in feet) To dBA 65 dBA 60 dBA 55 dBA Ldn: 46 98 211 456												
Medium Trucks: 64.7 62.6 59.6 57.6 65.1 66 Heavy Trucks: 66.6 65.1 56.8 58.0 66.1 66 Vehicle Noise: 70.5 68.7 64.4 62.4 70.2 7 Centerline Distance to Noise Contour (in feet) 70.0BA 65 dBA 60 dBA 55 dBA Ldn: 46 98 211 456	,	1 1 1			eq Eve		Leq Ni					
Heavy Trucks: 66.6 65.1 56.8 58.0 66.1 67 Vehicle Noise: 70.5 68.7 64.4 62.4 70.2 7 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 46 98 211 456											-	65.
Vehicle Noise: 70.5 68.7 64.4 62.4 70.2 7 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 46 98 211 456		-							-			65.
Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 46 98 211 456	· · -								·			66.
TO dBA 65 dBA 60 dBA 55 dBA Ldn: 46 98 211 456						64.4		62.4	4	70.2	2	70.
Ldn: 46 98 211 456	Centerline Distance	e to Noise C	ontour (in feet)	70 -1		05 -15			0.404		
						M		D/A	1 6			
GIVEL. 48 103 221 477												
			CI	VEL.	48		103			221	4	+/ /

FF	IWA-RD-77-108 I	HIGHWA	Y NOISE F	REDICTIO	N MODEL			
Scenario: Existing V Road Name: First St. Road Segment: e/o Dwy.	,				ame: Palor aber: 1179			
SITE SPECIFIC I	NPUT DATA			NO	ISE MOD	EL INPUT	s	
Highway Data			Site Co	nditions (H	ard = 10, S	Soft = 15)		
Average Daily Traffic (Adt):	16,525 vehicle	s			Autos	s: 15		
Peak Hour Percentage:	10%		м	edium Truck	s (2 Axles): 15		
Peak Hour Volume:	1.653 vehicles		н	eavy Trucks	(3+ Axles): 15		
Vehicle Speed:	35 mph							
Near/Far Lane Distance:	36 feet		Vehicle		-	1e - 1		
			Ve	hicleType	Day	Evening	Night	Daily
Site Data				Aut				92.21
Barrier Height:	0.0 feet			ledium Truc			17.6%	
Barrier Type (0-Wall, 1-Berm):	0.0			Heavy Truc	ks: 84.4	% 3.2%	12.5%	2.24
Centerline Dist. to Barrier:	44.0 feet		Noise S	ource Elev	ations (in	feet)		
Centerline Dist. to Observer:	44.0 feet			Autos:	0.000	,		
Barrier Distance to Observer:	0.0 feet		Medi	m Trucks:	2.297			
Observer Height (Above Pad):	5.0 feet		Hea	vy Trucks:	8.004	Grade Ad	liustment.	0.0
Pad Elevation:	0.0 feet			,				
Road Elevation:	0.0 feet		Lane E	quivalent D		n feet)		
Road Grade:	0.0%			Autos:	40.460			
Left View:	-90.0 degree	5		ım Trucks:	40.241			
Right View:	90.0 degree	5	Hea	vy Trucks:	40.262			
FHWA Noise Model Calculatio	ns							
VehicleType REMEL	Traffic Flow	Distanc			Fresnel	Barrier At		m Atter
Autos: 64.3			1.28	-1.20	-4.61		000	0.00
Medium Trucks: 75.7			1.31	-1.20	-4.87		000	0.00
Heavy Trucks: 81.5	7 -15.07		1.31	-1.20	-5.50	0.0	000	0.00
Unmitigated Noise Levels (wit		-	,					
VehicleType Leq Peak Ho			q Evening	Leq Nig		Ldn	-	VEL
		3.5	61.1		56.9	65.		65
		2.6	59.6		57.6	65.		65
		5.1	56.8		58.0	66.		66
		i8.6	64.3	3	62.3	70.	2	70
Centerline Distance to Noise (Contour (in feet)				- 1			
			70 dBA	65 dB	A	60 dBA		dBA
	L	.dn:	45	97		209 219		51 72
	CN		47	102				

Tuesday, July 02, 2019

Scenar	io: Existing Wi	th Project				Project N	lame: F	Palom	ino		
	e: First St.					Job Nu					
	nt: e/o Mounta	in Av.									
SITE	SPECIFIC IN	PUT DATA								S	
Highway Data				S	ite Con	ditions (l	Hard =	10, Se	oft = 15)		
Average Daily	Traffic (Adt):	8,737 vehicles					A	Autos:	15		
Peak Hour	Percentage:	10%			Mee	dium Truc	:ks (2 A	xles):	15		
Peak F	lour Volume:	874 vehicles			Hea	avy Truck	is (3+ A	xles):	15		
Ve	hicle Speed:	35 mph		v	ehicle I	Mix					
Near/Far La	ne Distance:	36 feet				cleType		Day	Evening	Night	Daily
Site Data				┢				76.3%	•	12.69	
Ba	rrier Heiaht:	0.0 feet			Me	edium Tru		73.3%		17.69	
Barrier Type (0-V		0.0			E	leavy Tru	cks:	84.4%	3.2%	12.5%	6 3.65%
Centerline Di	. ,	44.0 feet		_							
Centerline Dist.	to Observer:	44.0 feet		^	loise So	ource Ele			eet)		
Barrier Distance	to Observer:	0.0 feet				Autos:					
Observer Height	(Above Pad):	5.0 feet				n Trucks: v Trucks:			Grade Ad		* 0.0
P	ad Elevation:	0.0 feet			neav	y mucks.	0.0	104	Graue Auj	usunei	<i>n</i> . 0.0
Ro	ad Elevation:	0.0 feet		L	ane Equ	uivalent	Distand	e (in	feet)		
	Road Grade:	0.0%				Autos:	40.4	60			
	Left View:	-90.0 degrees			Mediur	n Trucks:	40.2	241			
	Right View:	90.0 degrees			Heav	y Trucks:	40.2	262			
FHWA Noise Mod	el Calculation	s		-							
VehicleType	REMEL	Traffic Flow	Distanc		Finite		Fresn	-	Barrier Atte		erm Atten
Autos:	64.30	-1.78		1.28		-1.20		4.61	0.0		0.00
Medium Trucks:	75.75	-13.47		1.31		-1.20		4.87	0.0		0.00
Heavy Trucks:	81.57	-15.70		1.31		-1.20		-5.50	0.0	00	0.00
Unmitigated Nois			-								
VehicleType	Leq Peak Hou			γ Ev	ening	Leq N	·		Ldn		CNEL
Autos:	62		0.6		58.3		54.1		62.1		62.
	62).2		57.2		55.3		62.7		63.
Medium Trucks:			1.4		56.2		57.4		65.4		65.
Heavy Trucks:							60.6		68.4	ļ.	68.
Heavy Trucks: Vehicle Noise:	68	.8 6	7.0		62.1		00.0		00.4		00.
Heavy Trucks:	68	.8 6								-	
Heavy Trucks: Vehicle Noise:	68	.8 6 ontour (in feet)		70 di 35	BA	65 di 75	ва	(50 dBA	5	5 dBA 346

	FH\	WA-RD-77-108	HIGHW	AY NO	ISE PR	EDICTI	ON MOI	DEL			
Road Nan	io: Existing Wi ne: First St. nt: w/o Hamne	,					Name: F umber: 1		ino		
SITE	SPECIFIC IN	IPUT DATA							L INPUTS	S	
Highway Data				Si	te Cond	ditions ((Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	9,341 vehicle	es				-	Autos:	15		
Peak Hour	Percentage:	10%			Med	lium Tru	icks (2 A	xles):	15		
Peak H	lour Volume:	934 vehicle	S		Hea	avy Truc	ks (3+ A	xles):	15		
Ve	hicle Speed:	35 mph		Ve	hicle N	lix					
Near/Far La	ne Distance:	36 feet		-		cleType		Day	Evening	Night	Daily
Site Data								76.3%	•	12.6%	
Ba	rrier Heiaht:	0.0 feet			Me	dium Tr	ucks:	73.3%	9.2%	17.6%	6.09%
Barrier Type (0-V		0.0			Н	leavy Tr	ucks:	84.4%	3.2%	12.5%	3.57%
Centerline Di	. ,	44.0 feet		Nic	vica Sa	urco Ek	evations	(in f	not)		
Centerline Dist.	to Observer:	44.0 feet		NC	158 30	Autos			el)		
Barrier Distance	to Observer:	0.0 feet			Modium	1 Trucks					
Observer Height	(Above Pad):	5.0 feet				/ Trucks		04	Grade Adj	iustmont	0.0
P	ad Elevation:	0.0 feet						-	,	usunon	0.0
Ro	ad Elevation:	0.0 feet		La	ne Equ	iivalent	Distanc	e (in	feet)		
	Road Grade:	0.0%				Autos		160			
	Left View:	-90.0 degree	es		Medium	n Trucks	: 40.2	241			
	Right View:	90.0 degree	es		Heavy	/ Trucks	: 40.2	262			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distan	ice	Finite I	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	64.30	-1.48		1.28		-1.20		-4.61	0.0	000	0.00
Medium Trucks:	75.75	-13.20		1.31		-1.20		4.87	0.0		0.00
Heavy Trucks:	81.57	-15.52		1.31		-1.20		-5.50	0.0	000	0.00
Unmitigated Nois	e Levels (with										
VehicleType	Leq Peak Hou	, ,		eq Eve	•	Leq I			Ldn		VEL
Autos:	62		60.9		58.5		54.4		62.4		62.
Medium Trucks:	62		60.5		57.5		55.6		63.0		63.
Heavy Trucks:	66		64.6		56.4		57.6		65.6		65.
,			67.2		62.3		60.8		68.7	,	68.
Vehicle Noise:		.0	07.2		02.0						
,	69		-							T	
Vehicle Noise:	69	ontour (in feet)	70 dB		65 0		6	0 dBA		dBA
Vehicle Noise:	69	ontour (in feet	-	70 dB 36 37		65 c 7 8	7	e	60 dBA 167 174	3	dBA 59 74

Tuesday, July 02, 2019

	FH\	VA-RD-77-108	HIGHW	AY NO	ISE PR	EDICTIO		DEL			
Scenario:	Existing W	ith Project				Project Na	ame: I	Palomi	no		
Road Name:						Job Nun	nber:	11795			
Road Segment:	w/o E. Park	kridge Av.									
	PECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				Si	te Conc	ditions (H	ard =	10, So	ft = 15)		
Average Daily Tr	affic (Adt):	21,403 vehicl	es					Autos:	15		
Peak Hour Pe	ercentage:	10%				lium Trucl		/	15		
Peak Hou	ur Volume:	2,140 vehicle	s		Hea	vy Trucks	: (3+ A	(xles):	15		
	cle Speed:	45 mph		Ve	hicle N	lix					
Near/Far Lane	e Distance:	52 feet			Vehic	cleType		Day	Evening	Night	Daily
Site Data						Aut	os:	76.3%	11.0%	12.6%	92.08%
Barri	er Height:	0.0 feet			Me	dium Truc	ks:	73.3%	9.2%	17.6%	5.64%
Barrier Type (0-Wal	l, 1-Berm):	0.0			н	eavy Truc	ks:	84.4%	3.2%	12.5%	2.27%
Centerline Dist.		50.0 feet		No	oise So	urce Elev	ation	s (in fe	et)		
Centerline Dist. to		50.0 feet				Autos:	0.0	000			
Barrier Distance to		0.0 feet			Medium	1 Trucks:	2.2	297			
Observer Height (Al	,	5.0 feet			Heavy	/ Trucks:	8.0	004	Grade Ad	justment	0.0
	Elevation:	0.0 feet		1.	no Equ	ivalent D	ictory	o (in f	inot)		
	elevation: ad Grade:	0.0 feet 0.0%		Le	пе сци	Autos:	43.0		eelj		
RC RC	I eft View:	-90.0 deare			Modium	1 Trucks:	42.1				
F	Right View:	90.0 degre				/ Trucks:	42.8				
FHWA Noise Model	Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	се	Finite F	Road	Fresn	el	Barrier Att	en Bei	rm Atten
Autos:	68.46	1.11		0.88		-1.20		-4.65	0.0	000	0.00
Medium Trucks:	79.45	-11.02		0.91		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-14.97		0.91		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise L											
	eq Peak Hou			eq Eve		Leq Ni			Ldn		NEL
Autos:	69		67.3		64.9		60.7		68.7		69.3
Medium Trucks:	68		66.0		63.0		61.0 60.4		68.5	-	68.
Heavy Trucks: Vehicle Noise:	69 73		67.5 71.7		59.2 67.7		65.5		68.5 73.3		68.0
	13		,		07.7		00.0		75.0	,	73.
	to Noise C	ontour (in foo	4								
Centerline Distance	to Noise C	ontour (in fee	9	70 dE	A	65 dB	A	6	0 dBA	55	dBA
	to Noise Co	ontour (in fee	:) Ldn:	70 dE 83	A	65 dB 180	A	6	0 dBA 387		dBA 333

Fł	IWA-RD-77-108	HIGHV	VAY NO		ION MO	DEL			
Scenario: Existing V Road Name: Hidden V	alley Pkwy.				t Name: lumber:		ino		
Road Segment: e/o E. Pa	•								
SITE SPECIFIC	NPUT DATA		-				L INPUT	S	
Highway Data			SI	te Conditions	(Hard =	: 10, SC			
Average Daily Traffic (Adt):	22,800 vehicle	es				Autos:	15		
Peak Hour Percentage:	10%			Medium Tr	ucks (2 J	Axles):	15		
Peak Hour Volume:	2,280 vehicles	S		Heavy Tru	cks (3+)	Axles):	15		
Vehicle Speed:	45 mph		V	ehicle Mix					
Near/Far Lane Distance:	52 feet		-	VehicleTvp	•	Dav	Evenina	Night	Daily
Site Data					Autos:	76.3%	11.0%	•	91.95
Barrier Height:	0.0 feet			Medium T	rucks:	73.3%	9.2%	17.6%	5.74
Barrier Type (0-Wall, 1-Berm):	0.0			Heavy T	rucks:	84.4%	3.2%	12.5%	2.31
Centerline Dist. to Barrier:	50.0 feet								
Centerline Dist. to Observer:	50.0 feet		N	oise Source E		<u> </u>	eet)		
Barrier Distance to Observer:	0.0 feet			Auto		000			
Observer Height (Above Pad):	5.0 feet			Medium Truck		297			
Pad Elevation:	0.0 feet			Heavy Truck	s: 8.	004	Grade Ad	justment.	0.0
Road Elevation:	0.0 feet		Li	ane Equivalen	t Distan	ce (in i	feet)		
Road Grade:	0.0%			Auto		000			
Left View:	-90.0 degree			Medium Truck		794			
Right View:	90.0 degree			Heavy Truck		814			
FHWA Noise Model Calculation	ns								
VehicleType REMEL	Traffic Flow	Dista	ance	Finite Road	Fresi	nel	Barrier Att	en Ber	m Atter
Autos: 68.4	6 1.38		0.88	-1.20		-4.65	0.0	000	0.00
Medium Trucks: 79.4			0.91	-1.20		-4.87	0.0	000	0.00
Heavy Trucks: 84.2	5 -14.62		0.91	-1.20		-5.43	0.0	000	0.00
Unmitigated Noise Levels (with				,					
VehicleType Leq Peak H			Leq Eve		Night		Ldn		VEL
		67.6		65.2	61.0		69.0		69
		66.3		63.3	61.4		68.8		69
		67.8		59.6	60.8		68.8		68
Vehicle Noise:	3.9	72.1		68.0	65.8	8	73.0	6	74
Centerline Distance to Noise	Contour (in feet)							
			70 dE		dBA	6	60 dBA		dBA
		Ldn:	88	1	89		406	8	75
		VEL:	92		98		426		18

Tuesday, July 02, 2019

Scenario	OY Without	Project				Project	Vame: P	alomi	no		
Road Name							mber: 1				
Road Segment	s/o Corydon	St.									
SITE S	PECIFIC IN	PUT DATA				N	DISE M	ODEI		;	
Highway Data				:	Site Con						
Average Daily T	raffic (Adt):	28,511 vehicles					A	utos:	15		
Peak Hour F	Percentage:	10%			Me	dium Tru	cks (2 A	kles):	15		
Peak Ho	ur Volume:	2,851 vehicles			He	avy Truc	ks (3+ A	kles):	15		
Veh	icle Speed:	45 mph		-	Vehicle I	Mix					
Near/Far Lan	e Distance:	52 feet		Ľ		icleType	1	Dav	Evening	Night	Daily
Site Data					10/1			6.3%	11.0%	12.6%	
Born	ier Heiaht:	0.0 feet			Me	edium Tr	icks: 7	3.3%	9.2%	17.6%	5.79%
Barrier Type (0-Wa		0.0 1001			F	leavy Tr	icks: 8	4.4%	3.2%	12.5%	2.33%
Centerline Dist		50.0 feet		-							
Centerline Dist. to		50.0 feet		'	Noise So				et)		
Barrier Distance to	Observer:	0.0 feet				Autos					
Observer Height (A	bove Pad):	5.0 feet				n Trucks			Grade Adji		
Pad	d Elevation:	0.0 feet			Heav	y Trucks	8.0	04	Grade Adju	isuneni.	0.0
Road	d Elevation:	0.0 feet		1	Lane Equ	uivalent	Distanc	e (in f	eet)		
R	oad Grade:	0.0%				Autos	43.0	00			
	Left View:	-90.0 degrees			Mediur	n Trucks	: 42.7	94			
	Right View:	90.0 degrees			Heav	y Trucks	42.8	14			
FHWA Noise Model	Calculations	;									
VehicleType	REMEL	Traffic Flow	Dista		Finite		Fresne		Barrier Atte		m Atten
Autos:	68.46	2.34		0.88	-	-1.20		4.65	0.0		0.00
Medium Trucks:	79.45	-9.66		0.91		-1.20		4.87	0.0		0.00
Heavy Trucks:	84.25	-13.61		0.91	1	-1.20	-	5.43	0.0	00	0.00
Unmitigated Noise											
<i>,</i>	.eq Peak Hou			Leq E	/ening	Leq I	•		Ldn	CI	VEL
Autos:	70.		8.5		66.1		62.0		70.0		70.4
Medium Trucks:	69.		7.4		64.3		62.4		69.8		70.
Heavy Trucks:	70.		8.8		60.6		61.8		69.8		70.0
Vehicle Noise:	74.	9 7	3.0		69.0		66.8		74.6		75.
Centerline Distance	e to Noise Co	ntour (in feet)									
				70 c		65 c		6	0 dBA		dBA
		L	dn:	10)2	22	0		473	1,	020
		CN		10		23			496		070

	FH	WA-RD-77-108	HIGHW.	AY NC	DISE PRI	EDICTI	ON MOD	EL			
Road Nan	rio: OY Withou ne: River Rd. ent: s/o Lincoln				I		Name: P Imber: 1		no		
SITE	SPECIFIC IN	VPUT DATA							L INPUTS	5	
Highway Data				S	ite Cond	itions ('Hard = 1	0, Sc	oft = 15)		
Average Daily	Traffic (Adt):	14,544 vehicle	es				Α	utos:	15		
Peak Hour	r Percentage:	10%			Med	ium Tru	cks (2 A)	des):	15		
Peak H	Hour Volume:	1,454 vehicle	s		Hea	vy Truc	ks (3+ A)	des):	15		
Ve	ehicle Speed:	45 mph		14	ehicle M	iv.					
Near/Far La	ane Distance:	10 feet				leType	E	Day	Evening	Night	Daily
Site Data		-			101110			6.3%	•	12.6%	
Ba	arrier Height:	0.0 feet			Med	dium Tr	ucks: 7	3.3%	9.2%	17.6%	5.79%
Barrier Type (0-V		0.0			He	eavy Tr	ucks: 8	4.4%	3.2%	12.5%	2.33%
<i>,</i> , , ,	ist. to Barrier:	30.0 feet			loise Sou	uree El	votiono	lin fe	a4)		
Centerline Dist.	to Observer:	30.0 feet		/	uise sui	Autos			el)		
Barrier Distance	to Observer:	0.0 feet			Medium						
Observer Height	(Above Pad):	5.0 feet				Trucks			Grade Adj	ustmont	0.0
P	ad Elevation:	0.0 feet			neavy	TTUCKS	. 8.00	J4	Grade Auj	usuneni	0.0
Ro	ad Elevation:	0.0 feet		La	ane Equ	ivalent	Distance	e (in i	feet)		
	Road Grade:	0.0%				Autos	: 30.0	00			
	Left View:	-90.0 degree	es		Medium	Trucks	: 29.7	04			
	Right View:	90.0 degree	es		Heavy	Trucks	: 29.7	33			
FHWA Noise Mod	lel Calculation	is									
VehicleType	REMEL	Traffic Flow	Distar	ice	Finite F	Road	Fresne	1	Barrier Atte	en Ber	m Atten
VehicleType Autos:	REMEL		Distar	3.22		oad -1.20		l 4.49	Barrier Atte 0.0		
,1	REMEL 68.46	-0.58	Distar							00	0.00
Autos:	REMEL 68.46 79.45	-0.58 -12.58	Distar	3.22		-1.20		4.49	0.0	00	0.00
Autos: Medium Trucks:	REMEL 68.46 79.45 84.25	-0.58 -12.58 -16.53		3.22 3.29 3.28		-1.20 -1.20		4.49 4.86	0.0 0.0	00	0.00
Autos: Medium Trucks: Heavy Trucks:	REMEL 68.46 79.45 84.25	-0.58 -12.58 -16.53 nout Topo and	barrier a	3.22 3.29 3.28	uation)	-1.20 -1.20		4.49 4.86	0.0 0.0 0.0	00 00 00 <i>CI</i>	0.000
Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois	REMEL 68.46 79.45 84.25 Se Levels (with Leq Peak Hou	-0.58 -12.58 -16.53 nout Topo and ur Leq Day	barrier a	3.22 3.29 3.28 ttenu	uation)	-1.20 -1.20 -1.20		4.49 4.86	0.0 0.0 0.0	00 00 00 <i>CI</i>	0.000 0.000 0.000
Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks:	REMEL 68.46 79.45 84.25 e Levels (with Leq Peak Hou 69 69	-0.58 -12.58 -16.53 nout Topo and ur Leq Day 9.9	barrier a / Le 67.9 66.8	3.22 3.29 3.28 ttenu	ening 65.6 63.8	-1.20 -1.20 -1.20		4.49 4.86	0.0 0.0 0.0 <i>Ldn</i> 69.4 69.3	00 00 00 <i>CI</i>	0.000 0.000 0.000 VEL 69.9
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noiss VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL 68.46 79.45 84.25 e Levels (with Leq Peak Hou 69 69	-0.58 -12.58 -16.53 nout Topo and ur Leq Day 9.9	barrier a / Le	3.22 3.29 3.28 ttenu	ening 65.6	-1.20 -1.20 -1.20		4.49 4.86	0.0 0.0 0.0 <i>Ldn</i> 69.4	00 00 00 <i>CI</i>	0.000 0.000 0.000 VEL 69.9
Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos: Medium Trucks:	REMEL 68.46 79.45 84.25 e Levels (with Leq Peak Hou 69 69	-0.58 -12.58 -16.53 nout Topo and ur Leq Day 3.9 3.0 3.8	barrier a / Le 67.9 66.8	3.22 3.29 3.28 ttenu	ening 65.6 63.8	-1.20 -1.20 -1.20		4.49 4.86	0.0 0.0 0.0 <i>Ldn</i> 69.4 69.3	00 00 00 <i>CI</i>	0.000 0.000 0.000 VEL 69.6 69.6
Autos: Medium Trucks: Heavy Trucks: Vehicle Type Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	REMEL 68.46 79.45 84.25 Se Levels (with Leg Peak Hol 66 66 68 65 68 65	-0.58 -12.58 -16.53 cout Topo and ur Leq Day 0.9 0.0 0.8 1.3	barrier a / Le 67.9 66.8 68.3 72.5	3.22 3.29 3.28 attenu eq Eve	ening 65.6 63.8 60.0 68.5	-1.20 -1.20 -1.20		4.49 4.86 5.77	0.0 0.0 0.0 69.4 69.3 69.3 74.1	00 00 00 <i>CI</i>	0.000 0.000 0.000 VEL 69.6 69.6
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noiss VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL 68.46 79.45 84.25 Se Levels (with Leg Peak Hol 66 66 68 65 68 65	-0.58 -12.58 -16.53 cout Topo and ur Leq Day 0.9 0.0 0.8 1.3	barrier a / Le 67.9 66.8 68.3 72.5	3.22 3.29 3.28 ttenu	ening 65.6 63.8 60.0 68.5	-1.20 -1.20 -1.20		4.49 4.86 5.77	0.0 0.0 0.0 <i>Ldn</i> 69.4 69.3 69.3	00 00 00 <i>CI</i>	0.000 0.000 0.000 VEL 69.6 69.6
Autos: Medium Trucks: Heavy Trucks: Vehicle Type Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	REMEL 68.46 79.45 84.25 Se Levels (with Leg Peak Hol 66 66 68 65 68 65	-0.58 -12.58 -16.53 nout Topo and <i>ur</i> Leq Day 0.9 0.0 9.8 1.3 ontour (in feet	barrier a / Le 67.9 66.8 68.3 72.5	3.22 3.29 3.28 attenu eq Eve	ening 65.6 63.8 60.0 68.5 BA	-1.20 -1.20 -1.20 <i>Leq I</i>		4.49 4.86 5.77	0.0 0.0 0.0 69.4 69.3 69.3 74.1	00 00 00 <i>CI</i> 55	0.000 0.000 0.000 VEL 69.6 69.4 69.4 74.4

Tuesday, July 02, 2019

	FHV	VA-RD-77-108 H	IGHWAY	NOISE PI	REDICTION	MODEL			
	o: OY Withou					ame: Palom			
	e: Parkridge A				Job Num	ber: 11795			
Road Segmer	nt: n/o Second	St.							
SITES	SPECIFIC IN	IPUT DATA			NO	SE MODE	L INPUT	s	
Highway Data				Site Con	ditions (H	ard = 10, S	oft = 15)		
Average Daily	Traffic (Adt):	2,561 vehicles				Autos.	15		
Peak Hour	Percentage:	10%		Me	dium Truck	is (2 Axles)	: 15		
Peak H	our Volume:	256 vehicles		He	avy Trucks	(3+ Axles)	15		
Vel	hicle Speed:	25 mph		Vehicle	Mix				
Near/Far Lar	ne Distance:	10 feet			icleType	Dav	Evening	Night	Daily
Site Data					Aut	os: 76.3%	•	•	91.889
Rar	rier Height:	0.0 feet		M	edium Truc	ks: 73.3%	6 9.2%	17.6%	5.79
Barrier Type (0-W	•	0.0		I	Heavy Truc	ks: 84.4%	6 3.2%	12.5%	2.339
Centerline Dis	st. to Barrier:	30.0 feet		Noiso S	ourco Elov	ations (in f	iont)		
Centerline Dist.	to Observer:	30.0 feet		NOISE 30	Autos:	0.000	eei)		
Barrier Distance	to Observer:	0.0 feet		Modiu	m Trucks:	2.297			
Observer Height (J	Above Pad):	5.0 feet			v Trucks:	8.004	Grade Ad	iustment:	0.0
	ad Elevation:	0.0 feet							
	ad Elevation:	0.0 feet		Lane Eq		istance (in	feet)		
F	Road Grade:	0.0%			Autos:	30.000			
	Left View:	-90.0 degrees			m Trucks:	29.704			
	Right View:	90.0 degrees		Heav	y Trucks:	29.733			
FHWA Noise Mode	el Calculation	s							
VehicleType	REMEL		Distance			Fresnel	Barrier Atte		Atten
Autos:	58.73	-5.57	3.:		-1.20	-4.49	0.0		0.00
Medium Trucks:	70.80	-17.57	3.		-1.20	-4.86	0.0		0.00
Heavy Trucks:	77.97	-21.52	3.	28	-1.20	-5.77	0.0	000	0.00
Unmitigated Noise	•								
	Leq Peak Hou			Evening	Leq Nig		Ldn	CN	
Autos:	55			50.8		46.7	54.7		55.
Medium Trucks:	55			50.2		48.2	55.6		55.
Heavy Trucks: Vehicle Noise:	58			48.8 54.8		50.0 53.3	58.0 61.1		58. 61.
			.0	54.8		JJ.J	1.1ه	1	01.
Centerline Distanc	e to Noise Co	ontour (in feet)	70	dBA	65 dB	4	60 dBA	55 d	DA
		1 d		8	17	~	36	55 0	
		CNE		8	17		37	80	
		CIVE	· L ·	0	17		57	00	,

	FH\	VA-RD-77-108	HIGHV	NAY NO	OISE PF	REDICT		EL			
	io: OY Withou ne: Parkridge A						Name: P umber: 1				
	nt: s/o Second					00011	umbor. 1				
	SPECIFIC IN	IPUT DATA								s	
Highway Data				S	ite Con	ditions	(Hard = 1	10, S	oft = 15)		
Average Daily	Traffic (Adt):	4,931 vehicle	s				A	utos:	15		
Peak Hour	Percentage:	10%			Mee	dium Tri	ucks (2 A	xles):	15		
Peak H	lour Volume:	493 vehicles			Hea	avy Tru	cks (3+ A	xles):	15		
Ve	hicle Speed:	40 mph		V	ehicle l	Mix					
Near/Far La	ne Distance:	36 feet		V		icleType		Day	Evening	Night	Daily
Site Data					VCIII			6.3%	•	12.6%	
		0.0.4			Me	edium Ti		3.3%		17.6%	
Barrier Type (0-V	rrier Height:	0.0 feet 0.0				leavy T		34.4%		12.5%	
Centerline Di		0.0 44.0 feet									
Centerline Dist.				N	loise So	ource E	evations	(in f	eet)		
Barrier Distance		44.0 feet 0.0 feet				Auto	s: 0.0	00			
Observer Height		5.0 feet			Mediur	n Truck	s: 2.2	97			
	ad Flevation:				Heav	y Truck	s: 8.0	04	Grade Ad	justment.	0.0
	ad Elevation: ad Elevation:	0.0 feet		1	ano Fai	uivalon	Distanc	o (in	foot)		
	Road Grade:	0.0 feet 0.0%		-	ane Ly	Auto			iccij		
	Left View:	-90.0 dearee			Modium	n Truck					
	Right View:	90.0 degree				y Truck					
	°	•	5		neav	y much	5. 40.2	02			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite		Fresne		Barrier Att	en Ber	m Atten
Autos:	66.51	-4.76		1.28		-1.20	-	4.61	0.0	000	0.00
Medium Trucks:	77.72	-16.77		1.31		-1.20	-	4.87	0.0	000	0.00
Heavy Trucks:	82.99	-20.72		1.31		-1.20	-	5.50	0.0	000	0.00
Unmitigated Nois			-								
VehicleType	Leq Peak Hou			Leq Eve	•	Leq	Night		Ldn		VEL
Autos:	61		59.9		57.5		53.3		61.3		61.
Medium Trucks:	61		58.9		55.9		54.0		61.4		61.
Heavy Trucks:			60.9		52.6		53.8		61.9		62.
Vehicle Noise:			64.7		60.5		58.5		66.3	3	66.
Centerline Distan	ce to Noise Co	ontour (in feet)		=0.							10.4
				70 d			dBA	(60 dBA		dBA
			_dn: IEL:	25 26			4 6		116 121		49 61

Tuesday, July 02, 2019

	FHV	VA-RD-77-108	HIGH	WAYN	IOISE PF	REDICTIC	N MO	DEL			
	io: OY Withou					Project N			ino		
	ne: Parkridge A					Job Nu	mber:	11795			
Road Segme	nt: s/o Lincoln	AV.									
	SPECIFIC IN	PUT DATA			<u></u>					S	
Highway Data					Site Con	ditions (F			,		
Average Daily	. ,	6,784 vehicle	es					Autos:	15		
	Percentage:	10%				dium Truc					
	lour Volume:	678 vehicle	s		He	avy Truck	s (3+ /	Axles):	15		
Ve	hicle Speed:	40 mph		F	Vehicle I	Mix					
Near/Far La	ne Distance:	36 feet		-	Vehi	cleType		Day	Evening	Night	Daily
Site Data						AL	itos:	76.3%	11.0%	12.6%	91.88
Ba	rrier Height:	0.0 feet			Me	edium Tru	cks:	73.3%	9.2%	17.6%	5.799
Barrier Type (0-W		0.0			F	łeavy Tru	cks:	84.4%	3.2%	12.5%	2.33
Centerline Di	st. to Barrier:	44.0 feet		ŀ	Noiso Sc	ource Ele	vation	e (in f	not)		
Centerline Dist.	to Observer:	44.0 feet		-	110/36 30	Autos:		000			
Barrier Distance	to Observer:	0.0 feet			Madium	n Trucks:		297			
Observer Height	(Above Pad):	5.0 feet				v Trucks:		297	Grade Ad	iustmont	
P	ad Elevation:	0.0 feet			Tieav	y muchs.	0.	004	Orade Au	usuncin	. 0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalent I	Distan	ce (in	feet)		
	Road Grade:	0.0%				Autos:	40.	460			
	Left View:	-90.0 degree	es		Mediur	n Trucks:	40.	241			
	Right View:	90.0 degree	es		Heav	y Trucks:	40.	262			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atter
Autos:	66.51	-3.38		1.2	8	-1.20		-4.61	0.0	000	0.00
Medium Trucks:	77.72	-15.38		1.3	1	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	82.99	-19.33		1.3	1	-1.20		-5.50	0.0	000	0.00
Unmitigated Nois	e Levels (with	out Topo and	barrie	er atter	uation)						
VehicleType	Leq Peak Hou	r Leq Day	·	Leq E	vening	Leq N	ight		Ldn	C	NEL
Autos:	63	.2	61.2		58.9		54.7	7	62.7	7	63
Medium Trucks:	62	.4	60.3		57.3		55.3	3	62.8	3	63
Heavy Trucks:	63	.8	62.2		54.0		55.2	2	63.2	2	63
Vehicle Noise:	67	.9	66.1		61.9		59.9)	67.	7	68
Centerline Distan	ce to Noise Co	ontour (in feet)								
					dBA	65 di		e	60 dBA		dBA
			Ldn:	-	1	66			143	-	808
			VFI :		2	70			150		23

	FHWA-	RD-77-108 F	IIGHWA	Y NO	OISE PR	EDICTIC	ON MO	DEL			
Scenario: OY Road Name: Pac Road Segment: s/o	ific Av.	,				Project N Job Nu			no		
SITE SPECI	FIC INPU	IT DATA				NC	DISE N	/ODE	L INPUT	s	
Highway Data				S	Site Conc	litions (l	Hard =	10, Sc	oft = 15)		
Average Daily Traffic	(Adt):	560 vehicles						Autos:	15		
Peak Hour Percen	tage:	10%			Mea	lium Truc	cks (2 A	(xles)	15		
Peak Hour Vol	lume:	56 vehicles			Hea	vy Truck	(3+ A	(xles)	15		
Vehicle Sp	beed:	25 mph		14	ehicle M	1.4					
Near/Far Lane Dist	ance:	10 feet				leType		Dav	Evening	Night	Daily
Site Data				+	Verne			76.3%	•	12.6%	
Barrier He	iaht.	0.0 feet			Me	dium Tru	icks:	73.3%	9.2%	17.6%	5.79%
Barrier Type (0-Wall, 1-B	•	0.0			н	eavy Tru	icks:	84.4%	3.2%	12.5%	2.33%
Centerline Dist. to Ba	,	30.0 feet			loise So			- 11- 6	- 41		
Centerline Dist. to Obse	erver: 3	30.0 feet		~	ioise soi	Autos:		5 (<i>III I</i> 6 200	el)		
Barrier Distance to Obse	erver:	0.0 feet			Madium	Autos: Trucks:		297			
Observer Height (Above	Pad):	5.0 feet						297	Grade Ad	iustmont	
Pad Elev	ation:	0.0 feet			neavy	Trucks:	0.0	JU4	Graue Au	Jusunen	. 0.0
Road Elev	ation:	0.0 feet		L	ane Equ	ivalent l	Distan	ce (in i	feet)		
Road G	rade:	0.0%				Autos:	30.	000			
Left	View: -9	90.0 degrees			Medium	Trucks:	29.	704			
Right	View: 9	90.0 degrees			Heavy	Trucks:	29.	733			
FHWA Noise Model Calc	ulations										
VehicleType REN		affic Flow	Distan		Finite F		Fresn		Barrier Att	en Ber	m Atten
Autos:	58.73	-12.17		3.22		-1.20		-4.49		000	0.000
Medium Trucks:	70.80	-24.18		3.29		-1.20		-4.86		000	0.000
Heavy Trucks:	77.97	-28.12		3.28		-1.20		-5.77	0.0	000	0.00
Unmitigated Noise Level											
<i>,</i> , ,	eak Hour	Leq Day		q Ev	ening	Leq N			Ldn		NEL
Autos:	48.6		6.6		44.2		40.1		48.		48.
Medium Trucks:	48.7		6.6		43.6		41.6		49.0		49.3
Heavy Trucks:	51.9).4		42.2		43.4		51.4		51.5
Vehicle Noise:	54.8	53	3.0		48.2		46.7	·	54.5	5	54.8
Centerline Distance to N	oise Conte	our (in feet)									
				70 di	BA	65 di	BA	6	0 dBA		dBA
		1.	dn:	3		6			13		28
		CN		3		6			13		29

Tuesday, July 02, 2019

	FH\	WA-RD-77-108	BHIGHW	AY NO	DISE PF	REDICTIO	N MO	DEL			
Scenario	: OY Withou	t Project				Project N	ame:	Palomi	no		
Road Name	: Mountain A	۹v.				Job Nun	nber:	11795			
Road Segment	t: n/o Hamne	er Av.									
	PECIFIC IN	NPUT DATA								S	
Highway Data				S	ite Con	ditions (H			,		
Average Daily T	. ,	11,135 vehicl	es					Autos:	15		
Peak Hour F	•	10%				dium Truci		/	15		
	our Volume:	1,114 vehicle	s		Hea	avy Trucks	s (3+ /	Axles):	15		
	icle Speed:	40 mph		V	ehicle l	Nix					
Near/Far Lan	e Distance:	36 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						Au	tos:	76.3%	11.0%	12.6%	91.88
Barr	ier Height:	0.0 feet			Me	edium Truc	cks:	73.3%	9.2%	17.6%	5.799
Barrier Type (0-Wa	all, 1-Berm):	0.0			H	leavy Truc	cks:	84.4%	3.2%	12.5%	2.33
Centerline Dist		44.0 feet		N	loise So	ource Elev	ation	s (in fe	et)		
Centerline Dist. to		44.0 feet				Autos:	0.	000			
Barrier Distance to		0.0 feet			Mediur	n Trucks:	2.	297			
Observer Height (A	,	5.0 feet			Heav	y Trucks:	8.	004	Grade Adj	iustment	0.0
	d Elevation:	0.0 feet		-							
	d Elevation:	0.0 feet		L	ane Equ	uivalent D			eet)		
R	oad Grade:	0.0%				Autos:		460			
	Left View:	-90.0 degre				n Trucks:	40.				
	Right View:	90.0 degre	es		Heav	y Trucks:	40.	262			
FHWA Noise Model											
VehicleType	REMEL	Traffic Flow	Distar		Finite		Fresr		Barrier Atte		m Atter
Autos:	66.51	-1.23		1.28		-1.20		-4.61	0.0		0.00
Medium Trucks:	77.72			1.31		-1.20		-4.87	0.0		0.00
Heavy Trucks:	82.99			1.31		-1.20		-5.50	0.0	00	0.00
Unmitigated Noise			-					1			
	Lea Peak Hou	ur Leq Da		eq Eve	ening 61.0	Leq Ni	gnt 56.8		Ldn 64.9		NEL 65.
21	CE.										
Autos:		5.4	63.4								
Autos: Medium Trucks:	64	1.6	62.5		59.4		57.5	5	64.9)	65.
Autos: Medium Trucks: Heavy Trucks:	64 65	1.6 5.9	62.5 64.4		59.4 56.2		57.5 57.3	5 3	64.9 65.4)	65. 65.
Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	64 65 70	k.6 5.9 0.1	62.5 64.4 68.3		59.4		57.5	5 3	64.9)	65. 65.
Autos: Medium Trucks: Heavy Trucks:	64 65 70	k.6 5.9 0.1	62.5 64.4 68.3	70 di	59.4 56.2 64.1	65 dE	57.5 57.3 62.0	5	64.9 65.4	3	65. 65. 70. dBA
Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	64 65 70	k.6 5.9 0.1	62.5 64.4 68.3	70 di 43	59.4 56.2 64.1 BA	65 dE 92	57.5 57.3 62.0	5	64.9 65.4 69.8	55	65. 65. 70.

	FHV	/A-RD-77-108	HIGH	WAY N	OISE PF	REDICTIO	on Mo	DEL			
Scenario: O						Project N			ino		
Road Name: Ha						Job Nu	mber:	11795			
Road Segment: s/o	o Third St										
SITE SPEC	CIFIC IN	PUT DATA							L INPUT	s	
Highway Data				5	Site Con	ditions (l	Hard =	: 10, Sc	oft = 15)		
Average Daily Traffic	c (Adt):	39,247 vehicle	s					Autos:	15		
Peak Hour Perce	entage:	10%			Me	dium Truo	cks (2 /	Axles):	15		
Peak Hour V	olume:	3,925 vehicles			He	avy Truck	ks (3+)	Axles):	15		
Vehicle		40 mph		1	/ehicle	Mix					
Near/Far Lane Dis	stance:	73 feet		F		icleType		Dav	Evening	Night	Daily
Site Data							utos:	76.3%			91.88
Barrier H	leiaht [.]	0.0 feet			Me	edium Tru	icks:	73.3%	9.2%	17.6%	5.799
Barrier Type (0-Wall, 1-	•	0.0			F	leavy Tru	icks:	84.4%	3.2%	12.5%	2.33
Centerline Dist. to I		55.0 feet			1-1 0-			- //- 6			
Centerline Dist. to Ob	server:	55.0 feet		'	voise Sc	ource Ele		<u> </u>	et)		
Barrier Distance to Ob	server:	0.0 feet				Autos: n Trucks:		000			
Observer Height (Abov	e Pad):	5.0 feet						297	Grade Ad	inatroant	
Pad Ele	vation:	0.0 feet			Heav	y Trucks:	8.	004	Grade Adj	usunen	0.0
Road Ele	vation:	0.0 feet		L	ane Eq	uivalent l	Distan	ce (in i	feet)		
Road	Grade:	0.0%				Autos:	41.	446			
Lei	t View:	-90.0 degree	s		Mediur	n Trucks:	41.	232			
Righ	t View:	90.0 degree	s		Heav	y Trucks:	41.	253			
FHWA Noise Model Cal	culations	5									
VehicleType RE	MEL	Traffic Flow	Dist	ance	Finite	Road	Fresi	nel	Barrier Att	en Ber	m Atten
Autos:	66.51	4.24		1.12	2	-1.20		-4.67	0.0	000	0.00
Medium Trucks:	77.72	-7.76		1.15		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	82.99	-11.71		1.15	i	-1.20		-5.38	0.0	000	0.00
Unmitigated Noise Lev	els (witho	out Topo and I	oarrie	r atten	uation)						
	Peak Hou			Leq Ev		Leq N			Ldn		VEL
Autos:	70.		8.7		66.3		62.1		70.2		70.
Medium Trucks:	69.		7.8		64.8		62.8	-	70.2	-	70.
Heavy Trucks:	71.		9.7		61.5		62.		70.7		70.
Vehicle Noise:	75.		3.6		69.4		67.3	3	75.1	I	75.
Centerline Distance to	Noise Co	ntour (in feet)	- 1					1 .			
			. L	70 a		65 d		6	0 dBA		dBA
			.dn:	12		26			562		211
		CN	EL:	12	1	273	3		589	1,	269

Tuesday, July 02, 2019

Ca	io: OY Withou	t Droje et				Project N	-	Deler:			
	e: Hamner Av					Job Nur			no		
	nt: s/o Second					000 140	iber.	1795			
ů	SPECIFIC IN			1		NO	ISE N	IODE		s	
Highway Data				s	Site Con	ditions (H					
Average Daily	Traffic (Adt):	33,674 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10%			Mee	dium Truc	ks (2 A	xles):	15		
Peak F	lour Volume:	3,367 vehicles			Hea	avy Truck	s (3+ A	xles):	15		
Ve	hicle Speed:	40 mph		L.	/ehicle I	Niv					
Near/Far La	ne Distance:	73 feet		-		cleType		Dav	Evening	Night	Daily
Site Data								76.3%	•	12.6%	
Pa	rrier Height:	0.0 feet			Me	dium True	cks:	73.3%	9.2%	17.6%	5.79%
Barrier Type (0-W		0.0 1001			H	leavy True	cks:	84.4%	3.2%	12.5%	2.33%
Centerline Di	st. to Barrier:	55.0 feet			loise So	urce Elev	ation	: (in fe	et)		
Centerline Dist.	to Observer:	55.0 feet		-	0.30 00	Autos:		00			
Barrier Distance	to Observer:	0.0 feet			Modiur	n Trucks:		97			
Observer Height	Above Pad):	5.0 feet				v Trucks:		04	Grade Ad	iustmen	t: 0.0
P	ad Elevation:	0.0 feet									
	ad Elevation:	0.0 feet		L	ane Equ	ivalent D			feet)		
	Road Grade:	0.0%				Autos:	41.4				
	Left View:	-90.0 degree				n Trucks:	41.2				
	Right View:	90.0 degree	S		Heav	y Trucks:	41.2	253			
FHWA Noise Mod	el Calculation	s		-							
VehicleType	REMEL	Traffic Flow	Distan	се	Finite		Fresn		Barrier Att	en Be	rm Atten
Autos:	66.51	3.58		1.12		-1.20		4.67		000	0.00
Medium Trucks:	77.72			1.15		-1.20		4.87		000	0.00
Heavy Trucks:	82.99	-12.37		1.15		-1.20		-5.38	0.0	000	0.00
Unmitigated Nois											
VehicleType	Leq Peak Ho			eq Ev	ening	Leq Ni			Ldn	-	NEL
Autos:			68.0		65.7		61.5		69.5		70.0
	69		67.1		64.1		62.1		69.6	-	69.
Medium Trucks:			69.0		60.8		62.0		70.0		70.3
Medium Trucks: Heavy Trucks:	70	-			68.7		66.7		74.5	5	74.
Medium Trucks:		-	72.9								
Medium Trucks: Heavy Trucks:	74	l.7 i	-								
Medium Trucks: Heavy Trucks: Vehicle Noise:	74	.7 ontour (in feet)		70 d	BA	65 dE		6	0 dBA		ō dBA
Medium Trucks: Heavy Trucks: Vehicle Noise:	74	1.7 ontour (in feet)	-	70 d	'BA 9	65 dE 236 247		6	0 dBA 508 532	1	5 dBA ,094 ,146

	FHW	'A-RD-77-108 H	IIGHWA	YNO	DISE PR	EDICT	ION MO	DEL				
Scenario: OY Road Name: Har Road Segment: s/o	nner Av.	Project		Project Name: Palomino Job Number: 11795								
SITE SPECI	FIC INF	PUT DATA				ľ	NOISE I	IODE	L INPUT	s		
Highway Data				S	ite Cond	ditions	(Hard =	10, So	oft = 15)			
Average Daily Traffic	(Adt): 2	26,577 vehicles						Autos:	15			
Peak Hour Percer	tage:	10%			Med	lium Tr	ucks (2)	Axles):	15			
Peak Hour Vo	lume: 1	2,658 vehicles			Hea	avy Tru	cks (3+ /	Axles):	15			
Vehicle S	peed:	40 mph			ehicle N	1 14						
Near/Far Lane Dist	ance:	73 feet		v		ux cleType		Day	Evening	Night	Daily	
Site Data					venio		+ Autos:	76.3%	v	12.6%		
				-	Mo	ر dium T		73.3%		12.6%		
Barrier He		0.0 feet				leavy T		84.4%		12.5%		
Barrier Type (0-Wall, 1-B		0.0				eavy 1	ruchs.	04.470	5.270	12.370	2.00/0	
Centerline Dist. to Ba		55.0 feet		N	loise So	urce E	levation	s (in fe	eet)			
Centerline Dist. to Obs		55.0 feet				Auto	s: 0.	000				
Barrier Distance to Obs		0.0 feet			Mediun	n Truck	s: 2.	297				
Observer Height (Above		5.0 feet			Heavy	/ Truck	s: 8.	004	Grade Ad	justment	: 0.0	
Pad Elev		0.0 feet		-	ono Eau	u colon	t Distan	aa (in	fa a 4)			
Road Elev		0.0 feet		-	апе Еци			446	ieel)			
Road G		0.0%			Mediun	Auto		446 232				
Left Right	View: View:	-90.0 degrees 90.0 degrees				/ Truck / Truck		232 253				
FHWA Noise Model Calc	ulations											
VehicleType REI	/IEL	Traffic Flow	Distanc	е	Finite I	Road	Fresr	nel	Barrier Att	en Bei	m Atten	
Autos:	66.51	2.55	1	1.12		-1.20		-4.67	0.0	000	0.000	
Medium Trucks:	77.72	-9.45	1	1.15		-1.20		-4.87	0.0	000	0.000	
Heavy Trucks:	82.99	-13.40		1.15		-1.20		-5.38	0.0	000	0.000	
Unmitigated Noise Level												
, ,	eak Hour			Eve	ening	Leq	Night		Ldn		NEL	
Autos:	69.0		7.0		64.6		60.5		68.5		68.9	
Medium Trucks:	68.2		5.1		63.1		61.1		68.5		68.9	
Heavy Trucks:	69.5		3.0		59.8		61.0		69.0		69.1	
Vehicle Noise:	73.7		1.9		67.7		65.6	5	73.5	>	73.8	
Centerline Distance to N	oise Coi	ntour (in feet)		70 dl	RA	65	dBA		60 dBA	55	dBA	
			dn:	93			01		434		и <i>Б</i> А 34	
		CNI		93		-	11		454 454	-	134 178	
		CIVE	-4	30		2			-94	2		

Tuesday, July 02, 2019

	FH\	WA-RD-77-108	HIGH	IWAY N	IOISE PI	REDICTIO	N MO	DEL					
Scenario	: OY Withou	t Project				Project N	ame:	Palomi	ino				
Road Name	: Hamner Av					Job Nur	nber:	11795					
Road Segmen	t: s/o Hidden	Valley Pkwy.											
	PECIFIC IN	IPUT DATA			NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15)								
Highway Data					Site Con	ditions (H							
Average Daily 1	, ,	33,848 vehicl	es					Autos:	15				
Peak Hour F	•	10%				dium Truc		/	15				
Peak Ho	our Volume:	3,385 vehicle	s		Heavy Trucks (3+ Axles): 15								
	icle Speed:	40 mph			Vehicle Mix								
Near/Far Lan	e Distance:	73 feet			Veh	icleType		Day	Evening	Night	Daily		
Site Data						Au	tos:	76.3%	11.0%	12.6%	91.889		
Bari	rier Height:	0.0 feet			M	edium Truc	cks:	73.3%	9.2%	17.6%	5.79%		
Barrier Type (0-Wa	all, 1-Berm):	0.0			I	Heavy True	cks:	84.4%	3.2%	12.5%	2.339		
Centerline Dis		55.0 feet			Noise So	ource Elev	vation	s (in fe	eet)				
Centerline Dist. to		55.0 feet		Ē		Autos:	0.	000					
Barrier Distance to		0.0 feet			Mediu	m Trucks:	2.	297					
Observer Height (A	,	5.0 feet			Heav	v Trucks:	8.	004	Grade Ad	justment	: 0.0		
	d Elevation:	0.0 feet		-		·		// /	(
	d Elevation:	0.0 feet		-	Lane Eq	uivalent D			reet)				
ĸ	load Grade:	0.0%			14 E	Autos:		446					
	Left View: Right View:	-90.0 degre 90.0 degre				m Trucks: vy Trucks:		232 253					
	J	•	55			<i>y maono</i> .	41.	200					
FHWA Noise Mode VehicleType	REMEL	s Traffic Flow	Die	tance	Finito	Road	Fresr	al	Barrier Att	on Ro	rm Atten		
Autos:	66.51	3.60	510	1.1		-1.20	1100	-4.67		000	0.00		
Medium Trucks:	77.72	-8.40		1.1	5	-1.20		-4.87		000	0.00		
Heavy Trucks:	82.99	-12.35		1.1	5	-1.20		-5.38	0.0	000	0.00		
Unmitigated Noise	Levels (with	out Topo and	barrie	er atter	uation)								
	Leq Peak Ho			Leq E	vening	Leq Ni			Ldn		NEL		
Autos:			68.1		65.7		61.5		69.5	-	70.		
Medium Trucks:			67.1		64.1		62.2	-	69.6		69.		
Heavy Trucks:		.6	69.1		60.8		62.0		70.1		70.		
Vehicle Noise:			72.9		68.7		66.7	, ,	74.5	5	74.		
Centerline Distance	e to Noise C	ontour (in fee)	70	dD A	6E -1	-						
			I dn:		dBA 10	65 dE 236		6	60 dBA 509		dBA		
		~	Lan: NFL :		10 15	236			509 534		,098 .149		
		L.	VEL.	T	15	∠48			534	1,	149		

F	HWA-RD-77-10	8 HIGH	WAY NC	ISE PREDICT		DEL						
Scenario: OY With					t Name:		ino					
Road Name: E. Parkri Road Segment: s/o Hidd				JOD I	Number:	11795						
SITE SPECIFIC	INPUT DATA			NOISE MODEL INPUTS								
Highway Data			Si	te Conditions	; (Hard =	: 10, So	oft = 15)					
Average Daily Traffic (Adt)	8,676 vehic	les		Autos: 15								
Peak Hour Percentage	10%			Medium Trucks (2 Axles): 15								
Peak Hour Volume	868 vehicle	es		Heavy Trucks (3+ Axles): 15								
Vehicle Speed	45 mph		14	ehicle Mix								
Near/Far Lane Distance	36 feet		Ve	VehicleTvp	<u>م</u>	Dav	Evening	Night	Dailv			
Site Data				,,	Autos:	76.3%	•	12.6%				
Barrier Height	0.0 feet			Medium 1	rucks:	73.3%	9.2%	17.6%	5.79			
Barrier Type (0-Wall, 1-Berm)				Heavy T	rucks:	84.4%	3.2%	12.5%	2.33			
Centerline Dist. to Barrier			\vdash	,								
Centerline Dist. to Observer			N	Noise Source Elevations (in feet)								
Barrier Distance to Observer	11.0 1001					000						
Observer Height (Above Pad)				Medium Truci		297						
Pad Elevation				Heavy Truck	(s: 8.	004	Grade Ad	justment.	0.0			
Road Elevation			Li	ane Equivaler	t Distan	ce (in	feet)					
Road Grade				Auto		460	1					
Left View		299		Medium Truci	(s: 40	241						
Right View				Heavy Truck	ks: 40.	262						
FHWA Noise Model Calculati	ons											
VehicleType REMEL	Traffic Flow		tance	Finite Road	Fresi	-	Barrier Att		m Atter			
Autos: 68.4		-	1.28	-1.20		-4.61		000	0.00			
Medium Trucks: 79.4			1.31	-1.20		-4.87		000	0.00			
Heavy Trucks: 84.:	-18.77	'	1.31	-1.20		-5.50	0.0	000	0.00			
Unmitigated Noise Levels (w	thout Topo and	l barrie	er attenu	ation)								
VehicleType Leq Peak H			Leq Eve		Night		Ldn		VEL			
	65.7	63.7		61.4	57.2		65.2		65			
	64.7	62.6		59.6	57.6		65.0		65			
	65.6	64.1		55.8	57.0	-	65.1		65			
Vehicle Noise:	70.1	68.3		64.2	62.	1	69.9	9	70			
Centerline Distance to Noise	Contour (in fee	:t)			_							
		L	70 dE		dBA	6	60 dBA		dBA			
		Ldn:	43		93		200	4	32			
		NEL:	45		98		210		53			

Tuesday, July 02, 2019

Scenario	: OY Without	Project				Project	Name: F	Palom	ino		
	Lincoln Av.	,					imber: 1				
Road Segment	t: s/o River Ro	i.									
SITE S	PECIFIC IN	PUT DATA				N	OISE N	IODE	L INPUTS		
Highway Data					Site Con	ditions ('Hard =	10, So	oft = 15)		
Average Daily T	raffic (Adt):	23,440 vehicles					A	Autos:	15		
Peak Hour F	Percentage:	10%			Mee	dium Tru	cks (2 A	xles):	15		
Peak Ho	our Volume:	2,344 vehicles			Hea	avy Truc	ks (3+ A	xles):	15		
Veh	icle Speed:	40 mph		1	Vehicle I	<i>Ni</i> v					
Near/Far Lan	e Distance:	36 feet		H		cleType		Dav	Evening	Night	Daily
Site Data								76.3%	-	12.6%	
Parr	ier Heiaht:	0.0 feet			Ме	dium Tr	ucks:	73.3%	9.2%	17.6%	5.79%
Barrier Type (0-Wa		0.0			H	leavy Tr	ucks:	84.4%	3.2%	12.5%	2.33%
Centerline Dist		44.0 feet		-							
Centerline Dist. to	Observer:	44.0 feet		'	Voise So	Autos			eet)		
Barrier Distance to	o Observer:	0.0 feet			Madium	Autos n Trucks					
Observer Height (A	bove Pad):	5.0 feet				v Trucks			Grade Adju	etmont	0.0
Pad	d Elevation:	0.0 feet			neav	y mucks	. 0.0	104	Orade Haja	Sunone	0.0
Road	d Elevation:	0.0 feet		L	Lane Equ	ıivalent	Distand	e (in	feet)		
R	oad Grade:	0.0%				Autos					
	Left View:	-90.0 degrees			Mediur	n Trucks					
	Right View:	90.0 degrees			Heav	y Trucks	: 40.2	262			
FHWA Noise Model	Calculations	;									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Atte	n Ber	m Atten
Autos:	66.51	2.01		1.28		-1.20		4.61	0.00		0.00
Medium Trucks:	77.72	-10.00		1.31		-1.20		4.87	0.00		0.00
Heavy Trucks:	82.99	-13.95		1.31	I	-1.20		-5.50	0.00	00	0.00
Unmitigated Noise	Levels (witho	out Topo and b	arrier	atten	uation)						
<i>,</i>	Leq Peak Hou	. ,		.eq Ev	/ening	Leq I	·		Ldn	CI	VEL
Autos:	68.		6.6		64.2		60.1		68.1		68.
Medium Trucks:	67.		5.7		62.7		60.7		68.1		68.
Heavy Trucks:	69.		7.6		59.4		60.6		68.6		68.
Vehicle Noise:	73.	3 7	1.5		67.3		65.2		73.1		73.4
Centerline Distance	e to Noise Co	ntour (in feet)		_							_
				70 a		65 c		6	60 dBA		dBA
		L	dn:	70	0	15	2		327	7	04
		CN		74		15			342		37

	FH\	NA-RD-77-108	HIGHW	AY NOI	SE PR	EDICTI		DEL					
Road Nar	rio: OY Withou ne: Lincoln Av. nt: s/o Rincon	,			Project Name: Palomino Job Number: 11795								
SITE	SPECIFIC IN	IPUT DATA							L INPUTS	5			
Highway Data				Site	Cond	ditions (Hard =	10, Sc	oft = 15)				
Average Daily	Traffic (Adt):	23,697 vehicle	es				A	Autos:	15				
Peak Hour	Percentage:	10%			Med	dium Tru	cks (2 A	xles):	15				
	our Volume:	2,370 vehicle	5		Hea	avy Truc	ks (3+ A	xles):	15				
Ve	hicle Speed:	40 mph		Vak	icle N	Also .							
Near/Far La	ne Distance:	36 feet		ven		n ix cleType		Day	Evening	Night	Daily		
Site Data				_	Vern			76.3%	•	12.6%			
				_	Mo	dium Tr		73.3%		17.6%			
	rrier Height:	0.0 feet				leavy Tr		84.4%		12.5%			
Barrier Type (0-V	. ,	0.0				cavy m	2043.	04.470	0.270	12.570	2.00 /		
	ist. to Barrier:	44.0 feet		Noi	se So	urce Ele	evations	s (in fe	eet)				
Centerline Dist. Barrier Distance		44.0 feet				Autos	: 0.0	000					
Observer Height		0.0 feet 5.0 feet		N	lediun	n Trucks	: 2.2	97					
	ad Elevation:	0.0 feet			Heavy	y Trucks	: 8.0	04	Grade Adj	ustment	: 0.0		
	ad Elevation: ad Elevation:	0.0 feet		Lan	e Fai	iivalent	Distanc	e (in	feet)				
, AC	au Elevalion. Road Grade:	0.0%			0 _q0	Autos							
	Left View:	-90.0 degree			lodiun	n Trucks							
	Right View:	90.0 degree				y Trucks							
FHWA Noise Mod	lel Calculation	s											
VehicleType	REMEL	Traffic Flow	Distan	ice l	-inite I	Road	Fresn	el	Barrier Atte	en Ber	m Atten		
Autos:	66.51	2.05		1.28		-1.20		4.61	0.0	00	0.000		
Medium Trucks:	77.72	-9.95		1.31		-1.20		4.87	0.0	00	0.000		
Heavy Trucks:		-13.90		1.31		-1.20		-5.50	0.0	00	0.000		
Unmitigated Nois					- <u>´</u>								
VehicleType	Leg Peak Hou	, ,		eq Even	•	Leq I	•		Ldn		NEL		
<i>,</i>	-		66.7		64.3		60.1		68.1		68.0		
Autos:													
Autos: Medium Trucks:	67	.9	65.7		62.7		60.8		68.2				
Autos: Medium Trucks: Heavy Trucks:	67 69	.9 .2	65.7 67.7		62.7 59.4		60.8 60.6		68.7	,	68.8		
Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	67 69 73	.9 .2 .4	65.7 67.7 71.5		62.7		60.8			,	68.8		
Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	67 69 73	.9 .2 .4	65.7 67.7 71.5		62.7 59.4 67.4		60.8 60.6 65.3		68.7 73.1		68.8 73.4		
Autos: Medium Trucks: Heavy Trucks:	67 69 73	.9 .2 .4 ontour (in feet	65.7 67.7 71.5	70 dBA	62.7 59.4 67.4	65 0	60.8 60.6 65.3		68.7 73.1	55	68.8 73.4 dBA		
Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	67 69 73	.9 .2 .4 ontour (in feet	65.7 67.7 71.5	70 dBA 71 74	62.7 59.4 67.4	65 c 15	60.8 60.6 65.3 IBA 3		68.7 73.1	55	68.5 68.8 73.4 dBA 709 743		

Tuesday, July 02, 2019

	FH\	WA-RD-77-108	HIGH	WAY N	IOISE PF	EDICTIO	и мо	DEL					
Scenario	: OY Withou	t Project				Project Na	ame:	Palomi	no				
Road Name	: Lincoln Av.					Job Nun	nber:	11795					
Road Segmen	t: s/o Railroa	d St.											
	PECIFIC IN	IPUT DATA			NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15)								
Highway Data					Site Con	ditions (H			,				
Average Daily T	. ,	26,204 vehicle	es					Autos:	15				
Peak Hour F	•	10%				dium Truck			15				
	our Volume:	2,620 vehicle	s		Heavy Trucks (3+ Axles): 15								
	icle Speed:	40 mph			Vehicle Mix								
Near/Far Lan	e Distance:	36 feet			Vehi	cleType		Day	Evening	Night	Daily		
Site Data						Aut	tos:	76.3%	11.0%	12.6%	91.889		
Barr	ier Heiaht:	0.0 feet			Me	dium Truc	cks:	73.3%	9.2%	17.6%	5.79%		
Barrier Type (0-Wa		0.0			H	leavy Truc	cks:	84.4%	3.2%	12.5%	2.339		
Centerline Dist		44.0 feet			Noise So	urce Elev	ation	s (in fe	et)				
Centerline Dist. to Observer: 44.0 feet				Ē		Autos:	0.	000					
Barrier Distance to Observer: 0.0 feet				Mediur	n Trucks:	2.	297						
Observer Height (A	,	5.0 feet			Heav	y Trucks:	8.	004	Grade Ad	justment	0.0		
	d Elevation:	0.0 feet		-	Long Eau	undent D	lioton	oo (in 1	[0.04]				
	d Elevation: oad Grade:	0.0 feet		ŀ	Lane Equ	ivalent D Autos:		460	eel)				
ĸ	l eft View:	0.0%			Madium	n Trucks:		460 241					
	Right View:	-90.0 degree 90.0 degree				v Trucks:		241 262					
FHWA Noise Mode		ě											
VehicleType	REMEL	S Traffic Flow	Diei	tance	Finite	Road	Fresi	al	Barrier Att	on Bo	rm Atten		
Autos:	66.51	2.49	2101	1.2		-1.20	1100	-4.61		000	0.00		
Medium Trucks:	77.72			1.3		-1.20		-4.87		000	0.00		
Heavy Trucks:	82.99	-13.46		1.3	1	-1.20		-5.50	0.0	000	0.00		
Unmitigated Noise	Levels (with	out Topo and	barrie	er atter	uation)								
	eq Peak Ho			Leq E	vening	Leq Ni			Ldn		NEL		
Autos:	69		67.1		64.7		60.5		68.6		69.		
Medium Trucks:	68		66.2		63.2		61.2		68.6		68.		
Heavy Trucks:	69		68.1		59.9		61.1		69.1		69.		
Vehicle Noise:	73		72.0		67.8		65.7	7	73.5	5	73.		
Centerline Distance	e to Noise C	ontour (in feet)	70		6E -10			o dDA				
			L day		dBA	65 dB		6	0 dBA		dBA		
			Ldn: NFL:		6 9	163 171			352 369		758 794		
			VEL.		3	171			209		54		

	FH\	WA-RD-77-108	HIGHW	AY NO	DISE PF	REDICTIC	ON MO	DEL					
Scenari	o: OY Withou	t Project				Project N	lame:	Palomi	no				
Road Nam	e: Lincoln Av.					Job Nu	mber:	11795					
Road Segmer	nt: s/o Pomon	a Rd.											
	SPECIFIC IN	IPUT DATA							L INPUT	s			
Highway Data				S	ite Con	ditions (I	Hard =	10, Sc	oft = 15)				
Average Daily	Traffic (Adt):	31,267 vehicle	s		Autos: 15								
Peak Hour	Percentage:	10%			Medium Trucks (2 Axles): 15								
Peak H	our Volume:	3,127 vehicles	6	Heavy Trucks (3+ Axles): 15									
Ve	hicle Speed:	40 mph		V	ehicle I	Mix							
Near/Far La	ne Distance:	36 feet		-		icleType		Day	Evening	Night	Daily		
Site Data			-		-	AL	itos:	76.3%	11.0%	12.6%	91.889		
Bai	rier Height:	0.0 feet			Me	edium Tru	cks:	73.3%	9.2%	17.6%	5.799		
Barrier Type (0-W	•	0.0			F	leavy Tru	cks:	84.4%	3.2%	12.5%	2.33		
Centerline Dis	st. to Barrier:	44.0 feet		M	laisa Sr	ource Ele	vation	e (in fr	not)				
Centerline Dist.	to Observer:	44.0 feet		/*	0/36 30	Autos:		3 (<i>III I</i> e 200	el)				
Barrier Distance	to Observer:	0.0 feet			Madius	n Trucks:		297					
Observer Height (Above Pad):	5.0 feet				v Trucks:		297 004	Grade Ad	iustmont			
Pa	ad Elevation:	0.0 feet					-			usunoni	0.0		
Roa	ad Elevation:	0.0 feet		Li	ane Equ	uivalent l	Distan	ce (in i	feet)				
1	Road Grade:	0.0%				Autos:	40.	460					
	Left View:	-90.0 degree	s			m Trucks:		241					
	Right View:	90.0 degree	s		Heav	y Trucks:	40.	262					
FHWA Noise Mode	el Calculation	s											
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atter		
Autos:	66.51	3.26		1.28		-1.20		-4.61	0.0	000	0.00		
Medium Trucks:	77.72	-8.75		1.31		-1.20		-4.87	0.0	000	0.00		
Heavy Trucks:	82.99	-12.69		1.31		-1.20		-5.50	0.0	000	0.00		
Unmitigated Noise			oarrier	attenu	ation)						-		
	Leq Peak Hou			eq Eve		Leq N			Ldn		NEL		
Autos:			67.9		65.5		61.3		69.3		69.		
Medium Trucks:	69		6.9		63.9		62.0		69.4		69.		
Heavy Trucks:			6.8		60.6		61.8		69.9		70		
Vehicle Noise:			72.7		68.6		66.5	5	74.3	3	74		
Centerline Distand	e to Noise C	ontour (in feet)		70 -10	D.4	05 -1	04		0.0		-/0.4		
			dn:	70 dE 85		65 di 184		6	0 dBA 396		dBA 153		
			Lan: IEL:	85 89		184			396 415		193 194		
		CN	1LL.	- 09					+ (D	8	.34		

Tuesday, July 02, 2019

Seena	io: OY Withou	Project				Project	Nama:	Palor	ino		
	10. Of Williou 1e: Second St.						imber:				
	nt: w/o Parkrid					000740	iniber.	11/33			
ů	SPECIFIC IN	•				N					
Highway Data	JECIFIC IN	FUIDAIA		s	ite Con				oft = 15)	,	
Average Daily	Traffic (Adt):	15,898 vehicle	s				,	Autos.	15		
Peak Hour	Percentage:	10%			Mee	dium Tru	cks (2 A	xles).	15		
Peak H	our Volume:	1,590 vehicles			Hea	avy Truc	ks (3+ A	xles).	: 15		
Ve	hicle Speed:	35 mph		L.	ehicle l	Ai~					
Near/Far La	ne Distance:	10 feet				cleType		Day	Evening	Night	Daily
Site Data								76.3%	-	12.6%	
Ba	rrier Height:	0.0 feet			Me	dium Tr		73.3%		17.6%	
Barrier Type (0-V		0.0			H	leavy Tr	ucks:	84.4%	6 3.2%	12.5%	2.33%
	ist. to Barrier:	30.0 feet							41		
Centerline Dist.	to Observer:	30.0 feet		^	ioise so	Autos		s (<i>in 1</i>)00	eet)		
Barrier Distance	to Observer:	0.0 feet			1 4 m all 1 m	Autos n Trucks		297			
Observer Height	(Above Pad):	5.0 feet				n Trucks v Trucks		297 004	Grade Adj	untmon	+ 0.0
P	ad Elevation:	0.0 feet			neav	y mucks	. 0.0	JU4	Grade Auj	usunen	. 0.0
Ro	ad Elevation:	0.0 feet		L	ane Equ	ıivalent	Distand	ce (in	feet)		
	Road Grade:	0.0%				Autos	: 30.0	000			
	Left View:	-90.0 degree	s		Mediur	n Trucks	29.1	704			
	Right View:	90.0 degree	s		Heav	y Trucks	: 29.	733			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	се	Finite	Road	Fresn	el	Barrier Atte	en Be	rm Atten
Autos:	64.30	0.90		3.22		-1.20		-4.49	0.0	00	0.00
Medium Trucks:	75.75	-11.11		3.29		-1.20		-4.86	0.0	00	0.000
Heavy Trucks:	81.57	-15.05		3.28		-1.20		-5.77	0.0	00	0.00
Unmitigated Nois	e Levels (with	out Topo and L	oarrier a	ttenu	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	Le	eq Ev	ening	Leq I	Vight		Ldn	С	NEL
Autos:	67	.2 6	5.3		62.9		58.7		66.7		67.3
Medium Trucks:			4.6		61.6		59.6		67.0		67.4
Heavy Trucks:	68	.6 6	7.1		58.8		60.0		68.1		68.3
Vehicle Noise:	72	.4 7	0.5		66.2		64.3		72.1		72.4
Centerline Distan	ce to Noise Co	ontour (in feet)									
				70 d		65 0			60 dBA		i dBA
			.dn: FI :	41 43		89	-		192 201		413 432

	/A-RD-77-108 HIGH	WAYN									
Scenario: OY Without	Project				ame: Palon						
Road Name: Second St.				Job Nun	nber: 11795	5					
Road Segment: e/o Parkridg	e Av.										
SITE SPECIFIC IN	PUT DATA		NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15)								
Highway Data			Site Cond	ditions (H	ard = 10, S	oft = 15)					
Average Daily Traffic (Adt):	13,016 vehicles				Autos						
Peak Hour Percentage:	10%				ks (2 Axles)						
Peak Hour Volume:	1,302 vehicles		Hea	avy Trucks	s (3+ Axles)	: 15					
Vehicle Speed:	35 mph	F	Vehicle N	lix							
Near/Far Lane Distance:	10 feet	F		cleType	Day	Evening	Night	Daily			
Site Data				Au	tos: 76.3%	6 11.0%	12.6%	91.88%			
Barrier Height:	0.0 feet		Me	dium Truc	ks: 73.3%	6 9.2%	17.6%	5.79%			
Barrier Type (0-Wall, 1-Berm):	0.0		н	leavy Truc	ks: 84.4%	6 3.2%	12.5%	2.33%			
Centerline Dist. to Barrier:	30.0 feet	-	Noise So	urce Elev	ations (in i	feet)					
Centerline Dist. to Observer:	30.0 feet	-		Autos:	0.000	000					
Barrier Distance to Observer:	0.0 feet		Mediun	1 Trucks:	2.297						
Observer Height (Above Pad):	5.0 feet			/ Trucks:	8.004	Grade Ad	iustment:	0.0			
Pad Elevation:	0.0 feet										
Road Elevation:	0.0 feet	-	Lane Equ		istance (in	feet)					
Road Grade:	0.0%			Autos:	30.000						
Left View:	-90.0 degrees			n Trucks:	29.704						
Right View:	90.0 degrees		Heavy	/ Trucks:	29.733						
FHWA Noise Model Calculations	;										
VehicleType REMEL	Traffic Flow Dist	tance	Finite I	Road	Fresnel	Barrier Att	en Ber	m Atten			
Autos: 64.30	0.03	3.2	=	-1.20	-4.49		000	0.00			
Medium Trucks: 75.75	-11.97	3.2	-	-1.20	-4.86		000	0.00			
	-15.92	3.2	8	-1.20	-5.77	0.0	000	0.00			
Heavy Trucks: 81.57											
	out Topo and barrie	er atter	uation)								
			uation) vening	Leq Ni	ght	Ldn	Cl	VEL			
Unmitigated Noise Levels (without vehicleType Leq Peak Hout Autos: 66.	Leq Day 4 64.4		vening 62.0	Leq Ni	57.8	65.9	9	66.			
Unmitigated Noise Levels (witho VehicleType Leq Peak Hour Autos: 66. Medium Trucks: 65.	r Leq Day 4 64.4 9 63.7		vening 62.0 60.7	Leq Ni	57.8 58.8	65.9 66.2	ə 2	66. 66.			
Unmitigated Noise Levels (witho VehicleType Leq Peak Hour Autos: 66. Medium Trucks: 65. Heavy Trucks: 67.	Leq Day 4 64.4 9 63.7 7 66.2		62.0 60.7 58.0	Leq Ni	57.8 58.8 59.1	65.9 66.2 67.2	9 2 2	66. 66. 67.			
Unmitigated Noise Levels (witho VehicleType Leq Peak Hour Autos: 66. Medium Trucks: 65.	Leq Day 4 64.4 9 63.7 7 66.2		vening 62.0 60.7	Leq Ni	57.8 58.8	65.9 66.2	9 2 2	66. 66. 67.			
Unmitigated Noise Levels (witho VehicleType Leq Peak Hour Autos: 66. Medium Trucks: 65. Heavy Trucks: 67.	Leq Day 4 64.4 9 63.7 7 66.2 5 69.7		62.0 60.7 58.0	Leq Ni	57.8 58.8 59.1	65.9 66.2 67.2	9 2 2	66. 66. 67.			
Unmitigated Noise Levels (witho VehicleType Leq Peak Hour Autos: 666. Medium Trucks: 655. Heavy Trucks: 67. Vehicle Noise: 71.3	Leq Day 4 64.4 9 63.7 7 66.2 5 69.7	Leq E	62.0 60.7 58.0	Leq Nig	57.8 58.8 59.1 63.4	65.9 66.2 67.2	9 2 2 2	66. 66. 67.			
Unmitigated Noise Levels (witho VehicleType Leq Peak Hour Autos: 666. Medium Trucks: 655. Heavy Trucks: 67. Vehicle Noise: 71.3	Leq Day 4 64.4 9 63.7 7 66.2 5 69.7	Leq E	62.0 60.7 58.0 65.3		57.8 58.8 59.1 63.4	65.9 66.2 67.2 71.2	2 2 2 2 55	66. 66. 67. 71.			

Tuesday, July 02, 2019

	FH\	WA-RD-77-108	HIGHW	AY N	OISE PF	REDICTIO	N MO	DEL			
Road Nam	io: OY Withou e: Second St.					Project N Job Nur			no		
Road Segmer	nt: w/o Pacific	Av.									
SITE	SPECIFIC IN	IPUT DATA				NO	ISE N	IODE		S	
Highway Data				S	ite Con	ditions (H	lard =	10, So	ft = 15)		
	Percentage:	14,166 vehicle 10%				dium Truc	ks (2 /	,	15 15		
	our Volume:	1,417 vehicles	5		He	avy Truck	s (3+ A	(xles):	15		
	hicle Speed:	35 mph		V	ehicle l	Mix					
Near/Far La	ne Distance:	10 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						Au	tos:	76.3%	11.0%	12.6%	91.88
Bar	rier Height:	0.0 feet			Me	edium True	cks:	73.3%	9.2%	17.6%	5.79
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Tru	cks:	84.4%	3.2%	12.5%	2.33
Centerline Dis		30.0 feet		٨	loise Sc	ource Elev	ation	s (in fe	et)		
Centerline Dist.		30.0 feet				Autos:	0.0	000	,		
Barrier Distance		0.0 feet			Mediur	n Trucks:	2.3	297			
Observer Height (,	5.0 feet			Heav	y Trucks:	8.0	004	Grade Adj	iustment	0.0
	ad Elevation:	0.0 feet			one Fe	uivalent D	Victor	na (in f	in n4)		
	ad Elevation: Road Grade:	0.0 feet		-	ane Equ	Autos:	30.		eel)		
,	Road Grade:	0.0%			Madiu	n Trucks:	29.				
	Right View:	-90.0 degree 90.0 degree				y Trucks:	29.				
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresr	el	Barrier Atte	en Bei	m Atter
Autos:	64.30	0.40		3.22		-1.20		-4.49	0.0	00	0.00
Medium Trucks:	75.75	-11.61		3.29		-1.20		-4.86	0.0	00	0.00
Heavy Trucks:	81.57	-15.55		3.28		-1.20		-5.77	0.0	00	0.00
Unmitigated Noise			-		/						
VehicleType	Leq Peak Hou			eq Ev	ening	Leq Ni			Ldn		NEL
Autos:	66		64.8		62.4		58.2		66.2		66
Medium Trucks:	66		64.1		61.1		59.1		66.5		66
Heavy Trucks:	68		6.6		58.3		59.5		67.6		67
Vehicle Noise:	71		70.0		65.7		63.8		71.6	6	71
Centerline Distance	ce to Noise Co	ontour (in feet,)	70 d	DA.	65 dE	24	6	0 dBA	55	dBA
			l dn:	70 8		65 dE 82	<i>w</i> -1	0	178		83
			Lan: IFL:	38		82			178		183 100
		Ci	*66.	40		00			100	-	00

	FHV	VA-RD-77-108 I	HIGH	NAY N	OISE PF	REDICTIC	ON MO	DEL			
	o: OY Without	Project				Project N			ino		
	e: Second St.	A				Job Nu	mber:	11795			
Road Segmen	nt: e/o Pacific	AV.									
	SPECIFIC IN	IPUT DATA								S	
Highway Data				5	ite Con	ditions (l					
Average Daily	. ,	14,778 vehicles	S					Autos:	15		
	Percentage:	10%				dium Truc	•				
	our Volume:	1,478 vehicles			He	avy Truck	(3+)	Axles):	15		
	hicle Speed:	35 mph		V	ehicle l	Nix					
Near/Far La	ne Distance:	10 feet			Veh	cleType		Day	Evening	Night	Daily
Site Data						AL	itos:	76.3%	11.0%	12.6%	91.889
Bai	rier Height:	0.0 feet			Me	edium Tru	icks:	73.3%	9.2%	17.6%	5.79%
Barrier Type (0-W	•	0.0			F	leavy Tru	icks:	84.4%	3.2%	12.5%	2.33%
Centerline Dis		30.0 feet		-				- (- 6	41		
Centerline Dist.	to Observer:	30.0 feet		^	loise Sc	ource Ele		<u> </u>	eet)		
Barrier Distance	to Observer:	0.0 feet				Autos:		000			
Observer Height (Above Pad):	5.0 feet				n Trucks:		297	Grade Ad	inatroant	
Pa	d Elevation:	0.0 feet			Heav	y Trucks:	8.	004	Grade Adj	usunen	0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distan	ce (in i	feet)		
1	Road Grade:	0.0%				Autos:	30.	000			
	Left View:	-90.0 degrees	S		Mediur	n Trucks:	29.	704			
	Right View:	90.0 degrees	S		Heav	y Trucks:	29.	733			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresi	nel	Barrier Att	en Ber	m Atten
Autos:	64.30	0.58		3.22		-1.20		-4.49	0.0	000	0.00
Medium Trucks:	75.75	-11.42		3.29		-1.20		-4.86	0.0	000	0.00
Heavy Trucks:	81.57	-15.37		3.28		-1.20		-5.77	0.0	000	0.00
Unmitigated Noise	e Levels (with	out Topo and b									
VehicleType	Leq Peak Hou			Leq Ev		Leq N			Ldn		VEL
Autos:	66		4.9		62.6		58.4		66.4		66.
Medium Trucks:	66		4.3		61.3		59.3		66.7		67.
Heavy Trucks:	68		6.8		58.5		59.3		67.7		67.
Vehicle Noise:	72		0.2		65.9		63.9	9	71.8	3	72.
Centerline Distand	ce to Noise Co	ontour (in feet)		70 d	DA I	65 d	DA.	6	0 dBA	55	dBA
		,	dn:	39		65 al 85		1 0	183		ава 94
		CN		41		85 89			183		94 12
		CN	LL.	41		89			191	4	12

Tuesday, July 02, 2019

	rio: OY Withou					Project N			no		
	ne: Second St.					Job Nur	nber: 1	1795			
Road Segme	ent: w/o Mounta	ain Av.									
	SPECIFIC IN	IPUT DATA								s	
Highway Data				s	ite Con	ditions (H		- ·			
Average Daily	. ,	15,842 vehicle	:S					utos:	15		
	r Percentage:	10%				dium Truc		,	15		
	Hour Volume:	1,584 vehicles	6		Hea	avy Truck	s (3+ A	xles):	15		
	ehicle Speed:	35 mph		ν	ehicle N	lix					
Near/Far La	ane Distance:	10 feet			Vehi	cleType	l	Day	Evening	Night	Daily
Site Data						Au	tos: ī	6.3%	11.0%	12.6%	91.88
Ba	nrrier Height:	0.0 feet			Me	dium True	cks: 7	73.3%	9.2%	17.6%	5.79
Barrier Type (0-V		0.0			H	leavy Tru	cks: 8	34.4%	3.2%	12.5%	2.33
Centerline D	ist. to Barrier:	30.0 feet		٨	loise So	urce Elev	ations	(in fe	et)		
Centerline Dist.	to Observer:	30.0 feet				Autos:	0.0				
Barrier Distance	to Observer:	0.0 feet			Mediun	n Trucks:	2.2				
Observer Height	(Above Pad):	5.0 feet				v Trucks:	8.0		Grade Ad	iustment	: 0.0
F	ad Elevation:	0.0 feet						-			
Ro	ad Elevation:	0.0 feet		L	ane Equ	ivalent D			eet)		
	Road Grade:	0.0%				Autos:	30.0				
	Left View:	-90.0 degree				n Trucks:	29.7				
	Right View:	90.0 degree	S		Heav	y Trucks:	29.7	33			
FHWA Noise Mod		-									
VehicleType	REMEL	Traffic Flow	Distan		Finite		Fresne		Barrier Att		m Atter
Autos:		0.88		3.22		-1.20		4.49	0.0		0.00
Medium Trucks.		-11.12		3.29		-1.20		4.86		000	0.00
Heavy Trucks:	81.57	-15.07		3.28		-1.20	-	5.77	0.0	000	0.00
Unmitigated Nois											
VehicleType	Leq Peak Hou			eq Ev	ening	Leq Ni	~		Ldn		NEL
Autos:			65.2		62.9		58.7		66.7		67
Medium Trucks			64.6		61.6		59.6		67.0		67
Heavy Trucks			67.1		58.8		60.0		68.1		68
Vehicle Noise.		-	70.5		66.2		64.2		72.1		72
	ce to Noise Co	ontour (in feet)	1								
Centerline Distan						65 dE	RA .	6	0 dBA	55	dBA
Centerline Distan				70 d			<i>"</i> ··				
Centerline Distan			Ldn: IFI :	41		89		-	191	4	12

	FHW/	A-RD-77-108 H	IGHWAY	NOISE PI	REDICTIC	ON MOE	EL			
Scenario: C Road Name: S Road Segment: e					Project N Job Nui			10		
SITE SPE	CIFIC INP	UT DATA			NC	DISE M	ODEL	INPUTS	5	
Highway Data				Site Con	ditions (F	Hard = 1	10, Soi	ft = 15)		
Average Daily Traf	fic (Adt): 1	6,293 vehicles				A	utos:	15		
Peak Hour Per	centage:	10%		Me	dium Truc	ks (2 A	xles):	15		
Peak Hour	Volume: 1	,629 vehicles		He	avy Truck	s (3+ A	xles):	15		
Vehicle	Speed:	35 mph		Vehicle	Mix					
Near/Far Lane D	oistance:	36 feet			icleType	1	Day	Evening	Night	Daily
Site Data				VCI			6.3%	11.0%	12.6%	
	Halasht	0.0 feet		M	adium Tru		3.3%	9.2%	17.6%	5.79%
Barrier Type (0-Wall,	Height:	0.0 reet 0.0		ŀ	leavy Tru	cks: F	34.4%	3.2%	12.5%	2.33%
Centerline Dist. to	,	44.0 feet								
Centerline Dist. to O		44.0 feet		Noise So	ource Ele			et)		
Barrier Distance to 0		0.0 feet			Autos:					
Observer Height (Abo		5.0 feet			m Trucks:					
	levation:	0.0 feet		Heav	y Trucks:	8.0	04 (Grade Adj	ustment.	0.0
	levation:	0.0 feet		Lane Ea	uivalent I	Distanc	e (in fe	eet)		
	d Grade:	0.0%			Autos:					
		-90.0 degrees		Mediu	n Trucks:					
Rig	ht View:	90.0 degrees		Heav	y Trucks:	40.2	62			
FHWA Noise Model C	alculations									
VehicleType F		Traffic Flow	Distance		Road	Fresne		Barrier Atte	en Ber	m Atten
Autos:	64.30	1.01	1.:		-1.20		4.61	0.0		0.000
Medium Trucks:	75.75	-11.00		31	-1.20		4.87	0.0		0.000
Heavy Trucks:	81.57	-14.95	1.3	31	-1.20	-	5.50	0.0	00	0.000
Unmitigated Noise Le										
,	Peak Hour			Evening	Leq N			Ldn		VEL
Autos:	65.4			61.0		56.9		64.9		65.3
Medium Trucks:	64.9			59.7		57.8		65.2		65.
Heavy Trucks:	66.7			57.0		58.1		66.2		66.3
Vehicle Noise:	70.5		.7	64.3		62.4		70.2		70.5
Centerline Distance to	Noise Con	tour (in feet)	70	dBA	65 dl	DA I	61) dBA	55	dBA
		La		46	65 di 98			211		ава 56
		La CNF		46 48	98 103			211 221		56 76
		CNE	. L .	40	103	,		221	4	10

Tuesday, July 02, 2019

	FH	WA-RD-77-108	HIGHV	VAY NO	DISE PF	REDICTIC	N MC	DEL			
	io: OY Withou					Project N			ino		
	e: Second St					Job Nu	mber:	11795			
Road Segme	nt: e/o Dwy. 8										
	SPECIFIC IN	NPUT DATA							L INPUT	s	
Highway Data				S	ite Con	ditions (F	lard =	: 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	16,293 vehicl	es					Autos:	15		
Peak Hour	Percentage:	10%				dium Truc		/	15		
Peak H	lour Volume:	1,629 vehicle	s		He	avy Truck	s (3+ .	Axles):	15		
	hicle Speed:	35 mph		V	ehicle l	Mix					
Near/Far La	ne Distance:	36 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						AL	itos:	76.3%	11.0%	12.6%	91.889
Ba	rrier Height:	0.0 feet			Me	edium Tru	cks:	73.3%	9.2%	17.6%	5.79%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	łeavy Tru	cks:	84.4%	3.2%	12.5%	2.33%
Centerline Di		44.0 feet		N	oise Sc	ource Ele	vation	ıs (in fe	eet)		
Centerline Dist.		44.0 feet				Autos:	0.	000			
Barrier Distance		0.0 feet			Mediur	n Trucks:	2.	297			
Observer Height (· · ·	5.0 feet			Heav	y Trucks:	8.	004	Grade Ad	justment	0.0
	ad Elevation: ad Elevation:	0.0 feet		1	no Ea	uivalent L	Victor	co (in	foot)		
	ad Elevation: Road Grade:	0.0 feet 0.0%		-	ane Ly	Autos:		460	eel)		
	Left View:	-90.0 deare			Modiur	n Trucks:		.400			
	Right View:	90.0 degre				y Trucks:		.262			
FHWA Noise Mod	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresi	nel	Barrier Att	en Bei	m Atten
Autos:	64.30	1.01		1.28		-1.20		-4.61	0.0	000	0.00
Medium Trucks:	75.75	-11.00		1.31		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	81.57	-14.95		1.31		-1.20		-5.50	0.0	000	0.00
Unmitigated Nois			-								
VehicleType	Leq Peak Ho			Leq Eve		Leq N			Ldn		NEL
Autos:			63.4		61.0		56.	-	64.9	-	65.
Medium Trucks:	-		62.7		59.7		57.	-	65.2		65.
Heavy Trucks:		6.7	65.2		57.0		58.		66.2		66.
Vehicle Noise:			68.7		64.3		62.4	4	70.2	2	70.
Centerline Distan	ce to Noise C	ontour (in fee)	70 dł	24	65 dI	24	6	0 dBA	55	dBA
			I dn:	46	//1	98	<i></i> 1	1 0	211		UDA 56
		0	NFL:	40		90			221		76
		0	•	-+0		100					

FH ¹	NA-RD-77-108 F	IGHWA	Y NOISE P	REDICTION	MODEL			
Scenario: OY Withou	t Project			Project Nar	ne: Palom	ino		
Road Name: Second St.				Job Numb	er: 11795			
Road Segment: w/o Hamne	er Av.							
SITE SPECIFIC IN	IPUT DATA					L INPUT	S	
Highway Data			Site Cor	ditions (Ha	rd = 10, S	oft = 15)		
Average Daily Traffic (Adt):	18,657 vehicles				Autos:	15		
Peak Hour Percentage:	10%		Me	dium Trucks	(2 Axles).	15		
Peak Hour Volume:	1,866 vehicles		He	avy Trucks (3+ Axles).	15		
Vehicle Speed:	35 mph		Vehicle	Mix				
Near/Far Lane Distance:	36 feet			icleType	Day	Evening	Night	Daily
Site Data		-		Auto	,		12.6%	
Barrier Height:	0.0 feet		М	edium Truck	s: 73.3%	9.2%	17.6%	
Barrier Type (0-Wall, 1-Berm):	0.0			Heavy Truck	s: 84.4%	3.2%	12.5%	
Centerline Dist. to Barrier:	44.0 feet			-				
Centerline Dist. to Observer:	44.0 feet		Noise S	ource Eleva		eet)		
Barrier Distance to Observer:	0.0 feet			Autos:	0.000			
Observer Height (Above Pad):	5.0 feet			m Trucks:	2.297			
Pad Elevation:	0.0 feet		Heav	ry Trucks:	8.004	Grade Ad	ljustment.	0.0
Road Elevation:	0.0 feet		Lane Eq	uivalent Dis	tance (in	feet)		
Road Grade:	0.0%			Autos:	40.460			
Left View:	-90.0 degrees		Mediu	m Trucks:	40.241			
Right View:	90.0 degrees		Heav	y Trucks:	40.262			
FHWA Noise Model Calculation	s							
VehicleType REMEL	Traffic Flow	Distand	ce Finite	Road F	resnel	Barrier At	ten Ber	m Atter
Autos: 64.30	1.59		1.28	-1.20	-4.61	0.0	000	0.00
Medium Trucks: 75.75			1.31	-1.20	-4.87		000	0.00
Heavy Trucks: 81.57	-14.36		1.31	-1.20	-5.50	0.0	000	0.00
Unmitigated Noise Levels (with		-	,					
VehicleType Leq Peak Ho			q Evening	Leq Nigł		Ldn	-	VEL
		4.0	61.6		57.4	65.		65.
		3.3	60.3		58.4	65.		66.
		5.8	57.6		58.7	66.	-	66.
		9.3	64.9		63.0	70.	8	71
Centerline Distance to Noise C	ontour (in feet)							
		L	70 dBA	65 dBA		60 dBA		dBA
		dn:	50	107		231		99
	CN		52	112		242		21

Tuesday, July 02, 2019

	FHW/	A-RD-77-108 I	HIGH\	NAY N	NOISE PR	REDICTIC	N MOL	DEL			
Scenario: OY Wi Road Name: First Si Road Segment: w/o Pa	t.					Project N Job Nui			ino		
SITE SPECIFIC	C INP	UT DATA							L INPUT	5	
Highway Data					Site Con	ditions (H	lard =	10, Sc	oft = 15)		
Average Daily Traffic (Ad	<i>t):</i> 1	9,879 vehicle	6				A	lutos:	15		
Peak Hour Percentag	le:	10%			Me	dium Truc	ks (2 A	xles):	15		
Peak Hour Volum	ie: 1	,988 vehicles			He	avy Truck	s (3+ A	xles):	15		
Vehicle Spee	d:	35 mph			Vehicle I	Nix					
Near/Far Lane Distand	e:	10 feet		-		cleType	1	Day	Evening	Night	Daily
Site Data						AL	tos:	, 76.3%	11.0%	12.6%	91.88
Barrier Heigl	n#-	0.0 feet			Me	dium Tru	cks: 1	73.3%	9.2%	17.6%	5.79
Barrier Type (0-Wall, 1-Berr	n):	0.0			ŀ	leavy Tru	cks: 8	34.4%	3.2%	12.5%	2.33
Centerline Dist. to Barri		30.0 feet		5	Noise Sc	urce Ele	vations	in fe	eet)		
Centerline Dist. to Observe	er:	30.0 feet		F		Autos:	0.0		,		
Barrier Distance to Observ	er:	0.0 feet			Mediur	n Trucks:	2.2	97			
Observer Height (Above Pa	·	5.0 feet				v Trucks:	8.0	04	Grade Ad	iustmen	t: 0.0
Pad Elevation		0.0 feet		_							
Road Elevation		0.0 feet		4	Lane Eq	ivalent L			leet)		
Road Grad		0.0%				Autos:	30.0				
Left Vie		-90.0 degree	5			n Trucks:	29.7				
Right Vie	W:	90.0 degree	6		Heav	y Trucks:	29.7	33			
FHWA Noise Model Calcula											
VehicleType REMEL		Traffic Flow	Dist	ance	Finite		Fresn		Barrier Atte		rm Atten
	4.30	1.87		3.2	-	-1.20		4.49	0.0		0.00
	5.75	-10.14		3.2		-1.20		4.86	0.0		0.00
Heavy Trucks: 81	1.57	-14.08		3.2	8	-1.20	-	5.77	0.0	00	0.00
Unmitigated Noise Levels (
VehicleType Leq Peak		Leq Day		Leq E	vening	Leq N	•		Ldn	-	NEL
Autos:	68.2	-	6.2		63.9		59.7		67.7		68.
Medium Trucks:	67.7	-	5.6		62.6		60.6		68.0		68.
Heavy Trucks:	69.6		8.0		59.8		61.0		69.0		69.
Vehicle Noise:	73.3	7	1.5		67.1		65.2		73.1		73.
Centerline Distance to Nois	e Con	tour (in feet)	-								
			. L		dBA	65 dl		6	0 dBA		5 dBA
		L CN	dn:		18 60	103 108			223 233		480 502

Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Dasriver: 44.0 feet Barrier Distance to Observer: 0.0 feet Pad Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees Kitos: 64.30 VehicleType REMEL Traffic Flow Distance Autos: 40.262 FHWA Noise Model Calculations 1.80 VehicleType REMEL Traffic Flow Autos: 64.30 1.80 Autos: 64.30 1.80 Autos: 64.30 1.81 Autos: 64.30 1.81 Autos: 64.30 1.81 1.28 -1.20 -4.67 Autos: 75.75 -10.21 1.31 -1.20 -5.50 Medium Trucks: 75.57 -0.00 Medium Trucks: 75.5.50 0.000 M	
Highway Data Site Conditions (Hard = 10, Soft = 15) Average Daily Traffic (Adt): 19,551 vehicles Autos:: 15 Peak Hour Percentage: 10% Medium Trucks (2 Akes): 15 Peak Hour Volume: 1,955 vehicles Medium Trucks (2 Akes): 15 Vehicle Speed: 35 mph Vehicle Mix Vehicle Type Day Evening Night Site Data Autos: 76.3% 11.0% 12.6% Barrier Height: 0.0 feet Medium Trucks: 73.3% 9.2% 17.6% Barrier Jist to Dbserver: 44.0 feet Medium Trucks: 2.97 Heavy Trucks: 8.4.4% 3.2% 12.5% Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.0.04 Grade Adjustment Road Grade: 0.0% Left View: -90.0 degrees Medium Trucks: 40.400 FWMA Noise Model Calculations VehicleType Kautos: 4.64 0.000 VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bee Autos: 76.3% 1.20 -4.67 0.000 Medium Trucks: 75.75 -10.21 1.31 -1.20 -4.67 0.000 Medium Trucks: <th>91.889 5.799</th>	91.889 5.799
Average Daily Traffic (Adt): 19,551 vehicles Autos: 15 Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Peak Hour Volume: 1,955 vehicles Heavy Trucks (2 Axles): 15 Vehicle Speed: 35 mph Vehicle Mix Vehicle Mix Site Data Autos: 76.3% 11.0% 12.6% Barrier Height: 0.0 feet Medium Trucks: 73.3% 9.2% 17.6% Barrier Type (0-Wall, 1-Berm): 0.0 feet Medium Trucks: 73.3% 9.2% 17.6% Barrier Distance to Observer: 0.0 feet Molse Source Elevations (in feet) Centerline Dist. to Desrever: 40.0 feet Autos: 0.00 Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment Pad Elevation: 0.0 feet Left Ivew: 90.0 degrees Medium Trucks: 40.262 FHWA Nolse Model Calculations VehicleType Remet Atten Ber Barrier Atten Ber VehicleType REMEL 1.80 1.28 -1.20 -4.61 0.000 Medium Trucks: 75.75 -10.21 1.31 -1.20 -4.61 0.000 Medium Trucks: 1.57	91.889 5.799
Piek Hour Percentage: 10% Medium Trucks (2 Axles): 15 Peak Hour Volume: 1,955 vehicles Heavy Trucks (3 + Axles): 15 Vehicle Speed: 35 mph Vehicle Mix Vehicle Mix Site Data Autos: 76.3% 11.0% 12.6% Barrier Height: 0.0 feet Medium Trucks: 73.3% 9.2% 17.6% Barrier Height: 0.0 feet Medium Trucks: 84.4% 3.2% 12.5% Centerline Dist. to Observer: 4.0 feet Mutos: 0.000 Medium Trucks: 2.37 12.5% Observer Height (Abov Pad) 5.0 feet Heavy Trucks: 8.0.04 Grade Adjustment Pad Elevation: 0.0 feet Medium Trucks: 2.37 12.5% Observer Height (Abov Pad) 5.0 feet Medium Trucks: 2.297 Pad Elevation: 0.0 feet Medium Trucks: 2.297 Road Grade. 0.0% Autos: 4.0460 Road Grade. 0.0% Autos: 4.0460 Kight View: 90.0 degrees Medium Trucks: 40.262 FHWA Noise Model Calculations Finite Road Fresnel Barrier Atten VehicleType REMEL Traffic Flow Distance Finite Road <th>91.889 5.799</th>	91.889 5.799
Peak Hour Volume: 1,955 vehicles Vehicle Speed: Heavy Trucks (3+ Axles): 15 Vehicle Speed: 35 mph Vehicle Speed: 35 mph Vehicle Mix Site Date Barrier Height: 0.0 feet Centerline Dist. to Barrier: 44.0 feet Centerline Dist. to Observer: 4.0 feet Barrier Distance to Observer: 4.0 feet Road Grade: 0.0% Left Flow: -90.0 degrees Right View: 90.0 degrees Medium Trucks: 40.400 Right View: 90.0 degrees FHWA Noise Model Calculations Vehicle/Type REMEL Traffic Flow Lag Clevals (without Topo and barrier attenuation) Vehicleype Leg View and barrier attenuation)	91.889 5.799
Vehicle Speed: 35 mph Near/Far Lane Distance: Vehicle Speed: 36 mph Vehicle Mix Site Data Vehicle Type Day Evening Night Barrier Height: 0.0 feet Medium Trucks: 73.3% 9.2% 17.6% Barrier Type (0-Wall, 1-Berrn): 0.0 0 Medium Trucks: 0.3% 12.5% Centerline Dist. to Desriver: 4.0 teet Autos: 0.000 Medium Trucks: 0.000 Barrier Tistance to Observer: 0.0 feet Moise Source Elevations (in feet) 0.000 Medium Trucks: 0.000 Barrier Distance to Observer: 0.0 feet Autos: 0.000 Medium Trucks: 0.000 Road Elevation: 0.0 feet Autos: 0.000 Medium Trucks: 0.000 Road Grade: 0.0% Autos: 40.460 Medium Trucks: 40.241 Heavy Trucks: 40.30 1.80 1.28 -1.20 -4.61 0.000 Medium Trucks: 75.75 -10.21 1.31 -1.20 -4.61 0.000 Medium Trucks: 75.75 -10.21 1.31 -1.20 -5.50 0.000 Medium Trucks: 81.57 -14.15 1.31 -1.20 -5.50 0.000 Medium	91.889 5.799
Near/Far Lane Distance: 36 Verticle MX Site Data Verticle MX Verticle Type Day Evening Night Site Data Autos: 76.3% 11.0% 12.6% Barrier Height: 0.0 feet Medium Trucks: 73.3% 9.2% 17.6% Barrier Height: 0.0 Medium Trucks: 73.3% 9.2% 12.6% Centerline Dist. to Barrier: 44.0 feet Noise Source Elevations (in feet) Autos: 0.00 Barrier Distance to Observer: 0.0 feet Autos: 0.00 Medium Trucks: 2.297 Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.004 Grade Adjustment Road Grade: 0.0% Lane Equivalent Distance (in feet) Autos: 40.460 Keitlew Trucks: 90.0 degrees Medium Trucks: 40.262 FMWA Noise Model Calculations Vehicle Type REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bearrier Atten Autos: 64.30 1.80 1.28 <	91.889 5.799
Near/Far Lane Distance: 36 feet VehicleType Day Evening Night Site Data Autos: 76.3% 11.0% 12.6% Barrier Height: 0.0 feet Medium Trucks:: 73.3% 9.2% 17.6% Barrier Type (0-Wall, 1-Berm): 0.0 Medium Trucks:: 73.3% 9.2% 17.6% Centerline Dist. to Desrever: 40.0 feet Moise Source Elevations (in feet) Autos: 0.00 Desrver Height: 0.0 feet Moles Cource Elevations (in feet) Autos: 0.00 Medium Trucks:: 2.297 Pad Elevation: 0.0 feet Autos: 4.0460 Medium Trucks:: 4.0460 Left View: 90.0 degrees Medium Trucks:: 40.261 Heavy Trucks: 40.262 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Be Autos: 64.30 1.80 1.28 -1.20 -4.61 0.000 Medium Trucks: 75.75 -10.21 1.31	91.889 5.799
Site Data Autos: 76.3% 11.0% 12.6% Barrier Height: 0.0 feet Medium Trucks: 73.3% 9.2% 17.6% Barrier Height: 0.0 feet Medium Trucks: 73.3% 9.2% 17.6% Barrier Height: 0.0 Centerline Dist. to Barrier: 44.0 feet Moise Source: 84.4% 3.2% 12.5% Centerline Dist. to Diserver: 40.0 feet Autos: 0.000 Medium Trucks: 2.297 Observer Height (Abov Pad): 0.0 feet Autos: 0.04 Grade Adjustment Heavy Trucks: 8.004 Grade Adjustment Road Grade: 0.0% Left View: -90.0 degrees Medium Trucks: 40.460 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bearrier Atten Bearri	91.889 5.799
Barrier Height: 0.0 feet Medium Trucks: 73.3% 9.2% 17.6% Barrier Type (0-Wall, 1-Berm): 0.0 1.00 Heavy Trucks: 84.4% 3.2% 12.5% Centerline Dist. to Diserver: 44.0 teet Autos: 0.00 Moise Source Elevations (in feet) Noise Source Elevations (in feet) Noise Source Elevations (in feet) Autos: 0.00 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment Pad Elevation: 0.0 feet Road Grade: 0.0% Autos: 40.026 Medium Trucks: 40.241 Heavy Trucks: 40.241 Right View: 90.0 degrees Heavy Trucks: 40.262 FMWA Noise Model Calculations Noise Source Elevation: 0.000 Medium Trucks: 40.261 Heavy Trucks: 40.262 FWWA Noise Model Calculations Medium Trucks: 75.75 -10.21 1.31 -1.20 -4.61 0.000 Medium Trucks: 81.57 -14.15 1.31 -1.20 -4.61 0.000 Heavy Trucks: 81.57	5.799
Barrier Type (I) U.0 feet Barrier Type (I) U.0 feet Centerline Dist. to Barrier: 44.0 feet Centerline Dist. to Doserver: 40.0 feet Barrier Type (I) 0.0 feet Road Grade: 0.0% Left I/vew: 90.0 degrees Right View: 90.0 degrees FHWA Noise Model Calculations VehicleType REMEL VehicleType 1.80 Heavy Trucks: 8.1.57 -10.21 1.31 -1.20 -4.61 0.000 Medium Trucks: 8.1.57 -1.15 1.31 -1.20 -4.61 0.000 Medium Trucks: 8.1.57 -1.21 1.31 -1.20 -5.50 0.000 Imitigated Noise Levels (without Topo and barrier attenuation)	
Dame Type (Distribution (Distribution (Distribution (Centerline (Dist. (D Barrier: 44.0 feet Noise Source Elevations (in feet) Centerline (Distribution (Distribution (Distribution (Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.237 Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.004 Grade Adjustment Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Lane Equivalent Distance (in feet) Road Grade: 0.0% Autos: 40.460 Left View: -90.0 degrees Medium Trucks: 40.262 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bearrier Atten <td></td>	
Centerline Dist. to Observer: 44.0 feet Barrier Distance to Observer: 0.0 feet Deserver Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Elevation: 0.0 feet Road Calculations: 4.0 feet Right View: 90.0 degrees Right View: 90.0 degrees Right View: 90.0 degrees Right View: 90.0 degrees Period Calculations: 64.30 VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Be Autos: 75.75 10.21 1.31 -1.20 -4.61 0.000 Heavy Trucks: 81.57 -1.21 -3.1 -1.20 -4.67 0.000 Heavy Trucks: 81.57 -1.21 -3.1 -1.20 -4.67 0.000 Heavy Trucks: 81.57 -1.21 -5.50 0.000 Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Pak Hour Leq Day Leq Evening <td></td>	
Barrier Distance to Observer: 0.0 feet Autos: 0.000 Observer Height (Above Pad): 5.0 feet Medium Trucks: 2.297 Pad Elevation: 0.0 feet Heavy Trucks: 8.004 Grade Adjustment Road Grade: 0.0% Autos: 40.460 Left View: -90.0 degrees Medium Trucks: 2.297 FHWA Noise Model Calculations 0.0 feet Autos: 40.460 VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Be Autos: 64.30 1.80 1.28 -1.20 -4.61 0.000 Medium Trucks: 75.75 -10.21 1.31 -1.20 -4.63 0.000 Heavy Trucks: 81.57 -14.15 1.31 -1.20 -5.50 0.000 Unmitigated Noise Levels (without Topo and barrier attenuation) Upenciertype Leq Night Ldn C	
Observer Height (Above Pad): 5.0 feet Medium Trucks: 2.297 Pad Elevation: 0.0 feet Heavy Trucks: 8.004 Grade Adjustment Road Glevation: 0.0 feet Lane Equivalent Distance (in feet) Lane Kall Autos: 40.460 Left View: -90.0 degrees Medium Trucks: 40.262 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bearrier Atten Bea	
Pad Elevation: 0.0 feet Preavy Trucks: 8.0.04 Grade Adjustment Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Road Grade: 0.0% Latutos: 40.460 Left View: -90.0 degrees Medium Trucks: 40.241 Right View: 90.0 degrees Heavy Trucks: 40.241 VehicleType REMEL Traffic Flow Distance Finite Road Autos: 64.30 1.80 1.28 -1.20 -4.61 0.000 Medium Trucks: 75.75 -10.21 1.31 -1.20 -4.67 0.000 Heavy Trucks: 81.57 -14.15 1.31 -1.20 -5.50 0.000 Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Paek Hour Leq Pay Leq Night Lch C	
Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Road Grade: 0.0% Autos: 40.460 Left Ivew: -90.0 degrees Medium Trucks: 40.241 Right View: 90.0 degrees Medium Trucks: 40.241 Heavy Trucks: 40.262 Heavy Trucks: 40.262 FHWA Noise Model Calculations Istance Finite Road Fresnel Barrier Atten Bee Autos: 64.30 1.80 1.28 -1.20 -4.61 0.000 Medium Trucks: 15.75 -10.21 1.31 -1.20 -4.67 0.000 Heavy Trucks: 81.57 -14.15 1.31 -1.20 -5.50 0.000 Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Day Leq Night Lch C	: 0.0
Left View: -90.0 degrees Medium Trucks: 40.241 Right View: 90.0 degrees Heavy Trucks: 40.262 FHWA Noise Model Calculations Entitic Flow Distance Finite Road Fresnel Barrier Atten Be Autos: 64.30 1.80 1.28 -1.20 -4.61 0.000 Medium Trucks: 75.75 -10.21 1.31 -1.20 -4.67 0.000 Heavy Trucks: 81.57 -14.15 1.31 -1.20 -5.50 0.000 Unnitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Reving Leq Night Lch C	
Right View: 90.0 degrees Heavy Trucks: 40.262 FHWA Noise Model Calculations Environment of the state of the stat	
FHWA Noise Model Calculations Finite Road Fresnel Barrier Atten Be VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Be Autos: 64.30 1.80 1.28 -1.20 -4.61 0.000 Medium Trucks: 75.75 -10.21 1.31 -1.20 -4.87 0.000 Heavy Trucks: 81.57 -14.15 1.31 -1.20 -5.50 0.000 Ummitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Night Ldn C	
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Be Autos: 64.30 1.80 1.28 -1.20 -4.61 0.000 Medium Trucks: 75.75 -10.21 1.31 -1.20 -4.67 0.000 Heavy Trucks: 81.57 -10.21 1.31 -1.20 -5.50 0.000 Umritigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn C	
Autos: 64.30 1.80 1.28 -1.20 -4.61 0.000 Medium Trucks: 75.75 -10.21 1.31 -1.20 -4.87 0.000 Heavy Trucks: 75.75 -10.21 1.31 -1.20 -4.87 0.000 Unaitigated Noise Levels (without Topo and barrier attenuation) -5.50 0.000 -1.20 -5.50 0.000 VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn C	
Medium Trucks: 75.75 -10.21 1.31 -1.20 -4.87 0.000 Heavy Trucks: 81.57 -14.15 1.31 -1.20 -5.50 0.000 Unmitigated Noise Levels (without Topo and barrier attenuation) Leq Peak Hour Leq Day Leq Evening Leq Night Ldn C	m Atten
Heavy Trucks: 81.57 -14.15 1.31 -1.20 -5.50 0.000 Unmitigated Noise Levels (without Topo and barrier attenuation)	0.00
Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn C	0.00
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn C	0.00
AUTOS: 00.2 04.2 61.8 57.6 65.7	NEL 66.
Medium Trucks: 65.7 63.5 60.5 58.6 66.0	
Medium Trucks: 65.7 63.5 60.5 58.6 66.0 Heavy Trucks: 67.5 66.0 57.8 58.9 67.0	
Vehicle Noise: 71.3 69.5 65.1 63.2 71.0	66.
	66. 67.
Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55	66.
	66. 67.
	66. 67. 71.
	66. 67. 71. dBA

Tuesday, July 02, 2019

	FHV	VA-RD-77-108	HIGHW	AY NO	ISE PF	REDICTIO	N MOI	DEL			
Scenari Road Name Road Segmen		Project				Project Na Job Nun			no		
	PECIFIC IN	PUT DATA								s	
Highway Data				Si	te Con	ditions (H	ard =	10, So	ft = 15)		
Average Daily	raffic (Adt):	19,552 vehicle	es					Autos:	15		
Peak Hour		10%				dium Trucl		/	15		
	our Volume:	1,955 vehicles	6		He	avy Trucks	s (3+ A	xles):	15		
	icle Speed:	35 mph		Ve	hicle l	Nix					
Near/Far Lar	e Distance:	36 feet			Vehi	icleType		Day	Evening	Night	Daily
Site Data						Aut	os:	76.3%	11.0%	12.6%	91.88%
Bar	rier Height:	0.0 feet				edium Truc		73.3%	9.2%	17.6%	
Barrier Type (0-Wa	all, 1-Berm):	0.0			F	leavy Truc	:ks:	84.4%	3.2%	12.5%	2.339
Centerline Dis		44.0 feet		N	oise Sc	ource Elev	ation	s (in fe	et)		
Centerline Dist. t		44.0 feet				Autos:		000			
Barrier Distance t		0.0 feet			Mediur	n Trucks:	2.2	297			
Observer Height (/	,	5.0 feet			Heav	y Trucks:	8.0	004	Grade Ad	iustment	0.0
	d Elevation: d Elevation:	0.0 feet		1:	no Fa	uivalent D	istan	o (in f	iaat)		
	oad Grade:	0.0 feet 0.0%		20	ne Ly	Autos:	40.4		001/		
,	Left View:	-90.0 degree			Mediur	n Trucks:	40.2				
	Right View:	90.0 degree				y Trucks:	40.2				
FHWA Noise Mode	Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	се	Finite	Road	Fresn	el i	Barrier Att	en Ber	m Atten
Autos:	64.30	1.80		1.28		-1.20		-4.61	0.0		0.00
Medium Trucks:	75.75	-10.21		1.31		-1.20		-4.87		000	0.00
Heavy Trucks:	81.57	-14.15		1.31		-1.20		-5.50	0.0	000	0.00
Unmitigated Noise			-		- í .					-	
VehicleType Autos:	Leq Peak Hou 66		64.2	eq Eve	ning 61.8	Leq Ni	ght 57.6		Ldn 65.7		NEL 66.
Autos: Medium Trucks:	65	-	04.2 63.5		60.5		57.6		66.0		66,
Heavy Trucks:	67		55.5 66.0		57.8		58.9		67.0		67.
Vehicle Noise:	71	-	69.5		65.1		63.2		71.0		71.
Centerline Distanc	e to Noise Co	ontour (in feet)								
				70 dE	A	65 dB	A	6	0 dBA	55	dBA
			l dn:	51		111			239	6	514
				0.					200		

	FHW	A-RD-77-108 F	IIGH	WAY N	OISE PF	REDICTIO	N MOI	DEL			
Scenario: OY Wi		Project				Project N			ino		
Road Name: First Si						Job Nur	nber:	11795			
Road Segment: e/o Mo	untair	1 AV.									
SITE SPECIFI	C INF	PUT DATA							L INPUT	S	
Highway Data				S	Site Con	ditions (H	lard =	10, Sc	oft = 15)		
Average Daily Traffic (Ad	tt):	9,618 vehicles						Autos:	15		
Peak Hour Percentag	ye:	10%			Mee	dium Truc	ks (2 A	(xles)	15		
Peak Hour Volum	ne:	962 vehicles			Hea	avy Trucks	s (3+ A	(xles)	15		
Vehicle Spee		35 mph			/ehicle I	Nix					
Near/Far Lane Distand	ce:	36 feet		-		cleType		Dav	Evening	Night	Dailv
Site Data							tos:	76.3%		•	91.88
Barrier Heigi	ht.	0.0 feet			Me	edium Truc	cks:	73.3%	9.2%	17.6%	5.79
Barrier Type (0-Wall, 1-Berr		0.0			F	leavy Truc	cks:	84.4%	3.2%	12.5%	2.33
Centerline Dist. to Barri		44.0 feet		-							
Centerline Dist. to Observ		44.0 feet		^	loise So	ource Elev			eet)		
Barrier Distance to Observ		0.0 feet				Autos:		000			
Observer Height (Above Pa		5.0 feet				n Trucks:		297			
Pad Elevatio	·	0.0 feet			Heav	y Trucks:	8.0	004	Grade Ad	justment.	: 0.0
Road Elevation		0.0 feet		L	ane Equ	uivalent D	istand	ce (in i	feet)		
Road Grad		0.0%				Autos:	40.4		1		
Left Vie	w:	-90.0 degrees			Mediur	n Trucks:	40.2	241			
Right Vie	W:	90.0 degrees			Heav	y Trucks:	40.2	262			
FHWA Noise Model Calcula											
VehicleType REMEL		Traffic Flow	Dis	tance	Finite		Fresn	-	Barrier Att		m Atter
	4.30	-1.28		1.28		-1.20		-4.61		000	0.00
	5.75	-13.29		1.31		-1.20		-4.87		000	0.00
Heavy Trucks: 8'	1.57	-17.23		1.31		-1.20		-5.50	0.0	000	0.00
Unmitigated Noise Levels (arrie		<u> </u>					Т	
VehicleType Leq Peak				Leq Ev		Leq Ni			Ldn		NEL
Autos:	63.1		1.1		58.7		54.6		62.0		63
Medium Trucks:	62.6).4		57.4		55.5		62.9		63
Heavy Trucks:	64.4		2.9		54.7		55.9		63.9		64
Vehicle Noise:	68.2		6.4		62.0		60.1		67.9	9	68
Centerline Distance to Nois	e Cor	ntour (in feet)	T	70 -	04	05 -15			0.404		-10.4
		,	L	70 d		65 dE	5A	6	60 dBA		dBA
			dn: =L:	32 34		69 72			149 156		21 35

FHWA-RD-77-108 F	IIGHWA	Y NOISE P	REDICTION	NODEL			
Scenario: OY Without Project			Project Nam		no		
Road Name: First St.			Job Numbe	er: 11795			
Road Segment: w/o Hamner Av.							
SITE SPECIFIC INPUT DATA		0/10 000				S	
Highway Data		Site Cor	nditions (Har				
Average Daily Traffic (Adt): 10,270 vehicles	5			Autos:	15		
Peak Hour Percentage: 10%			dium Trucks	· · ·	15		
Peak Hour Volume: 1,027 vehicles		He	eavy Trucks (3	+ Axles):	15		
Vehicle Speed: 35 mph		Vehicle	Mix				
Near/Far Lane Distance: 36 feet		Veh	icleType	Day	Evening	Night	Daily
Site Data			Autos	: 76.3%	11.0%	12.6%	91.88
Barrier Height: 0.0 feet		M	edium Trucks	73.3%	9.2%	17.6%	5.79
Barrier Type (0-Wall, 1-Berm): 0.0			Heavy Trucks	84.4%	3.2%	12.5%	2.33
Centerline Dist. to Barrier: 44.0 feet		Noise S	ource Elevati	ons (in fe	et)		
Centerline Dist. to Observer: 44.0 feet			Autos:	0.000	.,		
Barrier Distance to Observer: 0.0 feet		Mediu	m Trucks:	2.297			
Observer Height (Above Pad): 5.0 feet		Heat	vy Trucks:	8.004	Grade Ad	iustment	: 0.0
Pad Elevation: 0.0 feet							
Road Elevation: 0.0 feet		Lane Eq	uivalent Dist		eet)		
Road Grade: 0.0%				40.460			
Left View: -90.0 degrees				40.241			
Right View: 90.0 degrees	5	Hear	vy Trucks:	40.262			
FHWA Noise Model Calculations							
VehicleType REMEL Traffic Flow	Distanc				Barrier Att		m Atter
Autos: 64.30 -1.00		1.28	-1.20	-4.61		000	0.00
Medium Trucks: 75.75 -13.00		1.31	-1.20	-4.87		000	0.00
Heavy Trucks: 81.57 -16.95		1.31	-1.20	-5.50	0.0	000	0.00
Unmitigated Noise Levels (without Topo and b		,					
VehicleType Leq Peak Hour Leq Day		q Evening	Leq Night		Ldn		NEL
	1.4	59.0	-	4.9	62.9	-	63
	0.7	57.7	-	5.8	63.2	-	63
	3.2	55.0	-	6.1	64.2		64
Vehicle Noise: 68.5 6	6.7	62.3	6	0.4	68.2	2	68
Centerline Distance to Noise Contour (in feet)			as 194				
		70 dBA	65 dBA	6	0 dBA		dBA
L	dn:	33	72		155	3	35
CN		35	75		163	-	50

	FHW	/A-RD-77-108 H	IIGHW	AY N		REDICTIO	и мо	DEL		_	
	o: OY Without e: Hidden Vall t: w/o E. Parki	ley Pkwy.				Project N Job Nur			ino		
SITE S	SPECIFIC IN	PUT DATA				NO	ISE I	NODE	L INPUT	S	
Highway Data				S	ite Con	ditions (H	lard =	10, Sc	oft = 15)		
Average Daily T Peak Hour I	, ,	23,901 vehicles 10%			Me	dium Truc		Autos: Axles):	15 15		
	•	2.390 vehicles			He	avy Truck	s (3+)	Axles):	15		
	nicle Speed:	45 mph		v	ehicle l	Vix		,			
Near/Far Lar	e Distance:	52 feet			Veh	icleType		Day	Evening	Night	Dail
Site Data						Au	tos:	76.3%	11.0%	12.6	% 91.88
Bar	rier Height:	0.0 feet			Me	edium True	cks:	73.3%	9.2%	17.6	% 5.79
Barrier Type (0-Wa	all, 1-Berm):	0.0			ŀ	leavy Tru	cks:	84.4%	3.2%	12.5	% 2.33
Centerline Dis		50.0 feet		N	loise Sc	ource Elev	ation/	s (in fe	eet)		-
Centerline Dist. t		50.0 feet				Autos:	0.	000			
Barrier Distance t		0.0 feet			Mediur	n Trucks:	2.	297			
Observer Height (/	,	5.0 feet			Heav	y Trucks:	8.	004	Grade Ad	ljustme	nt: 0.0
	d Elevation:	0.0 feet				uivalent D	Victor	aa (in	fa a 4)		
	d Elevation:	0.0 feet		L	ane Eq				ieel)		
F	Road Grade:	0.0%				Autos:		000			
	Left View:	-90.0 degrees				n Trucks:		794 814			
	Right View:	90.0 degrees			neav	y Trucks:	42.	014			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow	Distar		Finite		Fresi	-	Barrier Att		erm Atte
Autos:	68.46	1.58		0.88		-1.20		-4.65		000	0.0
Medium Trucks:	79.45	-10.43		0.91		-1.20		-4.87		000	0.0
Heavy Trucks:	84.25	-14.37		0.91		-1.20		-5.43	0.0	000	0.0
Unmitigated Noise					· · ·						
,1	Leq Peak Hou			eq Ev		Leq Ni			Ldn		CNEL
Autos:	69.		7.8		65.4		61.3		69.2	-	69
Medium Trucks:	68.		5.6		63.6		61.6	-	69.0	-	69
Heavy Trucks: Vehicle Noise:	69. 74.		3.1 2.3		59.8 68.3		61.0	-	69.1 73.9		69
Centerline Distanc	e to Noise Co	ntour (in feet)	-							-	
2 Distance		, ,		70 d		65 dE		6	60 dBA	ŧ	5 dBA
		L	dn:	91		195	_		421		907
		CN	EL:	95		205			441		951

Tuesday, July 02, 2019

Tuesday, July 02, 2019

	FH\	VA-RD-77-108	HIGHW	AY N	DISE PF	EDICTIO	N MOD	EL			
Road Nam	io: OYWithou e: Hidden Va nt: e/oE.Park	lley Pkwy.				Project Na Job Nun			סו		
	SPECIFIC IN	IPUT DATA							INPUTS	S	
Highway Data				S	ite Con	ditions (H	lard = 1	0, So	ft = 15)		
	Traffic (Adt): Percentage: lour Volume:	25,287 vehicle 10% 2,529 vehicle				dium Truck avy Trucks	ks (2 A)		15 15 15		
Ve	hicle Speed:	45 mph		v	ehicle l	Nix					
Near/Far La	ne Distance:	52 feet		-		cleType	L	av	Evening	Night	Daily
Site Data								6.3%	11.0%	12.6%	
Bai	rier Height:	0.0 feet			Me	dium Truc	cks: 7	3.3%	9.2%	17.6%	5.79%
Barrier Type (0-W	all, 1-Berm):	0.0			H	leavy Truc	cks: 8	4.4%	3.2%	12.5%	2.33%
Centerline Dis		50.0 feet		٨	loise So	urce Elev	ations	(in fe	et)		
Centerline Dist.		50.0 feet				Autos:	0.00)0			
Barrier Distance		0.0 feet			Mediur	n Trucks:	2.29	97			
Observer Height (,	5.0 feet			Heav	y Trucks:	8.00)4	Grade Adj	ustment	0.0
	ad Elevation:	0.0 feet		-	ono Em	ivalent D	latana	/in f	a a 41		
	ad Elevation: Road Grade:	0.0 feet		-	ane Equ	Autos:	43.0		eel)		
,	Road Grade:	0.0%			Modium	n Trucks:	43.00				
	Right View:	-90.0 degree 90.0 degree				y Trucks:	42.7				
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresne	1 I	Barrier Atte	en Bei	rm Atten
Autos:	68.46	1.82		0.88		-1.20	-4	4.65	0.0	00	0.00
Medium Trucks:	79.45	-10.18		0.91		-1.20	-4	1.87	0.0	00	0.00
Heavy Trucks:	84.25	-14.13		0.91		-1.20	-	5.43	0.0	00	0.00
Unmitigated Noise											
VehicleType	Leq Peak Hou			Leq Ev		Leq Ni			Ldn		NEL
Autos:	70		68.0		65.6		61.4		69.5		69.
Medium Trucks:	69		66.8		63.8		61.9		69.3		69.
Heavy Trucks:	69	-	68.3		60.1		61.3		69.3		69
Vehicle Noise:	74		72.5		68.5		66.3		74.1		74.
Centerline Distance	ce to Noise Co	ontour (in feet)	70 d	RA	65 dB	Δ I	A) dBA	55	dBA
			I dn:	94		203			437		42
			VFI :	99		203			458		942
		0		55		210					

	FHV	VA-RD-77-108	HIGH	IWAY N	OISE PF	REDICT		DEL			
	o: OY With Pr	oject					Name: F				
	e: River Rd.					Job N	umber: 1	1795			
Road Segmer	nt: s/o Corydor	n St.									
	SPECIFIC IN	PUT DATA							L INPUT	s	
Highway Data				S	Site Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	28,924 vehicle	es				A	utos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	ucks (2 A	xles):	15		
Peak H	our Volume:	2,892 vehicles	6		Hea	avy Truc	cks (3+ A	xles):	15		
Ve	hicle Speed:	45 mph		1	/ehicle I	Mix					
Near/Far La	ne Distance:	52 feet		F		cleType		Day	Evening	Night	Daily
Site Data								76.3%		12.6%	
Bai	rier Height:	0.0 feet			Me	dium Ti	ucks:	73.3%	9.2%	17.6%	5.719
Barrier Type (0-W	•	0.0			F	leavy Ti	ucks: 8	34.4%	3.2%	12.5%	2.30%
Centerline Dis		50.0 feet		H	1-1 0		evations	1	4		
Centerline Dist.	to Observer:	50.0 feet		^	loise Sc				eet)		
Barrier Distance	to Observer:	0.0 feet				Auto					
Observer Height (Above Pad):	5.0 feet				n Truck			0		
Pa	d Elevation:	0.0 feet			Heav	y Truck	s: 8.0	04	Grade Ad	usuneni.	0.0
Roa	d Elevation:	0.0 feet		L	ane Equ	uivalent	Distanc	e (in	feet)		
1	Road Grade:	0.0%				Autos	s: 43.0	00			
	Left View:	-90.0 degree	s		Mediur	n Truck	s: 42.7	94			
	Right View:	90.0 degree	es		Heav	y Truck	s: 42.8	14			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	e/	Barrier Att	en Ber	m Atten
Autos:	68.46	2.41		0.88	1	-1.20		4.65	0.0	000	0.00
Medium Trucks:	79.45	-9.66		0.91		-1.20		4.87	0.0	000	0.00
Heavy Trucks:	84.25	-13.61		0.91		-1.20		5.43	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er atteni	uation)						
	Leq Peak Hou	r Leq Day		Leq Ev	ening	Leq	Night		Ldn		VEL
Autos:	70		68.6		66.2		62.0		70.0		70.
Medium Trucks:	69		67.4		64.3		62.4		69.8		70.
Heavy Trucks:	70	.4	8.86		60.6		61.8		69.8	3	70.
Vehicle Noise:	74	.9	73.1		69.1		66.8		74.	7	75.
Centerline Distant	e to Noise Co	ontour (in feet,)								
			L	70 d			dBA	6	60 dBA		dBA
			Ldn: VEL:	10	2	2	21		475 498		024
				10			31				074

Tuesday, July 02, 2019

	FHW	/A-RD-77-108 I	nghw	7AT N	IOISE PR			JEL .			
Scenario Road Name	: OY With Pro	oject				Project N Job Nu	lame: F mber: 1		ino		
Road Segmen	t: s/o Lincoln /	Av.									
SITE S	PECIFIC IN	PUT DATA							L INPUTS	5	
Highway Data				4	Site Con	ditions (Hard =	10, Sc	oft = 15)		
Average Daily T	raffic (Adt):	14,750 vehicle	6				A	lutos:	15		
Peak Hour F	Percentage:	10%			Med	dium True	cks (2 A	xles):	15		
Peak Ho	our Volume:	1,475 vehicles			Hea	avy Truck	(3+ A	xles):	15		
Veh	icle Speed:	45 mph		-	Vehicle N	Niv					
Near/Far Lan	e Distance:	10 feet		F		cleType		Dav	Evening	Night	Daily
Site Data				-		A	itos:	, 76.3%	11.0%	12.6%	91.999
Barr	ier Heiaht:	0.0 feet			Me	dium Tru	icks:	73.3%	9.2%	17.6%	5.719
Barrier Type (0-Wa		0.0			H	leavy Tru	icks: 8	34.4%	3.2%	12.5%	2.30%
Centerline Dist	t. to Barrier:	30.0 feet			Noise So	urce Ele	vations	in fe	et)		
Centerline Dist. to	o Observer:	30.0 feet		F		Autos					
Barrier Distance to	o Observer:	0.0 feet			Mediun	n Trucks.					
Observer Height (A	bove Pad):	5.0 feet				V Trucks:			Grade Adj	ustment	0.0
Pa	d Elevation:	0.0 feet									
	d Elevation:	0.0 feet		1	Lane Equ			· ·	feet)		
R	oad Grade:	0.0%				Autos:					
	Left View:	-90.0 degree				n Trucks.					
	Right View:	90.0 degree	6		Heav	y Trucks:	29.7	'33			
FHWA Noise Mode	l Calculations										
VehicleType	REMEL	Traffic Flow	Dista		Finite		Fresn	-	Barrier Atte		m Atten
Autos:	68.46	-0.51		3.22	-	-1.20		4.49	0.0		0.00
Medium Trucks:	79.45	-12.58		3.29	-	-1.20		4.86	0.0		0.00
Heavy Trucks:	84.25	-16.53		3.28	8	-1.20	-	5.77	0.0	00	0.00
Unmitigated Noise					· · ·						
	eq Peak Hou			.eq Ei	/ening	Leq N	•		Ldn		NEL
Autos:	70.		8.0		65.6		61.4		69.5		69.
Medium Trucks:	69.		6.8		63.8		61.9		69.3		69.
Heavy Trucks:	69.		8.3		60.0		61.2		69.3		69.
Vehicle Noise:	74.	4 7	2.5		68.5		66.3		74.1		74.
Centerline Distance	e to Noise Co	ntour (in feet)									
				70 0		65 d		6	60 dBA		dBA
			dn:	5	6	12	1		262	5	64
		CN		5		12	_		274		91

	FHV	VA-RD-77-108	HIGHW	VAY N	IOISE PF	REDICT		DEL						
Road Nam	io: OY With Pr e: Parkridge A nt: n/o Second	Av.					Name: F lumber: 1							
SITE	SPECIFIC IN	IPUT DATA				N	IOISE M	IODE	L INPUTS	5				
Highway Data				:	Site Con	ditions	(Hard =	10, S	oft = 15)					
Average Daily	Traffic (Adt):	2,767 vehicle	es					Autos:						
Peak Hour	Percentage:	10%			Medium Trucks (2 Axles): 15									
Peak H	lour Volume:	277 vehicle	s		Hea	avy Tru	cks (3+ A	xles):	15					
Ve	hicle Speed:	25 mph		-	Vehicle I	Mix								
Near/Far La	ne Distance:	10 feet		-		cleType		Day	Evening	Night	Daily			
Site Data							Autos: 7	76.3%	5 11.0%	12.6%	92.48%			
Bai	rrier Heiaht:	0.0 feet			Me	edium T	rucks: 1	73.3%	9.2%	17.6%	5.36%			
Barrier Type (0-W	all, 1-Berm):	0.0			F	leavy T	rucks: 8	34.4%	3.2%	12.5%	2.16%			
Centerline Dis	st. to Barrier:	30.0 feet			Noise Source Elevations (in feet)									
Centerline Dist.	to Observer:	30.0 feet		-		Auto								
Barrier Distance	to Observer:	0.0 feet			Modiur	n Truck								
Observer Height (Above Pad):	5.0 feet				y Truck			Grade Adj	ustmen	t [.] 0.0			
Pa	ad Elevation:	0.0 feet				·		-		aounon	0.0			
Roa	ad Elevation:	0.0 feet		1	Lane Equ	uivalen	t Distanc	e (in	feet)					
1	Road Grade:	0.0%				Auto	s: 30.0	000						
	Left View:	-90.0 degree	es		Mediur	n Truck	s: 29.7	'04						
	Right View:	90.0 degree	es		Heav	y Truck	s: 29.7	'33						
FHWA Noise Mode	el Calculation	s												
FHWA Noise Mode VehicleType	el Calculation REMEL	s Traffic Flow	Dista	ance	Finite	Road	Fresne	e/	Barrier Atte	en Be	rm Atten			
			Dista	ance 3.22		Road -1.20		el -4.49	Barrier Atte 0.0					
VehicleType	REMEL	Traffic Flow	Dista		2		-			00	0.000			
VehicleType Autos:	REMEL 58.73	Traffic Flow -5.20	Dista	3.22	2 9	-1.20	-	4.49	0.0	00	0.000			
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise	REMEL 58.73 70.80 77.97 E Levels (with	Traffic Flow -5.20 -17.57 -21.52 out Topo and	barrier	3.22 3.29 3.28 atten	2 9 3 vuation)	-1.20 -1.20 -1.20	-	4.49 4.86	0.0 0.0 0.0	00 00 00	0.000 0.000 0.000			
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType	REMEL 58.73 70.80 77.97 E Levels (with Leq Peak Hou	Traffic Flow -5.20 -17.57 -21.52 out Topo and Ir Leq Day	barrier	3.22 3.29 3.28 atten	2 9 8 uation) vening	-1.20 -1.20 -1.20	Night	4.49 4.86	0.0 0.0 0.0	00 00 00 <i>C</i>	0.000 0.000 0.000			
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos:	REMEL 58.73 70.80 77.97 E Levels (with Leq Peak Hou 55	Traffic Flow -5.20 -17.57 -21.52 out Topo and ir Leq Day .6	barrier , L 53.6	3.22 3.29 3.28 atten	2 9 8 <i>uation)</i> <i>vening</i> 51.2	-1.20 -1.20 -1.20	Night 47.0	4.49 4.86 5.77	0.0 0.0 0.0 <i>Ldn</i> 55.1	00 00 00 <i>C</i>	0.000 0.000 0.000 NEL 55.5			
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks:	REMEL 58.73 70.80 77.97 E Levels (with Leq Peak Hou 55 55	Traffic Flow -5.20 -17.57 -21.52 out Topo and r Leq Day .6 .3	<i>barrier</i> , <u>l</u> 53.6 53.2	3.22 3.29 3.28 atten	2 3 uation) vening 51.2 50.2	-1.20 -1.20 -1.20	Night 47.0 48.2	-4.49 -4.86 -5.77	0.0 0.0 0.0 <i>Ldn</i> 55.1 55.6	00 00 00 <i>C</i>	0.000 0.000 0.000 NEL 55.5 55.9			
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL 58.73 70.80 77.97 E Levels (with Leq Peak Hou 55	Traffic Flow -5.20 -17.57 -21.52 out Topo and r Leq Day .6 .3	barrier , L 53.6	3.22 3.29 3.28 atten	2 9 8 <i>uation)</i> <i>vening</i> 51.2	-1.20 -1.20 -1.20	Night 47.0	-4.49 -4.86 -5.77	0.0 0.0 0.0 <i>Ldn</i> 55.1	00 00 00 <i>C</i>	0.000 0.000 0.000 NEL 55.5 55.9			
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks:	REMEL 58.73 70.80 77.97 E Levels (with Leq Peak Hou 55 55	Traffic Flow -5.20 -17.57 -21.52 out Topo and Ir Leq Day .6 .3 .5	<i>barrier</i> , <u>l</u> 53.6 53.2	3.22 3.29 3.28 atten	2 3 uation) vening 51.2 50.2	-1.20 -1.20 -1.20	Night 47.0 48.2	-4.49 -4.86 -5.77	0.0 0.0 0.0 <i>Ldn</i> 55.1 55.6	00 00 00 C	0.000 0.000 0.000 <i>NEL</i> 55.9 55.9 58.1			
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks:	REMEL 58.73 70.80 77.97 2 Levels (with Leq Peak Hot 55 55 58 61	Traffic Flow -5.20 -17.57 -21.52 out Topo and Ir Leq Day .6 .3 .5 .5	barrier 53.6 53.2 57.0 59.7	3.22 3.28 3.28 atten Leg Ev	2 9 8 <i>vening</i> 51.2 50.2 48.8 54.9	-1.20 -1.20 -1.20 <i>Leq</i>	Night 47.0 48.2 50.0 53.3	4.49 4.86 5.77	0.0 0.0 0.0 55.1 55.6 58.0 61.2	00 00 00 C	0.000 0.000 0.000 <i>INEL</i> 55.5 55.9 58.1 61.5			
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	REMEL 58.73 70.80 77.97 2 Levels (with Leq Peak Hot 55 55 58 61	Traffic Flow -5.20 -17.57 -21.52 out Topo and Ir Leg Day .6 .3 .5 .5	barrier 53.6 53.2 57.0 59.7	3.22 3.28 3.28 atten Leg Ev	2 9 3 <i>vening</i> 51.2 50.2 48.8 54.9	-1.20 -1.20 -1.20 <i>Leq</i> 65	Night 47.0 48.2 50.0 53.3 dBA	4.49 4.86 5.77	0.0 0.0 0.0 55.1 55.6 58.0 61.2 60 dBA	00 00 00 <i>C</i>	0.000 0.000 0.000 WEL 55.5 55.9 58.1 61.5			
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	REMEL 58.73 70.80 77.97 2 Levels (with Leq Peak Hot 55 55 58 61	Traffic Flow -5.20 -17.57 -21.52 out Topo and Image: Image of the second	barrier 53.6 53.2 57.0 59.7	3.22 3.28 3.28 atten Leg Ev	2 9 3 <i>vening</i> 51.2 50.2 48.8 54.9 <i>iBA</i>	-1.20 -1.20 -1.20 <i>Leq</i> 65	Night 47.0 48.2 50.0 53.3	4.49 4.86 5.77	0.0 0.0 0.0 55.1 55.6 58.0 61.2	00 00 00 <i>C</i>	0.000 0.000 0.000 <i>INEL</i> 55.5 55.9 58.1 61.5			

Tuesday, July 02, 2019

	FHV	VA-RD-77-108 H	IIGHWA	Y NOISE P	REDICTION	N MODEL		
	2: OY With Pr 2: Parkridge A 2: s/o Second					ame: Palon hber: 11795		
*	PECIFIC IN			1	NO			
Highway Data	PECIFIC IN	PUTDATA		Site Cor	nditions (H			,
	Percentage: our Volume: icle Speed:	5,137 vehicles 10% 514 vehicles 40 mph 36 feet	5	He Vehicle		(3+ Axles)	: 15 : 15	
Site Data				Veł	nicleType Aut	Day 05: 76.39	Evening	Night Daily 12.6% 92.20
Barrier Type (0-Wa		0.0 feet 0.0			Hedium Truc Heavy Truc	ks: 73.3%	6 9.2%	12.6% 92.20 17.6% 5.56 12.5% 2.24
Centerline Dist		44.0 feet		Noise S	ource Elev	ations (in	feet)	
	o Observer:	44.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet		Hea	Autos: m Trucks: vy Trucks: uivalent D	0.000 2.297 8.004 istance (in		ustment: 0.0
R	oad Grade:	0.0%			Autos:	40.460		
	Left View: Right View:	-90.0 degrees 90.0 degrees			m Trucks: vy Trucks:	40.241 40.262		
FHWA Noise Mode	Calculation	s		1				
VehicleType	REMEL	Traffic Flow	Distanc	e Finite	Road	Fresnel	Barrier Atte	n Berm Atter
Autos:	66.51	-4.57		.28	-1.20	-4.61	0.0	
Medium Trucks: Heavy Trucks:	77.72 82.99	-16.77 -20.72		I.31 I.31	-1.20 -1.20	-4.87 -5.50		
Unmitigated Noise	Levels (with	out Topo and b	arrier at	tenuation)				
VehicleType	Leq Peak Hou	ır Leq Day	Leo	Evening	Leq Nig	ght	Ldn	CNEL
Autos:	62		0.1	57.7		53.5	61.5	62
Medium Trucks:	61		8.9	55.9		54.0	61.4	61
Heavy Trucks:	62		0.9	52.6		53.8	61.9	62
Vehicle Noise:	66	.6 6	4.8	60.6		58.5	66.4	66
Centerline Distance	e to Noise Co	ontour (in feet)				T		
				'0 dBA	65 dB.	A	60 dBA	55 dBA
		L	dn:	25 26	54 57		117	251
							122	263

	FH\	NA-RD-77-108	HIGH	NAY NO	DISE PF	REDICTIO		DEL			
	io: OY With Pr					Project I			ino		
	ne: Parkridge A nt: s/o Lincoln					Job Nu	mber:	11795			
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				S	ite Con	ditions (Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	6,990 vehicle	s				,	Autos:	15		
Peak Hour	Percentage:	10%			Mee	dium Tru	cks (2 A	(xles)	15		
Peak H	lour Volume:	699 vehicles	5		Hea	avy Truck	ks (3+ A	(xles)	15		
	hicle Speed:	40 mph		V	ehicle I	Mix					
Near/Far La	ne Distance:	36 feet		-		cleType		Day	Evening	Night	Daily
Site Data					-			76.3%		•	92.12
Ba	rrier Height:	0.0 feet			Me	dium Tru	icks:	73.3%	9.2%	17.6%	5.62
Barrier Type (0-V	•	0.0			F	leavy Tru	icks:	84.4%	3.2%	12.5%	2.27
Centerline D		44.0 feet		-							
Centerline Dist.	to Observer:	44.0 feet		N	oise Sc	urce Ele			eet)		
Barrier Distance	to Observer:	0.0 feet				Autos.		000			
Observer Height	(Above Pad):	5.0 feet				n Trucks.		297	Crada Ad	i colmont	
Р	ad Elevation:	0.0 feet			Heav	y Trucks.	8.0	004	Grade Ad	jusimeni.	0.0
Ro	ad Elevation:	0.0 feet		Li	ane Equ	uivalent	Distan	ce (in i	feet)		
	Road Grade:	0.0%				Autos.	40.4	460			
	Left View:	-90.0 degree	s		Mediur	n Trucks.	40.	241			
	Right View:	90.0 degree	s		Heav	y Trucks.	40.3	262			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atter
Autos:	66.51	-3.24		1.28		-1.20		-4.61	0.0	000	0.00
Medium Trucks:	77.72	-15.38		1.31		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	82.99	-19.33		1.31		-1.20		-5.50	0.0	000	0.00
Unmitigated Nois	e Levels (with	out Topo and	barrie	r attenu	ation)						
VehicleType	Leq Peak Hou			Leq Eve		Leq N			Ldn		VEL
Autos:			51.4		59.0		54.8		62.8		63
Medium Trucks:			50.3		57.3		55.3		62.8		63.
Heavy Trucks:			52.2		54.0		55.2		63.2		63
Vehicle Noise:			66.2		62.0		59.9)	67.3	7	68
Centerline Distan	ce to Noise Co	ontour (in feet))	70 -1	24	05.4	DA		0.404		-//D.4
			Ldn:	70 dE 31	м	65 d 67		6	60 dBA 144		dBA 10
CNEL:				33 70 151 325				20			

Tuesday, July 02, 2019

	FHW	/A-RD-77-108	HIGHV	NAY N	IOISE PF	REDICTI	ON MC	DEL				
Road Nam	o: OY With Pro e: Pacific Av. nt: s/o Second					Project Job N	Name: umber:					
	SPECIFIC IN							L INP				
Highway Data					Site Con	ditions	(Hard =	= 10, S	oft = 15)		
Average Daily	. ,	560 vehicle	s					Autos				
	Percentage:	10%				dium Tru		/				
Peak H	our Volume:	56 vehicles			Hea	avy Truc	:ks (3+	Axles)	: 15			
	hicle Speed:	25 mph			Vehicle I	Nix						
Near/Far La	ne Distance:	10 feet				cleType		Day	Evenir	ng N	ight	Daily
Site Data						A	utos:	76.39	6 11.0	% 1	2.6%	91.88%
Pa	rier Height:	0.0 feet			Me	dium Tr	ucks:	73.39	6 9.2	% 1	7.6%	5.79%
Barrier Type (0-W	all, 1-Berm):	0.0			H	leavy Tr	ucks:	84.4%	6 3.2	% 1	2.5%	2.33%
Centerline Dis		30.0 feet		1	Noise So	urce El	evatior	ıs (in i	eet)			
Centerline Dist.		30.0 feet				Autos	s: 0	.000				
Barrier Distance		0.0 feet			Mediur	n Trucks	s: 2	297				
Observer Height (,	5.0 feet			Heav	y Trucks	s: 8	.004	Grade	Adjust	ment:	0.0
	ad Elevation:	0.0 feet										
	ad Elevation:	0.0 feet		1	Lane Equ				feet)			
1	Road Grade:	0.0%				Autos		.000				
	Left View:	-90.0 degree				n Trucks		.704 .733				
	Right View:	90.0 degree	5		neav	y Trucks	5. 29	.733				
FHWA Noise Mod			Dist		Cinita	Deed	Erro		Demier	A	0	
VehicleType Autos:	REMEL 58.73	Traffic Flow -12.17	Dista	ance 3.22	Finite	-1.20	Fres	-4.49	Barrier	0.000	Beri	m Atten 0.000
Autos: Medium Trucks:	58.73 70.80	-12.17 -24.18		3.24	-	-1.20		-4.49		0.000		0.000
Heavy Trucks:	70.80	-24.10		3.28		-1.20		-4.00		0.000		0.000
Unmitigated Noise	l evels (with	out Topo and I	harrier	r atten	uation)							
VehicleType	Leg Peak Hou			Leg Ev		Lea	Night		Ldn		CI	VEL
Autos:	48.		6.6		44.2		40.	1	4	8.1	-	48.5
Medium Trucks:	48.	7 4	6.6		43.6		41.	6	4	9.0		49.3
Heavy Trucks:	51.	9 5	0.4		42.2		43.	4	ę	51.4		51.5
Vehicle Noise:	54.	8 5	3.0		48.2		46.	7	ţ	54.5		54.
Centerline Distand	e to Noise Co	ntour (in feet)										
-				70 c			dBA		60 dBA			dBA
		L	dn:	3	3	6	3		13		2	28
			FL:	3		e			13			29

	FH\	NA-RD-77-108	HIGHWA	Y NO	OISE PR	EDICTI	ON MOI	DEL			
	io: OY With Pr e: Mountain A						Name: F umber: 1		ino		
	nt: n/o Hamne					00074	annoen. j	11/55			
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				S	ite Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	13,926 vehicle	5				A	Autos:	15		
Peak Hour	Percentage:	10%					icks (2 A				
Peak H	lour Volume:	1,393 vehicles			Hea	avy Truc	:ks (3+ A	xles):	15		
Ve	hicle Speed:	40 mph		v	ehicle N	lix					
Near/Far La	ne Distance:	36 feet		F		cleType		Day	Evening	Night	Daily
Site Data								76.3%	•	12.6%	
Ba	rrier Height:	0.0 feet			Me	dium Tr	ucks:	73.3%	9.2%	17.6%	5.529
Barrier Type (0-W		0.0			Н	leavy Tr	ucks: 8	84.4%	3.2%	12.5%	4.719
Centerline Di	st. to Barrier:	44.0 feet			loise So	urco El	ovations	: (in fi	aat)		
Centerline Dist.	to Observer:	44.0 feet		Ê	0130 00	Autos					
Barrier Distance	to Observer:	0.0 feet			Modium	1 Trucks					
Observer Height (Above Pad):	5.0 feet				/ Trucks			Grade Ad	iustment	0.0
P	ad Elevation:	0.0 feet						-	,		
	ad Elevation:	0.0 feet		L	ane Equ				feet)		
	Road Grade:	0.0%				Autos					
	Left View:	-90.0 degree				n Trucks					
	Right View:	90.0 degree	S		Heavy	/ Trucks	a: 40.2	262			
FHWA Noise Mod		-									
VehicleType	REMEL	Traffic Flow	Distan		Finite I		Fresn		Barrier Att		m Atter
Autos:	66.51	-0.36		1.28		-1.20		4.61	0.0		0.00
Medium Trucks:	77.72	-12.47		1.31		-1.20		-4.87	0.0		0.00
Heavy Trucks:	82.99	-13.16		1.31		-1.20		-5.50	0.0	000	0.00
Unmitigated Nois										-	
VehicleType Autos:	Leq Peak Hou 66		4.3	q Ev	ening 61.9	Leq I	Vight 57.7		Ldn 65.7	-	VEL
Medium Trucks:	65		4.3 3.2		60.2		57.7		65.7		66. 66.
	69		3.2 8.4		60.2		58.3 61.4		69.4		69.
Heavy Trucks: Vehicle Noise:	72		0.4		65.6		64.2		72.1		72
			0.7		05.0		64.2		72.1		72.
Centerline Distan	ce to Noise Co	ontour (in feet)		70 d		65 (4	60 dBA	FF	dBA
		,	dn:	70 al		00 0			281		06
		CN		63		13			201	-	30

	FHV	VA-RD-77-108	HIGHW	VAY NO	DISE PR	EDICTIO	N MODE	L		
Scenario	: OY With Pr	oject				Project Na	me: Pal	omino		
Road Name	e: Hamner Av					Job Num	ber: 117	'95		
Road Segmen	t: s/o Third S	t.								
	PECIFIC IN	IPUT DATA		_				DEL INPUT	S	
Highway Data				s	ite Con	ditions (H		Soft = 15)		
Average Daily T	, ,	39,660 vehicl	es				Aut			
Peak Hour F		10%				dium Truck		., .		
	our Volume:	3,966 vehicle	s		Hea	avy Trucks	(3+ Axle	es): 15		
	icle Speed:	40 mph		v	ehicle N	lix				
Near/Far Lan	e Distance:	73 feet			Vehi	cleType	Da	y Evening	Night	Daily
Site Data						Aut	os: 76	3% 11.0%	12.6%	91.969
Barı	rier Height:	0.0 feet			Me	dium Truc	ks: 73	3% 9.2%	17.6%	5.73
Barrier Type (0-Wa	all, 1-Berm):	0.0			н	leavy Truc	ks: 84	4% 3.2%	12.5%	2.319
Centerline Dist		55.0 feet		N	loise So	urce Elev	ations (i	n feet)		
Centerline Dist. to		55.0 feet				Autos:	0.000			
Barrier Distance to		0.0 feet			Mediun	n Trucks:	2.297			
Observer Height (A	,	5.0 feet			Heav	V Trucks:	8.004	Grade Ad	djustmen	t: 0.0
	d Elevation:	0.0 feet				dura la má D		(In fa = 4)		
	d Elevation:	0.0 feet		L	ane Equ	Autos:	41.446	,		
R	oad Grade:	0.0%			Modium	n Trucks:	41.446			
		-90.0 degre				v Trucks:	41.232			
	Right View:	90.0 degre	es		neav	y mucks.	41.253	1		
FHWA Noise Mode		-						1		
VehicleType	REMEL	Traffic Flow	Dista	1.12	Finite		Fresnel	Barrier At		rm Atten
Autos: Medium Trucks:	66.51 77.72	4.29		1.12		-1.20 -1.20	-4. -4.		000	0.00
	82.99	-7.76		1.15		-1.20	-4.		000	0.00
Heavy Trucks:						-1.20	-5.	38 0.	000	0.00
VehicleType	Levels (with Leg Peak Hou				<u> </u>	Log Nic	what i	Ldn		NEL
Autos:	20 Teak Hot		68.8	eq Eve	66.4	Leq Nig	62.2	Zun 70.		70.
Medium Trucks:	69		67.8		64.8		62.8	70.	-	70.
Heavy Trucks:	71		69.7		61.5		62.7	70.	-	70.
Vehicle Noise:	75		73.6		69.4		67.3	75.		75.
venicie noise.										
Centerline Distance	e to Noise Co	ontour (in fee)							
	e to Noise Co	ontour (in fee	9	70 di	BA	65 dB.	A	60 dBA	55	ō dBA
	e to Noise Co	ontour (in fee	:) Ldn:	70 di 121		65 dB. 262	A	60 dBA 564		5 dBA ,214

	FHW	/A-RD-77-108	HIGH	HWAY N	OISE PF	REDICT	ION MO	DEL			
Scenario: OY Wi						Project	t Name:	Palom	ino		
Road Name: Hamne	er Av.					Job N	lumber:	11795			
Road Segment: s/o Se	cond	St.									
SITE SPECIFI	C IN	PUT DATA							L INPUT	s	
Highway Data				S	Site Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily Traffic (Ad	tt):	33,726 vehicle	s					Autos:	15		
Peak Hour Percentag	je:	10%			Mee	dium Tr	ucks (2 /	Axles):	15		
Peak Hour Volun	ie:	3,373 vehicles			Hea	avy Tru	cks (3+ /	Axles):	15		
Vehicle Spee	ed:	40 mph			/ehicle I	Niv					
Near/Far Lane Distant	ce:	73 feet		-		cleType	9	Day	Evening	Night	Daily
Site Data								76.3%	0	12.6%	
Barrier Heig	ht.	0.0 feet			Me	edium T	rucks:	73.3%	9.2%	17.6%	5.829
Barrier Type (0-Wall, 1-Berr		0.0			F	leavy T	rucks:	84.4%	3.2%	12.5%	2.45
Centerline Dist. to Barri		55.0 feet		-		_					
Centerline Dist. to Observ	er:	55.0 feet		^	loise Sc		levation	<u> </u>	eet)		
Barrier Distance to Observ	er:	0.0 feet				Auto		000			
Observer Height (Above Pa	d):	5.0 feet			Mediur			297	Over de Avi		
Pad Elevatio		0.0 feet			Heav	y Truck	's: 8.	004	Grade Ad	justment	0.0
Road Elevatio	on:	0.0 feet		L	ane Equ	uivalen	t Distan	ce (in	feet)		
Road Grad	de:	0.0%				Auto	s: 41.	446			
Left Vie	w:	-90.0 degree	s		Mediur	n Truck	s: 41.	232			
Right Vie	W:	90.0 degree	s		Heav	y Truck	s: 41.	253			
FHWA Noise Model Calcula	tions	;									
VehicleType REME	L	Traffic Flow	Dis	stance	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atter
Autos: 6	6.51	3.58		1.12		-1.20		-4.67	0.0	000	0.00
Medium Trucks: 7	7.72	-8.40		1.15		-1.20		-4.87	0.0	000	0.00
Heavy Trucks: 82	2.99	-12.16		1.15		-1.20		-5.38	0.0	000	0.00
Unmitigated Noise Levels (-		/						
VehicleType Leq Peak				Leq Ev		Leq	Night		Ldn		VEL
Autos:	70.		6.8		65.7		61.5		69.5		70
Medium Trucks:	69.		67.1		64.1		62.2	-	69.6	-	69.
Heavy Trucks:	70.		69.3		61.0		62.2		70.3	-	70
Vehicle Noise:	74.	-	73.0		68.8		66.7	, ,	74.0	6	74
Centerline Distance to Nois	ie Co	ntour (in feet)		70			-/0.4		0.404		-10.4
			L	70 d			dBA		50 dBA		dBA
			dn:	11	-		39		515		109
			IFI :	11			50		539		160

Tuesday, July 02, 2019

Scenario: OY \	Vith Pro	niect			Project N	<i>lame:</i> Pa	lomino		
Road Name: Ham		1001				mber: 11			
Road Segment: s/o F									
SITE SPECI		PUT DATA			N	DISE MO	DEL INPUTS	5	
Highway Data				Site Con), Soft = 15)		
Average Daily Traffic (Adt): :	26,785 vehicles				Au	tos: 15		
Peak Hour Percent	age:	10%		Me	dium True	cks (2 Axl	es): 15		
Peak Hour Vol	ime:	2,679 vehicles		He	avy Truck	ks (3+ Axl	es): 15		
Vehicle Sp	eed:	40 mph		Vehicle I	Mix				
Near/Far Lane Dista	nce:	73 feet			icleType	De	ay Evening	Night	Daily
Site Data							.3% 11.0%	•	91.16%
Barrier He	iaht:	0.0 feet		Me	edium Tru	icks: 73	.3% 9.2%	17.6%	5.93%
Barrier Type (0-Wall, 1-Be		0.0		ŀ	leavy Tru	icks: 84	.4% 3.2%	12.5%	2.91%
Centerline Dist. to Ba		55.0 feet		Noise O			(m. fr		
Centerline Dist. to Obse		55.0 feet		Noise Sc		vations (,		
Barrier Distance to Obse	rver:	0.0 feet		14 E	Autos: n Trucks		-		
Observer Height (Above F	Pad):	5.0 feet			n Trucks. v Trucks:			ustment: (0.0
Pad Eleva	tion:	0.0 feet		neav	y mucks.	8.004	4 Grade Adj	usuneni. (0.0
Road Eleva	tion:	0.0 feet		Lane Eq	uivalent	Distance	(in feet)		
Road Gi	ade:	0.0%			Autos:	41.446	6		
Left \	liew:	-90.0 degrees		Mediur	n Trucks.		_		
Right \	/iew:	90.0 degrees		Heav	y Trucks:	41.25	3		
FHWA Noise Model Calcu	lations								
VehicleType REM	EL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	en Berm	Atten
Autos:	66.51	2.55		12	-1.20		.67 0.0		0.000
Medium Trucks:	77.72	-9.32		15	-1.20		.87 0.0		0.000
Heavy Trucks:	82.99	-12.41	1.	15	-1.20	-5.	.38 0.0	00	0.000
Unmitigated Noise Levels	s (witho	out Topo and bai	rrier atte	enuation)					
VehicleType Leq Pe			,	Evening	Leq N	0	Ldn	CNE	
Autos:	69.		-	64.6		60.5	68.5		68.9
Medium Trucks:	68.		-	63.2		61.3	68.7		69.0
Heavy Trucks:	70.		•	60.8		61.9	70.0		70.1
Vehicle Noise:	74.:	2 72.	3	67.9		66.0	73.9	1	74.2
Centerline Distance to No	ise Co	ntour (in feet)							
) dBA	65 d		60 dBA	55 dl	
		Ldr	n: 1	100	21	5	463	997	7
		CNEL		104	22		484	1.04	

	FH\	WA-RD-77-108	HIGH	WAYN	NOISE PF	REDICT	ION MOD	EL			
Road Nan	rio: OY With Pr ne: Hamner Av nt: s/o Hidden	<i>.</i>					Name: Pa lumber: 11		10		
SITE	SPECIFIC IN	IPUT DATA				Ν	IOISE M	ODEL	INPUT	5	
Highway Data					Site Con	ditions	(Hard = 1	0, Sof	t = 15)		
Average Daily	Traffic (Adt):	34,313 vehicle				Au	utos:	15			
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2 Ax	les):	15		
Peak H	our Volume:	3,431 vehicle	s		Hea	avy Tru	cks (3+ Ax	les):	15		
Ve	hicle Speed:	40 mph		+	Vehicle I	Mix					
Near/Far La	ne Distance:	73 feet		-		icleType	, D	ay	Evening	Night	Daily
Site Data					VCIII			6.3%	11.0%	12.6%	
					Me	, dium T		3.3%	9.2%	17.6%	5.75%
	rrier Height:	0.0 feet 0.0				leavy T		4.4%	3.2%	12.5%	
Barrier Type (0-V	ist. to Barrier:	0.0 55.0 feet								12.070	2.127
Centerline Di Centerline Dist.		55.0 feet			Noise So	ource E	levations	(in fee	et)		
Barrier Distance		0.0 feet				Auto	s: 0.00	0			
Observer Height		5.0 feet			Mediur	n Truck	s: 2.29	7			
	ad Elevation:	0.0 feet			Heav	y Truck	s: 8.00	4 (Grade Adj	ustment	0.0
	ad Elevation: ad Elevation:	0.0 feet		-	Lane Eq	uivalen	t Distance	in fe	et)		
	Road Grade:	0.0%		-		Auto					
	Left View:	-90.0 degree	20		Mediur	n Truck					
	Right View:	90.0 degree				y Truck					
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresne	I E	Barrier Atte	en Ber	m Atten
Autos:	66.51	3.66		1.1	2	-1.20	-4	1.67	0.0	00	0.000
Medium Trucks:	77.72	-8.38		1.1	5	-1.20	-4	1.87	0.0	00	0.000
Heavy Trucks:	82.99	-12.14		1.1	5	-1.20	-8	5.38	0.0	00	0.000
Unmitigated Nois											
VehicleType	Leq Peak Hou	, ,		Leq E	vening	Leq	Night		Ldn		VEL
Autos:			68.1		65.7		61.6		69.6		70.0
Medium Trucks:			67.1		64.1		62.2		69.6		69.9
Heavy Trucks:			69.3		61.0		62.2		70.3		70.4
		9	73.0		68.8		66.8		74.6	1	74.9
Vehicle Noise:											
)	m							
Vehicle Noise: Centerline Distan		ontour (in feet			dBA		dBA) dBA		dBA
		ontour (in feet) Ldn: NEL:	11	dBA 12 17	2	dBA 40 52	1	0 dBA 518 542	1,	<i>dBA</i> 115 168

Tuesday, July 02, 2019

	FHW	A-RD-77-108	HIGH	WAY N	NOISE PR	EDICTIO	и мо	DEL			
Scenario: OY	With Pro	ject				Project N	ame:	Palomi	no		
Road Name: E. P.	arkridge	Av.				Job Nun	nber:	11795			
Road Segment: s/o H	Hidden V	alley Pkwy.									
SITE SPECI	FIC INF	PUT DATA							L INPUT	s	
Highway Data					Site Con	ditions (H			,		
Average Daily Traffic ('Adt):	8,882 vehicle	es					Autos:	15		
Peak Hour Percen		10%				dium Truci		,	15		
Peak Hour Vol		888 vehicle	s		Hea	avy Trucks	: (3+ A	Axles):	15		
Vehicle Sp		45 mph			Vehicle I	Nix					
Near/Far Lane Dista	ance:	36 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						Au	os:	76.3%	11.0%	12.6%	92.069
Barrier He	iaht:	0.0 feet			Me	dium Truc	ks:	73.3%	9.2%	17.6%	5.669
Barrier Type (0-Wall, 1-B	erm):	0.0			H	leavy Truc	ks:	84.4%	3.2%	12.5%	2.28
Centerline Dist. to Ba		44.0 feet			Noise So	urce Elev	ation	s (in fe	et)		
Centerline Dist. to Obse		44.0 feet				Autos:	0.0	000			
Barrier Distance to Obse		0.0 feet			Mediur	n Trucks:	2.3	297			
Observer Height (Above I		5.0 feet			Heav	v Trucks:	8.0	004	Grade Ad	justment	t: 0.0
Pad Eleva		0.0 feet		-							
Road Eleva		0.0 feet		-	Lane Equ	ivalent D			eet)		
Road G		0.0%				Autos:		460			
Left		-90.0 degree				n Trucks:		241			
Right	view:	90.0 degree	es		Heav	y Trucks:	40.	262			
FHWA Noise Model Calcu											
VehicleType REM		Traffic Flow	Dis	stance	Finite		Fresr		Barrier Att		rm Atten
Autos:	68.46	-2.71		1.2	-	-1.20		-4.61		000	0.00
Medium Trucks:	79.45	-14.83		1.3		-1.20		-4.87		000	0.00
Heavy Trucks:	84.25	-18.77		1.3		-1.20		-5.50	0.0	000	0.00
Unmitigated Noise Levels VehicleType Leg Pe	s (witho ak Hour		- T		<u> </u>	Log Ni	whi	1	Ldn		NEL
Autos:	65.8		63.9	Leq E	vening 61.5	Leq Ni	57.3		65.3		INEL 65.
	64.7	-	62.6		59.6		57.6		65.0	-	65
	04.1		64.1		55.8		57.0		65.1	-	65
Medium Trucks: Heavy Trucks:	65.6				00.0		01.0		00.	•	55.
Medium Trucks: Heavy Trucks: Vehicle Noise:	65.6 70.2		68.3		64.3		62.1		69.9	9	70.
Heavy Trucks:	70.2	2			64.3		62.1		69.9	9	70.
Heavy Trucks: Vehicle Noise:	70.2	2		70	64.3 dBA	65 dE			69.9		70. 6 dBA
Heavy Trucks: Vehicle Noise:	70.2	2 ntour (in feet				65 dE 94				55	70. 6 <i>dBA</i> 134

F	HWA-RD-77-10	8 HIGH	HWAY NO	DISE PREDICT	ION MO	DEL			
Scenario: OY With					t Name:				
Road Name: Lincoln A	w.			Job I	Vumber:	11795			
Road Segment: s/o River	Rd.								
SITE SPECIFIC	INPUT DATA						L INPUT	s	
Highway Data			S	ite Conditions	; (Hard =	: 10, So	oft = 15)		
Average Daily Traffic (Adt)	24,472 vehi	cles				Autos:	15		
Peak Hour Percentage	10%			Medium Ti	rucks (2 J	Axles):	15		
Peak Hour Volume	2,447 vehic	les		Heavy Tru	ıcks (3+)	Axles):	15		
Vehicle Speed	40 mph		V	ehicle Mix					
Near/Far Lane Distance	36 feet		-	VehicleTvp	e	Dav	Evening	Night	Dailv
Site Data					Autos:	76.3%	•	12.6%	92.22
Barrier Height	0.0 feet			Medium T	rucks:	73.3%	9.2%	17.6%	5.55
Barrier Type (0-Wall, 1-Berm)				Heavy 7	rucks:	84.4%	3.2%	12.5%	2.24
Centerline Dist. to Barrier			-						
Centerline Dist. to Observer			N	oise Source E			eet)		
Barrier Distance to Observer				Auto		000			
Observer Height (Above Pad)				Medium Truck		297			
Pad Elevation				Heavy Truck	(S: 8.	004	Grade Ad	justment.	0.0
Road Elevation			Li	ane Equivaler	t Distan	ce (in i	feet)		
Road Grade	0.0%			Auto	os: 40.	.460			
Left View	-90.0 degr	rees		Medium Truck	ks: 40.	.241			
Right View	90.0 degr	ees		Heavy Truck	(s: 40.	.262			
FHWA Noise Model Calculati	ons								
VehicleType REMEL	Traffic Flow	' Dis	stance	Finite Road	Fresi	nel	Barrier Att	en Ber	m Atter
Autos: 66.	51 2.2	1	1.28	-1.20		-4.61	0.0	000	0.00
Medium Trucks: 77.			1.31	-1.20		-4.87	0.0	000	0.00
Heavy Trucks: 82.	99 -13.9	5	1.31	-1.20		-5.50	0.0	000	0.00
Unmitigated Noise Levels (w		-		,					
VehicleType Leq Peak H			Leq Eve		Night		Ldn		VEL
	68.8	66.8		64.5	60.3		68.3		68
	67.8	65.7		62.7	60.		68.		68
	69.2	67.6		59.4	60.6	-	68.6		68
	73.4	71.6		67.4	65.3	3	73.1	1	73
Centerline Distance to Noise	Contour (in fe	et)							
		L	70 dE		dBA	6	60 dBA		dBA
		Ldn:	71		153		330		11
		CNEL:	75		161		346		45

Tuesday, July 02, 2019

Scenario: OY		oject				Project N			ino		
Road Name: Lin Road Segment: s/o		24				Job Nu	mber:	11795			
•											
SITE SPEC Highway Data	IFIC IN	PUT DATA			Site Con				L INPUTS	S	
Average Daily Traffic	(Adt):	24.729 vehicles			0.10 00.1	uniono (i		Autos:	15		
Peak Hour Perce		10%	>		Ma	dium Truc					
Peak Hour Vo		2.473 vehicles				avy Truck					
Vehicle S		40 mph		L		,	3 (0+7	1/103).	15		
Near/Far Lane Dis		36 feet			Vehicle I						
Neal/Fai Lane Dis	ance.	30 1001			Vehi	cleType		Day	Evening	Night	Daily
Site Data						AL	itos:	76.3%	11.0%	12.6%	92.22%
Barrier H	eiaht:	0.0 feet			Me	edium Tru	cks:	73.3%	9.2%	17.6%	5.55%
Barrier Type (0-Wall, 1-E		0.0			F	leavy Tru	cks:	84.4%	3.2%	12.5%	2.24%
Centerline Dist. to B	arrier:	44.0 feet		F	Noise Sc	ource Ele	vation	s (in fe	et)		
Centerline Dist. to Obs	erver:	44.0 feet		F		Autos:		000			
Barrier Distance to Obs	erver:	0.0 feet			Modiur	n Trucks:		297			
Observer Height (Above	Pad):	5.0 feet				v Trucks:		004	Grade Ad	iustmen	t: 0.0
Pad Elev	ation:	0.0 feet		L							
Road Elev	ation:	0.0 feet		L	Lane Eq	uivalent l			feet)		
Road C	Grade:	0.0%				Autos:	40.4	460			
Left	View:	-90.0 degrees	6		Mediur	n Trucks:	40.2	241			
Right	View:	90.0 degrees	8		Heav	y Trucks:	40.2	262			
FHWA Noise Model Cald	ulations	;									
VehicleType REI	MEL	Traffic Flow	Dist	ance	Finite	Road	Fresn	el	Barrier Atte	en Be	rm Atten
Autos:	66.51	2.25		1.2	8	-1.20		-4.61	0.0	000	0.00
Medium Trucks:	77.72	-9.95		1.3	1	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	82.99	-13.90		1.3	1	-1.20		-5.50	0.0	000	0.00
Unmitigated Noise Leve	ls (witho	out Topo and b	arrie	r atter	nuation)						
,	eak Hou			Leq E	vening	Leq N	<u> </u>		Ldn	-	NEL
Autos:	68.		6.9		64.5		60.3		68.3		68.
Medium Trucks:	67.	96	5.7		62.7		60.8		68.2	2	68.
Heavy Trucks:	69.	2 6	7.7		59.4		60.6		68.7	7	68.
Vehicle Noise:	73.	4 7	1.6		67.5		65.3		73.2	2	73.
Centerline Distance to N	loise Co	ntour (in feet)									
					dBA	65 di		e	60 dBA		5 dBA
		1	dn:	7	2	154	ŀ		333		716
		CN			'5	162			348		751

	FHV	VA-RD-77-108 I	HIGHW/	AY N	OISE PF	REDICTIC	ON MOD	EL			
Road Nam	o: OY With Pro e: Lincoln Av. ht: s/o Railroad					Project N Job Nu	lame: P mber: 1		0		
SITE	SPECIFIC IN	PUT DATA				NC	DISE M	ODEL	INPUT	S	
Highway Data				S	Site Con	ditions (l	Hard = 1	0, Sof	t = 15)		
Average Daily	Traffic (Adt):	27,030 vehicle	5				Α	utos:	15		
Peak Hour	Percentage:	10%			Me	dium Truc	ks (2 Ax	des):	15		
Peak H	our Volume:	2,703 vehicles			He	avy Truck	s (3+ Ax	des):	15		
Vei	hicle Speed:	40 mph			/ehicle	Mix					
Near/Far Lar	ne Distance:	36 feet		ľ		icleType	E	Day I	Evening	Night	Daily
Site Data				-				6.3%	11.0%	12.6%	
Bar	rier Height:	0.0 feet			Me	edium Tru	cks: 7	3.3%	9.2%	17.6%	5.61%
Barrier Type (0-W		0.0			ŀ	leavy Tru	cks: 8	4.4%	3.2%	12.5%	2.26%
Centerline Dis	. ,	44.0 feet			laina Ca	ource Ele	votiono	(in for	41		
Centerline Dist.	to Observer:	44.0 feet		~	ioise sc	Autos:			:()		
Barrier Distance	to Observer:	0.0 feet			Madiu	n Trucks:					
Observer Height (.	Above Pad):	5.0 feet				v Trucks:			Grade Ad	iustmont	
Pa	d Elevation:	0.0 feet			neav	y mucks.	0.00	J4 (siaue Auj	usuneni	0.0
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalent l	Distance	e (in fe	et)		
F	Road Grade:	0.0%				Autos:		60			
	Left View:	-90.0 degree	5		Mediur	n Trucks:	40.2	41			
	Right View:	90.0 degree	5		Heav	y Trucks:	40.2	62			
FHWA Noise Mode	el Calculations	s									
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresne	l E	arrier Att	en Ber	m Atten
Autos:	66.51	2.64		1.28	1	-1.20	7	4.61	0.0	000	0.000
Medium Trucks:	77.72	-9.52		1.31		-1.20		4.87	0.0		0.000
Heavy Trucks:	82.99	-13.46		1.31		-1.20	-	5.50	0.0	000	0.00
Unmitigated Noise			arrier a	tten	uation)						
	Leq Peak Hou			eq Ev	rening	Leq N		1	dn	-	VEL
Autos:	69.		7.3		64.9		60.7		68.7		69.2
Medium Trucks:	68.		6.2		63.2		61.2		68.6		68.9
Heavy Trucks:	69.		8.1		59.9		61.1		69.1		69.2
Vehicle Noise:	73.	.9 7	2.0		67.9		65.8		73.6	6	73.9
Centerline Distand	e to Noise Co	ontour (in feet)		-			~				
				70 d		65 d			dBA		dBA
			dn:	76		165			355		64
		CN	EL:	80	J	172	2	3	371	8	00

Tuesday, July 02, 2019

	FH\	WA-RD-77-108	B HIGH	WAY N	IOISE PF	REDICTIO	N MO	DEL			
Scenario	: OY With P	roject				Project N	lame:	Palomi	ino		
Road Name	e: Lincoln Av.					Job Nur	mber:	11795			
Road Segmen	t: s/o Pomon	a Rd.									
	PECIFIC IN	NPUT DATA							L INPUT	s	
Highway Data					Site Con	ditions (H					
Average Daily T	, ,	32,093 vehicl	les					Autos:	15		
Peak Hour F	•	10%				dium Truc		/	15		
Peak Ho	our Volume:	3,209 vehicle	es		He	avy Truck	s (3+)	Axles):	15		
	icle Speed:	40 mph		F	Vehicle I	Nix					
Near/Far Lan	e Distance:	36 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						Au	itos:	76.3%	11.0%	12.6%	92.09%
Barı	rier Height:	0.0 feet			Me	edium Tru	cks:	73.3%	9.2%	17.6%	5.64%
Barrier Type (0-Wa	all, 1-Berm):	0.0			ŀ	leavy Tru	cks:	84.4%	3.2%	12.5%	2.27%
Centerline Dist		44.0 feet			Noise Sc	ource Elev	vation	s (in fe	eet)		
Centerline Dist. to		44.0 feet		Ē		Autos:	0.	000			
Barrier Distance to		0.0 feet			Mediur	n Trucks:	2.	297			
Observer Height (A	,	5.0 feet			Heav	y Trucks:	8.	004	Grade Ad	iustment	0.0
	d Elevation:	0.0 feet		-				//	(4)		
	d Elevation:	0.0 feet		-	Lane Equ	uivalent L			reet)		
R	load Grade:	0.0%				Autos:		460			
	Left View: Right View:	-90.0 degre 90.0 degre				n Trucks: v Trucks:		241 262			
FHWA Noise Mode	J	ő									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresi	nel	Barrier Att	en Bei	m Atten
Autos:	66.51			1.2		-1.20		-4.61		000	0.00
Medium Trucks:	77.72	-8.75		1.3	1	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	82.99	-12.69		1.3	1	-1.20		-5.50	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	l barri	er atter	uation)						
,1	Leq Peak Hou			Leq E	vening	Leq N			Ldn		NEL
Autos:		0.0	68.0		65.6		61.4		69.5		69.
Medium Trucks:	69		66.9		63.9		62.0	-	69.4		69.
Heavy Trucks:).4	68.9		60.6		61.8	· ·	69.9		70.
Vehicle Noise:		4.6	72.8		68.6		66.	5	74.4	1	74.
Centerline Distance	e to Noise C	ontour (in fee	t)	70	1BA	65 dE	54		O dBA		dBA
			I dn:	701		65 dE 185		1 6	398		<i>dBA</i> 158
		~	NFI :	8	-	185			398 417	-	158 199
		L	IVEL:	9	0	194	•		417	6	53

l	FHWA	-RD-77-108 I	HIGH	HWAY N	OISE PF	REDICTI	ON MO	DEL			
Scenario: OY With	n Proje	ect				Project	Name:	Palom	ino		
Road Name: Second	St.					Job Ni	umber:	11795			
Road Segment: w/o Par	kridge	e Av.									
SITE SPECIFIC	: INP	UT DATA							L INPUT	S	
Highway Data				S	Site Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily Traffic (Ad): 16	6,449 vehicles	S					Autos:	15		
Peak Hour Percentage	e:	10%			Mee	dium Tru	icks (2 A	Axles):	15		
Peak Hour Volum	e: 1	645 vehicles			Hea	avy Truc	:ks (3+ A	Axles):	15		
Vehicle Spee	d:	35 mph		V	ehicle l	Mix					
Near/Far Lane Distance	e:	10 feet		H		icleType		Day	Evening	Night	Daily
Site Data					1011		utos:	76.3%	•	•	92.15
Barrier Heigh	<i>t</i> .	0.0 feet			Me	edium Tr	ucks:	73.3%	9.2%	17.6%	5.60
Barrier Type (0-Wall, 1-Berm		0.0			F	leavy Tr	ucks:	84.4%	3.2%	12.5%	2.26
Centerline Dist. to Barrie		30.0 feet		_							
Centerline Dist. to Observe		30.0 feet		^	loise So				eet)		
Barrier Distance to Observe		0.0 feet				Autos		000			
Observer Height (Above Pad	0:	5.0 feet				n Trucks		297			
Pad Elevatio		0.0 feet			Heav	y Trucks	:: 8.0	004	Grade Ad	justment.	: 0.0
Road Elevatio	n:	0.0 feet		L	ane Equ	uivalent	Distan	ce (in	feet)		
Road Grad	e:	0.0%				Autos	: 30.	000			
Left View	V:	-90.0 degree	s		Mediur	n Trucks	: 29.	704			
Right View	V:	90.0 degrees	S		Heav	y Trucks	29.	733			
FHWA Noise Model Calculat	ions										
VehicleType REMEL	1	raffic Flow	Di	stance	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atter
Autos: 64	.30	1.06		3.22		-1.20		-4.49	0.0	000	0.00
Medium Trucks: 75	.75	-11.11		3.29		-1.20		-4.86	0.0	000	0.00
Heavy Trucks: 81	.57	-15.05		3.28		-1.20		-5.77	0.0	000	0.00
Unmitigated Noise Levels (v			arri								
VehicleType Leq Peak		Leq Day		Leq Ev		Leq I			Ldn		NEL
Autos:	67.4		5.4		63.0		58.9		66.9		67
Medium Trucks:	66.7	-	4.6		61.6		59.6		67.0	-	67
Heavy Trucks:	68.6	-	7.1		58.8		60.0		68.1		68
Vehicle Noise:	72.4	-	0.6		66.3		64.3	3	72.1	1	72
Centerline Distance to Noise	e Con	tour (in feet)	-1	70 -	DA	65			C dBA	55	dD A
		,	-	70 d 42		65 0	1BA		60 dBA		dBA
			dn:	42		9	-		193		16
		CN	EL:	44		9	4		202	4	36

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL Scenario: OY With Project Project Name: Palomino Job Number: 11795 Road Name: Second St. Road Segment: e/o Parkridge Av. SITE SPECIFIC INPUT DATA NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15) Highway Data Average Daily Traffic (Adt): 13,979 vehicles Autos: 15 Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Peak Hour Volume: 1,398 vehicles Heavy Trucks (3+ Axles): 15 Vehicle Speed: 35 mph Vehicle Mix pe Day Evening Night Daily Autos: 76.3% 11.0% 12.6% 92.44% Near/Far Lane Distance: 10 feet VehicleType Site Data Medium Trucks: 73.3% 9.2% 17.6% 5.39% Barrier Height: Barrier Type (0-Wall, 1-Berm): 0.0 feet 0.0 Heavy Trucks: 84.4% 3.2% 12.5% 2.17% Centerline Dist. to Barrier: Centerline Dist. to Observer: 30.0 feet Noise Source Elevations (in feet) 30.0 feet Autos: 0.000 Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297 Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.004 Grade Adjustment: 0.0 Pad Elevation: 0.0 feet Lane Equivalent Distance (in feet) Road Elevation: 0.0 feet Autos: 30.000 Medium Trucks: 29.704 Road Grade: 0.0% Left View: -90.0 degrees 90.0 degrees Heavy Trucks: 29.733 Right View: FHWA Noise Model Calculations VehicleType REMEL
 MEL
 Traffic Flow
 Distance
 Finite Road

 64.30
 0.37
 3.22
 -1.20
 Fresnel Barrier Atten Berm Atten Autos Medium Trucks: 75.75 -11.97 3.29 -1.20 -4.86 0.000 Heavy Trucks: 81.57 -15.92 3.28 -1.20 -5.77 0.000 Unmitigated Noise Levels (without Topo and barrier attenuation) Leq Night 58.2
 VehicleType
 Leq Peak Hour
 Leq Day
 Leq Evening

 Autos:
 66.7
 64.7
 62.3
 Ldn CNEL 66.2 Medium Trucks: 65.9 63.7 60.7 58.8 66.2 Heavy Trucks: 67.7 66.2 58.0 59.1 67.2 Vehicle Noise: 63.5 71.6 69.8 65.5 71.3 Centerline Distance to Noise Contour (in feet)

70 dBA

37

38

Ldn:

CNEL:

65 dBA

79

83

60 dBA

171

178

	FRV	IA-RD-11-100 R	IGHWA			EDICTIC		JDEL				
Scenar	io: OY With Pr	oject				Project N	lame:	Palom	ino			
Road Nan	ne: Second St.					Job Nu	mber:	11795				
Road Segme	nt: w/o Pacific	Av.										
SITE	SPECIFIC IN	PUT DATA							L INPUT	s		
Highway Data				Si	te Con	ditions (H	lard =	= 10, S	oft = 15)			
Average Daily	Traffic (Adt):	15,336 vehicles		Autos: 15								
Peak Hour	Percentage:	10%				dium Truc						
Peak H	lour Volume:	1,534 vehicles			He	avy Truck	s (3+	Axles).	15			
Ve	hicle Speed:	35 mph		Ve	hicle l	Mix						
Near/Far La	ne Distance:	10 feet				icleType	Т	Day	Evening	Night	Daily	
Site Data						AL	itos:	76.3%	6 11.0%	12.6%	92.50%	
Ba	rrier Height:	0.0 feet			Me	edium Tru	cks:	73.3%	6 9.2%	17.6%	5.35%	
Barrier Type (0-V	•	0.0			ŀ	leavy Tru	cks:	84.4%	3.2%	12.5%	2.16%	
Centerline D	ist. to Barrier:	30.0 feet		No	niso Sr	ource Ele	vation	ne (in f	oot)			
Centerline Dist.	to Observer:	30.0 feet		740	136 30	Autos:		.000	eel)		-	
Barrier Distance	to Observer:	0.0 feet			Modiu	n Trucks:	-	297				
Observer Height	(Above Pad):	5.0 feet				y Trucks:	_	.004	Grade Ad	iustmon	t· 0.0	
- P	ad Elevation:	0.0 feet			neav	y mucks.	0	.004	Graue Au	usunen	. 0.0	
Ro	ad Elevation:	0.0 feet		La	ne Eq	uivalent I	Distan	ice (in	feet)			
	Road Grade:	0.0%				Autos:	30	.000				
	Left View:	-90.0 degrees			Mediur	n Trucks:	29	.704				
	Right View:	90.0 degrees			Heav	y Trucks:	29	.733				
FHWA Noise Mod	el Calculations	5										
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten	
Autos:		0.77		3.22		-1.20		-4.49		000	0.000	
Medium Trucks:	75.75	-11.61		3.29		-1.20		-4.86		000	0.000	
Heavy Trucks:	81.57	-15.55		3.28		-1.20		-5.77	0.0	000	0.000	
Unmitigated Nois	e Levels (with		arrier a	ttenua	ation)							
VehicleType	Leq Peak Hou			q Eve	•	Leq N	<u> </u>		Ldn		NEL	
Autos:					62.8		58.		66.0		67.1	
Medium Trucks:					61.1		59.		66.	-	66.9	
Heavy Trucks:			6.6		58.3		59.	-	67.6		67.7	
Vehicle Noise:	72.	0 70).2		65.9		63.	9	71.	7	72.0	
Centerline Distan	ce to Noise Co	ntour (in feet)										
				70 dB	A	65 dl			60 dBA		5 dBA	
			in:	39		84			181		389	
		CNE	:L:	41		88			189	4	407	

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Tuesday, July 02, 2019

Tuesday, July 02, 2019

Tuesday, July 02, 2019

144

0.000

0.000

0.000

66.6

66.5

67.3

71.6

55 dBA

367

384

Site Data Autos: 76.3% 11.0% 12.6% 92 Barrier Height: 0.0 feet Medium Trucks: 73.3% 9.2% 17.6% 5 Barrier Dist. to Barrier: 30.0 feet Heavy Trucks: 84.4% 3.2% 12.5% 2 Centerline Dist. to Diserver: 30.0 feet Noise Source Elevations (in feet) Autos: 0.000 Darier: 30.0 feet Noise Source Elevations (in feet) Autos: 0.000 Deserver Height (Above Pad): 5.0 feet Heavy Trucks: 2.297 Pad Elevation: 0.0 feet Autos: 0.000 Road Grade: 0.0% Left View: 90.0 degrees Right View: 90.0 degrees Heavy Trucks: 29.704 FHWA Noise Model Calculations VerticeType REMEL Traffic Flow Distance Frieite Road Fresnel Barrier Atten Bern A Medium Trucks: 64.30 0.94 3.22 -1.20 -4.49 0.000		FH\	WA-RD-77-108	HIGHWA	Y NC	DISE PRE	DICTIO	N MODEL				
Highway Data Site Conditions (Hard = 10, Soft = 15) Average Daily Traffic (Adt): 15,948 vehicles Autos: 15 Peak Hour Percentage: 10% Medium Trucks (24 Autes): 15 Vehicle Speed: 35 mph Medium Trucks (24 Autes): 15 Vehicle Speed: 35 mph Vehicle Mix Use: 15 Site Data To feet Vehicle Type Day Evening Night L Barrier Height: 0.0 feet Medium Trucks: 7.3.3% 9.2% 17.6% 5 Barrier Type (0-Wall, 1-Berm): 0.0 feet Medium Trucks: 2.2.5% 2 Medium Trucks: 2.2.5% 2 Observer Height (Above Pad): 5.0 feet Medium Trucks: 2.2.97 Heavy Trucks: 8.004 Grade Adjustment: 0.0 Left View: 90.0 degrees Right View: 90.0 degrees Heavy Trucks: 2.9.704 Heavy Trucks: 81.57 11.42 3.22 -1.20 -4.49 0.000 Heavy Trucks: 81.57 15.37 3.22 <th>Road Nam</th> <th>e: Second St.</th> <th></th> <th></th> <th></th> <th>F</th> <th></th> <th></th> <th></th> <th></th> <th></th>	Road Nam	e: Second St.				F						
Average Daily Traffic (Adt): 15,948 vehicles Autos: 15 Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Peak Hour Volume: 1,595 vehicles Medium Trucks (2 Axles): 15 Vehicle Speed: 35 mph Heavy Trucks (3+ Axles): 15 Vehicle Speed: 35 mph Vehicle Type Day Evening Night L Site Data Autos: 76.3% 11.0% 12.6% 27 Barrier Height: 0.0 feet Medium Trucks: 73.3% 9.2% 17.6% 5 Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 30.0 feet Autos: 0.000 Medium Trucks: 2.297 12.5% 2 Observer Height (Above Pad): 5.0 feet Autos: 0.004 Medium Trucks: 2.004 Grade Adjustment: 0. Road Elevation: 0.0 feet Autos: 30.00 Medium Trucks: 2.97.04 Road Elevation: 0.0 feet Autos: 2.97.04 Heavy Trucks: 2.97.04	SITE	SPECIFIC IN	NPUT DATA				NO	ISE MOD	EL INPUT	s		
Noisy Barie Office Medium Trucks (2 Axies): 15 Peak Hour Volume: 1,555 vehicles Heavy Trucks (3 Axies): 15 Vehicle Speed: 35 mph Vehicle Mix Dey Evening Night L Site Data Autos: 76.3% 11.0% 12.6% 92 Barrier Height: 0.0 feet Medium Trucks: 76.3% 11.0% 12.6% 92 Barrier Type (Owall, 1-Berm): 0.0 0 Peav Trucks: 84.4% 3.2% 12.5% 2 Centerline Dist. to Barrier: 30.0 feet Noise Source Elevations (in feet) Noise Source Elevations (in feet) Noise Source Elevations (in feet) Noise Source filevation: 0.0 feet Medium Trucks: 2.9704 Heavy Trucks: 2.9704 Barier Distance to Observer: 9.0.0 degrees Heavy Trucks: 29.704 Heavy Trucks: 29.704 Right View: 9.0.0 degrees Heavy Trucks: 29.704 Heavy Trucks: 29.704 Medium Trucks: 64.30 0.94 3.22 -1.20 -4.49 0.000	Highway Data				S	ite Cond	itions (H	ard = 10, S	oft = 15)			
Near/Far Lane Distance: 10 fet Vehicle Mix Day Evening Night L Site Data Autos: 76.3% 11.0% 12.6% 92 Barrier Type (0-Walt, 1-Berm): 0.0 feet Medium Trucks: 76.3% 11.0% 12.6% 92 Centerline Dist. to Barrier: 30.0 feet Medium Trucks: 78.4% 3.2% 12.5% 2 Deserver Height (Above Pad): 5.0 feet Autos: 0.000 Medium Trucks: 2.297 Pad Elevation: 0.0 feet Autos: 0.000 Medium Trucks: 2.970 Road Grade: 0.0% Left View: -90.0 degrees Medium Trucks: 2.977 FHWA Noise Model Calculations Oteet Autos: 30.000 Medium Trucks: 2.977 VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm /A Medium Trucks: 67.3 0.94 3.22 -1.20 -4.49 0.000 Medium Trucks: 81.57 -15.37	Peak Hour Peak F	Percentage: lour Volume:	10% 1,595 vehicle					s (2 Axles)	: 15			
Vehicle type Day Evening lyght Left 20 Site Data Matheward Site Data Barrier Height: 0.0 Barrier Height: 0.0 Centerline Dist. to Barrier: 30.0 feet Moise Source Elevations (in feet) Centerline Dist. to Dbserver: 0.0 feet Barrier Jistance to Observer: 0.0 feet Road Elevation: 0.0 feet Autors: 68.7 Medium Trucks: 2.7.0 Vehicle Type RELMEL Traffic Flow <th cols<="" td=""><td></td><td>· · · · p · · · ·</td><td></td><td></td><td>V</td><td>ehicle M</td><td>ix</td><td></td><td></td><td></td><td></td></th>	<td></td> <td>· · · · p · · · ·</td> <td></td> <td></td> <td>V</td> <td>ehicle M</td> <td>ix</td> <td></td> <td></td> <td></td> <td></td>		· · · · p · · · ·			V	ehicle M	ix				
Barrier Height: 0.0 feet Medium Trucks: 73.3% 9.2% 17.6% 5 Barrier Type (0-Wall, 1-Berm): 0.0 0.0 Heavy Trucks: 84.4% 3.2% 12.5% 2 Centerline Dist. to Dbserver: 30.0 feet Noise Source Elevations (in feet) Autos: 0.000 Deserver Height (Above Pad): 5.0 feet Autos: 0.000 Medium Trucks: 2.297 Pad Elevation: 0.0 feet Autos: 0.000 Medium Trucks: 2.9.73 FHWA Noise Model Calculations 0.0 feet Autos: 2.9.704 Heavy Trucks: 29.704 VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bern A Medium Trucks: 75.75 -11.42 3.29 -1.20 -4.46 0.000 Heavy Trucks: 81.57 -15.37 3.28 -1.20 -4.86 0.000 Heavy Trucks: 81.57 -15.37 3.28 -1.20 -6.86 0.000 Heavy Trucks: 86.4 <td>Near/Far La</td> <td>ne Distance:</td> <td>10 feet</td> <td></td> <td></td> <td>Vehic</td> <td>leType</td> <td>Day</td> <td>Evening</td> <td>Night</td> <td>Daily</td>	Near/Far La	ne Distance:	10 feet			Vehic	leType	Day	Evening	Night	Daily	
Barrier Type (IVWall, 1-Barri): 0.0 Heavy Trucks: 84.4% 3.2% 12.5% 2 Centerline Dist. to Diserver: 30.0 feet Noise Source Elevations (in feet) Noise So	Site Data						Aut	os: 76.3%	6 11.0%	12.6%	92.47%	
Barrier Type (0-Wall, 1-Berm): 0.0 Heavy Trucks: 84.4% 3.2% 12.5% 2 Centerline Dist. to Diserver: 30.0 feet Noise Source Elevations (in feet) Noise Source Elevation (Ba	rrier Heiaht:	0.0 feet			Med	lium Truc	ks: 73.3%	6 9.2%	17.6%	5.37%	
Centerline Dist. to Observer: 30.0 feet Noise Source Elevations (in feet) Barrier Distance to Observer: 0.0 feet Autos: 0.000 Barrier Distance to Observer: 0.0 feet Autos: 0.000 Pad Elevation: 0.0 feet Heavy Trucks: 8.004 Grade Adjustment: 0.0 Road Grade: 0.0 feet Lane Equivalent Distance (in feet) Lane Equivalent Distance (in feet) Road Grade: 0.0% Lant View: 90.0 degrees Medium Trucks: 29.704 WehiceType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bern A Autos: 75.75 -11.42 3.22 -1.20 -4.49 0.000 Heavy Trucks: 81.57 -15.37 3.28 -1.20 -5.77 0.000 Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Day Leq Day Leq Night Ldn CNEL Matium Trucks: 66.3 65.3 62.9 58.7 66.8 66.7 Heavy Trucks: <td>Barrier Type (0-W</td> <td>/all, 1-Berm):</td> <td></td> <td></td> <td></td> <td>He</td> <td>eavy Truc</td> <td>ks: 84.4%</td> <td>6 3.2%</td> <td>12.5%</td> <td>2.16%</td>	Barrier Type (0-W	/all, 1-Berm):				He	eavy Truc	ks: 84.4%	6 3.2%	12.5%	2.16%	
Barrier Distance to Observer: 0.0 feet Autos: 0.000 Observer Height (Above Pad): 5.0 feet Medium Trucks: 2.97 Pad Elevation: 0.0 feet Heavy Trucks: 8.004 Grade Adjustment: 0. Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Autos: 30.000 Left Ivew: 90.0 degrees Medium Trucks: 2.9.733 Heavy Trucks: 2.9.733 FHWA Noise Model Calculations 0.04 degrees Finite Road Fresnel Barrier Atten Bernier Atten VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bernier Atten Medium Trucks: 75.75 -11.42 3.22 -1.20 -4.49 0.000 Heavy Trucks: 81.57 -15.37 3.28 -1.20 -5.77 0.000 Ummitigated Noise Levels (without Topo and barrier attenuation) UetricleType Leq Day Leq Evening Leq Night Ldn CNEL Autos: 66.3 65.3 66.7 66.8					N	oise Sou	rce Elev	ations (in	feet)			
Medium Trucks: 2.297 Boserver Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Cirade: 0.0 feet Road Grade: 0.0% Left View: 90.0 degrees Right View: 90.0 degrees Heavy Trucks: 29.704 Medium Trucks: 64.30 0.94 3.22 -1.20 -4.49 Autos: 81.57 -15.37 3.28 -1.20 -5.77 0.000 Heavy Trucks: 81.57 -15.37 3.28 -1.20 -5.77 0.000 Unitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Revening Heavy Trucks:							Autos:	0.000				
Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees WehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bern A Autos: 64.30 0.94 3.22 -1.20 -4.49 0.000 Medium Trucks: 75.75 -11.42 3.29 -1.20 -4.49 0.000 Heavy Trucks: 81.57 -15.37 3.28 -1.20 -4.66 0.000 UrbicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 66.3 65.3 62.9 58.7 66.8 66.7 Heavy Trucks: 68.3 66.8 59.7 67.7 Vehicle Noise: 72.2 70.3 66.0 64.0 71.9 Centerline Distance to Noise Contour						Medium	Trucks:	2.297				
Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Road Grade: 0.0% Autos: 30.00 Left View: 90.0 degrees Medium Trucks: 29.704 Right View: 90.0 degrees Finite Road Fresnel Barrier Atten VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bern A Medium Trucks: 75.75 -11.42 3.29 -1.20 -4.49 0.000 Heavy Trucks: 81.57 -15.37 3.28 -1.20 -5.77 0.000 Ummitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 67.3 65.3 62.9 58.7 66.8 66.8 59.7 67.7 Wehicle Noise: 72.2 70.3 66.0 64.0 71.9		· · · ·				Heavy	Trucks:	8.004	Grade Ad	iustment	: 0.0	
Road Grade: 0.0% Autos: 30.000 Left View: 90.0 degrees Medium Trucks: 29.704 Right View: 90.0 degrees Medium Trucks: 29.704 Heavy Trucks: 29.704 Heavy Trucks: 29.704 VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm A Medium Trucks: 64.30 0.94 3.22 -1.20 -4.49 0.000 Medium Trucks: 75.75 -11.42 3.29 -1.20 -5.77 0.000 Unnitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Evening Leq Night Ldn CNEL Autos: 67.3 65.3 62.9 58.7 66.8 66.8 59.3 66.7 Heavy Trucks: 68.3 66.8 58.5 59.7 67.7 Vehicle Noise: 72.2 70.3 66.0 64.0 71.9	Ro	ad Elevation:			Li	ane Equi	valent D	istance (in	feet)			
Right View: 90.0 degrees Heavy Trucks: 29.733 FHWA Noise Model Calculations Heavy Trucks: 29.733 VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bern A Matos: 64.30 0.94 3.22 -1.20 -4.49 0.000 Medium Trucks: 75.75 -11.142 3.28 -1.20 -5.77 0.000 Ummitigated Noise Levels (without Topo and barrier attenuation) Use Revening Leq Night Ldn CNEL Autos: 67.3 65.3 62.9 58.7 66.8 Medium Trucks: 66.7 Heavy Trucks: 68.3 66.8 58.5 59.7 67.7 Vehicle Noise: 72.2 70.3 66.0 64.0 71.9 Centerline Distance to Noise Contour (in feet) Learet Intervent (in feet) Learet Intervent (in feet) Learet Intervent (in feet) Learet Intervent (in feet)		Road Grade:					Autos:	30.000				
Right View: 90.0 degrees Heavy Trucks: 29.733 FHWA Noise Model Calculations Entite Road Fresnel Barrier Atten Berri A VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berri A Medium Trucks: 64.30 0.94 3.22 -1.20 -4.49 0.000 Heavy Trucks: 75.75 -11.42 3.29 -1.20 -4.86 0.000 Heavy Trucks: 81.57 -15.37 3.28 -1.20 -5.77 0.000 Ummitigated Noise Levels (without Topo and barrier attenuation) Leq Revening Leq Night Ldn CNEL Autos: 67.3 65.3 62.9 58.7 66.8 Medium Trucks: 66.8 66.8 59.7 67.7 Vehicle Noise: 72.2 70.3 66.8 58.5 59.7 67.7 Vehicle Noise: 72.2 70.3 66.0 71.9 Centertline Distance to Noise Contour (in feet) Entertline Distance to Noise Contour (in feet) Entertlin		Left View:	-90.0 degree	es		Medium	Trucks:	29.704				
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm A Autos: 64.30 0.94 3.22 -1.20 -4.49 0.000 Medium Trucks: 75.75 -11.14.2 3.29 -1.20 -4.46 0.000 Heavy Trucks: 81.57 -11.42 3.29 -1.20 -5.77 0.000 Ummitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Qay Leq Round CNEL Autos: 67.3 65.3 62.9 58.7 66.8 Medium Trucks: 66.8 58.5 59.7 67.7 Heavy Trucks: 68.3 66.8 58.5 59.7 67.7 Vehicle Noise: 72.2 70.3 66.0 61.0 71.9 Centertine Distance to Noise Contour (in feet) Leq Levels (in feet) Leq Levels Kenter Leve		Right View:	90.0 degree	es		Heavy	Trucks:	29.733				
Autos: 64.30 0.94 3.22 -1.20 -4.49 0.000 Medium Trucks: 75.75 -11.42 3.29 -1.20 -4.66 0.000 Heavy Trucks: 81.57 -15.37 3.28 -1.20 -5.77 0.000 Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Reak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 67.3 65.3 62.9 58.7 66.8 Medium Trucks: 66.4 64.3 61.3 59.3 66.7 Heavy Trucks: 68.3 66.8 58.5 59.7 67.7 Vehicle Noise: 72.2 70.3 66.0 64.0 71.9 Centerline Distance to Noise Contour (in feet)	FHWA Noise Mod	el Calculation	IS									
Medium Trucks: 75.75 -11.42 3.29 -1.20 -4.86 0.000 Heavy Trucks: 81.57 -15.37 3.28 -1.20 -5.77 0.000 Unnitigated Noise Levels (without Topo and barrier attenuation) Leq Deak Hour Leq Deay Leq Revening Leq Night Ldn CNEL Vehicle Type Leq Peak Hour Leq Deay Leq Evening Leq Night CM CNEL Medium Trucks: 66.3 65.3 62.9 58.7 66.8 66.7 Heavy Trucks: 68.3 66.8 58.5 59.7 67.7 Vehicle Noise: 72.2 70.3 66.0 64.0 71.9 Centerline Distance to Noise Contour (in feet) E	VehicleType	REMEL	Traffic Flow	Distand	ce	Finite R	load	Fresnel	Barrier Att	en Ber	m Atten	
Heavy Trucks: 81.57 -15.37 3.28 -1.20 -5.77 0.000 Unmitigated Noise Levels (without Topo and barrier attenuation) Leq Revention Leq Night Ldn CNEL Vehicle Type Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 67.3 65.3 62.9 58.7 66.8 Medium Trucks: 66.4 64.3 61.3 59.3 66.7 Heavy Trucks: 68.3 66.8 58.5 59.7 67.7 Vehicle Noise: 72.2 70.3 66.0 64.0 71.9 Centertline Distance to Noise Contour (in feet)											0.00	
Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 67.3 65.3 62.9 58.7 66.8 Medium Trucks: 66.4 64.3 61.3 59.3 66.7 Heavy Trucks: 66.8 66.8 59.7 67.7 Vehicle Noise: 72.2 70.3 66.0 64.0 71.9 Centerline Distance to Noise Contour (in feet)			=								0.00	
VehicleType Leq Peak Hour Leq Day Leq Vening Leq Night Ldn CNEL Autos: 67.3 65.3 62.9 58.7 66.8 Medium Trucks: 66.4 64.3 61.3 59.3 66.7 Heavy Trucks: 68.3 66.8 59.7 67.7 Vehicle Noise: 72.2 70.3 66.0 64.0 71.9 Centerline Distance to Noise Contour (in feet)							-1.20	-5.77	0.0	000	0.00	
Autos: 67.3 65.3 62.9 58.7 66.8 Medium Trucks: 66.4 64.3 61.3 59.3 66.7 Heavy Trucks: 68.3 66.8 58.5 59.7 67.7 Vehicle Noise: 72.2 70.3 66.0 64.0 71.9 Centerline Distance to Noise Contour (in feet) East East East East						<u> </u>						
Medium Trucks: 66.4 64.3 61.3 59.3 66.7 Heavy Trucks: 68.3 66.8 58.5 59.7 67.7 Vehicle Noise: 72.2 70.3 66.0 64.0 71.9 Centerline Distance to Noise Contour (in feet)	,1				q Eve		Leq Nig					
Heavy Trucks: 68.3 66.8 58.5 59.7 67.7 Vehicle Noise: 72.2 70.3 66.0 64.0 71.9 Centerline Distance to Noise Contour (in feet)		•.									67.3	
Vehicle Noise: 72.2 70.3 66.0 64.0 71.9 Centerline Distance to Noise Contour (in feet)						• · · •					67.	
Centerline Distance to Noise Contour (in feet)											67.9	
						66.0		64.0	71.9)	72.	
70 dBA 65 dBA 60 dBA 55 dB/	Centerline Distan	ce to Noise C	ontour (in feet									
						BA		A				
Ldn: 40 86 186 400												
CNEL: 42 90 194 419			CI	VEL:	42		90		194	4	19	

	FHV	VA-RD-77-108	HIGH	WAY N	OISE PF	REDICTI	ом мо	DEL			
	: OY With Pr	oject				Project			ino		
	: Second St.					Job NL	ımber:	11795			
Road Segment	: w/o Mounta	in Av.									
	PECIFIC IN	PUT DATA							l input	s	
Highway Data				S	Site Con	ditions ('Hard =	10, Sc	oft = 15)		
Average Daily T	raffic (Adt):	17,012 vehicle	s					Autos:	15		
Peak Hour P	ercentage:	10%			Mee	dium Tru	cks (2 /	Axles):	15		
Peak Ho	ur Volume:	1,701 vehicles			Hea	avy Truc	ks (3+ A	Axles):	15		
	icle Speed:	35 mph		N	/ehicle I	Nix					
Near/Far Lane	e Distance:	10 feet		F		cleTvpe		Dav	Evenina	Night	Dailv
Site Data						A	utos:	76.3%	11.0%		92.43
Barr	ier Height:	0.0 feet			Me	edium Tri	ucks:	73.3%	9.2%	17.6%	5.399
Barrier Type (0-Wa		0.0			F	leavy Tri	ucks:	84.4%	3.2%	12.5%	2.179
Centerline Dist		30.0 feet		-							
Centerline Dist. to	Observer:	30.0 feet		^	loise So				eet)		
Barrier Distance to	Observer:	0.0 feet				Autos		000			
Observer Height (A	bove Pad):	5.0 feet				n Trucks		297	Grade Ad	i colmont	
Pad	Elevation:	0.0 feet			Heav	y Trucks	: 8.0	004	Grade Au	usunen.	0.0
Road	Elevation:	0.0 feet		L	ane Equ	uivalent	Distan	ce (in i	feet)		
R	oad Grade:	0.0%				Autos	: 30.	000			
	Left View:	-90.0 degree	s		Mediur	n Trucks	: 29.	704			
1	Right View:	90.0 degree	s		Heav	y Trucks	: 29.	733			
FHWA Noise Model	Calculation	5									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atten
Autos:	64.30	1.22		3.22		-1.20		-4.49	0.0	000	0.00
Medium Trucks:	75.75	-11.12		3.29)	-1.20		-4.86	0.0	000	0.00
Heavy Trucks:	81.57	-15.07		3.28	1	-1.20		-5.77	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and L	oarrie	r atteni	uation)						
	.eq Peak Hou			Leq Ev		Leq I			Ldn		VEL
Autos:	67.		5.6		63.2		59.0		67.0		67.
Medium Trucks:	66.		4.6		61.6		59.6		67.0		67.
Heavy Trucks:	68.		7.1		58.8		60.0		68.1		68.
Vehicle Noise:	72	-	0.6		66.3		64.3	3	72.2	2	72.
Centerline Distance	e to Noise Co	ontour (in feet)	-	70 -	04	05.	04		0.404		-10.4
		,	.dn:	70 d		65 c 9(0 dBA 194		dBA 19
			EL:	42	-	94	-		203		19 38
		CN	LL.	44	•	94	+		200	4	30

Tuesday, July 02, 2019

		/A-RD-77-108	nonv	TATI	NOISE PR						
	io: OY With Pr	oject				Project N			ino		
	e: Second St. nt: e/o Mountai					Job Nu	mper:	11795			
Road Seymen	n. e/o Mouritai	II AV.									
SITE : Highway Data	SPECIFIC IN	PUT DATA			Site Con				L INPUT	S	
					Sile Con	uluons (i		Autos:			
Average Daily	, ,	18,309 vehicle	S			dium Truc	-				
	Percentage:	10%				avy Truck					
	our Volume:	1,831 vehicles			пе	avy much	S (3+ A	ixies).	15		
	hicle Speed:	35 mph		Γ	Vehicle I	Nix					
Near/Far La	ne Distance:	36 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						Au	itos:	76.3%	11.0%	12.69	% 90.78%
Bai	rier Heiaht:	0.0 feet			Me	edium Tru	cks:	73.3%	9.2%	17.69	% 5.63%
Barrier Type (0-W	all, 1-Berm):	0.0			F	leavy Tru	cks:	84.4%	3.2%	12.59	% 3.59%
Centerline Dis	st. to Barrier:	44.0 feet		F	Noise So	urce Ele	vation	s (in fe	et)		-
Centerline Dist.	to Observer:	44.0 feet		F		Autos		000			
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks:		97			
Observer Height (Above Pad):	5.0 feet				v Trucks:		004	Grade Ad	iustmei	nt: 0.0
Pa	ad Elevation:	0.0 feet		L							
	ad Elevation:	0.0 feet		L	Lane Eq			· ·	feet)		
1	Road Grade:	0.0%				Autos:					
	Left View:	-90.0 degree				n Trucks:					
	Right View:	90.0 degree	s		Heav	y Trucks:	40.2	262			
FHWA Noise Mode	el Calculation:	s		-							
VehicleType	REMEL	Traffic Flow	Dista		Finite		Fresn	-	Barrier Att		erm Atten
Autos:	64.30	1.46		1.2	8	-1.20		-4.61	0.0	000	0.00
Medium Trucks:	75.75	-10.62		1.3	1	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	81.57	-12.57		1.3	1	-1.20		-5.50	0.0	000	0.00
Unmitigated Noise											
VehicleType	Leq Peak Hou			Leq E	vening	Leq N	<u> </u>		Ldn		CNEL
Autos:	65.		3.9		61.5		57.3		65.3	-	65.
Medium Trucks:	65.		3.1		60.1		58.1		65.6		65.9
Heavy Trucks:	69.		7.6		59.3		60.5		68.6	-	68.
Vehicle Noise:	71.	.9 7	0.1		65.2		63.7		71.5	5	71.
Centerline Distand	ce to Noise Co	ontour (in feet)						1		Т	
				-	dBA	65 d		6	60 dBA	5	5 dBA
			.dn: FI :	-	i6 i8	12(12)			258 269		556 579

	FH\	WA-RD-77-108	HIGHWA	Y NOISE PI	REDICTIO		EL			
	o: OY With Pr e: Second St. nt: e/o Dwy. 8					Vame: Pa mber: 11		D		
SITE	SPECIFIC IN	IPUT DATA			N	DISE M	ODEL	INPUTS	5	
Highway Data				Site Con	ditions (Hard = 1	0, Soft	= 15)		
Average Daily	Traffic (Adt):	18,653 vehicle	s			A	utos:	15		
Peak Hour	Percentage:	10%		Me	dium Tru	cks (2 Ax	des):	15		
Peak H	our Volume:	1,865 vehicles		He	avy Truck	ks (3+ Ax	des):	15		
Ve	hicle Speed:	35 mph		Vehicle	Mise					
Near/Far La	ne Distance:	36 feet			icleType		av E	vening	Night	Daily
Site Data				ven			ay 1 6.3%	11.0%	12.6%	
	rier Height:	0.0 feet		M	edium Tru		3.3%	9.2%	17.6%	5.52%
Barrier Type (0-W		0.0 1001		1	Heavy Tru	icks: 8	4.4%	3.2%	12.5%	3.52%
Centerline Di	. ,	44.0 feet								
Centerline Dist.		44.0 feet		Noise Se	ource Ele			t)		
Barrier Distance		0.0 feet			Autos.					
Observer Height (5.0 feet			m Trucks.					
	ad Elevation:	0.0 feet		Heav	ry Trucks.	8.00)4 G	irade Adj	ustment:	0.0
Roa	ad Elevation:	0.0 feet		Lane Eq	uivalent	Distance	e (in fee	et)		
	Road Grade:	0.0%			Autos.	40.46	60			
	Left View:	-90.0 degree	s	Mediu	m Trucks.	40.24	41			
	Right View:	90.0 degree	s	Heav	y Trucks.	40.26	62			
FHWA Noise Mod	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Distan	ce Finite	Road	Fresne	I Ba	arrier Atte	en Ber	m Atten
Autos:	64.30	1.55		1.28	-1.20	-4	4.61	0.0	00	0.00
Medium Trucks:	75.75	-10.62		1.31	-1.20		4.87	0.0		0.000
Heavy Trucks:	81.57	-12.57		1.31	-1.20	-8	5.50	0.0	00	0.00
Unmitigated Noise	e Levels (with	out Topo and I								
VehicleType	Leq Peak Hou			q Evening	Leq N	•	L	.dn	-	VEL
Autos:	65		4.0	61.6		57.4		65.4		65.9
Medium Trucks:	65		3.1	60.1		58.1		65.6		65.9
Heavy Trucks:	69		7.6	59.3		60.5		68.6		68.
Vehicle Noise:	71	.9 7	0.1	65.2		63.7		71.5		71.8
Contorlino Distan	e to Noise Co	ontour (in feet)								
Centennie Distant							60	dBA	55	dBA
Centennie Distant				70 dBA	65 d					
Centerine Distant			.dn: FI :	56 58	12	0	2	ава 59 70	5	58 81

Tuesday, July 02, 2019

	FH\	WA-RD-77-108	HIGHV	VAY NO	ISE PF	REDICTIO	N MO	DEL			
Scenario	p: OY With Pr	roject				Project N	ame:	Palomi	no		
Road Name	e: Second St.					Job Nur	nber:	11795			
Road Segmen	t: w/o Hamne	er Av.									
	SPECIFIC IN	NPUT DATA							LINPUT	s	
Highway Data				S	te Con	ditions (H			,		
Average Daily	, ,	21,017 vehicl	es					Autos:	15		
Peak Hour		10%				dium Truc		/	15		
	our Volume:	2,102 vehicle	s		He	avy Truck	s (3+)	Axles):	15		
	nicle Speed:	35 mph		V	ehicle l	<i>lix</i>					
Near/Far Lar	ne Distance:	36 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						Au	tos:	76.3%	11.0%	12.6%	91.06%
Bar	rier Height:	0.0 feet			Me	dium Tru	cks:	73.3%	9.2%	17.6%	5.55%
Barrier Type (0-Wa	all, 1-Berm):	0.0			ŀ	leavy Tru	cks:	84.4%	3.2%	12.5%	3.399
Centerline Dis		44.0 feet		N	oise Sc	urce Ele	vation	s (in fe	et)		
Centerline Dist. t		44.0 feet				Autos:	0.	000			
Barrier Distance t		0.0 feet			Mediur	n Trucks:	2.	297			
Observer Height (/	,	5.0 feet			Heav	v Trucks:	8.	004	Grade Ad	iustment	0.0
	d Elevation:	0.0 feet		-							
	d Elevation:	0.0 feet		La	ine Equ	ivalent L			eet)		
F	Road Grade:	0.0%			Ma	Autos:		460			
	Left View: Right View:	-90.0 degre				n Trucks: v Trucks:		241 262			
	5	90.0 degre	85		neav	y mucho.	40.	202			
FHWA Noise Mode	el Calculation REMEL	s Traffic Flow	Dista		Finite	Deed	Fresi		Barrier Att		m Atten
VehicleType Autos:	REIVIEL 64.30		DISta	1.28	Finite	-1.20	Fresi	-4.61	Barrier Att 0.0		m Atten 0.00
Medium Trucks:	75.75			1.31		-1.20		-4.87		000	0.00
Heavy Trucks:	81.57			1.31		-1.20		-4.07		000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Hou	ur Leq Daj	/ 1	Leq Eve	ning	Leq N	ight		Ldn	C	NEL
Autos:	66	6.5	64.5		62.1		57.9	Э	65.9)	66.
Medium Trucks:	65	5.8	63.6		60.6		58.7	7	66.1	I	66.
Heavy Trucks:	69	9.5	67.9		59.7		60.9	9	68.9)	69.
Vehicle Noise:	72	2.3	70.5		65.7		64.1	1	72.0)	72.
Centerline Distanc	e to Noise C	ontour (in fee)					1			
			L	70 dE	BA	65 dE		6	0 dBA		dBA
			Ldn:	60		129			277	-	97
		C	NEL:	62		134			289	6	522

	FHW	/A-RD-77-108 H	ligh	WAY NO	DISE PR	EDICTIO	N MO	DEL			
Scenario: OY W	ith Pro	oject				Project N	ame:	Palom	ino		
Road Name: First	St.					Job Nur	nber:	11795			
Road Segment: w/o P	arkridę	ge Av.									
SITE SPECIF	IC IN	PUT DATA							L INPUT	S	
Highway Data				s	ite Con	ditions (H	lard =	10, Sc	oft = 15)		
Average Daily Traffic (A	dt):	21,118 vehicles	5				,	Autos:	15		
Peak Hour Percenta	ige:	10%			Med	dium Truc	ks (2 A	(xles)	15		
Peak Hour Volu	me:	2,112 vehicles			Hea	avy Truck	s (3+ A	(xles)	15		
Vehicle Spe	ed:	35 mph		V	ehicle N	<i>Nix</i>					
Near/Far Lane Distar	nce:	10 feet		-		cleTvpe		Dav	Evening	Night	Daily
Site Data					1011			76.3%			92.35
Barrier Heig	wht.	0.0 feet			Me	dium True	cks:	73.3%	9.2%	17.6%	5.45
Barrier Type (0-Wall, 1-Be		0.0 reet				leavy Tru				12.5%	
Centerline Dist. to Bar		30.0 feet									
Centerline Dist. to Obser		30.0 feet		N	oise So	urce Elev			eet)		
Barrier Distance to Obser		0.0 feet				Autos:		000			
Observer Height (Above P		5.0 feet				n Trucks:		297			
Pad Eleval		0.0 feet			Heav	y Trucks:	8.0	004	Grade Ad	justment	0.0
Road Eleval		0.0 feet		L	ane Equ	ivalent D	Distan	ce (in i	feet)		
Road Gra		0.0%		-	uno 240	Autos:	30.				
l eft V		-90.0 degrees			Mediun	n Trucks:					
Right V		90.0 degrees				y Trucks:					
FHWA Noise Model Calcu	ations	;									
VehicleType REM	L	Traffic Flow	Dis	tance	Finite	Road	Fresh	el	Barrier At	en Ber	m Atter
Autos:	64.30	2.15		3.22		-1.20		-4.49	0.	000	0.00
Medium Trucks:	75.75	-10.14		3.29		-1.20		-4.86	0.0	000	0.00
Heavy Trucks:	31.57	-14.08		3.28		-1.20		-5.77	0.0	000	0.00
Unmitigated Noise Levels	(with	out Topo and b	arrie	er attenu	ation)						
VehicleType Leq Pea				Leq Ev		Leq Ni			Ldn		NEL
Autos:	68.		6.5		64.1		60.0		68.		68
Medium Trucks:	67.		5.6		62.6		60.6		68.		68
Heavy Trucks:	69.		8.0		59.8		61.0		69.		69
Vehicle Noise:	73.	4 7	1.6		67.3		65.3	5	73.	1	73
Centerline Distance to No.	ise Co	ntour (in feet)									
			L	70 d		65 dE		6	60 dBA		dBA
			dn:	49		105 110			226		86
			FI :	51					236		09

Tuesday, July 02, 2019

							ом мо				
	io: OY With Pr	oject				Project I			ino		
	e: First St.					Job NL	mber:	11795			
Road Segme	nt: e/o Parkrid	ge Av.									
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				1	Site Con	ditions (Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	20,996 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10%				dium Tru					
Peak H	lour Volume:	2,100 vehicles			Hea	avy Truc	ks (3+ A	Axles):	15		
	hicle Speed:	35 mph			Vehicle I	Nix					-
Near/Far La	ne Distance:	36 feet				cleType		Day	Evening	Night	Daily
Site Data						A	utos:	76.3%	11.0%	12.6%	6 92.44%
Da	rrier Height:	0.0 feet			Me	dium Tri	icks:	73.3%	9.2%	17.6%	6 5.39%
Barrier Type (0-W		0.0			H	leavy Tri	icks:	84.4%	3.2%	12.5%	6 2.17%
Centerline Di	st. to Barrier:	44.0 feet		1	Noise So	urce Ele	vation	s (in fe	eet)		
Centerline Dist.	to Observer:	44.0 feet				Autos		200	,		
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks		297			
Observer Height	· · · ·	5.0 feet				v Trucks		004	Grade Ad	iustmen	it: 0.0
	ad Elevation:	0.0 feet									
	ad Elevation:	0.0 feet		4	Lane Equ				leet)		
	Road Grade:	0.0%				Autos					
	Left View:	-90.0 degree				n Trucks					
	Right View:	90.0 degree	S		Heav	y Trucks	40.	262			
FHWA Noise Mod											
VehicleType	REMEL	Traffic Flow	Dista		Finite		Fresr		Barrier Atte		erm Atten
Autos:	64.30	2.13		1.28	-	-1.20		-4.61	0.0		0.00
Medium Trucks:	75.75	-10.21		1.31		-1.20		-4.87	0.0		0.00
Heavy Trucks:	81.57	-14.15		1.31		-1.20		-5.50	0.0	00	0.00
Unmitigated Nois			-								
VehicleType	Leq Peak Hou			.eq El	/ening	Leq I			Ldn	-	CNEL
Autos:	66		64.5		62.2		58.0		66.0		66.
Medium Trucks:	65		3.5		60.5		58.6		66.0		66.3
Heavy Trucks:	67		6.0		57.8		58.9		67.0		67.
Vehicle Noise:			69.6		65.3		63.3	5	71.1		71.4
Centerline Distan	ce to Noise Co	ontour (in feet)		70 -	104	05 -	0.4		0.0		C
			dn:	70 c		65 a		6	0 dBA 243		5 dBA
											522
			IFI :	5		11			243		547

	FH\	NA-RD-77-108	HIGHWA	Y NO	ISE PR	EDICTIC	N MODE	iL.			
	io: OY With Pr e: First St. nt: e/o Dwy. 1	roject					lame: Pa mber: 11				
SITE	SPECIFIC IN	IPUT DATA				NC	DISE MC	DEL I	NPUT	5	
Highway Data				Sit	te Conc	litions (l	lard = 10	, Soft :	= 15)		
Average Daily	Traffic (Adt):	20,240 vehicle	es				Au	tos:	15		
Peak Hour	Percentage:	10%			Mea	lium Truc	ks (2 Axl	es):	15		
Peak H	our Volume:	2,024 vehicles	3		Hea	vy Truck	s (3+ Axl	es):	15		
Ve	hicle Speed:	35 mph		Va	hicle M	liv					
Near/Far La	ne Distance:	36 feet		ve		leType	Da		/ening	Night	Daily
Site Data									11.0%	•	92.15%
Ba	rier Height:	0.0 feet			Me	dium Tru	cks: 73	.3%	9.2%	17.6%	5.59%
Barrier Type (0-W		0.0			Н	eavy Tru	cks: 84	.4%	3.2%	12.5%	2.25%
Centerline Di	st. to Barrier:	44.0 feet		No	vise So	urce Ele	vations (in foot	,		
Centerline Dist.	to Observer:	44.0 feet		/10	//30 00	Autos:			·		
Barrier Distance	to Observer:	0.0 feet			Modium	Trucks:					
Observer Height (Above Pad):	5.0 feet				/ Trucks:			ade Adi	ustment:	0.0
Pa	ad Elevation:	0.0 feet									
	ad Elevation:	0.0 feet		La	ne Equ		Distance		t)		
1	Road Grade:	0.0%				Autos:	40.46				
	Left View:	-90.0 degree				Trucks:					
	Right View:	90.0 degree	es		Heavy	/ Trucks:	40.26	2			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distand	e	Finite F	Road	Fresnel	Ba	rrier Atte	en Ber	m Atten
Autos:	64.30	1.96		1.28		-1.20	-4	61	0.0	00	0.000
Medium Trucks:	75.75	-10.21		1.31		-1.20	-4	87	0.0	00	0.000
Heavy Trucks:	81.57	-14.15		1.31		-1.20	-5	50	0.0	00	0.000
	01.57										
Unmitigated Noise		out Topo and	barrier at	tenua	ation)						
Unmitigated Noise VehicleType				t enua q Eve		Leq N		Lo	in	CI	IEL
	e Levels (with	Leq Day	64.4				ight 57.8	Lo	65.8		66.3
VehicleType Autos: Medium Trucks:	e Levels (with Leq Peak Hou 66 65	Leq Day	64.4 63.5		ning 62.0 60.5		<i>ight</i> 57.8 58.6	Lo	65.8 66.0		66.3 66.3
VehicleType Autos: Medium Trucks: Heavy Trucks:	e Levels (with Leq Peak Hou 66 65 67	.7 .5	64.4 63.5 66.0		ning 62.0 60.5 57.8		<i>ight</i> 57.8 58.6 58.9	Lo	65.8 66.0 67.0		66.3 66.3 67.1
VehicleType Autos: Medium Trucks:	e Levels (with Leq Peak Hou 66 65	.7 .5	64.4 63.5		ning 62.0 60.5		<i>ight</i> 57.8 58.6	Lo	65.8 66.0		66.3 66.3 67.1
VehicleType Autos: Medium Trucks: Heavy Trucks:	E Levels (with Leg Peak Hou 66 65 67 71	Leq Day .3 .7 .5 .3	2 Lee 64.4 63.5 66.0 69.5	q Eve	ning 62.0 60.5 57.8 65.2	Leg N	ight 57.8 58.6 58.9 63.2		65.8 66.0 67.0 71.1		66.3 66.3 67.1 71.4
VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	E Levels (with Leg Peak Hou 66 65 67 71	II Leq Day	Lee 64.4 63.5 66.0 69.5	q Eve 70 dB	ning 62.0 60.5 57.8 65.2	Leq N 65 d	ight 57.8 58.6 58.9 63.2 BA	60 c	65.8 66.0 67.0 71.1	55	66.3 66.3 67.1 71.4 dBA
VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	E Levels (with Leg Peak Hou 66 65 67 71	II Leq Day	2 Lee 64.4 63.5 66.0 69.5	q Eve	ning 62.0 60.5 57.8 65.2	Leg N	ight 57.8 58.6 58.9 63.2 BA		65.8 66.0 67.0 71.1 //BA	55	66.3 66.3 67.1 71.4

Tuesday, July 02, 2019

	FH\	WA-RD-77-108	HIGHW	AY N	DISE PF	REDICTIC	N MC	DEL			
Scenari	o: OY With Pr	roject				Project N	lame:	Palomi	no		
Road Nam	e: First St.					Job Nu	mber:	11795			
Road Segmer	nt: e/o Mounta	iin Av.									
	SPECIFIC IN	IPUT DATA								S	
Highway Data				S	ite Con	ditions (F			,		
Average Daily	. ,	9,774 vehicl	es					Autos:	15		
	Percentage:	10%				dium Truc			15		
	our Volume:	977 vehicle	s		He	avy Truck	s (3+	Axles):	15		
	hicle Speed:	35 mph		ν	ehicle l	Nix					
Near/Far La	ne Distance:	36 feet			Vehi	icleType		Day	Evening	Night	Daily
Site Data						AL	itos:	76.3%	11.0%	12.6%	90.41%
Bar	rier Height:	0.0 feet			Me	edium Tru	cks:	73.3%	9.2%	17.6%	6.08%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Tru	cks:	84.4%	3.2%	12.5%	3.51%
Centerline Dis		44.0 feet		۸	oise Sc	ource Ele	vatior	is (in fe	et)		
Centerline Dist.		44.0 feet				Autos:		000			
Barrier Distance		0.0 feet			Mediur	n Trucks:	2	297			
Observer Height (,	5.0 feet			Heav	y Trucks:	8	004	Grade Ad	justment	0.0
	d Elevation:	0.0 feet				uivalent L		(! (
	ad Elevation:	0.0 feet		-	апе Еч	Autos:		460	eel)		
,	Road Grade: Left View:	0.0%			Madiu	Autos: n Trucks:		.460			
	Right View:	-90.0 degre 90.0 degre				y Trucks:		241			
FHWA Noise Mode	5	•									
VehicleType	REMEL	s Traffic Flow	Dista	nce	Finite	Road	Fres	nel	Barrier Att	en Bei	m Atten
Autos:	64.30	-1.28		1.28		-1.20		-4.61		000	0.00
Medium Trucks:	75.75	-13.01		1.31		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	81.57	-15.39		1.31		-1.20		-5.50	0.0	000	0.00
Unmitigated Noise	e Levels (with	out Topo and	barrier	attenı	ation)						
VehicleType	Leq Peak Hou	ur Leq Day	/ L	eq Ev	ening	Leq N	ight		Ldn		NEL
Autos:	63		61.1		58.7		54.	-	62.6	-	63.
Medium Trucks:	62		60.7		57.7		55.		63.2	-	63.
Heavy Trucks:		i.3	64.8		56.5		57.		65.8		65.
Vehicle Noise:	69	0.1	67.4		62.5		61.	D	68.8	3	69.
Centerline Distance	e to Noise Co	ontour (in fee)		1			1		1	
				70 d	BA	65 dl		6	0 dBA		dBA
		-	Ldn: NFL:	37 38		79 83			171 178	-	168 183

	FHV	VA-RD-77-108	HIGHW	AY N	DISE PF	REDICTIO	N MOI	DEL			
Scenar	io: OY With Pr	oject				Project N	ame: F	Palomi	no		
Road Nam	e: First St.					Job Nur	nber: 1	1795			
Road Segme	nt: w/o Hamne	r Av.									
	SPECIFIC IN	IPUT DATA								s	
Highway Data				S	ite Con	ditions (H	lard =	10, So	ft = 15)		
Average Daily	Traffic (Adt):	10,426 vehicle	S				1	Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Truc	ks (2 A	xles):	15		
Peak H	lour Volume:	1,043 vehicles			He	avy Truck	s (3+ A	xles):	15		
Ve	hicle Speed:	35 mph		v	ehicle l	Mix					
Near/Far La	ne Distance:	36 feet		F		icleType		Dav	Evening	Night	Dailv
Site Data								76.3%		•	90.50%
	rrier Height:	0.0 feet			Me	dium Tru	cks:	73.3%		17.6%	
Barrier Type (0-W	•	0.0			F	leavy Tru	cks:	84.4%	3.2%	12.5%	3.449
Centerline Di		44.0 feet									
Centerline Dist.		44.0 feet		N	oise Sc	ource Ele			et)		
Barrier Distance		0.0 feet				Autos:		000			
Observer Height	Above Pad):	5.0 feet				n Trucks:		97			
	ad Flevation:	0.0 feet			Heav	y Trucks:	8.0	04	Grade Ad	justment.	0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent L	Distand	e (in f	eet)		
	Road Grade:	0.0%				Autos:	40.4	160			
	Left View:	-90.0 degree	s		Mediur	n Trucks:	40.2	241			
	Right View:	90.0 degree			Heav	y Trucks:	40.2	262			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	64.30	-1.00		1.28		-1.20		4.61	0.0	000	0.00
Medium Trucks:	75.75	-12.74		1.31		-1.20		4.87	0.0	000	0.00
Heavy Trucks:	81.57	-15.20		1.31		-1.20		-5.50	0.0	000	0.00
Unmitigated Nois	e Levels (with	out Topo and L	arrier	attenu	ation)						
VehicleType	Leq Peak Hou			.eq Ev		Leq N			Ldn		VEL
Autos:	63		1.4		59.0		54.9		62.9		63.
Medium Trucks:	63		1.0		58.0		56.0		63.4		63.
Heavy Trucks:			4.9		56.7		57.9		65.9		66.
Vehicle Noise:	69	.4 6	7.6		62.8		61.2		69.1	I	69.
Centerline Distan	ce to Noise Co	ontour (in feet)			- 1						
			<u> </u>	70 di		65 dE		6	0 dBA		dBA
			dn:	38		82			177		82
		CN	EL:	40		86			185	3	97

Tuesday, July 02, 2019

0						Designed		Delemi			
	o: OY With Pr					Project N Job Nu			ino		
Road Segmer	e: Hidden Va					<i>JOD INU</i>	nber.	11795			
Ŷ	SPECIFIC IN	•		1		NI				-	
JIE 3		PUIDAIA		5	Site Con	ditions (3	
Average Daily	Traffic (Adt):	24.452 vehicle	s					Autos:	15		
,	Percentage:	10%			Mee	dium True	:ks (2 A	(xles):	15		
	our Volume:	2,445 vehicles			Hea	avy Truck	s (3+ A	Axles):	15		
Vel	hicle Speed:	45 mph			(-hi-l-		-	-			
Near/Far Lar	ne Distance:	52 feet		-	Vehicle I	icleType		Day	Evening	Night	Daily
Site Data				_	Veni			76.3%	•	12.6%	
				_	M	Al dium Tri		73.3%		12.6%	
	rier Height:	0.0 feet				leavy Tru		84.4%		12.5%	
Barrier Type (0-W	. ,	0.0				ieavy III	643.	04.470	3.2 /0	12.370	2.207
Centerline Dis		50.0 feet		1	Voise So	ource Ele	vation	s (in fe	eet)		
Centerline Dist.		50.0 feet				Autos:	0.0	000			
Barrier Distance		0.0 feet			Mediur	n Trucks.	2.2	297			
Observer Height (Above Pad): d Flevation:	5.0 feet 0.0 feet			Heav	y Trucks:	8.0	004	Grade Adj	iustment	t: 0.0
	d Elevation: d Elevation:	0.0 feet			ano Fau	uivalent	Distan	co (in i	faat)		
	la Elevation: Road Grade:	0.0 reet		-	Lune Ly	Autos					
r	l eft View:		-		Madium	n Trucks.					
	Right View:	-90.0 degree 90.0 degree				y Trucks.					
	Night view.	50.0 degree	5		near	y mucho.	42.0	514			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow	Distan		Finite		Fresr		Barrier Atte		rm Atten
Autos:	68.46	1.69		0.88	-	-1.20		-4.65	0.0		0.000
Medium Trucks:	79.45	-10.43		0.91		-1.20		-4.87	0.0		0.000
Heavy Trucks:	84.25	-14.37		0.91	1	-1.20		-5.43	0.0	00	0.000
I Immitianted Maine		out Topo and	-								
	Leq Peak Hou	,		≥q Eι	/ening	Leq N	<u> </u>		Ldn	-	NEL
VehicleType		.8 6	67.9		65.5		61.3		69.3		69.8
VehicleType Autos:	69				63.6		61.6		69.0		69.4
VehicleType Autos: Medium Trucks:	68		6.6		59.8		61.0)	69.1		69.2
VehicleType Autos: Medium Trucks: Heavy Trucks:	68 69	.6 6	68.1								
VehicleType Autos: Medium Trucks:	68	.6 6			68.3		66.1		73.9)	74.2
VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	68 69 74	.6 6	8.1 72.3				66.1		73.9)	74.2
VehicleType Autos: Medium Trucks: Heavy Trucks:	68 69 74	.6 (.2) ontour (in feet)	68.1 72.3	70 a	68.3 IBA	65 d	ВА		i0 dBA	55	i dBA
VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	68 69 74	.6 (.2) ontour (in feet)	8.1 72.3	70 a 9'	68.3 IBA	65 d 19	ВА			55	74.2 5 dBA 912

	FH\	VA-RD-77-108	HIGHWA	Y NOISE	PREDICT	ION MODEL			
	o: OY With Pr 9: Hidden Va t: e/o E. Park	lley Pkwy.				Name: Palo lumber: 1179			
SITE S	SPECIFIC IN	IPUT DATA				IOISE MOD		S	
Highway Data				Site C	Conditions	(Hard = 10, 3	Soft = 15)		
Average Daily	Traffic (Adt):	25,493 vehicle	s			Auto	s: 15		
Peak Hour I	Percentage:	10%			Medium Tr	ucks (2 Axles): 15		
Peak Ho	our Volume:	2,549 vehicles	6		Heavy Tru	cks (3+ Axles): 15		
Vet	nicle Speed:	45 mph		Vahia	le Mix				
Near/Far Lar	e Distance:	52 feet			/ehicleType	e Day	Evening	Night	Daily
Site Data				-		Autos: 76.3	•	12.6%	
Par	rier Height:	0.0 feet			Medium T	rucks: 73.3	% 9.2%	17.6%	5.74%
Barrier Type (0-Wa		0.0			Heavy T	rucks: 84.4	% 3.2%	12.5%	2.32%
Centerline Dis	. ,	50.0 feet		Mala		laurationa (in	6		
Centerline Dist. t	o Observer:	50.0 feet		NOISE	Auto	levations (in s: 0.000	reet)		
Barrier Distance t	o Observer:	0.0 feet			Auto dium Truck				
Observer Height ()	Above Pad):	5.0 feet					Grade Ad	livetment	
Pa	d Elevation:	0.0 feet		н	eavy Truck	s: 8.004	Grade Ad	jusunem.	0.0
Roa	d Elevation:	0.0 feet		Lane	Equivalen	t Distance (ii	n feet)		
F	Road Grade:	0.0%			Auto	s: 43.000			
	Left View:	-90.0 degree	s	Me	dium Truck	s: 42.794			
	Right View:	90.0 degree	s	Н	eavy Truck	s: 42.814			
FHWA Noise Mode	Calculation	s							
VehicleType	REMEL	Traffic Flow	Distan	ce Fir	nite Road	Fresnel	Barrier Att	ten Beri	m Atten
Autos:	68.46	1.86		0.88	-1.20	-4.65	5 0.0	000	0.00
Medium Trucks:	79.45	-10.18		0.91	-1.20	-4.8	7 0.0	000	0.000
Heavy Trucks:	84.25	-14.13		0.91	-1.20	-5.43	3 0.0	000	0.00
Unmitigated Noise			barrier a	ttenuatio	n)				
VehicleType	Leq Peak Hou	, ,		q Evening		Night	Ldn	-	VEL
Autos:	70		68.0		5.7	61.5	69.5		70.
Medium Trucks:	69		6.8		3.8	61.9	69.3	-	69.
Heavy Trucks:	69		68.3		D.1	61.3	69.3	-	69.
Vehicle Noise:	74	.4	72.5	6	8.5	66.3	74.1	1	74.
Centerline Distanc	e to Noise Co	ontour (in feet,							
Contonnie Biotane						dBA	60 dBA	55	dBA
Contornino Diotano				70 dBA		-			
Contor mile Dictante			Ldn: IFI :	94 99	2	03 13	438 459	9	43 89

Tuesday, July 02, 2019

	FH\	WA-RD-77-108	HIGHW	AY NO	DISE PR	EDICTIO	N MODEL			
Scenari	io: HY Withou	t Project				Project Na	ame: Palo	mino		
Road Nam	e: River Rd.					Job Nun	nber: 1179	95		
Road Segmer	nt: s/o Corydo	n St.								
	SPECIFIC IN	NPUT DATA						EL INPUT	S	
Highway Data				S	ite Con	ditions (H	ard = 10,	Soft = 15)		
Average Daily	Traffic (Adt):	34,803 vehicl	es				Auto	s: 15		
Peak Hour	Percentage:	10%			Mee	dium Truck	ks (2 Axles	s): 15		
Peak H	our Volume:	3,480 vehicle	s		Hea	avy Trucks	s (3+ Axles	s): 15		
Ve	hicle Speed:	45 mph		v	ehicle I	Nix				
Near/Far La	ne Distance:	52 feet		Ē		cleType	Day	Evening	Night	Daily
Site Data						Aut	os: 76.3	% 11.0%	12.6%	91.889
Bai	rier Height:	0.0 feet			Me	dium Truc	ks: 73.3	% 9.2%	17.6%	5.79%
Barrier Type (0-W	all, 1-Berm):	0.0			H	leavy Truc	ks: 84.4	% 3.2%	12.5%	2.33%
Centerline Dis		50.0 feet		N	oise So	urce Elev	ations (in	feet)		
Centerline Dist.		50.0 feet				Autos:	0.000	,		
Barrier Distance		0.0 feet			Mediur	n Trucks:	2.297			
Observer Height (,	5.0 feet			Heav	v Trucks:	8.004	Grade Ad	ljustmen	t: 0.0
	ad Elevation:	0.0 feet		Ŀ	_				-	
	ad Elevation:	0.0 feet		L	ane Equ	ivalent D		n teet)		
,	Road Grade:	0.0%				Autos:	43.000			
	Left View:	-90.0 degre				n Trucks:	42.794			
	Right View:	90.0 degre	es		Heav	y Trucks:	42.814			
FHWA Noise Mode		-								
VehicleType	REMEL	Traffic Flow	Distan		Finite		Fresnel	Barrier At		rm Atten
Autos:	68.46	•·		0.88		-1.20	-4.6		000	0.00
Medium Trucks:	79.45			0.91		-1.20	-4.8		000	0.00
Heavy Trucks:	84.25			0.91		-1.20	-5.4	3 0.	000	0.00
Unmitigated Noise			-		/					
VehicleType Autos:	Leq Peak Hou		69.4	eq Eve	ening 67.0	Leq Ni	ght 62.8	Ldn 70.		NEL 71.
Autos: Medium Trucks:			69.4 68.2		67.0		62.8 63.3	70.	-	71. 71.
			68.2 69.7		65.2 61.5		63.3 62.6	70.		71.
Heavy Trucks: Vehicle Noise:	71		69.7 73.9		69.9		67.7	70.		70.
					69.9		07.7	75.	5	75.
Centerline Distance	ce to NOISE C	ontour (in feet)	70 di	BA	65 dB	A	60 dBA	5	5 dBA
			I dn:	116		251		541		.165
		C	VEL:	122	-	263		567		.222
		0.			-	200		/		,

	FHV	VA-RD-77-108 I	HIGHW	AY NO	DISE PF	REDICTI	ом мо	DEL			
	io: HY Without	t Project				Project					
	e: River Rd. nt: s/o Lincoln	Av.				JOD NL	ımber:	11795			
	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data				S	ite Con	ditions ('Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	19,023 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	cks (2 /	Axles):	15		
Peak H	lour Volume:	1,902 vehicles			Hea	avy Truc	ks (3+ /	Axles):	15		
Ve	hicle Speed:	45 mph		V	ehicle I	Mix					
Near/Far La	ne Distance:	10 feet		v		icleType		Day	Evening	Night	Daily
Site Data					Veni		utos:	76.3%	•	•	91.88
					M	edium Tri		73.3%		17.6%	
	rrier Height:	0.0 feet				leavy Tri		84.4%		12.5%	
Barrier Type (0-W		0.0			'	ieavy In	1043.	04.470	5.270	12.370	2.55
Centerline Di		30.0 feet		N	oise So	ource Ele	evation	s (in fe	eet)		
Centerline Dist.		30.0 feet				Autos	: 0.	000			
Barrier Distance		0.0 feet			Mediur	n Trucks	: 2.	297			
Observer Height		5.0 feet			Heav	y Trucks	: 8.	004	Grade Ad	justment.	0.0
	ad Elevation:	0.0 feet									
	ad Elevation:	0.0 feet		L	ane Equ	uivalent		<u> </u>	feet)		
	Road Grade:	0.0%				Autos		000			
	Left View:	-90.0 degree				n Trucks		704			
	Right View:	90.0 degree	s		Heav	y Trucks	: 29.	733			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atter
Autos:	68.46	0.59		3.22		-1.20		-4.49	0.0	000	0.00
Medium Trucks:	79.45	-11.42		3.29		-1.20		-4.86	0.0	000	0.00
Heavy Trucks:	84.25	-15.36		3.28		-1.20		-5.77	0.0	000	0.00
Unmitigated Nois	e Levels (with	out Topo and L	barrier	attenu	ation)						
VehicleType	Leq Peak Hou			.eq Eve		Leq I			Ldn		VEL
Autos:	71		9.1		66.7		62.5		70.6		71
Medium Trucks:	70		8.0		65.0		63.0		70.4		70.
Heavy Trucks:			9.4		61.2		62.4	Ļ	70.4		70
Vehicle Noise:	75	.5 7	3.7		69.6		67.4	Ļ	75.3	3	75
Centerline Distan	ce to Noise Co	ontour (in feet)			1						
			_ L_	70 dl		65 c		6	60 dBA		dBA
		L	.dn:	67		14	5		312	6	72
			EL:	70		15			327		05

Tuesday, July 02, 2019

Scenario: HY With Road Name: Parkridg Road Segment: n/o Seco	e Av.				Project N Job Nur			ino		
SITE SPECIFIC Highway Data	INPUT DATA		9	Site Con	NC ditions (H			L INPUT	S	
Average Daily Traffic (Adt) Peak Hour Percentage Peak Hour Volume Vehicle Speed Near/Far Lane Distance	10% 315 vehicles 25 mph			Mee Hee /ehicle I	dium Truc avy Truck	ks (2 Å s (3+ Å	Autos: Axles):	15 15	Night	Daily
Site Data			_			itos:	76.3% 73.3%	11.0%	12.6% 17.6%	91.88
Barrier Height Barrier Type (0-Wall, 1-Berm) Centerline Dist. to Barrier	. 0.0				leavy Tru		73.3% 84.4%		12.5%	
Centerline Dist. to Observer Barrier Distance to Observer Observer Height (Above Pad) Pad Elevation Road Elevation Road Grade Left View	0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0%	15		Mediur Heav ane Equ	Autos: Autos: n Trucks: y Trucks: uivalent L Autos: n Trucks:	0.0 2.2 8.0 Distan o 30.0	297 204	Grade Ad	justment	± 0.0
Right View		s		Heav	y Trucks:	29.	733			
VehicleType REMEL	Traffic Flow	Distar	се	Finite	Road	Fresr	iel	Barrier Att	en Bei	rm Atte
Autos: 58. Medium Trucks: 70. Heavy Trucks: 77.	-16.67		3.22 3.29 3.28	9	-1.20 -1.20 -1.20		-4.49 -4.86 -5.77	0.0	000 000 000	0.0 0.0 0.0
Unmitigated Noise Levels (w										
VehicleType Leq Peak H			eq Ev	ening	Leq N	<u> </u>		Ldn		NEL
Autos: Medium Trucks: Heavy Trucks:	56.2 5	54.1 54.1 57.9		51.7 51.1 49.7		47.6 49.1 50.9		55.6 56.5 58.9	5	56 56 59
Vehicle Noise:	62.3 6	60.5		55.7	-	54.2	2	62.0)	62
Centerline Distance to Noise	Contour (in feet)	1								
			70 d	IBA	65 dE	BA	6	0 dBA	55	i dBA
	-	Ldn: IEL:	9 9		19 20			41 43		88 92

FH	WA-RD-77-108 HIG	HWAY N	IOISE PREDIC	TION MODEL		
Scenario: HY Withou Road Name: Parkridge Road Segment: s/o Secon	Av.			et Name: Palo Number: 1179		
SITE SPECIFIC I	NPUT DATA			NOISE MOD	EL INPUT	S
Highway Data			Site Condition:	s (Hard = 10,	Soft = 15)	
Average Daily Traffic (Adt):	9,222 vehicles			Auto	s: 15	
Peak Hour Percentage:	10%		Medium T	rucks (2 Axles	s): 15	
Peak Hour Volume:	922 vehicles		Heavy Tru	ucks (3+ Axles	s): 15	
Vehicle Speed:	40 mph	-	Vehicle Mix			
Near/Far Lane Distance:	36 feet	-	Venicle witx VehicleTyp	e Day	Evening	Night Daily
Site Data			venicieryp	Autos: 76.3	•	12.6% 91.88%
	0.0 feet		Medium			17.6% 5.79%
Barrier Height: Barrier Type (0-Wall, 1-Berm):	0.0 reet		Heavy		% 3.2%	12.5% 2.33%
Centerline Dist. to Barrier:	44.0 feet		,			
Centerline Dist. to Observer:	44.0 feet	4	Noise Source E		feet)	
Barrier Distance to Observer:	0.0 feet		Auto			
Observer Height (Above Pad):	5.0 feet		Medium Truc			
Pad Elevation:	0.0 feet		Heavy Truc	ks: 8.004	Grade Adj	iustment: 0.0
Road Elevation:	0.0 feet		Lane Equivaler	nt Distance (i	n feet)	
Road Grade:	0.0%	F	Auto	os: 40.460	,	
l eft View:	-90.0 degrees		Medium Truc	ks: 40.241		
Right View:	90.0 degrees		Heavy Truck	ks: 40.262		
FHWA Noise Model Calculation	ns					
VehicleType REMEL	Traffic Flow D	listance	Finite Road	Fresnel	Barrier Att	en Berm Atten
Autos: 66.51	-2.05	1.2	8 -1.20	-4.6	1 0.0	000 0.000
Medium Trucks: 77.72	-14.05	1.3	1 -1.20	-4.8	7 0.0	000 0.000
Heavy Trucks: 82.99	-18.00	1.3	1 -1.20	-5.5	0 0.0	0.000
Unmitigated Noise Levels (with		· · · · · · · · · · · · · · · · · · ·	,			
VehicleType Leq Peak Ho		Leg E	ů	n Night	Ldn	CNEL
	4.5 62.6		60.2	56.0	64.0	
	3.8 61.6		58.6	56.7	64.1	
	5.1 63.6		55.3	56.5	64.6	
Vehicle Noise: 6	9.3 67.4		63.3	61.2	69.0) 69.3
Centerline Distance to Noise C	Contour (in feet)	-				
		70 0		5 dBA	60 dBA	55 dBA
	Ldn			81	175	378
	CNEL	: 4	0	85	184	396

	FH\	WA-RD-77-108	HIGHW	/AY N	IOISE PF	REDICTIO	N MODEL			
Scenari	o: HY Withou	t Project				Project Na	ame: Palor	nino		
Road Name	e: Parkridge	Av.				Job Nurr	nber: 1179	5		
Road Segmen	at: s/o Lincoln	Av.								
	SPECIFIC IN	NPUT DATA						EL INPUTS	S	
Highway Data				4	Site Con	ditions (H	ard = 10, S	oft = 15)		
Average Daily	Traffic (Adt):	10,918 vehicl	es				Autos	: 15		
Peak Hour	Percentage:	10%			Me	dium Truck	(2 Axles)	: 15		
Peak He	our Volume:	1,092 vehicle	s		He	avy Trucks	(3+ Axles)	: 15		
Vel	hicle Speed:	40 mph			Vehicle I	Mix				
Near/Far Lar	ne Distance:	36 feet		-		cleType	Dav	Evening	Night	Daily
Site Data						Aut	os: 76.3	0	12.6%	
Bar	rier Height:	0.0 feet			Me	edium Truc	ks: 73.39	6 9.2%	17.6%	5.799
Barrier Type (0-Wa	all, 1-Berm):	0.0			ŀ	leavy Truc	ks: 84.49	6 3.2%	12.5%	2.33
Centerline Dis		44.0 feet		1	Noise Sc	ource Elev	ations (in	feet)		
Centerline Dist. t		44.0 feet				Autos:	0.000	,		
Barrier Distance t		0.0 feet			Mediur	n Trucks:	2.297			
Observer Height (/	,	5.0 feet			Heav	y Trucks:	8.004	Grade Adj	ustment:	0.0
	d Elevation:	0.0 feet		H						
	d Elevation:	0.0 feet		1	Lane Eq		istance (in	feet)		
F	Road Grade:	0.0%				Autos:	40.460			
	Left View:	-90.0 degre				n Trucks:	40.241			
	Right View:	90.0 degre	es		Heav	y Trucks:	40.262			
FHWA Noise Mode	el Calculation	IS								
VehicleType	REMEL	Traffic Flow	Dista		Finite		Fresnel	Barrier Atte		m Atten
Autos:	66.51	-1.31		1.28	-	-1.20	-4.61	0.0		0.00
Medium Trucks:	77.72			1.3		-1.20	-4.87			0.00
Heavy Trucks:	82.99	-17.26		1.3	1	-1.20	-5.50	0.0	00	0.00
Unmitigated Noise					<u> </u>				T	
	Leq Peak Hou			.eq Ei	/ening	Leq Nig		Ldn		IEL
Autos:			63.3		60.9		56.7	64.8		65.
Medium Trucks:			62.4		59.4		57.4	64.8		65.
Heavy Trucks:			64.3		56.1		57.3	65.3		65.
Vehicle Noise:	70		68.2		64.0		61.9	69.7		70.
Centerline Distanc	e to Noise C	ontour (in fee	t)	-					e-	
				70 0		65 dB	A	60 dBA		dBA
			Ldn:	4	2	91		196	43	23
		-	NFI :	4		95		206		43

	FHV	VA-RD-77-108 I	HIGHV	VAY NO	DISE PF	REDICTIC	N MOI	DEL			
	o: HY Without e: Pacific Av.	Project				Project N Job Nu			no		
	e: Pacific AV. nt: s/o Second	St.				JOD INUI	nber.	1795			
SITE	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				S	ite Con	ditions (F	lard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	659 vehicle	5				1	Autos:	15		
Peak Hour	Percentage:	10%			Mee	dium Truc	ks (2 A	xles):	15		
Peak H	our Volume:	66 vehicles			Hea	avy Truck	s (3+ A	xles):	15		
Vei	hicle Speed:	25 mph		V	ehicle I	Ai-					
Near/Far Lar	ne Distance:	10 feet		-		cleTvpe		Dav	Evening	Night	Daily
Site Data								76.3%		12.6%	
Bar	rier Height:	0.0 feet			Me	dium Tru	cks:	73.3%	9.2%	17.6%	5.79
Barrier Type (0-W	•	0.0 1001			ŀ	leavy Tru	cks:	84.4%	3.2%	12.5%	2.33
Centerline Dis		30.0 feet		_							
Centerline Dist.		30.0 feet		N	oise So	urce Ele			eet)		
Barrier Distance	to Observer:	0.0 feet				Autos:					
Observer Height (Above Pad):	5.0 feet				n Trucks:					
	d Elevation:	0.0 feet			Heav	y Trucks:	8.0	004	Grade Ad	justment.	0.0
Roa	d Elevation:	0.0 feet		L	ane Equ	uivalent I	Distand	e (in :	feet)		
F	Road Grade:	0.0%				Autos:	30.0	000			
	Left View:	-90.0 degree	s		Mediur	n Trucks:	29.7	04			
	Right View:	90.0 degree	S		Heav	y Trucks:	29.7	733			
FHWA Noise Mode	el Calculation:	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atter
Autos:	58.73	-11.46		3.22		-1.20		4.49	0.0	000	0.00
Medium Trucks:	70.80	-23.47		3.29		-1.20		4.86	0.0	000	0.00
Heavy Trucks:	77.97	-27.41		3.28		-1.20		-5.77	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and L	oarrier	attenu	ation)						
	Leq Peak Hou			Leq Eve		Leq N			Ldn		VEL
Autos:	49.		7.3		44.9		40.8		48.8		49
Medium Trucks:	49.		7.3		44.3		42.3		49.7		50
Heavy Trucks:	52.		1.1		42.9		44.1		52.1		52
Vehicle Noise:	55		3.7		48.9		47.4		55.2	2	55
Centerline Distanc	e to Noise Co	ontour (in feet)									
			_ L	70 dl	ЗA	65 dl	ЗA	6	0 dBA		dBA
			.dn: EL:	3		7			14		31
									15		32

Tuesday, July 02, 2019

Sconorio	HY Without	Project				Project N	ama: Po	lomin	0		
Road Name:							nber: 11		10		
Road Segment:						000 140		190			
SITE SP	ECIFIC IN	PUT DATA				NC	ISE MC	DEL	INPUT:	s	
Highway Data				5	Site Con	ditions (H	lard = 10), Soi	ft = 15)		
Average Daily Tra	affic (Adt):	13,286 vehicles	s				Au	tos:	15		
Peak Hour Pe	ercentage:	10%			Mee	dium Truc	ks (2 Axl	es):	15		
Peak Hou	r Volume:	1,329 vehicles			Hea	avy Truck	s (3+ Axl	es):	15		
Vehic	le Speed:	40 mph			/ehicle I	<i>liy</i>					
Near/Far Lane	Distance:	36 feet		-		cleType	Da	ay	Evening	Night	Daily
Site Data						Au	tos: 76	.3%	11.0%	12.6%	91.889
Barrie	er Height:	0.0 feet			Me	dium Tru	cks: 73	.3%	9.2%	17.6%	5.79%
Barrier Type (0-Wall,		0.0			H	leavy Tru	cks: 84	.4%	3.2%	12.5%	2.33
Centerline Dist.		44.0 feet		1	loise So	urce Ele	ations (in fee	et)		
Centerline Dist. to		44.0 feet				Autos:	0.00)			
Barrier Distance to		0.0 feet			Mediur	n Trucks:	2.29	7			
Observer Height (Ab	,	5.0 feet			Heav	y Trucks:	8.00	4 (Grade Ad	iustment	0.0
	Elevation:	0.0 feet			- Free			() -			
	Elevation:	0.0 feet		-	ane Equ	ivalent L			et)		
	ad Grade:	0.0%				Autos:	40.46	-			
	Left View:	-90.0 degrees				n Trucks:	40.24				
R	ight View:	90.0 degrees	s		Heav	y Trucks:	40.26	2			
FHWA Noise Model					-						
VehicleType Autos:	REMEL 66.51	Traffic Flow -0.46	Dist	ance 1.28	Finite	-1.20	Fresnel	61	Barrier Att		m Atten
Autos: Medium Trucks:	77.72	-0.46		1.28		-1.20		.61 .87	0.0		0.00
Heavy Trucks:	82.99	-12.47		1.31		-1.20		.67	0.0		0.00
						-1.20	-5	.50	0.0	000	0.00
Unmitigated Noise L VehicleType Le	evels (with eq Peak Hou			Leg Ev		Leg N	aht		Ldn	0	NEL
Autos:	66.		4.2	LOYLV	61.8	Login	57.6	-	65.6	-	66
Medium Trucks:	65.		3.2		60.2		58.3		65.7		66.
Heavy Trucks:	66.	7 6	5.2		56.9		58.1		66.2	2	66.
Vehicle Noise:	70.		9.0		64.8		62.8		70.6	-	70.
Centerline Distance	to Noise Co	ntour (in feet)									
				70 d	BA	65 dE	BA	60) dBA	55	dBA
		L	.dn:	48	3	104		1	224	4	82

	FHV	VA-RD-77-108	HIGHWA	Y NOISE	PREDICT	ION MOI	DEL			
Road Nam	o: HY Without e: Hamner Av nt: s/o Third St					Name: F lumber: 1		no		
SITE	SPECIFIC IN	PUT DATA			r	IOISE N	IODE	L INPUTS	5	
Highway Data				Site C	onditions	(Hard =	10, So	ft = 15)		
Average Daily	Traffic (Adt):	48,087 vehicle	s				Autos:	15		
Peak Hour	Percentage:	10%		/	/ledium Tr	ucks (2 A	xles):	15		
Peak H	our Volume:	4,809 vehicles		1	leavy Tru	cks (3+ A	xles):	15		
Vei	hicle Speed:	40 mph		Mahla						
Near/Far Lai	ne Distance:	73 feet		Vehicl			Dav	Evening	Night	Dailu
Site Data				V	ehicleType		Day 76.3%	Evening 11.0%	Night 12.6%	Daily 91.88%
				_	Medium T		76.3% 73.3%		12.6%	5.79%
	rier Height:	0.0 feet			Heavy T		73.3% 84.4%		12.5%	2.33%
Barrier Type (0-W	. ,	0.0			neavy i	IUCKS.	04.470	3.2%	12.5%	2.33%
Centerline Dis		55.0 feet		Noise	Source E	levations	s (in fe	et)		
Centerline Dist.		55.0 feet			Auto	s: 0.0	000			
Barrier Distance		0.0 feet		Mea	ium Truck	s: 2.2	97			
Observer Height (.	,	5.0 feet		He	avy Truck	s: 8.0	04	Grade Adji	ustment:	0.0
	d Elevation:	0.0 feet		1		Distant		41		
	d Elevation:	0.0 feet		Lane	quivalen		· ·	eet)		
F	Road Grade:	0.0%			Auto	•• •••				
	Left View:	-90.0 degree			ium Truck					
	Right View:	90.0 degree	S	He	avy Truck	s: 41.2	253			
FHWA Noise Mode	el Calculation:	s								
VehicleType	REMEL	Traffic Flow	Distan	ce Fini	te Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	66.51	5.13		1.12	-1.20		-4.67	0.0	00	0.000
Medium Trucks:	77.72	-6.88		1.15	-1.20		4.87	0.0	00	0.000
Heavy Trucks:	82.99	-10.82		1.15	-1.20		-5.38	0.0	00	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier a	ttenuatior	ı)					
		r Leg Day	Le	q Evening	Leq	Night		Ldn		VEL
VehicleType	Leq Peak Hou							71.1		71.5
VehicleType Autos:	Leq Peak Hou 71.	1 1	69.6	67	.2	63.0		/1.1		
<i>,</i> ,	1	.6 6	69.6 88.6	67 65		63.0 63.7		71.1		
Autos:	. 71.	.6 (.8 (.6					71.4
Autos: Medium Trucks:	71. 70.	.6 6 .8 6 .1 7	68.6	65	.6 .4	63.7		71.1		71.4 71.7
Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	71. 70. 72. 76.	6 6 8 6 1 3	58.6 70.6 74.5	65 62 70	.6 .4 .3	63.7 63.5 68.2		71.1 71.6 76.0		71.4 71.7 76.3
Autos: Medium Trucks: Heavy Trucks:	71. 70. 72. 76.	6 6 8 6 1 3 3 5 7 7 7 7	58.6 70.6 74.5	65 62 70 70 dBA	.6 .4 .3 65	63.7 63.5 68.2 dBA		71.1 71.6 76.0	55	71.4 71.7 76.3 dBA
Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	71. 70. 72. 76.	6 (8 (1) 3) ntour (in feet)	58.6 70.6 74.5	65 62 70	.6 .4 .3 65 2	63.7 63.5 68.2		71.1 71.6 76.0	55 1,:	71.4 71.7 76.3

Tuesday, July 02, 2019

FI	IWA-RD-77-108 HIG	HWAY NO	ISE PREDICTIO	N MODEL		
Scenario: HY Witho	ut Project		Project N	ame: Palom	ino	
Road Name: Hamner			Job Nun	nber: 11795		
Road Segment: s/o Secor	nd St.					
SITE SPECIFIC	INPUT DATA		NO	ISE MODE	L INPUT	5
Highway Data		Si	te Conditions (H	lard = 10, So	oft = 15)	
Average Daily Traffic (Adt):	41,289 vehicles			Autos:	15	
Peak Hour Percentage:	10%		Medium Truci	ks (2 Axles):	15	
Peak Hour Volume:	4,129 vehicles		Heavy Trucks	s (3+ Axles):	15	
Vehicle Speed:	40 mph	Ve	hicle Mix			
Near/Far Lane Distance:	73 feet		VehicleType	Dav	Evening	Night Daily
Site Data				tos: 76.3%	0	12.6% 91.88%
Barrier Height:	0.0 feet		Medium Truc	cks: 73.3%	9.2%	17.6% 5.79%
Barrier Type (0-Wall, 1-Berm):			Heavy Truc	cks: 84.4%	3.2%	12.5% 2.33%
Centerline Dist. to Barrier:	55.0 feet	No	oise Source Elev	ations (in f	oet)	
Centerline Dist. to Observer:	55.0 feet		Autos:	0.000		
Barrier Distance to Observer:	0.0 feet		Medium Trucks:	2.297		
Observer Height (Above Pad):	5.0 feet		Heavy Trucks:	8.004	Grade Ad	ustment: 0,0
Pad Elevation:	0.0 feet					
Road Elevation:	0.0 1001	La	ne Equivalent D		feet)	
Road Grade:	0.070		Autos:	41.446		
Left View:	00.0 009.000		Medium Trucks:	41.232		
Right View:	90.0 degrees		Heavy Trucks:	41.253		
FHWA Noise Model Calculation	ons	1				
VehicleType REMEL	Traffic Flow D	Distance	Finite Road	Fresnel	Barrier Atte	en Berm Atten
Autos: 66.5		1.12	-1.20	-4.67	0.0	
Medium Trucks: 77.7		1.15	-1.20	-4.87	0.0	
Heavy Trucks: 82.9	9 -11.49	1.15	-1.20	-5.38	0.0	0.00
Unmitigated Noise Levels (with	thout Topo and bar	rier attenua	tion)			
VehicleType Leq Peak H		Leq Eve			Ldn	CNEL
	0.9 68.9		66.5	62.4	70.4	
	/0.1 68.0		65.0	63.0	70.4	
	1.5 69.9		61.7	62.9	70.9	
Vehicle Noise:	75.6 73.8	3	69.6	67.5	75.4	75.
Centerline Distance to Noise	Contour (in feet)					
		70 dB	A 65 dE		60 dBA	55 dBA
	Ldn. CNFL		270 283		582 609	1,253 1.312

F	HWA-RD-77-1	08 HIGH	HWAY NO	DISE PREDI		IODEL			
Scenario: HY With Road Name: Hamper						e: Palom r: 11795			
Road Segment: s/o First				00.	, Hambo				
SITE SPECIFIC	INPUT DAT	A					L INPUT	s	
Highway Data			S	ite Conditio	ns (Harc	l = 10, S	oft = 15)		
Average Daily Traffic (Adt,	: 32,490 veh	nicles				Autos:	15		
Peak Hour Percentage	: 10%			Medium	Trucks (2 Axles):	15		
Peak Hour Volume	: 3,249 vehi	cles		Heavy T	rucks (3	+ Axles):	15		
Vehicle Speed	: 40 mph		V	ehicle Mix					
Near/Far Lane Distance	: 73 feet			VehicleT	(00	Dav	Evening	Night	Dailv
Site Data				venicier	Autos:			•	91.88
				Mediun	Trucks:			17.6%	
Barrier Heigh		t				84.4%		12.5%	
Barrier Type (0-Wall, 1-Berm				neavy	mucho.	04.47	5 0.270	12.570	2.00
Centerline Dist. to Barrie			N	oise Source	Elevati	ons (in f	eet)		
Centerline Dist. to Observe				A	itos:	0.000			
Barrier Distance to Observe				Medium Tru	icks:	2.297			
Observer Height (Above Pad				Heavy Tru	icks:	8.004	Grade Ad	ljustment.	0.0
Pad Elevation				ane Equival	ant Diat	nnoo (in	fact)		
Road Elevation		t	Li				reet)		
Road Grade						1.446			
Left View		·		Medium Tru		1.232			
Right View	: 90.0 deg	jrees		Heavy Tru	ICKS: 2	1.253			
FHWA Noise Model Calculat									
VehicleType REMEL	Traffic Flo		stance	Finite Road		esnel	Barrier At		m Atter
Autos: 66.		42	1.12			-4.67		000	0.00
Medium Trucks: 77.			1.15	-1.2		-4.87		000	0.00
Heavy Trucks: 82.			1.15		20	-5.38	0.0	000	0.00
Unmitigated Noise Levels (w		-		<i>,</i>					
VehicleType Leq Peak I			Leq Eve		eq Night		Ldn	-	VEL
Autos:	69.9	67.9		65.5		1.3	69.		69
Medium Trucks:	69.1	66.9		63.9		2.0	69.		69
Heavy Trucks:	70.4	68.9		60.6		1.8	69.	-	70
Vehicle Noise:	74.6	72.7		68.6	6	6.5	74.	3	74
Centerline Distance to Noise	Contour (in f	et)	70 dE	24	65 dBA		60 dBA	57	dBA
		l das				1 0			
		Ldn: CNFL:	107 112		230 241		496 519		068 119

Tuesday, July 02, 2019

				-	EDICTIO					
Scenario: HY Witho					Project N			no		
Road Name: Hamner					Job Nun	nber: 1	1795			
Road Segment: s/o Hidde	in Valley Pkwy.									
SITE SPECIFIC	INPUT DATA								5	
Highway Data			Sit	e Cond	ditions (H	ard = 1	10, So			
Average Daily Traffic (Adt):	41,542 vehic	les					utos:	15		
Peak Hour Percentage:	10%				lium Truci			15		
Peak Hour Volume:	4,154 vehicle	es		Hea	vy Trucks	s (3+ A	kles):	15		
Vehicle Speed:	40 mph		Ve	hicle N	lix					
Near/Far Lane Distance:	73 feet				cleType	Ĺ	Day	Evening	Night	Daily
Site Data					Au	os: 7	6.3%	11.0%	12.6%	91.88
Barrier Height:	0.0 feet			Me	dium Truc	:ks: 7	3.3%	9.2%	17.6%	5.79
Barrier Type (0-Wall, 1-Berm):				н	eavy Truc	:ks: 8	4.4%	3.2%	12.5%	2.33
Centerline Dist. to Barrier:	55.0 feet		No	ise So	urce Elev	ations	(in fe	et)		
Centerline Dist. to Observer:	55.0 feet				Autos:	0.0				
Barrier Distance to Observer:	0.0 feet			Mediun	1 Trucks:	2.2				
Observer Height (Above Pad):	5.0 feet				/ Trucks:	8.0	04	Grade Ad	ustment	: 0.0
Pad Elevation:	0.0 feet						-			
Road Elevation:	0.0 feet		La	ne Equ	ivalent D			eet)		
Road Grade:	0.0%				Autos:	41.4				
Left View:	-90.0 degre	es	1		n Trucks:	41.2				
Right View:	90.0 degre	es		Heavy	/ Trucks:	41.2	53			
FHWA Noise Model Calculatio										
VehicleType REMEL	Traffic Flow	Distan		Finite I		Fresne		Barrier Att		m Atter
Autos: 66.5			1.12		-1.20		4.67	0.0		0.00
Medium Trucks: 77.7			1.15		-1.20		4.87	0.0		0.00
Heavy Trucks: 82.9	9 -11.46	5	1.15		-1.20	-	5.38	0.0	00	0.00
Unmitigated Noise Levels (wi										
VehicleType Leq Peak H			q Ever	~	Leq Ni	/		Ldn	-	NEL
	70.9	69.0		66.6		62.4		70.4		70
	70.2	68.0		65.0		63.1		70.5		70
	71.5	70.0		61.7		62.9		71.0		71.
Vehicle Noise:	75.7	73.8		69.6		67.6		75.4	ł	75
	Contour (in fee									
Centerline Distance to Noise			70 dB	A	65 dE	A	6	0 dBA	55	dBA
Centerline Distance to Noise				~						
Centerline Distance to Noise		Ldn: NFL:	126 132	~	271			584 612		258

	FHV	VA-RD-77-108	HIGHV	VAY N	IOISE PR	REDICT	ION MO	DEL			
	 D: HY Without E. Parkridge t: s/o Hidden ' 	e Av.					Name: lumber:		no		
SITE S	SPECIFIC IN	PUT DATA				ľ	IOISE N	IODE	L INPUT	s	
Highway Data				:	Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	raffic (Adt):	13,108 vehicle	s					Autos:	15		
Peak Hour I	• •	10%			Med	dium Tr	ucks (2 /	(xles):	15		
Peak He	our Volume:	1,311 vehicles	6		Hea	avy Tru	cks (3+ /	xles):	15		
Vet	nicle Speed:	45 mph		H	Vehicle N	Also .					
Near/Far Lar	e Distance:	36 feet		H		cleType		Day	Evening	Night	Daily
Site Data					Vern			76.3%	-	12.6%	
					Me	, dium T		73.3%		17.6%	5.79%
	rier Height:	0.0 feet 0.0				leavy T		84.4%		12.5%	
Barrier Type (0-Wa Centerline Dis	. ,	0.0 44.0 feet								12.070	2.007
Centerline Dis Centerline Dist. t		44.0 feet		1	Noise So	ource E	levation	s (in fe	et)		
Barrier Distance t		44.0 feet				Auto		000			
					Mediun	n Truck	s: 2.	297			
Observer Height (/	,	5.0 feet 0.0 feet			Heav	y Truck	s: 8.	004	Grade Ad	justment	: 0.0
	d Elevation: d Elevation:	0.0 feet		-	Lane Equ	iivələn	t Distan	no (in i	faat)		
	a Elevation: Road Grade:	0.0 feet		H	Lune Ly	Auto			001)		
F	l eft View:				Mediun						
	Right View:	-90.0 degree 90.0 degree				y Truck					
FHWA Noise Mode	l Calculation:	5									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresr	el	Barrier Att	en Ber	m Atten
Autos:	68.46	-1.03		1.28	В	-1.20		-4.61	0.0	000	0.000
Medium Trucks:	79.45	-13.04		1.31	1	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-16.98		1.31	1	-1.20		-5.50	0.0	000	0.00
Unmitigated Noise										-	
<i>,</i>	Leq Peak Hou	1 ,		Leq E	vening	Leq	Night		Ldn		NEL
Autos:	67.		65.5		63.2		59.0		67.0		67.
Medium Trucks:	66.	-	64.4		61.4		59.4		66.8	-	67.2
Heavy Trucks:	67.		65.8		57.6		58.8		66.8	-	67.0
Vehicle Noise:	71.		70.1		66.0		63.8	1	71.7	/	72.0
Centerline Distanc	e to Noise Co	ontour (in feet)	70 c	1BA	65	dBA	F	0 dBA	55	dBA
			I dn:	5			22		264		68
			VFL:	6			22 28		204		100 196
		CI	¥66.	0	0		20		211	0	

Tuesday, July 02, 2019

	FH	WA-RD-77-108	B HIGH	WAY N	IOISE PF	REDICTIC	N MC	DEL			
Scenari	o: HY Withou	t Project				Project N	lame:	Palomi	ino		
Road Name	e: Lincoln Av	-				Job Nui	mber:	11795			
Road Segmen	nt: s/o River R	Rd.									
	SPECIFIC IN	NPUT DATA								S	
Highway Data					Site Con	ditions (F					
Average Daily	, ,	28,619 vehic	les					Autos:	15		
Peak Hour		10%				dium Truc		/	15		
	our Volume:	2,862 vehicle	es		He	avy Truck	s (3+.	Axles):	15		
	hicle Speed:	40 mph			Vehicle I	Mix					
Near/Far Lar	ne Distance:	36 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						AL	itos:	76.3%	11.0%	12.6%	91.88%
Bar	rier Height:	0.0 feet			Me	edium Tru	cks:	73.3%	9.2%	17.6%	5.79%
Barrier Type (0-Wa	all, 1-Berm):	0.0			ŀ	leavy Tru	cks:	84.4%	3.2%	12.5%	2.33%
Centerline Dis		44.0 feet		5	Noise So	ource Ele	vation	is (in fe	et)		
Centerline Dist. t		44.0 feet		_		Autos:		000	,		
Barrier Distance t		0.0 feet			Mediur	n Trucks:	2.	297			
Observer Height (/	,	5.0 feet			Heav	v Trucks:	8.	004	Grade Ad	ljustment	: 0.0
	d Elevation:	0.0 feet		-		uivalent I		(!	(4)		
	d Elevation: Road Grade:	0.0 feet		Ľ	Lane Eq	Autos:		460	eel)		
F	l eft View:	0.0%			Madiu	n Trucks:		.460			
	Right View:	-90.0 degre 90.0 degre				v Trucks:		.241			
FHWA Noise Mode	Calculation	•				-					
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Ber	rm Atten
Autos:	66.51	2.87		1.2	3	-1.20		-4.61	0.0	000	0.00
Medium Trucks:	77.72	-9.13		1.3	1	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	82.99	-13.08		1.3	1	-1.20		-5.50	0.0	000	0.00
Unmitigated Noise	Levels (with	nout Topo and	l barri	er atten	uation)						
	Leq Peak Ho			Leq E		Leq N			Ldn		NEL
Autos:		9.5	67.5		65.1		60.9	-	69.0	-	69.
Medium Trucks:		3.7	66.6		63.5		61.	-	69.0		69.
Heavy Trucks:).0	68.5		60.3		61.4		69.5		69.
Vehicle Noise:		4.2	72.4		68.2		66.	1	73.9	9	74.
Centerline Distanc	e to Noise C	ontour (in fee	t)	70 (CE di	24	4		55	dD A
			I dn:	700		65 dl		, c	373		dBA 304
		~	Lan: NEL:	8	-	173	-		373 391	-	304 342
		L L	IVEL:	8	+	181			331	6	0 4 2

	FHV	/A-RD-77-108 H	IGHW	AY NO	DISE PR	EDICTIO	n Moi	DEL			
Scenario:	HY Without	Project				Project N	ame: I	Palom	ino		
Road Name:	Lincoln Av.					Job Nur	nber: '	11795			
Road Segment:	s/o Rincon	St.									
	PECIFIC IN	PUT DATA							L INPUT	s	
Highway Data				S	ite Con	ditions (H	lard =	10, Sc	oft = 15)		
Average Daily Tr	affic (Adt):	28,597 vehicles						Autos:	15		
Peak Hour P	ercentage:	10%			Med	dium Truc	ks (2 A	xles):	15		
Peak Hou	ur Volume:	2,860 vehicles			Hea	avy Trucks	s (3+ A	(xles):	15		
Vehi	cle Speed:	40 mph		v	ehicle N	Nix					
Near/Far Lane	Distance:	36 feet				cleType		Day	Evening	Night	Daily
Site Data								76.3%	•		91.88
Barri	er Height:	0.0 feet			Me	dium Truc	cks:	73.3%	9.2%	17.6%	5.79
Barrier Type (0-Wal	•	0.0			h	leavy Truc	cks:	84.4%	3.2%	12.5%	2.33
Centerline Dist.		44.0 feet									
Centerline Dist. to	Observer:	44.0 feet		N	oise So	urce Elev			eet)		
Barrier Distance to	Observer:	0.0 feet				Autos:		000			
Observer Height (A	bove Pad):	5.0 feet				n Trucks:		297	0 d A-4		
U 1	Elevation:	0.0 feet			Heav	y Trucks:	8.0	004	Grade Ad	ustment	: 0.0
Road	Elevation:	0.0 feet		L	ane Equ	ivalent D	istand	e (in i	feet)		
Ro	ad Grade:	0.0%				Autos:	40.4	460			
	Left View:	-90.0 degrees			Mediun	n Trucks:	40.2	241			
F	Right View:	90.0 degrees			Heav	y Trucks:	40.2	262			
FHWA Noise Model	Calculations	5									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atter
Autos:	66.51	2.87		1.28		-1.20		-4.61	0.0	000	0.00
Medium Trucks:	77.72	-9.14		1.31		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	82.99	-13.08		1.31		-1.20		-5.50	0.0	000	0.00
Unmitigated Noise			-								
	eq Peak Hou			eq Eve		Leq Ni			Ldn		NEL
Autos:	69.		.5		65.1		60.9		69.0		69
Medium Trucks:	68.		5.5		63.5		61.6		69.0		69
Heavy Trucks:	70.		3.5		60.3		61.4		69.5		69
Vehicle Noise:	74.		2.4		68.2		66.1		73.9)	74
Centerline Distance	to Noise Co	ntour (in feet)		70."	24	05.15					-10.4
				70 dl		65 dE		6	0 dBA		dBA
		CNI	in:	80 84		173 181			373 391		04
											42

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL Scenario: HY Without Project Project Name: Palomino Job Number: 11795 Road Name: Lincoln Av. Road Segment: s/o Railroad St SITE SPECIFIC INPUT DATA NOISE MODEL INPUTS Highway Data Site Conditions (Hard = 10, Soft = 15) Autos: 15 Average Daily Traffic (Adt): 31,768 vehicles Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Peak Hour Volume: 3,177 vehicles Heavy Trucks (3+ Axles): 15 Vehicle Speed: 40 mph Vehicle Mix Near/Far Lane Distance: 36 feet pe Day Evening Night Daily Autos: 76.3% 11.0% 12.6% 91.88% VehicleType Site Data Medium Trucks: 73.3% 9.2% 17.6% 5.79% Barrier Height: Barrier Type (0-Wall, 1-Berm): 0.0 feet 0.0 Heavy Trucks: 84.4% 3.2% 12.5% 2.33% Centerline Dist. to Barrier: Centerline Dist. to Observer: 44.0 feet Noise Source Elevations (in feet) 44.0 feet 0.000 Autos: Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297 Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.004 Grade Adjustment: 0.0 Pad Elevation: 0.0 feet Lane Equivalent Distance (in feet) Road Elevation: 0.0 feet Autos: Medium Trucks: 40.460 40.241 Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees Heavy Trucks: 40.262 FHWA Noise Model Calculations VehicleType REMEL
 MEL
 Traffic Flow
 Distance
 Finite Road

 66.51
 3.33
 1.28
 -1.20
 Fresnel -4.61 Barrier Atten Berm Atten Autos 0.000 Medium Trucks: 77.72 -8.68 1.31 -1.20 -4.87 0.000 0.000 Heavy Trucks: 82.99 -12.63 1.31 -1.20 -5.50 0.000 0.000 Unmitigated Noise Levels (without Topo and barrier attenuation) Leq Night 61.4
 VehicleType
 Leq Peak Hour
 Leq Day
 Leq Evening

 Autos:
 69.9
 67.9
 65.6
 Ldn CNEL 69.4 69.9 Medium Trucks: 69.1 67.0 64.0 62.1 69.5 69.8 Heavy Trucks: 70.5 68.9 60.7 61.9 69.9 70.1 Vehicle Noise: 74.7 74.7 72.8 74.4 68.6 66.6 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 86 186 400 862 CNEL: 90 195 419 903

	FHV	/A-RD-77-108 H	IGHWAY	NOISE PF	REDICTIO	N MODEL			
Road Nam	io: HY Without e: Lincoln Av. nt: s/o Pomona					lame: Palon mber: 11795			
*	SPECIFIC IN				NC	DISE MODE		\$	
Highway Data				Site Con		lard = 10, S		<u> </u>	
Average Daily	Traffic (Adt):	38.360 vehicles				Autos			
• •	Percentage:	10%		Me	dium Truc	ks (2 Axles)	: 15		
	•	3.836 vehicles				s (3+ Axles)			
Ve	hicle Speed:	40 mph		Vehicle I					
Near/Far La		36 feet			viix icleType	Day	Evening	Night	Daily
Site Data				ven		tos: 76.3%	•	12.6%	
				14	Au dium Tru			17.6%	
	rrier Height:	0.0 feet			leavy Tru			12.5%	
Barrier Type (0-W Centerline Dis	. ,	0.0 44.0 feet						12.570	2.0070
Centerline Dist.		44.0 feet		Noise Sc		vations (in i	eet)		
Barrier Distance		0.0 feet			Autos:	0.000			
Observer Height (5.0 feet			m Trucks:				
	ad Flevation:	0.0 feet		Heav	y Trucks:	8.004	Grade Ad	ljustment.	: 0.0
	ad Elevation:	0.0 feet		Lane Eq	uivalent L	Distance (in	feet)		
	Road Grade:	0.0%			Autos:	40.460	,		
	Left View:	-90.0 degrees		Mediur	m Trucks:	40.241			
	Right View:	90.0 degrees		Heav	y Trucks:	40.262			
FHWA Noise Mode	el Calculations	5							
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Att	ten Ber	m Atten
Autos:	66.51	4.14	1.2	28	-1.20	-4.61	0.0	000	0.000
Medium Trucks:	77.72	-7.86	1.3		-1.20	-4.87		000	0.000
Heavy Trucks:	82.99	-11.81	1.3		-1.20	-5.50	0.0	000	0.000
Unmitigated Noise									
VehicleType	Leq Peak Hou			Evening	Leq N	0	Ldn		NEL
Autos:	70.			66.4		62.2	70.2		70.7
Medium Trucks:	70. 71.		7.8 9.8	64.8 61.5		62.9 62.7	70.3 70.8		70.6 70.9
Heavy Trucks: Vehicle Noise:	71.		9.8 3.6	69.4		67.4	70.0		70.9
			5.0	09.4		67.4	75.	2	75.5
Centerline Distant	e lo Noise Co	mour (in reet)	70	dBA	65 dF	RA	60 dBA	55	dBA
		17		98	211		454		78
		CNE		02	221		475	-	024
		0.12						.,	

EHWA-BD-77-109 HIGHWAY NOISE PREDICTION MODE

Tuesday, July 02, 2019

Tuesday, July 02, 2019

Tuesday, July 02, 2019

151

	FH\	WA-RD-77-108	HIGH	NAY NO	DISE PI	REDICTI	ON MC	DEL			
Scenari	o: HY Withou	t Project				Project I	Name:	Palom	ino		
	e: Second St.					Job NL	umber:	11795			
Road Segmer	t: w/o Parkric	ige Av.									
	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data				S	ite Con	ditions ((Hard =	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	18,468 vehicl	es					Autos:	15		
Peak Hour	Percentage:	10%				dium Tru			15		
Peak H	our Volume:	1,847 vehicle	s		He	avy Truc	ks (3+	Axles):	15		
Vel	hicle Speed:	35 mph		v	ehicle	Mix					
Near/Far Lar	ne Distance:	10 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	76.3%	11.0%	12.6%	91.88%
Bar	rier Height:	0.0 feet			M	edium Tri	ucks:	73.3%	9.2%	17.6%	5.79%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	Heavy Tru	ucks:	84.4%	3.2%	12.5%	2.339
Centerline Dis		30.0 feet		Ν	loise So	ource Ele	evatior	ns (in fe	eet)		
Centerline Dist.		30.0 feet				Autos	: 0	.000			
Barrier Distance		0.0 feet			Mediu	m Trucks	: 2	297			
Observer Height (,	5.0 feet			Heav	y Trucks	: 8	.004	Grade Ad	ljustment	0.0
	d Elevation:	0.0 feet					Distan	(!	(4)		
	d Elevation:	0.0 feet		L	ane Eq	uivalent			reet)		
ŀ	Road Grade:	0.0%			A 4	Autos		.000			
	Left View:	-90.0 degre				m Trucks vy Trucks		.704 .733			
	Right View:	90.0 degre	es		neav	y mucks	. 29	.733			
FHWA Noise Mode		-									
VehicleType	REMEL	Traffic Flow	Dist	ance		Road	Fres		Barrier Att		rm Atten
Autos: Medium Trucks:	64.30 75.75			3.22 3.29		-1.20 -1.20		-4.49 -4.86		000 000	0.00
Heavy Trucks:	75.75 81.57			3.29		-1.20		-4.80		000	0.00
Unmitigated Noise			h a mila	0.20		-1.20		-5.77	0.0	500	0.00
	Lea Peak Ho			Leg Eve		Leq I	Viaht		l dn	0	NEL
Autos:	1		65.9	LUYLN	63.5	Logi	59.	3	67.4		67.
Medium Trucks:	67	.4	65.2		62.2		60.		67.3		68.
Heavy Trucks:	69	.2	67.7		59.5		60.	7	68.	7	68.
Vehicle Noise:	73	3.0	71.2		66.8		64.	9	72.7	7	73.
Centerline Distanc	e to Noise C	ontour (in fee)							Т	
				70 di		65 a		6	60 dBA		dBA
			Ldn:	46		98	-		212		157
		C	NEL:	48		10)3		222	4	178

F	HWA-RD-77-1	08 HIGI	HWAY NO	DISE PREDICT	ION MO	DEL			
Scenario: HY With	out Project			Project	Name:	Palomi	no		
Road Name: Second	St.			Job N	lumber:	11795			
Road Segment: e/o Park	ridge Av.								
SITE SPECIFIC	INPUT DATA	4					L INPUT	s	
Highway Data			S	ite Conditions	(Hard =	10, Sc	oft = 15)		
Average Daily Traffic (Adt)	: 15,262 vehi	icles				Autos:	15		
Peak Hour Percentage	: 10%			Medium Tr	ucks (2 /	Axles):	15		
Peak Hour Volume	: 1,526 vehic	les		Heavy Tru	cks (3+ A	Axles):	15		
Vehicle Speed	: 35 mph		V	ehicle Mix					
Near/Far Lane Distance	: 10 feet			VehicleTvp		Dav	Evening	Night	Dailv
Site Data						76.3%	•	12.6%	
				Medium T		73.3%		17.6%	5.79%
Barrier Height				Heavy T		84.4%		12.5%	
Barrier Type (0-Wall, 1-Berm) Centerline Dist, to Barrier				,				12.070	2.007
Centerline Dist. to Barrier Centerline Dist. to Observer			N	oise Source E	levation	s (in fe	eet)		
	00.0 1000			Auto	s: 0.0	000			
Barrier Distance to Observer				Medium Truck	s: 2.	297			
Observer Height (Above Pad)				Heavy Truck	s: 8.	004	Grade Ad	justment.	0.0
Pad Elevation			1	ane Equivalen	t Distan	oo (in i	foot)		
Road Elevation			-	Auto		000	eel)		
Road Grade				Medium Truck					
	00.0 409			Heavy Truck		704			
Right View	: 90.0 deg	rees		пеаvy писк	s. 29.	733			
FHWA Noise Model Calculati									
VehicleType REMEL	Traffic Flow		stance	Finite Road	Fresr		Barrier Att		m Atten
Autos: 64.		-	3.22	-1.20		-4.49		000	0.00
Medium Trucks: 75.			3.29	-1.20		-4.86		000	0.00
Heavy Trucks: 81.	57 -15.2	23	3.28	-1.20		-5.77	0.0	000	0.00
Unmitigated Noise Levels (w	ithout Topo ar	nd barri	ier attenu	ation)					
VehicleType Leq Peak H			Leq Eve		Night		Ldn		VEL
	67.0	65.1		62.7	58.5		66.5		67.
	66.6	64.4		61.4	59.5		66.9		67.:
	68.4	66.9		58.7	59.8	3	67.9		68.
Vehicle Noise:	72.2	70.4		66.0	64.1		71.9	9	72.
Centerline Distance to Noise	Contour (in fe	et)							
		T	70 dE	BA 65	dBA	6	i0 dBA	55	dBA
		Ldn:	40	8	37		187	4	02

Tuesday, July 02, 2019

	io: HY Without	Project				Project N			ino		
	e: Second St. nt: w/o Pacific	Av.				Job Nur	nber:	11795			
	SPECIFIC IN	PUT DATA			0/4- 0					S	
Highway Data					Site Con	ditions (H			,		
Average Daily	. ,	16,686 vehicle	es					Autos:			
	Percentage:	10%				dium Truc					
		1,669 vehicles	5		He	avy Truck	s (3+ .	Axles):	15		
	hicle Speed:	35 mph			Vehicle I	Nix					
Near/Far La	ne Distance:	10 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						Au	tos:	76.3%	11.0%	12.6%	91.889
Pa	rier Heiaht:	0.0 feet			Me	dium True	cks:	73.3%	9.2%	17.6%	5.79%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Tru	cks:	84.4%	3.2%	12.5%	2.33%
Centerline Dis		30.0 feet			Noise Sc	urce Elev	ation	ıs (in fe	eet)		
Centerline Dist.		30.0 feet				Autos:	0.	000	í		
Barrier Distance		0.0 feet			Mediur	n Trucks:	2.	297			
Observer Height (Above Pad):	5.0 feet			Heav	v Trucks:	8	004	Grade Ad	liustmen	t: 0.0
Pa	ad Elevation:	0.0 feet		_							
Roa	ad Elevation:	0.0 feet			Lane Eq	uivalent D	Distan	ce (in	feet)		
1	Road Grade:	0.0%				Autos:		.000			
	Left View:	-90.0 degree	es		Mediur	n Trucks:	29	704			
	Right View:	90.0 degree	es		Heav	y Trucks:	29	733			
FHWA Noise Mod											
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite		Fresi	-	Barrier Att		rm Atten
Autos:	64.30	1.11		3.2	-	-1.20		-4.49		000	0.00
Medium Trucks:	75.75	-10.90		3.2	-	-1.20		-4.86		000	0.00
Heavy Trucks:	81.57	-14.84		3.2	-	-1.20		-5.77	0.0	000	0.00
Unmitigated Noise											
VehicleType	Leq Peak Hou	. ,		Leq E	vening	Leq Ni	· ·		Ldn		NEL
Autos:	67.		65.5		63.1		58.	-	66.9	-	67.
Medium Trucks:	66.	-	64.8		61.8		59.	-	67.3	-	67.
Heavy Trucks:	68.	-	67.3		59.0		60.3	_	68.3	-	68.
Vehicle Noise:	72.	6	70.8		66.4		64.	5	72.3	3	72.
Centerline Distand	ce to Noise Co	ntour (in feet)								
			L		dBA	65 dE	BA	6	60 dBA		5 dBA
			Ldn:	4	3	92			198		427
		-	VFI :		5	96			207		446

Average Daily Traffic (Adt): 17,478 vehicles Autos: 15 Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Peak Hour Volume: 1,748 vehicles Medium Trucks (2 Axles): 15 Vehicle Speed: 35 mph Heavy Trucks (3 + Axles): 15 Vehicle Speed: 35 mph Vehicle Mix Vehicle Mix Site Data Autos: 76.3% 11.0% 12.6% Barrier Type (0-Wall, 1-Berm): 0.0 Vehicle Type Day Evening Night Centerline Dist. to Barrier: 30.0 feet Medium Trucks: 0.000 Medium Trucks: 2.297 Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Autos: 30.000 Road Grade: 0.0% Left View: -90.0 degrees Heavy Trucks: 8.004 Grade Adjustment: Right View: 90.0 degrees Finite Road Fresnel Barrier Atten Berrier Autos: 64.30 1.31 3.22 -1.20 -4.49 0.000 Medium Truc		FHV	VA-RD-77-108 H	IGHWA	NOIS						
Highway Data Site Conditions (Hard = 10, Soft = 15) Average Daily Traffic (Adt): 17,478 vehicles Autos:: 15 Peak Hour Percentage: 10% Medium Trucks (2 Aktes): 15 Peak Hour Volume: 1,748 vehicles Medium Trucks (2 Aktes): 15 Vehicle Speed: 35 mph Medium Trucks (2 Aktes): 15 Near/Far Lane Distance: 10 feet Vehicle Type Day Evening Night Barrier Height: 0.0 feet Medium Trucks: 76.3% 11.0% 12.6% Barrier Distance to Observer: 30.0 feet Medium Trucks: 2.297 Heavy Trucks: 8.04 Grade Adjustment: Observer Height (Above Pad): 5.0 feet Autos: 0.000 Medium Trucks: 2.97 Road Grade: 0.0% Laft View: -90.0 degrees Medium Trucks: 2.973 FHWA Noise Model Calculations Vehicle Type Reader Traftic Flow Distance Inte Road Grade Adjustment: Vehicle/Type ReBHEL Traffic Flow Distance Finite Road Fresnel	Road Name:	Second St.							10		
Average Daily Traffic (Adi): 17,478 vehicles Autos: 15 Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Peak Hour Volume: 1,748 vehicles Medium Trucks (2 Axles): 15 Vehicle Speed: 35 mph Heavy Trucks (3+ Axles): 15 Site Data Autos: 76.3% 11.0% 12.6% Barrier Type (0-Wall, 1-Berm): 0.0 10 feet Medium Trucks: 73.3% 9.2% 17.6% Barrier Type (0-Wall, 1-Berm): 0.0 10 feet Medium Trucks: 73.3% 9.2% 17.6% Barrier Type (0-Wall, 1-Berm): 0.0 10 feet Medium Trucks: 2.297 Observer Height (Above Pad): 5.0 feet Autos: 0.000 Medium Trucks: 2.297 Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.004 Grade Adjustment: 0 Road Grade: 0.0% Left Wire: 9.0.0 degrees Medium Trucks: 2.9.704 Heavy Trucks: 64.30 1.31 3.22 -1.20 -4.49 0.000 </th <th>SITE SP</th> <th>ECIFIC IN</th> <th>PUT DATA</th> <th></th> <th></th> <th>N</th> <th>OISE N</th> <th>IODEL</th> <th>INPUT:</th> <th>s</th> <th></th>	SITE SP	ECIFIC IN	PUT DATA			N	OISE N	IODEL	INPUT:	s	
Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Peak Hour Volume: 1,748 vehicles Heavy Trucks (3+ Axles): 15 Vehicle Speed: 35 mph Vehicle Mix Vehicle Mix Vehicle Mix Site Data Autos: 76.3% 11.0% 12.6% 9 Barrier Height: 0.0 feet Autos: 76.3% 11.0% 12.6% 9 Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 30.0 feet Medium Trucks: 73.3% 9.2% 17.6% Barrier Distance to Observer: 30.0 feet Autos: 0.000 Medium Trucks: 2.297 Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.004 Grade Adjustment: 0.000 Read Glevation: 0.0 feet Mutos: 30.000 Medium Trucks: 2.973 Road Grade: 0.0% Left View: 90.0 degrees Medium Trucks: 2.970 Heavy Trucks: 84.30 1.31 3.22 -1.20 -4.49 0.000 Medium Trucks:<	Data				Site	Conditions ('Hard =	10, So	ft = 15)		
Peak Hour Volum: 1,748 vehicles Wehicle Speed: 35 mph Near/Far Lane Distance: 10 feet Barrier Height: 0.0 feet Barrier Height: 0.0 feet Barrier Dist. to Barrier: 30.0 feet Centerline Dist. to Observer: 30.0 feet Barrier Distance to Observer: 30.0 feet Barrier Distance to Observer: 30.0 feet Read Elevation: 0.0 feet Barrier Distance to Observer: 30.0 feet Road Elevation: 0.0 feet Road Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: 90.0 degrees Right View: 90.0 degrees Redwy Trucks: Barrier Atten Berrier Atten Heavy Trucks: 29.73 PHWA Noise Model Calculations Distance Finite Road Fressnel Barrier Atten Berrier Atten VehicleType RedWard Lae(4 32 1.20 -4.49 0.000 Medium Trucks: 75.75 -10.69 </td <td>age Daily Tra</td> <td>affic (Adt):</td> <td>17,478 vehicles</td> <td>8</td> <td></td> <td></td> <td>A</td> <td>Autos:</td> <td>15</td> <td></td> <td></td>	age Daily Tra	affic (Adt):	17,478 vehicles	8			A	Autos:	15		
Vehicle Speed: 35 mph Near/Far Lane Distance: Vehicle Mix Site Data Vehicle Type Day Evening Night Site Data Vehicle Mix Vehicle Type Day Evening Night Barrier Height: 0.0 feet Medium Trucks: 76.3% 11.0% 12.6% Barrier Type (0-Wall, 1-Berm): 0.0 Medium Trucks: 83.3% 9.2% 17.6% Barrier Dist. to Diserver: 30.0 feet Medium Trucks: 84.4% 3.2% 12.5% Observer Height (Above Pad): 5.0 feet Autos: 0.00 Medium Trucks: 2.297 Pad Elevation: 0.0 feet Autos: 0.004 Grade Adjustment: 0.00 Right View: -90.0 degrees Medium Trucks: 29.704 Heavy Trucks: 29.704 Wehicle Type REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berrier Autos: 64.30 1.31 3.22 -1.20 -4.49 0.000 Heavy Trucks: 81.57 -14.	eak Hour Pe	rcentage:	10%			Medium Tru	cks (2 A	xles):	15		
Near/Far Lane Distance: 10 feet Verifice mix Day Evening Night Site Data Autos: 76.3% 11.0% 12.6% 9 Barrier Height: 0.0 feet Medium Trucks: 76.3% 11.0% 12.6% 9 Barrier Type (0-Walt, 1-Berm): 0.0 feet Medium Trucks: 73.3% 9.2% 17.6% Centerline Dist. to Barrier: 30.0 feet Noise Source Elevations (in feet) Noise Source Elevations (in feet) Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.004 Grade Adjustment: Pad Elevation: 0.0 feet Moise Source Elevations (in feet) Autos: 30.000 Road Grade: 0.0% Autos: 30.000 Medium Trucks: 29.704 Heavy Trucks: 81.57 -10.69 3.29 -1.20 -4.49 0.000 Medium Trucks: 64.30 1.31 3.22 -1.20 -4.49 0.000 Medium Trucks: 81.57 -14.64 3.28 -1.20 -4.49 0.000 Me	Peak Hou	r Volume:	1,748 vehicles			Heavy Truc	ks (3+ A	xles):	15		
Near/Far Lane Distance: 10 feet VehicleType Day Evening Night Site Data Autos: 76.3% 11.0% 12.6% Barrier Type (0-Wall, 1-Berm): 0.0 Medium Trucks: 73.3% 9.2% 17.6% Barrier Type (0-Wall, 1-Berm): 0.0 Medium Trucks: 73.3% 9.2% 17.6% Barrier Type (0-Wall, 1-Berm): 0.0 Medium Trucks: 84.4% 3.2% 12.5% Centerline Dist. to Dbserver: 30.0 feet Noise Source Elevations (in feet) Autos: 0.000 Barrier Type (Awall, 1-Berm): 0.0 feet Autos: 0.000 Medium Trucks: 2.297 Observer: 0.0 feet Noise Source Elevations (in feet) Autos: 30.000 Medium Trucks: 2.9704 Road Elevation: 0.0 feet Autos: 90.0 degrees Medium Trucks: 29.704 Heavy Trucks: 64.30 1.31 3.22 -1.20 -4.49 0.000 Medium Trucks: 75.5 -10.69 3.29 -1.20 -5.77 0.000	Vehic	le Speed:	35 mph		Vah	olo Miv					
Site Data Autos: 76.3% 11.0% 12.6% 9 Barrier Height: 0.0 feet Medium Trucks: 73.3% 9.2% 17.6% Barrier Type (0-Wall, 1-Berm): 0.0 0 Heavy Trucks: 73.3% 9.2% 17.6% Centerline Dist. to Barrier: 30.0 feet Melium Trucks: 84.4% 3.2% 12.5% Barrier Distance to Observer: 30.0 feet Noise Source Elevations (in feet) Autos: 0.000 Deserver Height (Above Pad): 5.0 feet Heavy Trucks: 8.004 Grade Aljustment: Road Grade: 0.0% Lane Equivalent Distance (in feet) Autos: 30.000 Medium Trucks: 99.0 degrees Heavy Trucks: 29.704 Heavy Trucks: 9.733 FHWA Noise Model Calculations 0.006 S2.9 -1.20 -4.49 0.000 Medium Trucks: 75.7 -10.69 3.29 -1.20 -4.49 0.000 Medium Trucks: 15.7 -14.64 3.28 -1.20 -5.77 0.000 Me	ear/Far Lane	Distance:	10 feet		ven			Dav	Evoning	Night	Daily
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 30.0 feet Cherterline Dist. to Observer: 30.0 feet Barrier Tiste (0-Wall, 1-Berm): 0.0 Centerline Dist. to Observer: 30.0 feet Barrier Distance to Observer: 30.0 feet Barrier Distance to Observer: 0.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Elevation: 0.0 feet Road Clevation: 0.0 feet Road Clevation: 0.0 feet Road Clevation: 0.0 feet Road Clevation: 0.0 degrees Right View: 90.0 degrees FHWA Noise Model Calculations VehicleType VehicleType RefMEL Traffic Flow Distance VehicleType Leq Peak Hour Leq Vening Leq Night VehicleType Leq Peak Hour Leq Vening Leq Night VehicleType Leq Peak Hour Leq Vening Leq Night VehicleType Cottooo <td< td=""><td></td><td></td><td></td><td></td><td></td><td><i>,</i>,</td><td></td><td>.,</td><td>v</td><td>•</td><td></td></td<>						<i>,</i> ,		.,	v	•	
Darrier Type (OV-Wall, 1-Berm): 0.0 Heavy Trucks: 84.4% 3.2% 12.5% Centerline Dist. to Diserver: 30.0 feet Noise Source Elevations (in feet) Noise Source Elevations (in feet) Centerline Dist. to Observer: 0.0 feet Autos: 0.000 Barrier Distance to Observer: 0.0 feet Autos: 0.000 Barrier Distance to Observer: 0.0 feet Autos: 0.000 Road Elevation: 0.0 feet Autos: 0.000 Road Elevation: 0.0 feet Autos: 30.000 Right View: -90.0 degrees Medium Trucks: 29.704 Heavy Trucks: 64.30 1.31 3.22 -1.20 Autos: 64.30 1.31 3.22 -1.20 -4.49 0.000 Medium Trucks: 81.57 -14.64 3.28 -1.20 -5.77 0.000 Unmitigated Noise Levels (without Topo and barrier attenuation) Leq Evening Leq Night Lch CNU Vehicle Type Leq Day Leq Evening Leq Night Lch <td< td=""><td>-</td><td></td><td>0.0 ()</td><td></td><td>-</td><td></td><td></td><td></td><td></td><td></td><td>5.79%</td></td<>	-		0.0 ()		-						5.79%
Dame Type (o Distance Finite Road Generations Contentions Conteni						Heavy Tr					2.339
Centerline Dist. to Observer: 30.0 feet Noise Source Levations (in reef) Barrier Distance to Observer: 0.0 feet Autos: 0.000 Observer Height (Above Pad): 5.0 feet Medium Trucks: 2.297 Pad Elevation: 0.0 feet Lane Equivalent Distance (in feet) Medium Trucks: 2.297 Road Grade: 0.0% Late Equivalent Distance (in feet) Motes 30.000 Road Grade: 0.0% Left View: -90.0 degrees Medium Trucks: 29.704 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berrier VehicleType REMEL Traffic Flow Distance 1.20 -4.49 0.000 Medium Trucks: 75.75 -10.69 3.29 -1.20 -4.49 0.000 Medium Trucks: 15.75 -10.69 3.28 -1.20 -5.77 0.000 Unmittigated Noise Levels (without Topo and barrier attenuation) Leq Evening Leq Night Lon CNM V		,				,					
Barrier Distance to Observer: 0.0 feet Autos: 0.000 Observer Height (Above Pad): 5.0 feet Medium Trucks: 2.297 Pad Elevation: 0.0 feet Heavy Trucks: 8.004 Grade Adjustment: Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Autos: 30.000 Left View: -90.0 degrees Medium Trucks: 29.704 Right View: 90.0 degrees Heavy Trucks: 29.704 VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berrier Autos: 64.30 1.31 3.22 -1.20 -4.49 0.000 Medium Trucks: 61.57 -14.64 3.28 -1.20 -5.77 0.000 Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Zwering Leq Night Ldn CNM VehicleType Eq Peak Hour Leq Day Leq Evening Leq Night Ldn CNM Medium Trucks: 67.1 65.0					Nois				et)		
Observer Height (Above Pad): 5.0 feet Meaum Trucks:: 2.297 Pad Elevation: 0.0 feet Heavy Trucks:: 8.004 Grade Adjustment: 1 Road Elevation: 0.0 feet Left View: -90.0 degrees Autos: 30.000 Right View: 90.0 degrees Medium Trucks:: 29.704 Heavy Trucks:: 29.704 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berrier Autos: 64.30 1.31 3.22 -1.20 -4.49 0.000 Medium Trucks: 75.7 -10.69 3.29 -1.20 -5.77 0.000 Medium Trucks: 81.57 -14.64 3.28 -1.20 -5.77 0.000 Unmitigated Noise Levels (without Topo and barrier attenuation) Leq Evening Leq Night Lch CNM VehicleType Leq Peak Hour Leq Qay Leq Evening Leq Night Lch CNM Medium Trucks: 67.1 65.0 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>											
Pad Elevation: 0.0 feet Heavy Trucks: 8.004 Grade Adjustment. It Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Lane Equivalent Distance (in feet) Road Grade: 0.0% Autos: 90.0 degrees Medium Trucks: 29.704 FHWA Noise Model Calculations											
Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Road Grade: 0.0% Autos: 30.000 Left View: -90.0 degrees Medium Trucks: 29.704 Right View: 90.0 degrees Heavy Trucks: 29.733 FHWA Noise Model Calculations Distance Finite Road Fresnel Barrier Atten Berrier Autos: 64.30 1.31 3.22 -1.20 -4.49 0.000 Medium Trucks: 75.75 -10.69 3.29 -1.20 -5.77 0.000 Unnitigated Noise Levels (without Topo and barrier attenuation) Vehicle Type Leq Peak Hour Leq Zevening Leq Night Ldn CNM Vehicle Type Leq Peak Hour Leg Day Leq Evening Leq Night Ldn CNM Medium Trucks: 67.6 65.7 63.3 59.1 67.1 Medium Trucks: 67.1 65.0 62.0 60.0 67.5		,			1	Heavy Trucks	: 8.0	04	Grade Ad	justment.	0.0
Road Grade: 0.006 Autos: 30.00 Left View: -90.0 degrees Medium Trucks: 29.704 Heavy Trucks: 29.704 Heavy Trucks: 29.733 FHWA Noise Model Calculations Medium Trucks: 29.733 Vehicle Type REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berrier Autos: 64.30 1.31 3.22 -1.20 -4.49 0.000 Medium Trucks: 75.75 -10.69 3.29 -1.20 -4.86 0.000 Medium Trucks: 15.75 -14.64 3.28 -1.20 -5.77 0.000 Unmitigated Noise Levels (without Topo and barrier attenuation) Leq Evening Leq Night Ldn CNt Autos: 67.6 65.7 63.3 59.1 67.1 67.1 Medium Trucks: 67.1 65.0 62.0 60.0 67.5					Lane	e Equivalent	Distanc	e (in f	eet)		
Left View: -90.0 degrees Medium Trucks: 29.704 Right View: 90.0 degrees Heavy Trucks: 29.733 FHWA Noise Model Calculations Finite Road Fresnet Barrier Atten Berrier Atten VehicleType REMEL Traffic Flow Distance Finite Road Fresnet Barrier Atten Berrier Atten Medium Trucks: 75.75 -10.69 3.29 -1.20 -4.86 0.000 Medium Trucks: 75.75 -10.69 3.28 -1.20 -4.86 0.000 Medium Trucks: 81.57 -14.64 3.28 -1.20 -5.77 0.000 Unmitigated Noise Levels (without Topo and barrier attenuation) Leq Evening Leq Night Ldn CNI Autos: 67.6 65.7 63.3 59.1 67.1 67.1 Medium Trucks: 67.1 65.0 62.0 60.0 67.5									,		
Right View: 90.0 degrees Heavy Trucks: 29.733 FHWA Noise Model Calculations Vehicle Type REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berrier Atten Autos: 64.30 1.31 3.22 -1.20 -4.49 0.000 Medium Trucks: 75.75 -10.69 3.29 -1.20 -5.77 0.000 Unnitigated Noise Levels (without Topo and barrier attenuation) Vehicle Type Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNB Vehicle Type Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNB Vehicle Type Leq Cab 65.7 63.3 59.1 67.1 65.0 62.0 60.0 67.5					м	edium Trucks					
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Autos: 64.30 1.31 3.22 -1.20 -4.49 0.000 Medium Trucks: 75.75 -10.69 3.29 -1.20 -4.86 0.000 Heavy Trucks: 81.57 -14.64 3.28 -1.20 -5.77 0.000 Unnitigated Noise Levels (without Topo and barrier attenuation) Leq Evening Leq Night Ldn CNtt VehicleType Leg Peak Hour Leg Day Leg Evening Leq Night Ldn CNtt Mutos:: 67.6 65.7 63.3 59.1 67.1 65.0 62.0 60.0 67.5					1	Heavy Trucks					
Autos: 64:30 1.31 3.22 -1.20 -4.49 0.000 Medium Trucks: 75.75 -10.69 3.29 -1.20 -4.86 0.000 Heavy Trucks: 81:57 -14.64 3.28 -1.20 -5.77 0.000 Unnitigated Noise Levels (without Topo and barrier attenuation)	oise Model (Calculation	s		-						
Medium Trucks: 75.75 -10.69 3.29 -1.20 -4.86 0.000 Heavy Trucks: 81.57 -14.64 3.28 -1.20 -5.77 0.000 Unmitigated Noise Levels (without Topo and barrier attenuation) - - - - - - - - 0.000 VehicleType Leq Peak Hour Leq Qay Leq Evening Leq Night Loh CNB Autos: 67.6 65.7 63.3 59.1 67.1 Medium Trucks: 67.1 65.0 62.0 60.0 67.5	әТуре	REMEL	Traffic Flow	Distanc	e F	inite Road	Fresn	el I	Barrier Att	en Ber	m Atten
Heavy Trucks: 81.57 -14.64 3.28 -1.20 -5.77 0.000 Unnitigated Noise Levels (without Topo and barrier attenuation) Leq Day Leq Evening Leq Night Ldn CNtt Vehicle Type Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNtt Autos: 67.6 65.7 63.3 59.1 67.1 Medium Trucks: 67.1 65.0 62.0 60.0 67.5		64.30	1.31	3	3.22	-1.20		4.49	0.0	000	0.00
Unnitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNI Autos: 67.6 65.7 63.3 59.1 67.1 Medium Trucks: 67.1 65.0 62.0 60.0 67.5											0.00
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNI Autos: 67.6 65.7 63.3 59.1 67.1 Medium Trucks: 67.1 65.0 62.0 60.0 67.5	y Trucks:	81.57	-14.64	3	8.28	-1.20		-5.77	0.0	000	0.00
Autos: 67.6 65.7 63.3 59.1 67.1 Medium Trucks: 67.1 65.0 62.0 60.0 67.5	ted Noise L	evels (with	out Topo and b	arrier att	enuati						
Medium Trucks: 67.1 65.0 62.0 60.0 67.5		,		,		•	•		-		
											67.
											67.
				-		59.2	60.4		68.5		68.
Vehicle Noise: 72.8 71.0 66.6 64.7 72.5	le Noise:	72.	.8 7	1.0		6.6	64.7		72.5	5	72.
Centerline Distance to Noise Contour (in feet)	e Distance	to Noise Co	ontour (in feet)								
70 dBA 65 dBA 60 dBA 55 d											
Ldn: 44 95 204 440			-				-				
CNEL: 46 99 214 460			CN	EL:	46	99	9		214	4	60

Tuesday, July 02, 2019

	FH\	WA-RD-77-108	HIGHW	AY NO	SE PR	EDICTIO	N MO	DEL			
Scenari	o: HY Withou	t Project				Project N	ame:	Palomi	no		
	e: Second St.					Job Nur	nber:	11795			
Road Segmer	nt: w/o Mounta	ain Av.									
	SPECIFIC IN	NPUT DATA							L INPUT	s	
Highway Data				Sit	e Conc	ditions (H	lard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	18,795 vehicl	es					Autos:	15		
Peak Hour	Percentage:	10%				lium Truc			15		
Peak H	our Volume:	1,880 vehicle	s		Hea	ivy Truck	s (3+ /	Axles):	15		
Ve	hicle Speed:	35 mph		Ve	hicle N	lix					
Near/Far La	ne Distance:	10 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						Au	tos:	76.3%	11.0%	12.6%	91.88%
Bar	rier Height:	0.0 feet			Me	dium Tru	cks:	73.3%	9.2%	17.6%	5.79%
Barrier Type (0-W	all, 1-Berm):	0.0			н	eavy Tru	cks:	84.4%	3.2%	12.5%	2.33%
Centerline Dis		30.0 feet		No	ise So	urce Ele	vation	s (in fe	et)		
Centerline Dist.		30.0 feet				Autos:	0.	000			
Barrier Distance		0.0 feet		1	Mediun	Trucks:	2.	297			
Observer Height (,	5.0 feet			Heavy	/ Trucks:	8.	004	Grade Ad	justment	0.0
	d Elevation:	0.0 feet		1.0			Veter	(!)			
	d Elevation:	0.0 feet		La	ne Equ	ivalent E		ce (In 1 000	eet)		
,	Road Grade:	0.0%			1 E	Autos: 1 Trucks:					
	Left View:	-90.0 degre				/ Trucks: / Trucks:		704 733			
	Right View:	90.0 degre	es		neavy	/ TTUCKS.	29.	733			
FHWA Noise Mode		_									
VehicleType	REMEL	Traffic Flow	Distar		Finite I		Fresr		Barrier Att		rm Atten
Autos:	64.30			3.22		-1.20 -1.20		-4.49		000	0.00
Medium Trucks:	75.75 81.57			3.29 3.28		-1.20		-4.86 -5.77		000	0.00
Heavy Trucks:				0.20		-1.20		-5.77	0.0	000	0.00
Unmitigated Noise VehicleType	Lea Peak Hou			eq Ever	- (Leg N	iaht		l dn		NEL
Autos			66.0	ey Lvei	63.6	Ley M	59.4	1	67.4		67.
Medium Trucks:			65.3		62.3		60.4	-	67.8	-	68.
Heavy Trucks:			67.8		59.6		60.7		68.8		68.
Vehicle Noise:	73	3.1	71.3		66.9		65.0)	72.8	3	73.
Centerline Distance	e to Noise C	ontour (in feet)								
				70 dB	4	65 dE		6	0 dBA		dBA
			Ldn:	46		100)		215	4	162
			VFI :	48		104			224		183

	FHWA	A-RD-77-108 H	ligi	HWAY NO	DISE PR	EDICTIC	ON MO	DEL			
Scenario: HY Wit	hout P	roject				Project N	lame:	Palomi	no		
Road Name: Second	St.					Job Nu	mber:	11795			
Road Segment: e/o Mo	untain	Av.									
SITE SPECIFIC	C INP	UT DATA							L INPUT	S	
Highway Data				S	te Con	ditions (l	Hard =	10, Sc	oft = 15)		
Average Daily Traffic (Ad	t): 1	9,436 vehicles	3				,	Autos:	15		
Peak Hour Percentag	e:	10%			Med	dium Truc	:ks (2 A	(xles)	15		
Peak Hour Volum	e: 1	,944 vehicles			Hea	avy Truck	:s (3+ A	(xles)	15		
Vehicle Spee	d:	35 mph		V	ehicle N	Niv					
Near/Far Lane Distanc	e:	36 feet				cleTvpe		Dav	Evening	Night	Dailv
Site Data					1011			76.3%	•	12.6%	
Barrier Heigh		0.0 feet			Me	dium Tru		73.3%		17.6%	
Barrier Type (0-Wall, 1-Bern		0.0 reet				leavy Tru		84.4%		12.5%	
Centerline Dist. to Barrie		44.0 feet				,					
Centerline Dist. to Observe		44.0 feet		N	oise So	urce Ele			eet)		
Barrier Distance to Observe		0.0 feet				Autos:		000			
Observer Height (Above Pag		5.0 feet				n Trucks:		297			
Pad Elevatio	·	0.0 feet			Heav	y Trucks:	8.0	004	Grade Ad	justment.	0.0
Road Elevatio		0.0 feet		Li	ane Eau	ivalent l	Distan	ce (in t	feet)		
Road Grad		0.0%				Autos:			,		
l eft Vie		-90.0 degrees			Mediun	n Trucks:					
Right Vie		90.0 degrees			Heav	y Trucks:	40.	262			
FHWA Noise Model Calcula	tions										
VehicleType REMEL	. 1	Traffic Flow	Dis	stance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos: 64	.30	1.77		1.28		-1.20		-4.61	0.0	000	0.00
Medium Trucks: 75	.75	-10.23		1.31		-1.20		-4.87		000	0.00
Heavy Trucks: 81	.57	-14.18		1.31		-1.20		-5.50	0.0	000	0.00
Unmitigated Noise Levels (arri							1	
VehicleType Leq Peak				Leq Eve		Leq N			Ldn		VEL
Autos:	66.2		4.2		61.8		57.6		65.6		66.
Medium Trucks:	65.6		3.5		60.5		58.5		65.9		66.
Heavy Trucks:	67.5	-	6.0		57.7		58.9		67.0		67.
Vehicle Noise:	71.3		9.4		65.1		63.2	2	71.0)	71.
Centerline Distance to Nois	e Con	tour (in feet)									
			ĻL	70 dE	BA	65 d		6	0 dBA		dBA
		L	dn:	51		110)		238		12
		CN		54		115			249		36

Tuesday, July 02, 2019

FHWA-RD-77-108	HIGH	WAY N	OISE PF	EDICTIC	N MC	DEL			
Scenario: HY Without Project				Project N	lame:	Palomi	ino		
Road Name: Second St.				Job Nu	mber:	11795			
Road Segment: e/o Dwy. 8									
SITE SPECIFIC INPUT DATA							L INPUT	S	
Highway Data		S	Site Con	ditions (H	lard =	= 10, Sc	oft = 15)		
Average Daily Traffic (Adt): 19,436 vehicle	es					Autos:	15		
Peak Hour Percentage: 10%			Mee	dium Truc	:ks (2	Axles):	15		
Peak Hour Volume: 1,944 vehicles	5		Hea	avy Truck	s (3+	Axles):	15		
Vehicle Speed: 35 mph			/ehicle	<i>Nix</i>					
Near/Far Lane Distance: 36 feet		-		cleType		Day	Evening	Night	Daily
Site Data				AL	itos:	76.3%	11.0%	12.6%	91.88
Barrier Height: 0.0 feet			Me	dium Tru	cks:	73.3%	9.2%	17.6%	5.79
Barrier Type (0-Wall, 1-Berm): 0.0			H	leavy Tru	cks:	84.4%	3.2%	12.5%	2.33
Centerline Dist. to Barrier: 44.0 feet			laiaa Ca	urce Ele	vetion	no (in fe	a.4)		
Centerline Dist. to Observer: 44.0 feet		-	ioise so	Autos:		.000	el)		
Barrier Distance to Observer: 0.0 feet			Madium	n Trucks:	-	297			
Observer Height (Above Pad): 5.0 feet				v Trucks:	-	.297	Grade Ad	iustmont	0.0
Pad Elevation: 0.0 feet			neav	y mucks.	0.	.004	Orade Au	usunoni	0.0
Road Elevation: 0.0 feet		L	ane Equ	ivalent L	Distan	ice (in i	feet)		
Road Grade: 0.0%				Autos:	40	.460			
Left View: -90.0 degree	es		Mediur	n Trucks:	40	.241			
Right View: 90.0 degree	es		Heav	v Trucks:	40	.262			
FHWA Noise Model Calculations									
VehicleType REMEL Traffic Flow	Dist	ance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atter
Autos: 64.30 1.77		1.28		-1.20		-4.61	0.0	000	0.00
Medium Trucks: 75.75 -10.23		1.31		-1.20		-4.87	0.0	000	0.00
Heavy Trucks: 81.57 -14.18		1.31		-1.20		-5.50	0.0	000	0.00
Unmitigated Noise Levels (without Topo and									
VehicleType Leq Peak Hour Leq Day		Leq Ev	•	Leq N	<u> </u>		Ldn		VEL
	64.2		61.8		57.	-	65.6		66
	63.5		60.5		58.	-	65.9		66
	66.0		57.7		58.	-	67.0		67
Vehicle Noise: 71.3	69.4		65.1		63.	2	71.0)	71
Centerline Distance to Noise Contour (in feet)					1			
	L	70 d		65 di		6	60 dBA		dBA
	Ldn:	51		110			238	-	12
CI	VFI :	54		115			249	5	36

	FH\	NA-RD-77-108	HIGH	WAY N	OISE PF	REDICTIO	N MOD	EL			
Scenari	io: HY Withou	t Project				Project N	ame: Pa	alomin	0		
	e: Second St.					Job Nur	nber: 11	795			
Road Segmer	nt: w/o Hamne	er Av.									
	SPECIFIC IN	IPUT DATA							INPUT	s	
Highway Data				s	ite Con	ditions (H	lard = 1	0, Sof	't = 15)		
Average Daily	Traffic (Adt):	23,101 vehicle	es				A	utos:	15		
Peak Hour	Percentage:	10%			Me	dium Truc	ks (2 Ax	les):	15		
Peak H	lour Volume:	2,310 vehicle	s		He	avy Truck	s (3+ Ax	les):	15		
Ve	hicle Speed:	35 mph		v	ehicle l	Mix					
Near/Far La	ne Distance:	36 feet		-		cleType	D	ay I	Evening	Night	Daily
Site Data						Au	tos: 7	6.3%	11.0%	12.6%	91.88%
Bai	rrier Height:	0.0 feet			Me	dium Tru	cks: 7	3.3%	9.2%	17.6%	5.79%
Barrier Type (0-W	'all, 1-Berm):	0.0			ŀ	leavy Tru	cks: 8	4.4%	3.2%	12.5%	2.33%
Centerline Dis		44.0 feet		۸	loise Sc	urce Ele	vations	(in fee	et)		
Centerline Dist.		44.0 feet				Autos:	0.00	0			
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks:	2.29	7			
Observer Height (,	5.0 feet			Heav	y Trucks:	8.00	4 (Grade Ad	justment	: 0.0
	ad Elevation:	0.0 feet				·					
	ad Elevation:	0.0 feet		L	ane Eq	uivalent L			eet)		
1	Road Grade:	0.0%				Autos:	40.46				
	Left View:	-90.0 degree				n Trucks:					
	Right View:	90.0 degree	es		Heav	y Trucks:	40.26	62			
FHWA Noise Mode		-									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite		Fresne		Barrier Att		m Atten
Autos:	64.30	2.52		1.28		-1.20		1.61		000	0.00
Medium Trucks:	75.75	-9.48		1.31		-1.20		1.87		000	0.00
Heavy Trucks:	81.57	-13.43		1.31		-1.20	-8	5.50	0.0	000	0.00
Unmitigated Noise											
VehicleType	Leq Peak Hou	, ,		Leq Ev	•	Leq N	•	1	Ldn		NEL
Autos:	66		64.9		62.6		58.4		66.4		66.
Medium Trucks:	66		64.2		61.2		59.3		66.7		67.
Heavy Trucks:	68		66.7		58.5		59.7		67.7		67.
Vehicle Noise:	72		70.2		65.8		63.9		71.7	(72.
Centerline Distant	ce to Noise C	ontour (in feet)	70 d	RA	65 dF	RA	60) dBA	55	dBA
			Ldn:	57		124			267		575
			NFL:	60		124			279		501
		Ci	VLL.	00		130		4	210	,	

Tuesday, July 02, 2019

	FHV	VA-RD-77-108	HIGHW	AY NO	DISE PF	REDICTIO	N MOD	EL			
	o: HY Without	Project				Project Na			no		
Road Name						Job Nun	nber: 1	1795			
Road Segmen	nt: w/o Parkrid	ge Av.									
	SPECIFIC IN	IPUT DATA								s	
Highway Data				S	ite Con	ditions (H	ard = 1	0, So	ft = 15)		
Average Daily	Traffic (Adt):	24,106 vehicle	es				Α	utos:	15		
Peak Hour	Percentage:	10%				dium Trucl		,	15		
Peak He	our Volume:	2,411 vehicles	S		He	avy Trucks	s (3+ A)	des):	15		
	hicle Speed:	35 mph		V	ehicle I	Mix					
Near/Far Lar	ne Distance:	10 feet			Vehi	cleType	E)ay	Evening	Night	Daily
Site Data						Aut	os: 7	6.3%	11.0%	12.6%	91.88%
Bar	rier Height:	0.0 feet			Me	edium Truc	:ks: 7	3.3%	9.2%	17.6%	5.79%
Barrier Type (0-Wa	•	0.0			ŀ	leavy Truc	:ks: 8	4.4%	3.2%	12.5%	2.339
Centerline Dis		30.0 feet		N	oise Sc	ource Elev	ations	(in fe	et)		
Centerline Dist. t		30.0 feet				Autos:	0.0				
Barrier Distance t		0.0 feet			Mediur	n Trucks:	2.2	97			
Observer Height (/	,	5.0 feet			Heav	y Trucks:	8.00)4	Grade Ad	iustment	0.0
	d Elevation:	0.0 feet				, 			41		
	d Elevation:	0.0 feet		La	ane Equ	uivalent D Autos:	30.0		eet)		
F	Road Grade: Left View:	0.0%			Madium	n Trucks:	29.7				
	Right View:	-90.0 degree 90.0 degree				y Trucks:	29.7				
FHWA Noise Mode		•									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresne	1	Barrier Att	en Ber	m Atten
Autos:	64.30	2.71		3.22		-1.20		4.49	0.0	000	0.00
Medium Trucks:	75.75	-9.30		3.29		-1.20	-	4.86	0.0	000	0.00
Heavy Trucks:	81.57	-13.24		3.28		-1.20	-	5.77	0.0	000	0.00
Unmitigated Noise											
	Leq Peak Hou			eq Eve		Leq Ni			Ldn		NEL
Autos:	69		67.1		64.7		60.5		68.5		69.
Medium Trucks:	68		66.4		63.4		61.4		68.9		69.
Heavy Trucks:	70		68.9		60.6		61.8		69.9		70.
Vehicle Noise:	74		72.3		68.0		66.1		73.9	9	74.
Centerline Distanc	e to Noise Co	ontour (in feet)	70 dE	24	65 dB	4	6	0 dBA	55	dBA
			I dn:	55	//1	118	rv.	0	253		46
			VFL:	57		123			255	-	570
		Ci		57		123			200		

FH	WA-RD-77-108 H	IGHWA	Y NOISE PI	REDICTION	MODE	L		
Scenario: HY Withou	t Project			Project Na				
Road Name: First St.				Job Num	ber: 117	'95		
Road Segment: e/o Parkric	ge Av.							
SITE SPECIFIC I	IPUT DATA					DEL INPUT	rs –	
Highway Data			Site Con	ditions (Ha	ard = 10	Soft = 15)		
Average Daily Traffic (Adt):	23,634 vehicles				Aut	os: 15		
Peak Hour Percentage:	10%		Me	dium Truck	s (2 Axle	es): 15		
Peak Hour Volume:	2,363 vehicles		He	avy Trucks	(3+ Axle	es): 15		
Vehicle Speed:	35 mph		Vehicle	Mix				-
Near/Far Lane Distance:	36 feet			icleType	Da	y Evening	Night	Daily
Site Data				Aut		3% 11.0%		91.88
Barrier Height:	0.0 feet		M	edium Truc	ks: 73	3% 9.2%	17.6%	5.79
Barrier Type (0-Wall, 1-Berm):	0.0		1	leavy Truc	ks: 84	4% 3.2%	12.5%	2.33
Centerline Dist. to Barrier:	44.0 feet		Malas C		- <i>dia</i>	- (1)		
Centerline Dist. to Observer:	44.0 feet		Noise Se	ource Elev				
Barrier Distance to Observer:	0.0 feet			Autos:	0.000			
Observer Height (Above Pad):	5.0 feet			m Trucks:	2.297		djustment	
Pad Elevation:	0.0 feet		Heav	y Trucks:	8.004	Grade A	ujusimeni	. 0.0
Road Elevation:	0.0 feet		Lane Eq	uivalent Di	stance	(in feet)		
Road Grade:	0.0%			Autos:	40.460)		
Left View:	-90.0 degrees		Mediu	m Trucks:	40.241			
Right View:	90.0 degrees		Heav	y Trucks:	40.262			
FHWA Noise Model Calculation	-							
VehicleType REMEL	Traffic Flow	Distanc			Fresnel	Barrier A		rm Atter
Autos: 64.30			1.28	-1.20	-4.		.000	0.00
Medium Trucks: 75.75			1.31	-1.20	-4.		.000	0.00
Heavy Trucks: 81.57	-13.33		1.31	-1.20	-5.	50 0.	.000	0.00
Unmitigated Noise Levels (with		-	,					
VehicleType Leq Peak Ho			t Evening	Leq Nig		Ldn		NEL
	.0 65		62.7		58.5	66		67
	6.5 64		61.3		59.4	66		67
	8.3 66		58.6		59.8	67		68
	2.1 70	.3	65.9		64.0	71	.8	72
Centerline Distance to Noise C	ontour (in feet)						-1	
			70 dBA	65 dB,	4	60 dBA		dBA
	Lo		58	126		271		584
	CNF		61	132		283		510

Co	io: LIX Mith	Droject				Drojoa! *	lama: D-	omino		
	io: HY Withou e: First St.	rioject					lame: Pal mber: 117			
	nt: e/o Dwy. 1					300 140		95		
Ŷ	,			-						
	SPECIFIC IN	IPUT DATA			04- 0			DEL INPUTS		
Highway Data					Site Con	aitions (, Soft = 15)		
Average Daily	, ,	23,635 vehicle	s					tos: 15		
	Percentage:	10%					cks (2 Axle			
	lour Volume:	2,364 vehicles			He	avy Truck	is (3+ Axle	es): 15		
	hicle Speed:	35 mph			Vehicle I	Mix				
Near/Far La	ne Distance:	36 feet			Vehi	cleType	Da	y Evening	Night	Daily
Site Data						A	itos: 76	.3% 11.0%	12.6%	91.88%
Ba	rrier Heiaht:	0.0 feet			Me	edium Tru	icks: 73	.3% 9.2%	17.6%	5.79%
Barrier Type (0-W		0.0			F	łeavy Tru	<i>icks:</i> 84	.4% 3.2%	12.5%	2.33%
Centerline Di		44.0 feet		H	Noiso Sc	urco Ela	vations (in foot)		
Centerline Dist.	to Observer:	44.0 feet		Ľ,	140/36 30	Autos		,		
Barrier Distance	to Observer:	0.0 feet			Modiur	n Trucks				
Observer Height (Above Pad):	5.0 feet				y Trucks:			istment	0.0
Pa	ad Elevation:	0.0 feet				·			ounoni.	0.0
	ad Elevation:	0.0 feet		1	Lane Eq		Distance	, ,		
	Road Grade:	0.0%				Autos:				
	Left View:	-90.0 degree				n Trucks.				
	Right View:	90.0 degree	s		Heav	y Trucks:	40.262	2		
FHWA Noise Mod	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresnel	Barrier Atte	n Ber	m Atten
Autos:	64.30	2.62		1.2	8	-1.20	-4.	61 0.00	00	0.000
Medium Trucks:	75.75	-9.38		1.3	1	-1.20	-4.	87 0.00	00	0.000
Heavy Trucks:	81.57	-13.33		1.3	1	-1.20	-5.	50 0.00	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	atten	uation)					
VehicleType	Leq Peak Hou	ır Leq Day		Leq E	vening	Leq N	light	Ldn	CI	VEL
Autos:	67	.0 6	65.0		62.7		58.5	66.5		67.0
Medium Trucks:	66	.5 6	64.3		61.3		59.4	66.8		67.1
Heavy Trucks:	68	.3 6	6.8		58.6		59.8	67.8		68.0
Vehicle Noise:	72	.1 1	70.3		65.9		64.0	71.8		72.1
Centerline Distan	ce to Noise Co	ontour (in feet)								
					dBA	65 d		60 dBA		dBA
			dn:	5	8	12	5	271	5	84
			IFI :	-	1	13	-	283		10

FH	WA-RD-77-108	HIGHWA	NOISE P	REDICTIO	N MODEL		
Scenario: HY Witho Road Name: First St. Road Segment: e/o Mount	,				ame: Palo nber: 1179		
SITE SPECIFIC I	NPUT DATA			NO	ISE MOD	EL INPUTS	
Highway Data			Site Cor	nditions (H	lard = 10, 3	Soft = 15)	
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume:	11,830 vehicle 10% 1,183 vehicles	5		edium Truck eavy Trucks): 15	
Vehicle Speed:	35 mph		Vehicle	Mix			
Near/Far Lane Distance:	36 feet			hicleType	Dav	Evening	Night Daily
Site Data					tos: 76.3	•	12.6% 91.88
Barrier Height:	0.0 feet		M	ledium Truc	cks: 73.3	% 9.2%	17.6% 5.79
Barrier Type (0-Wall, 1-Berm):	0.0			Heavy Truc	cks: 84.4	% 3.2%	12.5% 2.33
Centerline Dist. to Barrier:	44.0 feet		Noise S	ource Elev	ations (in	feet)	
Centerline Dist. to Observer:	44.0 feet			Autos:	0.000	1001	
Barrier Distance to Observer:	0.0 feet		Modiu	im Trucks:	2.297		
Observer Height (Above Pad):	5.0 feet			vy Trucks:	8.004	Grade Adii	istment: 0.0
Pad Elevation:	0.0 feet					,	0.0
Road Elevation:	0.0 feet		Lane Eq	quivalent D	istance (ii	1 feet)	
Road Grade:	0.0%			Autos:	40.460		
Left View:	-90.0 degree	S		ım Trucks:	40.241		
Right View:	90.0 degree	5	Hea	vy Trucks:	40.262		
FHWA Noise Model Calculatio	ns		1				
VehicleType REMEL	Traffic Flow	Distanc	e Finite	e Road	Fresnel	Barrier Atte	n Berm Atter
Autos: 64.30	-0.38	1	.28	-1.20	-4.6	0.00	0.00
Medium Trucks: 75.75	5 -12.39	1	.31	-1.20	-4.8	۶ 0.00	0.00
Heavy Trucks: 81.5	-16.34	1	.31	-1.20	-5.50	0.00	0.00
Unmitigated Noise Levels (wit	hout Topo and L	arrier att	enuation)				
VehicleType Leq Peak Ho	our Leq Day	Leg	Evening	Leq Ni	ght	Ldn	CNEL
		2.0	59.6		55.5	63.5	63
		1.3	58.3		56.4	63.8	64
Heavy Trucks: 6	5.3 6	3.8	55.6	6	56.8	64.8	64
Vehicle Noise: 6	9.1 6	7.3	62.9	9	61.0	68.8	69
Centerline Distance to Noise C	Contour (in feet)						
		7	0 dBA	65 dE	3A	60 dBA	55 dBA
	L	.dn:	37 38	79 83		171 179	368 385

Tuesday, July 02, 2019

Tuesday, July 02, 2019

	FH	WA-RD-77-108	HIGHWA	Y NO	ISE PREDICT		ODEL			
Scenari	o: HY Withou	t Project			Projec	t Name:	Palom	ino		
Road Nam	e: First St.				Job I	Vumber:	11795			
Road Segmer	at: w/o Hamne	er Av.								
	SPECIFIC IN	NPUT DATA							s	
Highway Data				Sit	e Conditions	G (Hard :	= 10, So	oft = 15)		
Average Daily	Traffic (Adt):	12,637 vehicl	es				Autos:			
Peak Hour	Percentage:	10%			Medium T					
Peak H	our Volume:	1,264 vehicle	s		Heavy Tru	ıcks (3+	Axles):	15		
	hicle Speed:	35 mph		Ve	hicle Mix					
Near/Far Lar	ne Distance:	36 feet			VehicleTyp	е	Day	Evening	Night	Daily
Site Data						Autos:	76.3%	11.0%	12.6%	91.88
Bar	rier Height:	0.0 feet			Medium 1	rucks:	73.3%	9.2%	17.6%	5.79
Barrier Type (0-W	all, 1-Berm):	0.0			Heavy T	rucks:	84.4%	3.2%	12.5%	2.33
Centerline Dis		44.0 feet		No	ise Source E	levatio	ns (in fe	eet)		
Centerline Dist.		44.0 feet			Auto	os: 0	0.000			
Barrier Distance		0.0 feet			Medium Truck	ks: 2	2.297			
Observer Height (J	,	5.0 feet			Heavy Truck	ks: 8	3.004	Grade Ad	justment	: 0.0
	d Elevation:	0.0 feet								
	d Elevation:	0.0 feet		La	ne Equivaler			teet)		
ŀ	Road Grade:	0.0%			Auto		0.460			
	Left View:	-90.0 degre			Medium Truck).241			
	Right View:	90.0 degre	es		Heavy Truck	(S: 40).262			
FHWA Noise Mode		-								
VehicleType	REMEL	Traffic Flow	Distan		Finite Road	Fres		Barrier Att		rm Atten
Autos:	64.30			1.28	-1.20		-4.61		000	0.00
Medium Trucks:	75.75			1.31	-1.20		-4.87		000	0.00
Heavy Trucks:	81.57			1.31	-1.20		-5.50	0.0	000	0.00
Unmitigated Noise		· · ·	1		<i>,</i>	Allenter		l dn		
VehicleType Autos:	Leq Peak Ho		62.3	q Evei	59.9 Leq	Night 55		Lan 63.8		NEL 64
Medium Trucks:	-		62.3 61.6		59.9 58.6	56		64.1	-	64.
Heavy Trucks:			64.1		55.9	57		65.1		65.
Vehicle Noise:).4	67.6		63.2	61		69.1		69.
Centerline Distance	e to Noise C	ontour (in fee)							
			, 	70 dB.	4 65	dBA	6	60 dBA	55	dBA
			Ldn:	38		83		179	3	385

	FHW	/A-RD-77-108	HIGH	HWAY N	OISE PR	EDICT	ION MO	DEL			
Scenario: HY		.,	_				Name:				
Road Name: Hidd						Job N	umber:	11795			
Road Segment: w/o	E. Parki	ridge Av.									
SITE SPECI	FIC IN	PUT DATA							L INPUT	s	
Highway Data				S	lite Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily Traffic (Adt):	29,276 vehicle	s					Autos:	15		
Peak Hour Percen	tage:	10%			Med	dium Tri	ucks (2 /	Axles):	15		
Peak Hour Vol	ume:	2,928 vehicles	5		Hea	avy True	cks (3+ /	Axles):	15		
Vehicle Sp	eed:	45 mph		V	ehicle N	<i>li</i> v					
Near/Far Lane Dista	ance:	52 feet		H		cleType		Day	Evening	Night	Daily
Site Data					Von		Autos:	76.3%		12.6%	
Barrier He	iaht.	0.0 feet			Me	dium T	rucks:	73.3%	9.2%	17.6%	5.79%
Barrier Type (0-Wall, 1-B	•	0.0 1001			h	leavy T	ucks:	84.4%	3.2%	12.5%	2.33%
Centerline Dist. to Ba		50.0 feet				-					
Centerline Dist. to Obse		50.0 feet		^	loise So				eet)		
Barrier Distance to Obse		0.0 feet				Auto		000			
Observer Height (Above I	Pad):	5.0 feet			Mediun			297			
Pad Eleva		0.0 feet			Heav	y Truck	s: 8.	004	Grade Ad	ustment:	0.0
Road Eleva	ation:	0.0 feet		L	ane Equ	iivalen	Distan	ce (in	feet)		
Road G	rade:	0.0%				Auto	s: 43.	000			
Left	View:	-90.0 degree	s		Mediun	n Truck	s: 42.	794			
Right	View:	90.0 degree	es		Heav	y Truck	s: 42.	814			
FHWA Noise Model Calcu	Ilations	;									
VehicleType REN	IEL	Traffic Flow	Dis	stance	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atten
Autos:	68.46	2.46		0.88		-1.20		-4.65	0.0	000	0.000
Medium Trucks:	79.45	-9.55		0.91		-1.20		-4.87		000	0.00
Heavy Trucks:	84.25	-13.49		0.91		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise Level	s (witho	out Topo and	barri	er attenu	uation)						
	ak Hou			Leq Ev	ening	Leq	Night		Ldn		VEL
Autos:	70.		68.6		66.3		62.1		70.1		70.
Medium Trucks:	69.		67.5		64.5		62.5		69.9		70.3
Heavy Trucks:	70.		68.9		60.7		61.9		69.9		70.1
Vehicle Noise:	75.	0	73.2		69.1		66.9	9	74.8	3	75.
Centerline Distance to No	oise Co	ntour (in feet))								
			L	70 d			dBA	6	60 dBA		dBA
			Ldn:	10-			24		482	,	038
			VFI :	10			35		505		089

Tuesday, July 02, 2019

Correct	or LIX Mitk	Droject				Draina(*)	lamai 5	Dolon-			
	o: HY Without e: Hidden Val	.,				Project N Job Nur			no		
	e: Hidden val ht: e/o E. Parki					300 140	nber. I	1795			
Ŷ	SPECIFIC IN	\$				NC					
Highway Data					Site Con	ditions (F				<u> </u>	
Average Daily	Traffic (Adt):	31,112 vehicle	s				A	lutos:	15		
Peak Hour	Percentage:	10%			Me	dium Truc	ks (2 A	xles):	15		
Peak H	our Volume:	3,111 vehicles			He	avy Truck	s (3+ A	xles):	15		
Vel	hicle Speed:	45 mph		F	Vehicle I	Mix					
Near/Far Lar	ne Distance:	52 feet		-		cleType	1	Day	Evening	Night	Daily
Site Data				-		Au	tos:	, 76.3%	11.0%	12.6%	91.88%
Rar	rier Height:	0.0 feet			Me	edium Tru	cks: 1	73.3%	9.2%	17.6%	5.79%
Barrier Type (0-W		0.0			ŀ	leavy Tru	cks: 8	34.4%	3.2%	12.5%	2.33%
Centerline Dis	t. to Barrier:	50.0 feet			Noise Sc	ource Elev	vations	in fe	et)	-	
Centerline Dist.	to Observer:	50.0 feet		F		Autos:	0.0				
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks:	2.2	97			
Observer Height (J	Above Pad):	5.0 feet				v Trucks:	8.0		Grade Ad	iustment	: 0.0
	d Elevation:	0.0 feet									
	d Elevation:	0.0 feet		4	Lane Eq	uivalent L			'eet)		
F	Road Grade:	0.0%				Autos:	43.0				
	Left View:	-90.0 degree				n Trucks:	42.7				
	Right View:	90.0 degree	S		Heav	y Trucks:	42.8	14			
FHWA Noise Mode	el Calculation:	s									-
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite		Fresn	e/	Barrier Atte	en Ber	rm Atten
Autos:	68.46	2.72		0.8		-1.20		4.65	0.0		0.00
Medium Trucks:	79.45	-9.28		0.9		-1.20		4.87	0.0		0.00
Heavy Trucks:	84.25	-13.23		0.9	1	-1.20	-	5.43	0.0	00	0.00
Unmitigated Noise											
,1	Leq Peak Hou			Leq E	vening	Leq N			Ldn	-	NEL
Autos:	70.		8.9		66.5		62.3		70.4		70.
Medium Trucks:	69.		7.7		64.7		62.8		70.2		70.
Heavy Trucks:	70.		9.2		61.0		62.2		70.2		70.3
Vehicle Noise:	75.	.3 7	3.4		69.4		67.2		75.0	1	75.3
Centerline Distanc	e to Noise Co	ontour (in feet)									
				-	dBA	65 dE		6	0 dBA		dBA
			dn:	10	20	233			502	1	081
			EL:		13	244			526		.134

FH\	VA-RD-77-108	HIGHWA	Y NO	ISE PR	EDICTIC	ON MOD	EL			
e: River Rd.	,									
SPECIFIC IN	IPUT DATA				NC	DISE M	ODEL	INPUTS	5	
			Sit	te Conc	litions (l	Hard = 1	0, So	ft = 15)		
Traffic (Adt):	35,216 vehicle	s						15		
Percentage:	10%			Mea	lium Truc	:ks (2 Ax	des):	15		
our Volume:	3,522 vehicles	6		Hea	vy Truck	:s (3+ Ax	des):	15		
nicle Speed:	45 mph		Vo	hicle N	lix					
ne Distance:	52 feet		ve			E	ay 🛛	Evening	Night	Daily
					AL	itos: 7	6.3%	11.0%	12.6%	91.97%
rier Heiaht:	0.0 feet			Me	dium Tru	cks: 7	3.3%	9.2%	17.6%	5.72%
all, 1-Berm):	0.0			Н	eavy Tru	cks: 8	4.4%	3.2%	12.5%	2.31%
t. to Barrier:	50.0 feet		No	oise So	urce Ele	vations	(in fe	et)		
o Observer:	50.0 feet				Autos:	0.00	0	1		
o Observer:	0.0 feet			Medium	Trucks	2.29	97			
Above Pad):	5.0 feet			Heavy	Trucks:			Grade Adi	ustment.	0.0
d Elevation:	0.0 feet							,		
d Elevation:	0.0 feet		La	ne Equ				eet)		
Road Grade:										
Right View:	90.0 degree	s		Heavy	/ Trucks:	42.8	14			
el Calculation	s		_							
REMEL	Traffic Flow			Finite F						m Atten
68.46	3.27		0.88		-1.20	-4	4.65	0.0	00	0.000
79.45	-8.79		0.91		-1.20	-4	4.87	0.0	00	0.000
84 25	-12.74		0.91		-1.20	-{	5.43	0.0	00	0.000
01.20										
	out Topo and	barrier at	tenua	ation)						
Levels (with Leq Peak Hou	ır Leq Day	Leo	tenua q Evel	ning	Leq N	•		Ldn		VEL
Levels (with Leq Peak Hou 71	Ir Leq Day	69.4		ning 67.1	Leq N	62.9		70.9		71.4
Levels (with Leq Peak Hou 71 70	ur Leq Day .4 .4	59.4 58.2		ning 67.1 65.2	Leq N	62.9 63.3		70.9		71.4 71.0
E Levels (with Leq Peak Hou 71 70 71	17 Leq Day .4 .4 .2	Leo 69.4 68.2 69.7		ning 67.1 65.2 61.5	Leq N	62.9 63.3 62.6		70.9 70.7 70.7		71.4 71.0 70.8
Levels (with Leq Peak Hou 71 70	17 Leq Day .4 .4 .2	59.4 58.2		ning 67.1 65.2	Leq N	62.9 63.3		70.9		71.4 71.0 70.8
Levels (with Leq Peak Hou 71 70 71 75	17 Leq Day .4 .4 .2	Leo 69.4 68.2 69.7 73.9	q Eve	ning 67.1 65.2 61.5 69.9		62.9 63.3 62.6 67.7		70.9 70.7 70.7 75.5	, ,	71.4 71.0 70.8 75.8
Levels (with Leq Peak Hou 71 70 71 75	rr Leq Day .4 .4 .2 .8 ontour (in feet	Lec 59.4 58.2 59.7 73.9	q Eve 70 dB	ning 67.1 65.2 61.5 69.9	65 di	62.9 63.3 62.6 67.7 BA	6	70.9 70.7 70.7 75.5 0 dBA	55	71.4 71.0 70.8 75.8 dBA
Levels (with Leq Peak Hou 71 70 71 75	IT Leq Day .4 .4 .2 .8 Dontour (in feet,	Leo 69.4 68.2 69.7 73.9	q Eve	ning 67.1 65.2 61.5 69.9		62.9 63.3 62.6 67.7 BA	6	70.9 70.7 70.7 75.5	55	71.4 71.0 70.8 75.8
	2: HY With Pr 2: River Rd. 4: s/o Corydou SPECIFIC IN Percentage: ur Volume: icile Speed: te Distance: 	2: HY With Project 2: River Rd. 4: s/o Corydon St. SPECIFIC INPUT DATA SPECIFIC INPUT DATA Fraffic (Ad): 35,216 vehicle Percentage: 10% 23,522 vehicle Second Stance: 52 feet 10% 10% 10% 10% 10% 10% 10% 10%	2: HY With Project 2: River Rd. 4: s/o Corydon St. SPECIFIC INPUT DATA SPECIFIC INPUT DATA Fraffic (Ad): 35,216 vehicles Percentage: 10% 25,22 vehicles sicle Speed: 45 mph le Distance: 52 feet Fier Height: 0.0 feet all, 1-Berm): 0.0 1: to Barrier: 50.0 feet 0 Observer: 0.0 feet 4 Doserver: 0.0 feet 4 Doserver: 0.0 feet 4 Devation: 0.0 feet 4 Elevation: 0.0 feet 5.0 feet 4 Elevation: 0.0 feet 5.0 feet	2: HY With Project 2: River Rd. 4: s/o Corydon St. SPECIFIC INPUT DATA Sin Fraffic (Adt): 35,216 vehicles Percentage: 10% Percentage: 10% Percentage: 35,22 vehicles uicle Speed: 45 mph Ve te Distance: 52 feet Frier Height: 0.0 feet all, 1-Berm): 0.0 t. to Barrier: 50.0 feet 0 Observer: 0.0 feet Above Pad): 5.0 feet d Elevation: 0.0 feet d Elevatio	2: HY With Project 2: Rive Rd. 4: s/o Corydon St. SPECIFIC INPUT DATA Site Conc Traffic (Adt): 35,216 vehicles Percentage: 10% Mec Distance: 3,522 vehicles Wehicle Mec Vehicle M	Diff Project Project N 2: River Rd. Job Nu 2: River Rd. Job Nu 3: Rever Rd. Job Nu SPECIFIC INPUT DATA Site Conditions (I I'rraffic (Adl): 35,216 vehicles Percentage: 10% uzr Volume: 35,222 vehicles Medium Truc Heavy Truc nicle Speed: 45 mph Vehicle Mix Vehicle Mix vehicle Speed: 45 mph vehicle Type Attract rier Height: 0.0 feet all, 1-Berm): 0.0 0 Observer: 50.0 feet 0 Observer: 50.0 feet 4 Elevation: 0.0 feet d Elevation: 0.0 feet Left View: 90.0 degrees Right View: 90.0 degrees Redium Trucks: Heavy Trucks: Calculations Distance Rested: Traffic Flow Distance Rested: 3.27 0.88 79.45 -8.79 0.91 </td <td>D: HY With Project Project Name: P. 2: River Rd. Job Number: 1: 2: River Rd. Job Number: 1: 2: River Rd. Job Number: 1: SPECIFIC INPUT DATA NOISE Mit SPECIFIC INPUT DATA Site Conditions (Hard = 1 Traffic (Adt): 35,216 vehicles A Percentage: 10% Medium Trucks (2 A) uicle Speed: 45 mph Vehicle Mix Vehicle Speed: 45 mph Vehicle Mix 1: 0.0 feet Medium Trucks: 7 all, 1-Berm): 0.0 Heavy Trucks: 8 0 Observer: 0.0 feet Motise Source Elevations 0 Observer: 0.0 feet Heavy Trucks: 8.00 d Elevation: 0.0 feet Autos: 0.0 d Elevation: 0.0 feet Lane Equivalent Distance Coad Grade: 0.9% Autos: 42.07 I eft Wiew: 90.0 degrees Medium Trucks: 42.72 Heavy Trucks: 42.8' Heavy Trucks: 42.8' I claculations Traffic Flow</td> <td>Bit River Rd. Job Number: 11795 1::::::::::::::::::::::::::::::::::::</td> <td>Dr. HY With Project Project Name: Palomino Job Number: 11795 2: River Rd. SPECIFIC INPUT DATA NOISE MODEL INPUTS SPECIFIC INPUT DATA Site Conditions (Hard = 10, Soft = 15) Fraffic (Adt): 35,216 vehicles Autos: 15 Percentage: 10% Medium Trucks (2 Axles): 15 Ur Volume: 3,522 vehicles Heavy Trucks (3 + Axles): 15 Vehicle Type Day Evening 0.0 feet Autos: 76.3% 11.0% Medium Trucks: 73.3% 9.2% Autos: 76.3% 11.0% Medium Trucks: 73.3% 9.2% Heavy Trucks: 84.4% 3.2% Noise Source Elevations (in feet) Autos: 40.000 0 Observer: 0.0 feet d Elevation: 0.0 feet d Elevation: 0.0 feet d Elevation: 0.0 feet Left Weiw: 90.0 degrees Medium Trucks: 42.794 Heavy Trucks: 42.814 Heavy Trucks: 42.814 Calculations Traffic Flow Distance Finite Road Fresnel Barrier Attt RMEL Traffic Flow Distance Finite Road<</td> <td>Dr. HY With Project Project Name: Palomino Job Number: 11795 2: River Rd. Job Number: 11795 SPECIFIC INPUT DATA NOISE MODEL INPUTS SPECIFIC INPUT DATA Site Conditions (Hard = 10, Soft = 15) Traffic (Adt): 35,216 vehicles Percentage: 10% Medium Trucks (2 Akles): 15 Heavy Trucks (2 Akles): 15 Vehicle Mix Day Loss To 3.3% 9.2% I. Berrier: 50.0 feet Motise Source Elevations (in feet) o Observer: 0.0 feet Macour Distance Autos: 0.0 feet Medium Trucks: More Source Elevations (in feet) o Observer: 0.0 feet Macour Trucks: 8.004 Glevation: 0.0 feet Deal Elevation: 0.0 feet Macour Trucks: 8.004 Glevation: 0.0 feet Heavy Trucks: 42.814 I Calculations Distance Right View: 90.0 degrees Remet I Traffic Flow Distance Fresent Barrier Atten Berrier Atten 68.46 3.27 79.45 -12.0 -4.65 0.000 8</td>	D: HY With Project Project Name: P. 2: River Rd. Job Number: 1: 2: River Rd. Job Number: 1: 2: River Rd. Job Number: 1: SPECIFIC INPUT DATA NOISE Mit SPECIFIC INPUT DATA Site Conditions (Hard = 1 Traffic (Adt): 35,216 vehicles A Percentage: 10% Medium Trucks (2 A) uicle Speed: 45 mph Vehicle Mix Vehicle Speed: 45 mph Vehicle Mix 1: 0.0 feet Medium Trucks: 7 all, 1-Berm): 0.0 Heavy Trucks: 8 0 Observer: 0.0 feet Motise Source Elevations 0 Observer: 0.0 feet Heavy Trucks: 8.00 d Elevation: 0.0 feet Autos: 0.0 d Elevation: 0.0 feet Lane Equivalent Distance Coad Grade: 0.9% Autos: 42.07 I eft Wiew: 90.0 degrees Medium Trucks: 42.72 Heavy Trucks: 42.8' Heavy Trucks: 42.8' I claculations Traffic Flow	Bit River Rd. Job Number: 11795 1::::::::::::::::::::::::::::::::::::	Dr. HY With Project Project Name: Palomino Job Number: 11795 2: River Rd. SPECIFIC INPUT DATA NOISE MODEL INPUTS SPECIFIC INPUT DATA Site Conditions (Hard = 10, Soft = 15) Fraffic (Adt): 35,216 vehicles Autos: 15 Percentage: 10% Medium Trucks (2 Axles): 15 Ur Volume: 3,522 vehicles Heavy Trucks (3 + Axles): 15 Vehicle Type Day Evening 0.0 feet Autos: 76.3% 11.0% Medium Trucks: 73.3% 9.2% Autos: 76.3% 11.0% Medium Trucks: 73.3% 9.2% Heavy Trucks: 84.4% 3.2% Noise Source Elevations (in feet) Autos: 40.000 0 Observer: 0.0 feet d Elevation: 0.0 feet d Elevation: 0.0 feet d Elevation: 0.0 feet Left Weiw: 90.0 degrees Medium Trucks: 42.794 Heavy Trucks: 42.814 Heavy Trucks: 42.814 Calculations Traffic Flow Distance Finite Road Fresnel Barrier Attt RMEL Traffic Flow Distance Finite Road<	Dr. HY With Project Project Name: Palomino Job Number: 11795 2: River Rd. Job Number: 11795 SPECIFIC INPUT DATA NOISE MODEL INPUTS SPECIFIC INPUT DATA Site Conditions (Hard = 10, Soft = 15) Traffic (Adt): 35,216 vehicles Percentage: 10% Medium Trucks (2 Akles): 15 Heavy Trucks (2 Akles): 15 Vehicle Mix Day Loss To 3.3% 9.2% I. Berrier: 50.0 feet Motise Source Elevations (in feet) o Observer: 0.0 feet Macour Distance Autos: 0.0 feet Medium Trucks: More Source Elevations (in feet) o Observer: 0.0 feet Macour Trucks: 8.004 Glevation: 0.0 feet Deal Elevation: 0.0 feet Macour Trucks: 8.004 Glevation: 0.0 feet Heavy Trucks: 42.814 I Calculations Distance Right View: 90.0 degrees Remet I Traffic Flow Distance Fresent Barrier Atten Berrier Atten 68.46 3.27 79.45 -12.0 -4.65 0.000 8

Tuesday, July 02, 2019

	FH\	VA-RD-77-108	HIGHW	AY N	OISE PF	EDICTIO	N MO	DEL			
Scenario	: HY With Pr	oject				Project N	ame:	Palomi	no		
Road Name	: River Rd.					Job Nur	nber:	11795			
Road Segment	t: s/o Lincoln	Av.									
	PECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data				S	Site Con	ditions (H			,		
Average Daily T	, ,	19,229 vehicle	s					Autos:	15		
Peak Hour F	•	10%				dium Truc		/	15		
Peak Ho	our Volume:	1,923 vehicles	5		He	avy Truck	s (3+ /	Axles):	15		
	icle Speed:	45 mph		V	/ehicle l	/lix					
Near/Far Lan	e Distance:	10 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						Au	tos:	76.3%	11.0%	12.6%	91.96%
Barr	ier Height:	0.0 feet			Me	dium Tru	cks:	73.3%	9.2%	17.6%	5.73%
Barrier Type (0-Wa	all, 1-Berm):	0.0			ŀ	leavy Tru	cks:	84.4%	3.2%	12.5%	2.319
Centerline Dist		30.0 feet		٨	loise Sc	urce Ele	vation	s (in fe	et)		
Centerline Dist. to		30.0 feet				Autos:	0.	000			
Barrier Distance to		0.0 feet			Mediur	n Trucks:	2.	297			
Observer Height (A	,	5.0 feet			Heav	y Trucks:	8.	004	Grade Ad	justment	0.0
	d Elevation:	0.0 feet			one Fe	ivalent E	Vioton	aa (in i	[0.04]		
	d Elevation:	0.0 feet		1	ane Equ	Autos:		ce (In 1 000	eet)		
R	oad Grade:	0.0%				n Trucks:		000 704			
	Right View:	-90.0 degree 90.0 degree				y Trucks:		704 733			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atten
Autos:	68.46	0.64		3.22		-1.20		-4.49	0.0	000	0.00
Medium Trucks:	79.45	-11.42		3.29		-1.20		-4.86	0.0	000	0.00
Heavy Trucks:	84.25	-15.36		3.28		-1.20		-5.77	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrier	attenu	uation)						
21	Leq Peak Hou			.eq Ev		Leq N			Ldn		NEL
Autos:	71		69.2		66.8		62.6	-	70.6		71.
Medium Trucks:	70		68.0		65.0		63.0		70.4		70.
Heavy Trucks:	71	-	69.4		61.2		62.4		70.4		70.
Vehicle Noise:	75		73.7		69.6		67.4	1	75.3	3	75.
Centerline Distance	e to Noise Co	ontour (in feet)	70 d	DA	65 dE	24	4	0 dBA	FE	dBA
			I dn:	70 a 67		145		C	313		ава 574
			Lan: JFL :	57 71		145			313		074 07

Fł	IWA-RD-77-108 I	HIGHW	AY NOISE	PREDICTIO	N MODE	EL		
Scenario: HY With Road Name: Parkridge Road Segment: n/o Seco	Av.			Project N Job Nur	ame: Pa nber: 11			
SITE SPECIFIC	NPUT DATA			NC	ISE MO	DEL INPUT	'S	
Highway Data			Site (Conditions (H	lard = 10), Soft = 15)		
Average Daily Traffic (Adt):	3,359 vehicles	5			AL	tos: 15		
Peak Hour Percentage:	10%			Medium Truc	ks (2 Ax	les): 15		
Peak Hour Volume:	336 vehicles			Heavy Truck	s (3+ Ax	les): 15		
Vehicle Speed:	25 mph		Vehic	le Mix				
Near/Far Lane Distance:	10 feet			/ehicleTvpe	D	av Evenina	Night	Dailv
Site Data						5.3% 11.0%		92.389
Barrier Height:	0.0 feet			Medium Tru	cks: 73	3.3% 9.2%		
Barrier Type (0-Wall, 1-Berm):	0.0			Heavy Tru	cks: 84	.4% 3.2%	12.5%	2.199
Centerline Dist. to Barrier:	30.0 feet							
Centerline Dist. to Observer:	30.0 feet		Noise	Source Ele				
Barrier Distance to Observer:	0.0 feet			Autos:				
Observer Height (Above Pad):	5.0 feet			dium Trucks:			divolmont	
Pad Elevation:	0.0 feet		h	eavy Trucks:	8.00	4 Grade A	djustment	0.0
Road Elevation:	0.0 feet		Lane	Equivalent [Distance	(in feet)		
Road Grade:	0.0%			Autos:	30.00	0		
Left View:	-90.0 degrees	s	Me	dium Trucks:	29.70	4		
Right View:	90.0 degrees	S	H	eavy Trucks:	29.73	3		
FHWA Noise Model Calculation	ns							
VehicleType REMEL	Traffic Flow	Distan	ice Fi	nite Road	Fresnel	Barrier A	ten Ber	m Atter
Autos: 58.7			3.22	-1.20			000	0.00
Medium Trucks: 70.8			3.29	-1.20			000	0.00
Heavy Trucks: 77.9	7 -20.62		3.28	-1.20	-5	.77 0	000	0.00
Unmitigated Noise Levels (with		-		<i>,</i>			1	
VehicleType Leq Peak H			eq Evenin			Ldn		NEL
		4.4		2.0	47.9	55		56
		4.1 7.9		1.1 9.7	49.1	56 58		56 59
		-			50.9			
		0.6	5	5.8	54.2	62	.1	62
Centerline Distance to Noise	contour (in feet)	1	70 dBA	65 dE		60 dBA	66	dBA
	,	dn:	70 dBA 9	65 dE 19		60 dBA 41		<i>ава</i> 89
	CN		9	19		41		93 93

Tuesday, July 02, 2019

	HY With Pro					Project N Job Nur			no		
Road Segment						000 140	1001. 1	1755			
SITE S Highway Data	PECIFIC IN	PUT DATA			ite Con	NO ditions (H				S	
Average Daily Ti	raffic (Adt):	9,428 vehicle	6		Sile Com	unions (n		utos:	15		
Peak Hour P	•	10%				dium Truc		,	15		
	ur Volume:	943 vehicles			Hea	avy Truck	s (3+ A	xles):	15		
Vehi Near/Far I an	cle Speed:	40 mph 36 feet		٧	/ehicle I						
	e Distance.	36 leel			Vehi	cleType		Day	Evening	Night	Daily
Site Data								6.3%		12.6%	
Barr	ier Height:	0.0 feet				edium True		73.3%		17.6%	
Barrier Type (0-Wa	ll, 1-Berm):	0.0			H	leavy Tru	cks: 8	34.4%	3.2%	12.5%	2.28
Centerline Dist.		44.0 feet		٨	loise So	urce Elev	ations	(in fe	et)		
Centerline Dist. to		44.0 feet				Autos:	0.0	00	í		
Barrier Distance to		0.0 feet			Mediur	n Trucks:	2.2	97			
Observer Height (A		5.0 feet			Heav	y Trucks:	8.0	04	Grade Adj	ustment.	0.0
	Elevation:	0.0 feet			ana Ea	ivalent D	latana	o (in 1	0.041		
	l Elevation:	0.0 feet		-	ane Equ	Autos:	40.4		eel)		
R	oad Grade:	0.0%			1 4 m all 1 m	n Trucks:	40.4				
,	Left View: Right View:	-90.0 degree 90.0 degree				y Trucks:	40.2				
FHWA Noise Model	Calculation	5									
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresn	el i	Barrier Atte	en Ber	m Atter
Autos:	66.51	-1.94		1.28		-1.20	-	4.61	0.0	00	0.00
Medium Trucks:	77.72	-14.05		1.31		-1.20	-	4.87	0.0	00	0.00
Heavy Trucks:	82.99	-18.00		1.31		-1.20		5.50	0.0	00	0.00
Unmitigated Noise											
	eq Peak Hou 64		2.7	eq Ev	ening 60.3	Leq Ni	gnt 56.1		Ldn 64.1	-	NEL
	64.		2.7 1.6		58.6		56.7		64.1		64 64
Autos:	60		1.0		55.3		56.5		64.1 64.6		64 64
Autos: Medium Trucks:	63.		26		00.3						
Autos: Medium Trucks: Heavy Trucks:	65.	.1 6	3.6		62.2						60
Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	65. 69.	1 6 3 6	3.6 7.5		63.3		61.2		69.0)	69
Autos: Medium Trucks: Heavy Trucks:	65. 69.	1 6 3 6		70 d		65 dF		6			
Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	65. 69.	1 6 3 6 ontour (in feet)		70 d	BA	65 dE 82		6	69.0 0 dBA 176	55	69 dBA 80

FHV	WA-RD-77-108			JOE FR	LDICTIC					
e: Parkridge A	Av.							ino		
SPECIFIC IN	IPUT DATA				NC	DISE N	IODE	L INPUT	s	
			Si	te Cond	litions (l	lard =	10, So	oft = 15)		
Traffic (Adt):	11.124 vehicle	s				1	Autos:	15		
Percentage:	10%			Med	ium Truc	ks (2 A	xles):	15		
lour Volume:	1.112 vehicles			Hea	vy Truck	s (3+ A	xles):	15		
hicle Speed:	40 mph									
ne Distance:	36 feet		Ve				D	Evening	Allerter	Delle
				venic				-	· ·	Daily
			_							
				H	eavy mu	CKS:	84.4%	3.2%	12.5%	2.29%
			N	oise Sou	urce Ele	vations	s (in fe	eet)		
					Autos:	0.0	000			
				Medium	Trucks:	2.2	97			
,				Heavy	Trucks:	8.0	04	Grade Ad	justmen	t: 0.0
			Lè	ane Equ				reet)		
Right View:	90.0 degree	S		Heavy	I rucks:	40.2	262			
	e									
el Calculation										
REMEL	Traffic Flow	Distar	ce	Finite F	Road	Fresn	el	Barrier Att	en Be	rm Atten
REMEL 66.51		Distar	ice 1.28	Finite F	Road -1.20		el -4.61		en Be	rm Atten 0.000
REMEL	Traffic Flow	Distar		Finite F				0.0		0.00
REMEL 66.51	Traffic Flow -1.22	Distan	1.28		-1.20		4.61	0.0 0.0	000	0.00
REMEL 66.51 77.72 82.99	Traffic Flow -1.22 -13.32		1.28 1.31 1.31		-1.20 -1.20		4.61 4.87	0.0 0.0	000	0.00
REMEL 66.51 77.72 82.99	Traffic Flow -1.22 -13.32 -17.26 out Topo and	barrier a	1.28 1.31 1.31	ation)	-1.20 -1.20		4.61 4.87	0.0 0.0	000 000 000	0.00
REMEL 66.51 77.72 82.99 E Levels (with	Traffic Flow -1.22 -13.32 -17.26 out Topo and I Ir Leq Day	barrier a	1.28 1.31 1.31	ation)	-1.20 -1.20 -1.20		-4.61 -4.87 -5.50	0.0 0.0 0.0	000 000 000	0.00 0.00 0.00
REMEL 66.51 77.72 82.99 e Levels (with Leq Peak Hou	Traffic Flow -1.22 -13.32 -17.26 out Topo and I Ir Leq Day .4 6	barrier a	1.28 1.31 1.31	ation) ening	-1.20 -1.20 -1.20	ight	-4.61 -4.87 -5.50	0.0 0.0 0.0		0.00 0.00 0.00
REMEL 66.51 77.72 82.99 E Levels (with Leq Peak Hou 65	Traffic Flow -1.22 -13.32 -17.26 out Topo and I Ir Leq Day .4 6 .5 6	barrier a	1.28 1.31 1.31	ation) ening 61.0	-1.20 -1.20 -1.20	<i>ight</i> 56.8	-4.61 -4.87 -5.50	0.0 0.0 0.0 <i>Ldn</i> 64.9	000 000 000 000 000 000	0.00 0.00 0.00 <i>NEL</i> 65.
REMEL 66.51 77.72 82.99 E Levels (with Leq Peak Hou 65 64	Traffic Flow -1.22 -13.32 -17.26 out Topo and I Ir Leq Day .4 6 .5 6 .8 6	barrier a 2.4 2.4	1.28 1.31 1.31	ation) ening 61.0 59.4	-1.20 -1.20 -1.20	<i>ight</i> 56.8 57.4	-4.61 -4.87 -5.50	0.0 0.0 0.0 <i>Ldn</i> 64.5 64.5	000 000 000 000 000 000	0.00 0.00 0.00 :NEL 65. 65. 65.
REMEL 66.51 77.72 82.99 e Levels (with Leq Peak Hot 65 64 65 70 70	Traffic Flow -1.22 -13.32 -17.26 out Topo and I Ir Leq Day .4 6 .5 6 .8 6	barrier a Le 33.4 52.4 34.3 58.2	1.28 1.31 1.31	ation) ening 61.0 59.4 56.1	-1.20 -1.20 -1.20	ight 56.8 57.4 57.3	-4.61 -4.87 -5.50	0.0 0.0 0.0 <i>Ldn</i> 64.5 64.5	000 000 000 000 000 000	0.00 0.00 0.00 :NEL 65. 65. 65.
REMEL 66.51 77.72 82.99 e Levels (with Leq Peak Hot 65 64 65 70 70	Traffic Flow -1.22 -13.32 -17.26 out Topo and I Ir Leq Day .4 6 .8 6 .0 6	barrier a Le 33.4 52.4 34.3 58.2	1.28 1.31 1.31	ation) ening 61.0 59.4 56.1 64.0	-1.20 -1.20 -1.20	ight 56.8 57.4 57.3 61.9	-4.61 -4.87 -5.50	0.0 0.0 0.0 <i>Ldn</i> 64.5 64.5	000 000 000 000 000 000 000 000 000 00	0.00 0.00 0.00 :NEL 65. 65. 65.
REMEL 66.51 77.72 82.99 e Levels (with Leq Peak Hot 65 64 65 70 70	Traffic Flow -1.22 -13.32 -17.26 out Topo and I II II Leq Day .4 .5 .6 .0 .0 .0 .0 .1 .2 .3 .4 .6 .7 .8 .0 .0 .1 .1 .1 .2 .3 .4 .6 .7 .8 .0 .10 .10 .10 .10 .10 .10 .10 .10 .11 .12 .13 .14 .15 .16 .17 .17 .18	barrier a Le 33.4 52.4 34.3 58.2	1.28 1.31 1.31 attenua	ation) ening 61.0 59.4 56.1 64.0	-1.20 -1.20 -1.20 <i>Leq N</i>	ight 56.8 57.4 57.3 61.9 8A	-4.61 -4.87 -5.50	0.0 0.0 0.0 64.5 64.5 65.3 69.8	000 000 000 3 3 3 3	0.000 0.000 0.000 NEL 65.3 65.3 65.3 70.3
	o: HY With Pi e: Parkridge <i>in</i> ft: slo Lincoln SPECIFIC IN Traffic (Adi): Percentage: our Volume: hicle Speed: ne Distance: Trier Height: all, 1-Bermi): at. to Barrier: to Observer: Above Pad): ad Elevation: ad Elev	try With Project Tarfir (Ad): 11,124 vehicle Percentage: 10% 11,124 vehicle Percentage: 11,124 vehicle Percentage: 11,12 vehicles thicle Speed: 40 mph ne Distance: 36 feet rer Height: 0.0 feet dal, 1-Bermi): 0.0 st. to Barrier: 44.0 feet to Observer: 0.0 feet dall devetion: 0.0 feet dal devetion: 0.0 feet delevation: 0.0 degree Right View: 90.0 degree	o: HY With Project e: Parkridge Av. ht: slo Lincoln Av. SPECIFIC INPUT DATA Traffic (Adt): 11,124 vehicles Percentage: 10% our Volume: 1,112 vehicles hicle Speed: 40 mph ne Distance: 36 feet Trier Height: 0.0 feet all, 1-Berm): 0.0 st. to Barrier: 44.0 feet to Observer: 44.0 feet to Observer: 0.0 feet Above Pad): 5.0 feet ad Elevation: 0.0 feet ad Elevation: 0.0 feet ad Elevation: 0.0 feet Sad Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees	o: HY With Project e: Parkridge Av. ht: s/o Lincoln Av. SPECIFIC INPUT DATA SI Traffic (Ad): 11,124 vehicles Percentage: 10% our Volume: 1,112 vehicles river Height: 0.0 feet all, 1-Berm): 0.0 to Deserver: 44.0 feet N to Observer: 44.0 feet Above Pad): 5.0 feet ad Elevation: 0.0 feet delevation: 0.0 fe	o: HY With Project I :: Parkridge Av. th: slo Lincoln Av. SPECIFIC INPUT DATA SPECIFIC INPUT DATA SPECIFIC INPUT DATA SPECIFIC INPUT DATA Serveration and the slope of	b: HY With Project Project N b: Parkindge Av. Job Num b: Incoin Av. Job Num SPECIFIC INPUT DATA Site Conditions (i Traffic (Adt): 11.124 vehicles Percentage: 10% Our Volume: 1,112 vehicles Inter Height: 0.0 feet All, 1-Bermi: 0.0 to Observer: 44.0 feet Mobove Padi): 5.0 feet Heavy Trucks: Heavy Trucks: ad Elevation: 0.0 feet d Elevation: 0.0 feet d Elevation: 0.0 feet d Elevation: 0.0 feet Lane Equivalent II Autos: Solad Grade: 0.0% Lane Equivalent II Autos: Right View: 90.0 degrees	b:: HY With Project Project Name: F e:: Parkirdige Av. Job Number: 1 sht: slo Lincoln Av. Site Conditions (Hard = Traffic (Adt): 11,124 vehicles Medium Trucks (2A Percentage: 10% Medium Trucks (2A ur Volume: 1,112 vehicles Medium Trucks (2A ne Distance: 36 feet Vehicle Nix rier Height: 0.0 feet Medium Trucks: all, 1-Berm): 0.0 Heavy Trucks: to Dbserver: 40.0 feet Motise Source Elevations: to Bosrver: 0.0 feet Medium Trucks: td Elevation: 0.0 feet Heavy Trucks: ad Elevation: 0.0 feet Lane Equivalent Distanc ad Grade Grade: 0.0% Medium Trucks: Left View: -90.0 degrees Heavy Trucks: 40.0	Description Project Name: Palom e: Parkindge Av. Job Number: 11795 ht: slo Lincoln Av. Site Conditions (Hard = 10, St SPECIFIC INPUT DATA NOISE MODE Parcentage: 10% our Volume: 1,112 vehicles Percentage: 10% our Volume: 1,112 vehicles Heavy Trucks (2 Avles): Heavy Trucks (2 Avles): our Volume: 1,112 vehicles riter Height: 0.0 feet All, 1-Barmi): 0.0 to Dsserver: 0.0 feet Above Pad): 5.0 feet Heavy Trucks: 8.4.4% Noise Source Elevation: 0.0 feet Above Pad): 5.0 feet Heavy Trucks: 8.004 Bid Elevation: 0.0 feet Actors: 40.06 Actors: 40.04 Ald Grade Grade: 0.06 Laft View: -90.0 degrees Medium Trucks: 40.262	e: Parkridge A. b: So Lincoln Av. SPECIFIC INPUT DATA NOISE MODEL INPUT: Site Conditions (Hard = 10, Soft = 15) Traffic (Ad): 11,124 vehicles Percentage: 10% our Volume: 1,112 vehicles hicle Speed: 40 mph ne Distance: 36 feet Vehicle Mix Trier Height: 0.0 feet all, 1-Berm): 0.0 sit. to Barrier: 44.0 feet to Observer: 0.0 feet Autos: 0.00 to Observer: 0.0 feet Advos: 2.297 Heavy Trucks: 84.4% 3.2% Noise Source Elevations (in feet) Autos: 0.004 Heavy Trucks: 84.4% 3.2% Noise Source Elevations (in feet) Autos: 0.004 Heavy Trucks: 84.4% Source Elevation: 0.0 feet Autos: 0.004 Heavy Trucks: 84.4% Source Elevation: 0.0 feet Autos: 0.004 Heavy Trucks: 84.4% Source Elevation: 0.0 feet Autos: 0.004 Heavy Trucks: 84.4% Source Elevations (in feet) Autos: 40.460 Autos: 40.460 Autos: 40.460 Heavy Trucks: 40.262	Description Project Name: Palomino Job Number: 11795 E: Parkridge Av. SPECIFIC INPUT DATA NOISE MODEL INPUTS SPECIFIC INPUT DATA Site Conditions (Hard = 10, Soft = 15) Traffic (Adt): 11,124 vehicles Percentage: 10% Our Volume: 1,112 vehicles hields Speed: 40 mph hields Speed: 40 mph Prior Height: 0.0 feet all, 1-Berm): 0.0 to Observer: 4.0 feet Above Pad): 5.0 feet Heavy Trucks: 2.97 Above Pad): 5.0 feet Heavy Trucks: 40.0460 Medium Trucks: 2.97 Heavy Trucks: 40.0460 Medium Trucks: 4.0.460 Medium Trucks: 4.0.460 Medium Trucks: 4.0.460

Tuesday, July 02, 2019

	FHW	A-RD-77-108 HIG	HWAY I	NOISE PF	REDICTION	N MODEL			
Scenario	p: HY With Pro	ject			Project Na	me: Palom	ino		
Road Name	e: Pacific Av.				Job Num	ber: 11795			
Road Segmen	t: s/o Second	St.							
	SPECIFIC IN	PUT DATA				ISE MODE		S	
Highway Data				Site Con	ditions (H	ard = 10, So	oft = 15)		
Average Daily	Traffic (Adt):	659 vehicles				Autos:	15		
Peak Hour	Percentage:	10%		Me	dium Truck	s (2 Axles):	15		
Peak He	our Volume:	66 vehicles		He	avy Trucks	(3+ Axles):	15		
	nicle Speed:	25 mph	ŀ	Vehicle I	Mix				
Near/Far Lar	ne Distance:	10 feet	ŀ	Vehi	cleType	Dav	Evening	Night [Dailv
Site Data					Aut	os: 76.3%		12.6% 9	1.88%
Bar	rier Height:	0.0 feet		Me	edium Truc	ks: 73.3%	9.2%	17.6%	5.79%
Barrier Type (0-Wa	•	0.0		ŀ	leavy Truc	ks: 84.4%	3.2%	12.5%	2.33%
Centerline Dis		30.0 feet	-	Noise Sc	ource Elev	ations (in f	eet)		
Centerline Dist. t	o Observer:	30.0 feet	ŀ		Autos:	0.000			
Barrier Distance t	o Observer:	0.0 feet		Mediur	n Trucks:	2.297			
Observer Height (/	Above Pad):	5.0 feet			y Trucks:	8.004	Grade Ad	ustment: 0	.0
Pa	d Elevation:	0.0 feet							
	d Elevation:	0.0 feet	-	Lane Eq		istance (in	feet)		
F	Road Grade:	0.0%			Autos:	30.000			
	Left View:	-90.0 degrees			n Trucks:	29.704			
	Right View:	90.0 degrees		Heav	y Trucks:	29.733			
FHWA Noise Mode	l Calculations								
VehicleType			listance	Finite		Fresnel	Barrier Atte		
Autos:	58.73	-11.46	3.2		-1.20	-4.49	0.0		0.00
Medium Trucks:	70.80	-23.47	3.2		-1.20	-4.86	0.0		0.00
Heavy Trucks:	77.97	-27.41	3.2	28	-1.20	-5.77	0.0	00	0.00
Unmitigated Noise			1	<u> </u>				Г	
	Leq Peak Hour			vening	Leq Nig		Ldn	CNE	
Autos:	49.3			44.9		40.8	48.8		49.3
Medium Trucks:	49.4			44.3		42.3	49.7		50.
Heavy Trucks:	52.6			42.9		44.1	52.1		52.
Vehicle Noise:	55.			48.9		47.4	55.2		55.
Centerline Distanc	e to Noise Co	ntour (in feet)	=0	-10.4	05.15		0.404	<i></i>	
				dBA	65 dB.	A (60 dBA	55 dB	A
		Ldn:		3	7		14	31	
		CNEL:		3	7		15	32	

	FHW	/A-RD-77-108	HIG	HWAY N	OISE PR	EDICI	ION MO	DEL			
Scenario: HY Wi	th Pro	oject				Projec	t Name:	Palom	ino		
Road Name: Mount	ain Av	/.				Job I	lumber:	11795			
Road Segment: n/o Ha	mner	Av.									
SITE SPECIFI	C IN	PUT DATA							L INPUT	s	
Highway Data				5	Site Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily Traffic (Ad	tt):	16,077 vehicle	es					Autos:	15		
Peak Hour Percentag	ge:	10%			Med	dium Ti	ucks (2 /	Axles):	15		
Peak Hour Volun	ne:	1,608 vehicles	s		Hea	avy Tru	cks (3+ /	Axles):	15		
Vehicle Spee	ed:	40 mph		1	/ehicle N	Niv					
Near/Far Lane Distan	ce:	36 feet		E State		cleTyp	<u>م</u>	Day	Evening	Night	Daily
Site Data					10.11			76.3%	•	12.6%	
Barrier Heig	ht.	0.0 feet			Me	dium 1	rucks:	73.3%	6 9.2%	17.6%	5.56
Barrier Type (0-Wall, 1-Ber		0.0			h	leavy T	rucks:	84.4%	3.2%	12.5%	4.39
Centerline Dist. to Barn		44.0 feet		_							
Centerline Dist. to Observ		44.0 feet		1	loise So	urce E	levation		eet)		
Barrier Distance to Observ		0.0 feet				Auto		000			
Observer Height (Above Pa		5.0 feet			Mediun			297			
Pad Flevati		0.0 feet			Heav	y Truck	(S: 8.	004	Grade Ad	justment.	0.0
Road Elevati		0.0 feet		L	ane Equ	ıivaler	t Distan	ce (in	feet)		
Road Gra		0.0%		_		Auto		460	,		
Left Vie		-90.0 degree	20		Mediun			241			
Right Vie		90.0 degree			Heav	y Truck		262			
FHWA Noise Model Calcula	tions	;									
VehicleType REME	L	Traffic Flow	Dis	stance	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atter
Autos: 6	6.51	0.28		1.28	i i	-1.20		-4.61	0.0	000	0.00
Medium Trucks: 7	7.72	-11.82		1.31		-1.20		-4.87	0.0	000	0.00
Heavy Trucks: 8	2.99	-12.84		1.31		-1.20		-5.50	0.0	000	0.00
Unmitigated Noise Levels (-		·						
VehicleType Leq Peak				Leq Ev		Leq	Night		Ldn		VEL
Autos:	66.		64.9		62.5		58.3		66.4		66
Medium Trucks:	66.	-	63.9		60.9		58.9		66.3	-	66.
Heavy Trucks:	70.	•	68.7		60.5		61.7		69.		69
Vehicle Noise:	72.	-	71.1		66.2		64.7	7	72.0	6	72
Centerline Distance to Nois	se Co	ntour (in feet)	70 -	DA I	67	dD A	1	60 dBA	57	dD A
				70 a			dBA		60 dBA		dBA
			Ldn: VFI :	65 68			40 46		302		52
									315		78

Tuesday, July 02, 2019

Road Nan	rio: HY With Pr ne: Hamner Av ent: s/o Third S					Project I Job Nu	Name: I Imber: ·				
	SPECIFIC IN	IPUT DATA			0/4- 0					S	
Highway Data		10 500 1.1			Site Con	iliions (Autos:	,		
Average Daily	Percentage:	48,500 vehicle	S		Mor	dium Tru					
	Hour Volume:	4.850 vehicles				avy Truc					
	hicle Speed:	40 mph					101017	5400).	10		
	ane Distance:	73 feet		1	Vehicle N						
	ine Distance.	70 1001			Vehi	cleType		Day	Evening	Night	Daily
Site Data				_				76.3%		12.6%	
	rrier Height:	0.0 feet				dium Tru		73.3%		17.6%	
Barrier Type (0-V	. ,	0.0			н	leavy Tri	UCKS:	84.4%	3.2%	12.5%	2.319
	ist. to Barrier:	55.0 feet		1	Noise So	urce Ele	evations	s (in f	eet)		
Centerline Dist.		55.0 feet				Autos	: 0.0	000			
Barrier Distance		0.0 feet			Mediun	n Trucks	: 2.2	297			
Observer Height	• • •	5.0 feet			Heav	/ Trucks	: 8.0	004	Grade Adj	iustment	: 0.0
-	ad Elevation:	0.0 feet		-	Lane Equ	uvalont	Distanc	o (in	foot)		
Ro	ad Elevation:	0.0 feet 0.0%		-	Lane Equ	Autos		· ·	leel)		
	Road Grade: Left View:	0.0% -90.0 dearee	_		Modium	Autos n Trucks					
	Right View:	90.0 degree				v Trucks					
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atter
Autos:	66.51	5.17		1.12	2	-1.20		-4.67	0.0	00	0.00
Medium Trucks:	77.72	-6.88		1.15	-	-1.20		-4.87	0.0		0.00
Heavy Trucks:		-10.82		1.15	-	-1.20		-5.38	0.0	00	0.00
Unmitigated Nois VehicleType	e Levels (with Leg Peak Hou				vening	Leg I	light	1	Ldn	0	NEL
Autos			59.6	ey Li	67.3	Leyi	63.1		71.1	-	71
Medium Trucks:			53.0 58.6		65.6		63.7		71.1		71
Heavy Trucks:			70.6		62.4		63.5		71.6		71
Vehicle Noise:			74.5		70.3		68.2		76.0		76
Centerline Distan	ce to Noise C	ontour (in feet)									
				70 c		65 a	IBA	(60 dBA	55	dBA
			dn:	13	39	29	9		645	1.	390
			IFI :	14		31			676		456

	FH\	WA-RD-77-108	HIGHW	AY N	OISE PR	EDICTI	on Mode	IL.			
	io: HY With Pr e: Hamner Av						Name: Pa Imber: 11		no		
Road Segme	nt: s/o Second	I St.									
SITE	SPECIFIC IN	IPUT DATA				N	OISE MO	DE	INPUTS	S	
Highway Data				5	Site Con	ditions ('Hard = 10), So	ft = 15)		
Average Daily	Traffic (Adt):	41,341 vehicle	≥s				Au	tos:	15		
Peak Hour	Percentage:	10%			Med	dium Tru	cks (2 Axi	es):	15		
Peak H	lour Volume:	4,134 vehicles	3		Hea	avy Truc	ks (3+ Axi	es):	15		
Ve	hicle Speed:	40 mph			Vehicle N	Ai~					
Near/Far La	ne Distance:	73 feet		- H		cleType	Da	av	Evening	Night	Daily
Site Data				-				.3%	11.0%	12.69	
Ba	rrier Height:	0.0 feet			Me	dium Tri	ucks: 73	.3%	9.2%	17.6%	5.81%
Barrier Type (0-W		0.0			H	leavy Tri	ucks: 84	.4%	3.2%	12.5%	6 2.439
Centerline Di	st. to Barrier:	55.0 feet			Noise So	urco Ek	evations (in fe	of)		
Centerline Dist.	to Observer:	55.0 feet		ŕ	10/30 00	Autos			00		
Barrier Distance	to Observer:	0.0 feet			Modium	n Trucks					
Observer Height (Above Pad):	5.0 feet				v Trucks			Grade Adj	iustmar	t· 0.0
Pa	ad Elevation:	0.0 feet							,	usunon	. 0.0
Roa	ad Elevation:	0.0 feet		L	Lane Equ	iivalent	Distance	(in f	eet)		
1	Road Grade:	0.0%				Autos	: 41.44	6			
	Left View:	-90.0 degree	es		Mediun	n Trucks	: 41.23	2			
	Right View:	90.0 degree)S		Heav	y Trucks	: 41.25	3			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL										
venicierype	REIVIEL	Traffic Flow	Dista	nce	Finite	Road	Fresnel		Barrier Atte	en Be	erm Atten
Autos:	66.51	Traffic Flow 4.46	Dista	nce 1.12		Road -1.20		.67	Barrier Atte 0.0		
21		4.46	Dista		2		-4			000	0.00
Autos:	66.51	4.46	Dista	1.12	2	-1.20	-4 -4	.67	0.0	000	0.00 0.00
Autos: Medium Trucks:	66.51 77.72 82.99	4.46 -7.52 -11.31		1.12 1.15 1.15	2 5 5	-1.20 -1.20	-4 -4	.67 .87	0.0 0.0	000	0.00 0.00
Autos: Medium Trucks: Heavy Trucks:	66.51 77.72 82.99	4.46 -7.52 -11.31 out Topo and	barrier	1.12 1.15 1.15 atten	2 5 5	-1.20 -1.20	-4 -4 -5	.67 .87	0.0 0.0	000 000 000	0.00 0.00
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise	66.51 77.72 82.99 e Levels (with Leq Peak Hou	4.46 -7.52 -11.31 out Topo and ur Leq Day	barrier	1.12 1.15 1.15 atten	2 5 5 uation)	-1.20 -1.20 -1.20	-4 -4 -5	.67 .87	0.0 0.0 0.0	000	0.00 0.00 0.00 <i>DNEL</i> 70.
Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType	66.51 77.72 82.99 e Levels (with Leq Peak Hou	4.46 -7.52 -11.31 out Topo and ur Leq Day 0.9	barrier	1.12 1.15 1.15 atten	2 5 5 uation) /ening	-1.20 -1.20 -1.20	-4 -4 -5 Vight	.67 .87	0.0 0.0 0.0 Ldn		0.00 0.00 0.00 <i>DNEL</i> 70.
Autos: Medium Trucks: Heavy Trucks: Unmitigated Nois VehicleType Autos:	66.51 77.72 82.99 e Levels (with Leq Peak Hou 70 70	4.46 -7.52 -11.31 out Topo and ur Leq Day 0.9 (0.1 (barrier / L 68.9	1.12 1.15 1.15 atten	2 5 5 <i>uation)</i> 7 ening 66.5	-1.20 -1.20 -1.20	-4 -4 -5 Vight 62.4	.67 .87	0.0 0.0 0.0 <i>Ldn</i> 70.4		0.00 0.00 0.00 <i>CNEL</i> 70. 70.
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noiss VehicleType Autos: Medium Trucks:	66.51 77.72 82.99 e Levels (with Leq Peak Hou 70 70 71	4.46 -7.52 -11.31 out Topo and ur Leq Day 0.9 (0.1 (.6	barrier (/ L 68.9 68.0	1.12 1.15 1.15 atten	2 5 5 <i>uation)</i> <i>vening</i> 66.5 65.0	-1.20 -1.20 -1.20	-4 -4 -5 Vight 62.4 63.1	.67 .87	0.0 0.0 0.0 <u>Ldn</u> 70.4 70.5		0.00 0.00 0.00 CNEL 70. 70. 71.
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noiss VehicleType Autos: Medium Trucks: Heavy Trucks:	66.51 77.72 82.99 e Levels (with Leq Peak Hot 70 70 71 75	4.46 -7.52 -11.31 out Topo and ur Leq Day 0.9 (0.1 (.6 (.7 (barrier (68.9 68.0 70.1 73.9	1.12 1.15 1.15 atten i .eq Ev	2 5 5 6 6 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6 9 .6 6 9 .6	-1.20 -1.20 -1.20 <i>Leq I</i>	-4 -4 -5 Vight 62.4 63.1 63.1 67.6	.67 .87 .38	0.0 0.0 0.0 <u>Ldn</u> 70.4 70.5 71.1 75.4	000 000 000 100 100	0.00 0.00 0.00 2NEL 70. 70. 71. 75.
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise Vehicle Type Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	66.51 77.72 82.99 e Levels (with Leq Peak Hot 70 70 71 75	4.46 -7.52 -11.31 out Topo and a ur Leq Day 0.9 (0.1 (6) 5.7 (in feet)	barrier (68.9 68.0 70.1 73.9	1.12 1.15 1.15 atteni .eq Ev	2 5 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	-1.20 -1.20 -1.20 <i>Leq N</i>	-4 -4 -5 Vight 62.4 63.1 67.6 IBA	.67 .87 .38	0.0 0.0 0.0 70.4 70.5 71.1 75.4 0 dBA	000 000 000 100 100	0.00 0.00 0.00 2NEL 70. 70. 71. 75.
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise Vehicle Type Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	66.51 77.72 82.99 e Levels (with Leq Peak Hot 70 70 71 75	4.46 -7.52 -11.31 <i>iout Topo and .</i> <i>ur Leq Day</i> .9 (.6	barrier (68.9 68.0 70.1 73.9	1.12 1.15 1.15 atten i .eq Ev	2 5 5 7 7 7 7 7	-1.20 -1.20 -1.20 <i>Leq I</i>	-4 -4 -5 Vight 62.4 63.1 63.1 67.6 IBA 3	.67 .87 .38	0.0 0.0 0.0 <u>Ldn</u> 70.4 70.5 71.1 75.4	000 000 000 4 5 4 5 1	70.5 70.5 71.5 75.5

Tuesday, July 02, 2019

	FH\	WA-RD-77-108	HIGHW	AY NOIS	e predic	TION M	ODEL			
Scenario	p: HY With Pr	roject			Projec	t Name	: Palomi	no		
Road Name	e: Hamner Av	ι.			Job I	Vumber	: 11795			
Road Segmen	t: s/o First St									
	SPECIFIC IN	NPUT DATA		011					S	
Highway Data				Site	Conditions	(Hard		,		
Average Daily 1	. ,	32,698 vehicl	es				Autos:	15		
Peak Hour I		10%			Medium T			15		
	our Volume:	3,270 vehicle	s		Heavy Tru	icks (3+	Axles):	15		
	nicle Speed:	40 mph		Veh	cle Mix					
Near/Far Lar	e Distance:	73 feet			VehicleTyp	е	Day	Evening	Night	Daily
Site Data						Autos:	76.3%	11.0%	12.6%	91.29%
Ban	rier Height:	0.0 feet			Medium		73.3%	9.2%	17.6%	
Barrier Type (0-Wa	all, 1-Berm):	0.0			Heavy	rucks:	84.4%	3.2%	12.5%	2.80%
Centerline Dis		55.0 feet		Nois	e Source E	levatio	ns (in fe	et)		
Centerline Dist. t		55.0 feet			Auto		0.000			
Barrier Distance t		0.0 feet		M	edium Truc	ks: 2	2.297			
Observer Height (A	,	5.0 feet		1	leavy Truci	ks: 8	3.004	Grade Ad	iustment	0.0
	d Elevation:	0.0 feet		1		4 Di-4-				
	d Elevation:	0.0 feet		Lane	e Equivaler			eet)		
F	l eft View:	0.0%			Aute dium Truc		1.446 1.232			
	Right View:	-90.0 degre			leavy Truci		1.232			
	Right view.	90.0 degre	es		leavy Iluci	10. 4	1.255			
FHWA Noise Mode		_								
VehicleType	REMEL	Traffic Flow	Distar		inite Road			Barrier Att		m Atten
Autos:	66.51	3.42		1.12	-1.20		-4.67	0.0		0.00
Medium Trucks:	77.72	••••		1.15	-1.20		-4.87		000	0.00
Heavy Trucks:	82.99			1.15	-1.20		-5.38	0.0	000	0.00
Unmitigated Noise			-			h Eastert	-	Lala		
VehicleType Autos:	Leq Peak Hou		67.9	eq Evenii	ng Leo 35.5	Night 61	2	Ldn 69.4		NEL 69.
Medium Trucks:			67.9 67.1		55.5 54.0	62		69.5		69.
Heavy Trucks:			69.7		54.0 51.5	62		70.7		70.
Vehicle Noise:			73.1		51.5 58.7	66		74.7		70.
Centerline Distanc	e to Noise C	ontour (in feet)							-
2 Distance			,	70 dBA	65	dBA	6	0 dBA	55	dBA
			🖵							
			Ldn:	113	2	243		523	- 1,	127

Road Name Road Segmen SITE S Highway Data Average Daily T Peak Hour F	b: HY With Pro : Hamner Av t: s/o Hidden SPECIFIC IN	Valley Pkwy.				Project N Job Nu			no		
Road Segmen SITE S Highway Data Average Daily T Peak Hour F	t: s/o Hidden	Valley Pkwy.									
Highway Data Average Daily T Peak Hour F	SPECIFIC IN	PUT DATA				000 140	mber.	11795			
Peak Hour F						NC	DISE N	IODE		s	
Peak Hour F					Site Con	ditions (I	Hard =	10, Sc	oft = 15)		
	Traffic (Adt):	42,007 vehicle	s					Autos:	15		
Peak Hr	Percentage:	10%			Me	dium Truc	:ks (2 A	xles):	15		
	our Volume:	4,201 vehicles			He	avy Truck	is (3+ A	xles):	15		
	nicle Speed:	40 mph		-	Vehicle I	Mix					
Near/Far Lan	e Distance:	73 feet		-		icleType		Day	Evening	Night	Daily
Site Data								76.3%	•	•	91.84
Barr	rier Height:	0.0 feet			Me	edium Tru	cks:	73.3%	9.2%	17.6%	
Barrier Type (0-Wa	•	0.0			ŀ	leavy Tru	cks:	84.4%	3.2%	12.5%	2.40
Centerline Dis		55.0 feet		_		·					
Centerline Dist. to		55.0 feet		1	Noise Sc	ource Ele			eet)		
Barrier Distance to		0.0 feet				Autos:		000			
Observer Height (A	Above Pad):	5.0 feet				m Trucks:		97	Our de Ad		
	d Elevation:	0.0 feet			Heav	y Trucks:	8.0	004	Grade Ad	ustment.	0.0
Roa	d Elevation:	0.0 feet		7	Lane Eq	uivalent l	Distand	e (in i	feet)		
R	Road Grade:	0.0%				Autos:	41.4	146			
	Left View:	-90.0 degree	s		Mediur	m Trucks:	41.2	232			
	Right View:	90.0 degree	s		Heav	y Trucks:	41.2	253			
FHWA Noise Mode	Calculation:	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atter
Autos:	66.51	4.54		1.1:	2	-1.20		4.67	0.0	000	0.00
Medium Trucks:	77.72	-7.49		1.1		-1.20		-4.87		000	0.00
Heavy Trucks:	82.99	-11.28		1.1	5	-1.20		-5.38	0.0	000	0.00
Unmitigated Noise			barrie								
	Leq Peak Hou			Leq E	vening	Leq N			Ldn		VEL
Autos:	71.		9.0		66.6		62.4		70.5		70
Medium Trucks:	70.		8.0		65.0		63.1		70.5		70
Heavy Trucks:	71.		0.1		61.9		63.1		71.1		71
Vehicle Noise:	75		3.9		69.7		67.6		75.5	5	75
Centerline Distance	e to Noise Co	ontour (in feet)	- 1	70 -	dBA	65 d	D۸	6	0 dBA	FF	dBA
		,	.dn:		27 27	275		_ C	592		ава 275
			IEL:		33	275			620		335

Tuesday, July 02, 2019

Scenario: HY With F Road Name: E. Parkric Road Segment: s/o Hidde	lge Av.				Project N Job Nui			ino		
SITE SPECIFIC I	NPUT DATA							l input	S	
Highway Data			S	ite Con	ditions (F	lard =	10, Sc	oft = 15)		
Average Daily Traffic (Adt):	13,314 vehicle	s					Autos:	15		
Peak Hour Percentage:	10%			Med	dium Truc	ks (2 /	Axles):	15		
Peak Hour Volume:	1,331 vehicles			Hea	avy Truck	s (3+)	Axles):	15		
Vehicle Speed:	45 mph		V	ehicle N	<i>liv</i>					
Near/Far Lane Distance:	36 feet		v		cleType		Day	Evening	Night	Daily
Site Data					AL	tos:	76.3%	11.0%	12.6%	92.00%
Barrier Height:	0.0 feet			Me	dium Tru	cks:	73.3%	9.2%	17.6%	5.70%
Barrier Type (0-Wall, 1-Berm):	0.0			н	leavy Tru	cks:	84.4%	3.2%	12.5%	2.30%
Centerline Dist. to Barrier:	44.0 feet						- 11- 6			
Centerline Dist. to Observer:	44.0 feet		N	01se 50	urce Ele			et)		
Barrier Distance to Observer:	0.0 feet				Autos:		000			
Observer Height (Above Pad):	5.0 feet				n Trucks:		297	0		
Pad Elevation:	0.0 feet			Heav	v Trucks:	8.	004	Grade Ad	justment	: 0.0
Road Elevation:	0.0 feet		L	ane Equ	ivalent L	Distan	ce (in i	feet)		
Road Grade:	0.0%				Autos:	40.	460			
Left View:	-90.0 degree	s		Mediun	n Trucks:	40.	241			
Right View:	90.0 degree	s		Heav	y Trucks:	40.	262			
FHWA Noise Model Calculatio	ns									
VehicleType REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresi	iel	Barrier Att	en Ber	m Atten
Autos: 68.4	6 -0.96		1.28		-1.20		-4.61	0.0	000	0.000
Medium Trucks: 79.4	5 -13.04		1.31		-1.20		-4.87	0.0	000	0.000
Heavy Trucks: 84.2	5 -16.98		1.31		-1.20		-5.50	0.0	000	0.000
Unmitigated Noise Levels (wit	hout Topo and I	arrier	attenu	uation)						
VehicleType Leq Peak He	our Leq Day	L	eq Eve	ening	Leq N	ight		Ldn	C	NEL
Autos: 6	67.6 6	5.6		63.2		59.1		67.	1	67.5
Medium Trucks: 6	6.5 6	4.4		61.4		59.4	Ļ	66.	В	67.2
	67.4 6	5.8		57.6		58.8	3	66.	В	67.0
Heavy Trucks: 6		0.1		66.1		63.9)	71.	7	72.0
	2.0 7									
				T					1	
Vehicle Noise: 7	Contour (in feet)		70 di		65 dl		e	0 dBA		dBA
Vehicle Noise: 7	Contour (in feet)	.dn: FI :	70 dl 57 60		65 dl 123 129	1	e	0 dBA 265 278	5	dBA 571

FHWA-RD-	77-108 HIGHW	AY NOISE P	REDICTION MC	DEL	
Scenario: HY With Project Road Name: Lincoln Av. Road Segment: s/o River Rd.			Project Name: Job Number:		
SITE SPECIFIC INPUT	АТА		NOISE	MODEL INPUT	S
Highway Data		Site Cor	ditions (Hard =		
Average Daily Traffic (Adt): 29,651	vehicles			Autos: 15	
Peak Hour Percentage: 10%	6	Me	dium Trucks (2	Axles): 15	
Peak Hour Volume: 2,965	vehicles	He	avy Trucks (3+	Axles): 15	
Vehicle Speed: 40	mph	Vehicle	Mix		
Near/Far Lane Distance: 36	feet		icleType	Day Evening	Night Daily
Site Data			Autos:	76.3% 11.0%	12.6% 92.16%
Barrier Height: 0.0	feet	м	edium Trucks:	73.3% 9.2%	17.6% 5.59%
Barrier Type (0-Wall, 1-Berm): 0.0			Heavy Trucks:	84.4% 3.2%	12.5% 2.25%
	feet	Noise O	ource Elevation	- (1- 64)	
Centerline Dist. to Observer: 44.0	feet	NUISE S		.000	
Barrier Distance to Observer: 0.0	feet	14-5		.000	
Observer Height (Above Pad): 5.0	feet				iustment: 0.0
Pad Elevation: 0.0	feet	Heal	y Trucks: 8	.004 Grade Adj	usimeni. 0.0
Road Elevation: 0.0	feet	Lane Eq	uivalent Distar	ice (in feet)	
Road Grade: 0.0	%		Autos: 40	.460	
Left View: -90.0	degrees	Mediu	m Trucks: 40	.241	
Right View: 90.0	degrees	Heav	/y Trucks: 40	.262	
FHWA Noise Model Calculations					
VehicleType REMEL Traffic	Flow Distan	ce Finite	Road Fres	nel Barrier Att	en Berm Atten
Autos: 66.51	3.04	1.28	-1.20	-4.61 0.0	0.00
Medium Trucks: 77.72	-9.13	1.31	-1.20	-4.87 0.0	000 0.000
Heavy Trucks: 82.99	-13.08	1.31	-1.20	-5.50 0.0	000 0.000
Unmitigated Noise Levels (without Top	oo and barrier a	ttenuation)			
VehicleType Leq Peak Hour L		eq Evening	Leq Night	Ldn	CNEL
Autos: 69.6	67.7	65.3			
Medium Trucks: 68.7	66.6	63.5			
Heavy Trucks: 70.0	68.5	60.3	.		
Vehicle Noise: 74.3	72.4	68.3	66.	2 74.0) 74.3
Centerline Distance to Noise Contour	(in feet)		r	T	T.
		70 dBA	65 dBA	60 dBA	55 dBA
	Ldn:	81	175	376	811
	CNEL:	85	183	394	850

	FH	WA-RD-77-108	HIGH	IWAY N	IOISE PF	REDICTI	ON MO	DDEL			
Scenar	io: HY With P	roject				Project	Name:	Palom	ino		
Road Nan	ne: Lincoln Av					Job Ni	umber:	11795			
Road Segme	nt: s/o Rincon	St.									
	SPECIFIC IN	NPUT DATA							L INPUT	s	
Highway Data					Site Con	ditions ((Hard :	= 10, So	oft = 15)		
Average Daily	Traffic (Adt):	29,629 vehicl	es					Autos:	15		
Peak Hour	Percentage:	10%				dium Tru		/			
Peak F	lour Volume:	2,963 vehicle	s		He	avy Truc	ks (3+	Axles):	15		
	hicle Speed:	40 mph			Vehicle I	Mix					
Near/Far La	ne Distance:	36 feet		Ē	Vehi	cleType		Day	Evening	Night	Daily
Site Data						A	utos:	76.3%	11.0%	12.6%	92.16%
Ba	rrier Height:	0.0 feet			Me	edium Tr	ucks:	73.3%	9.2%	17.6%	5.59%
Barrier Type (0-W	Vall, 1-Berm):	0.0			ŀ	łeavy Tr	ucks:	84.4%	3.2%	12.5%	2.25%
	ist. to Barrier:	44.0 feet			Noise Sc	ource Ele	evatio	ns (in fe	eet)		
Centerline Dist.		44.0 feet				Autos		.000			
Barrier Distance		0.0 feet			Mediur	n Trucks	: 2	.297			
Observer Height	· ,	5.0 feet			Heav	v Trucks	: 8	.004	Grade Ad	justment	: 0.0
	ad Elevation:	0.0 feet		L							
	ad Elevation:	0.0 feet		1	Lane Eq				feet)		
	Road Grade:	0.0%				Autos		.460			
	Left View:	-90.0 degre				n Trucks		.241			
	Right View:	90.0 degre	es		Heav	y Trucks	: 40	.262			
FHWA Noise Mod											
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite		Fres		Barrier Att		rm Atten
Autos:				1.2	-	-1.20		-4.61		000	0.00
Medium Trucks:	=	••••		1.3		-1.20		-4.87		000	0.00
Heavy Trucks:				1.3		-1.20		-5.50	0.0	000	0.00
Unmitigated Nois			1							-	
VehicleType	Leq Peak Ho			Leq E	vening	Leq I			Ldn 69.1		NEL
Autos: Medium Trucks:			67.7 66.5		65.3 63.5		61. 61.		69.1	-	69.0 69.1
			68.5		60.3		61.	-	69.0	-	69. 69.
Heavy Trucks: Vehicle Noise:			72.4		68.3		66.		69.: 74.(-	74.3
Centerline Distan					22.0		20			-	
Contentine Distan	00 10 110136 0	SOur (III leel	/	70 0	dBA	65 c	1BA	6	60 dBA	55	dBA
			Ldn:	8		17			376		311
			NEL:	8	5	18			394	8	349

F	HWA-RD-77-108	HIGHWA	Y NOISE P	REDICTION	MODEL			
Scenario: HY With				Project Na				
Road Name: Lincoln A				Job Numi	ber: 11795			
Road Segment: s/o Railro	oad St.							
SITE SPECIFIC	INPUT DATA				SE MODE		s	
Highway Data			Site Cor	nditions (Ha	rd = 10, So	oft = 15)		
Average Daily Traffic (Adt)	32,594 vehicle	s			Autos:	15		
Peak Hour Percentage	10%		Me	dium Truck	s (2 Axles):	15		
Peak Hour Volume	3,259 vehicles	3	He	avy Trucks	(3+ Axles):	15		
Vehicle Speed			Vehicle	Mix				
Near/Far Lane Distance	36 feet			icleType	Day	Evening	Night	Daily
Site Data				Auto	s: 76.3%	11.0%	12.6%	92.08
Barrier Height	0.0 feet		M	edium Truck	s: 73.3%	9.2%	17.6%	5.64
Barrier Type (0-Wall, 1-Berm)				Heavy Truck	s: 84.4%	3.2%	12.5%	2.27
Centerline Dist. to Barrier			Noise O		dia	41		
Centerline Dist. to Observer	: 44.0 feet		Noise S	ource Eleva		eet)		
Barrier Distance to Observer				Autos:	0.000			
Observer Height (Above Pad)	5.0 feet			m Trucks:	2.297	Grade Ad	i colmont	
Pad Elevation	0.0 feet		Hear	/y Trucks:	8.004	Grade Ad	jusiment	0.0
Road Elevation	0.0 feet		Lane Eq	uivalent Di	stance (in	feet)		
Road Grade	0.0%			Autos:	40.460			
Left View	-90.0 degree	s	Mediu	m Trucks:	40.241			
Right View	90.0 degree	s	Hea	/y Trucks:	40.262			
FHWA Noise Model Calculati	ons							
VehicleType REMEL	Traffic Flow	Distant			resnel	Barrier At		m Atter
Autos: 66.			1.28	-1.20	-4.61		000	0.00
Medium Trucks: 77.3			1.31	-1.20	-4.87		000	0.00
Heavy Trucks: 82.9	-12.63		1.31	-1.20	-5.50	0.0	000	0.00
Unmitigated Noise Levels (w			,	I			Т	
VehicleType Leq Peak F			q Evening	Leq Nig		Ldn		NEL
		58.1	65.7		61.5	69.		70
		67.0	64.0		62.1	69.		69
· · · · · · · · · · · · · · · · · · ·		68.9	60.7		61.9	69.5		70
		72.9	68.7		66.6	74.	4	74
Centerline Distance to Noise	Contour (in feet)		70 dBA	65 dBA		60 dBA	55	dBA
		Ldn:	70 dBA 87	65 dBA 187		403		68
		Lan: IEL:	87 91	187		403		108 109

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL Project Name: Palomino Job Number: 11795 Scenario: HY With Project Road Name: Lincoln Av. Road Segment: s/o Pomona Rd. SITE SPECIFIC INPUT DATA NOISE MODEL INPUTS Highway Data Site Conditions (Hard = 10, Soft = 15) Average Daily Traffic (Adt): 39,186 vehicles Autos: 15 Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Peak Hour Volume: 3,919 vehicles Heavy Trucks (3+ Axles): 15 Vehicle Speed: 40 mph Vehicle Mix Near/Far Lane Distance: 36 feet pe Day Evening Night Daily Autos: 76.3% 11.0% 12.6% 92.05% VehicleType Site Data Medium Trucks: 73.3% 9.2% 17.6% 5.67% Barrier Height: Barrier Type (0-Wall, 1-Berm): 0.0 feet 0.0 Heavy Trucks: 84.4% 3.2% 12.5% 2.28% Centerline Dist. to Barrier: Centerline Dist. to Observer: 44.0 feet Noise Source Elevations (in feet) 44.0 feet 0.000 Autos: Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297 Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.004 Grade Adjustment: 0.0 Pad Elevation: 0.0 feet Lane Equivalent Distance (in feet) Road Elevation: 0.0 feet Autos: Medium Trucks: 40.460 40.241 Road Grade: 0.0% Left View: -90.0 degrees 90.0 degrees Heavy Trucks: 40.262 Right View: FHWA Noise Model Calculations VehicleType REMEL
 MEL
 Traffic Flow
 Distance
 Finite Road

 66.51
 4.25
 1.28
 -1.20
 Fresnel Barrier Atten Berm Atten Autos Medium Trucks: 77.72 -7.86 1.31 -1.20 -4.87 0.000 Heavy Trucks: 82.99 -11.81 1.31 -1.20 -5.50 0.000 Unmitigated Noise Levels (without Topo and barrier attenuation) Leq Night 62.3 VehicleType Leq Peak Hour Leq Day Leq Evening Autos: 70.8 68.9 66.5 Ldn CNEL 70.3 Medium Trucks: 70.0 67.8 64.8 62.9 70.3 Heavy Trucks: 71.3 69.8 61.5 62.7 70.8 Vehicle Noise: 75.5 69.5 67.4 73.7 75.2 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 98 212 456 983

CNEL:

103

222

	FHW	A-RD-77-108 HI	GHWAY		EDICTI				
Road Nam	io: HY With Pro e: Second St. nt: w/o Parkridg					Vame: Palo Imber: 1179			
SITE	SPECIFIC INF	PUT DATA			N	OISE MOD	EL INPUT	5	
Highway Data				Site Con	ditions (Hard = 10,	Soft = 15)		
Average Daily	Traffic (Adt): 1	9.019 vehicles				Auto	s: 15		
• •	Percentage:	10%		Me	dium Tru	cks (2 Axles	;): 15		
Peak H	lour Volume:	1.902 vehicles		Hea	avy Truc	ks (3+ Axles	; ;): 15		
Ve	hicle Speed:	35 mph				-	-		
	ne Distance:	10 feet		Vehicle I		D.	E contra e	Allented	Delle
0/4+ D-4+				veni	cleType	Day	•	Night	Daily
Site Data						utos: 76.3		12.6%	92.11%
	rrier Height:	0.0 feet			edium Tri			17.6%	5.62%
Barrier Type (0-W	. ,	0.0		F	leavy Tri	ucks: 84.4	% 3.2%	12.5%	2.27%
Centerline Di		30.0 feet		Noise So	urce Ele	evations (in	feet)	-	
Centerline Dist.		30.0 feet			Autos	: 0.000		-	
Barrier Distance		0.0 feet		Mediur	n Trucks	2.297			
Observer Height (,	5.0 feet		Heav	y Trucks	8.004	Grade Ad	ustment:	0.0
	ad Elevation:	0.0 feet							
	ad Elevation:	0.0 feet		Lane Equ		Distance (i	n feet)		
	Road Grade:	0.0%			Autos				
	Left View:	-90.0 degrees			n Trucks				
	Right View:	90.0 degrees		Heav	y Trucks	29.733			
FHWA Noise Mod	el Calculations							-	
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Att	en Berr	m Atten
Autos:	64.30	1.69	3.2	22	-1.20	-4.4	9 0.0	000	0.000
Medium Trucks:	75.75	-10.46	3.2	29	-1.20	-4.8	6 0.0	000	0.000
Heavy Trucks:	81.57	-14.40	3.2	28	-1.20	-5.7	7 0.0	000	0.000
Unmitigated Nois									
VehicleType	Leq Peak Hour	1 1		vening	Leq I	•	Ldn		VEL
Autos:	68.0			63.7		59.5	67.5		68.0
Medium Trucks:	67.4			62.2		60.3	67.7		68.0
Heavy Trucks:	69.2	-		59.5		60.7	68.7		68.9
Vehicle Noise:	73.1	1 71	.2	66.9		64.9	72.8	\$	73.1
Centerline Distan	ce to Noise Col	ntour (in feet)							
				dBA	65 0		60 dBA		dBA
		Ld		46	99		213		60
		CNE	L: ·	48	10	4	223	48	81

Tuesday, July 02, 2019

Tuesday, July 02, 2019

Tuesday, July 02, 2019

0.000

0.000

0.000

70.8

70.6

70.9

75.5

1,029

478

	FH\	WA-RD-77-108	HIGHWA	Y NOISE	PREDICTIC	N MOD	EL			
Scenario	p: HY With Pr	roject			Project N	ame: P	alomir	no		
Road Name	e: Second St.				Job Nu	nber: 1	1795			
Road Segmen	t: e/o Parkrid	lge Av.								
	SPECIFIC IN	NPUT DATA		0/4- (S	
Highway Data				Site	conditions (F		· ·	,		
Average Daily 1	. ,	16,225 vehicl	es				utos:	15		
Peak Hour I		10%			Medium Truc			15		
	our Volume:	1,623 vehicle	s		Heavy Truck	s (3+ A)	des):	15		
	icle Speed:	35 mph		Vehic	le Mix					
Near/Far Lar	e Distance:	10 feet		1	/ehicleType	E	Day	Evening	Night	Daily
Site Data					AL	tos: 7	6.3%	11.0%	12.6%	92.369
Bar	rier Height:	0.0 feet			Medium Tru	cks: 7	3.3%	9.2%	17.6%	5.45%
Barrier Type (0-Wa		0.0			Heavy Tru	cks: 8	4.4%	3.2%	12.5%	2.20
Centerline Dis		30.0 feet		Noise	Source Ele	vations	(in fe	et)		
Centerline Dist. t		30.0 feet			Autos:	0.00)0			
Barrier Distance t		0.0 feet		Me	dium Trucks:	2.29	97			
Observer Height (A	,	5.0 feet		н	eavy Trucks:	8.00)4	Grade Adj	iustment	: 0.0
	d Elevation:	0.0 feet								
	d Elevation:	0.0 feet		Lane	Equivalent L			eet)		
F	Road Grade:	0.0%			Autos:	30.00				
	Left View:	-90.0 degre			dium Trucks:	29.70				
	Right View:	90.0 degre	es	н	eavy Trucks:	29.73	33			
FHWA Noise Mode		-								
VehicleType	REMEL	Traffic Flow	Distan		ite Road	Fresne	_	Barrier Atte		rm Atten
Autos:	64.30			3.22	-1.20		4.49	0.0		0.00
Medium Trucks:	75.75			3.29	-1.20		4.86		000	0.00
Heavy Trucks:	81.57			3.28	-1.20		5.77	0.0	000	0.00
Unmitigated Noise			1		<u>´</u>					
VehicleType Autos:	Leq Peak Hou	ur Leq Da 7.3	/ Le 65.4	q Evening	y <u>Leq N</u> 3.0	gnt 58.8		Ldn 66.8		NEL 67.
Autos: Medium Trucks:			64.4		3.0 1.4	58.8 59.5		66.9		67.
Heavy Trucks:		3.4	66.9		1.4 3.7	59.5 59.8		67.9		68.
Vehicle Noise:		2.3	70.5		3.7 5.1	59.8 64.2		72.0		72.
	a ta Naisa C	ontour (in fee	•)	-						
Centerline Distanc			/							
Centerline Distanc	e lo Noise C			70 dBA	65 di	BA	6	0 dBA	55	dBA
Centerline Distanc	e lo Noise C		Ldn:	70 dBA 41	65 di 88	BA		0 dBA 189		<i>dBA</i> 108

	FHV	VA-RD-77-108 H	IIGHW	AY NO	DISE PF	REDICTIO	ом мо	DEL			
	io: HY With Pr	oject				Project N			no		
	e: Second St.					Job Nur	mber:	11795			
Road Segme	nt: w/o Pacific	Av.									
SITE	SPECIFIC IN	PUT DATA			-				L INPUT	s	
Highway Data				S	ite Con	ditions (H	Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	17,856 vehicles						Autos:	15		
Peak Hour	Percentage:	10%			Mee	dium Truc	:ks (2 /	Axles):	15		
Peak H	lour Volume:	1,786 vehicles			Hea	avy Truck	:s (3+7	Axles):	15		
	hicle Speed:	35 mph		v	ehicle l	Mix					
Near/Far La	ne Distance:	10 feet		-		icleType		Day	Evening	Night	Daily
Site Data							itos:	76.3%			92.419
Ba	rrier Height:	0.0 feet		_	Me	edium Tru	cks:	73.3%	9.2%	17.6%	5.419
Barrier Type (0-W	•	0.0			F	leavy Tru	cks:	84.4%	3.2%	12.5%	2.18%
Centerline Di		30.0 feet									
Centerline Dist.	to Observer:	30.0 feet		N	oise So	ource Ele			eet)		
Barrier Distance	to Observer:	0.0 feet				Autos: n Trucks:		000			
Observer Height (Above Pad):	5.0 feet						297	Grade Ad	iustmont	
Pa	ad Elevation:	0.0 feet			Heav	y Trucks:	8.	004	Graue Au	usuneni	0.0
Roa	ad Elevation:	0.0 feet		L	ane Equ	uivalent E	Distan	ce (in i	feet)		
1	Road Grade:	0.0%				Autos:	30.	000			
	Left View:	-90.0 degrees			Mediur	n Trucks:	29.	704			
	Right View:	90.0 degrees			Heav	y Trucks:	29.	733			
FHWA Noise Mod	el Calculation:	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atten
Autos:	64.30	1.43		3.22		-1.20		-4.49	0.0	000	0.00
Medium Trucks:	75.75	-10.90		3.29		-1.20		-4.86	0.0	000	0.00
Heavy Trucks:	81.57	-14.84		3.28		-1.20		-5.77	0.0	000	0.00
Unmitigated Noise	e Levels (with	out Topo and b									
VehicleType	Leq Peak Hou			eq Eve		Leq N			Ldn		VEL
Autos:	67.		5.8		63.4		59.2		67.3		67.
Medium Trucks:	66.		4.8		61.8		59.8		67.3		67.
Heavy Trucks:	68.		7.3		59.0		60.2		68.3		68.
Vehicle Noise:	72		0.8		66.5		64.6	6	72.4	1	72.
Centerline Distand	ce to Noise Co	ontour (in feet)		70 dl		05 -11	04		0.0		-/0.4
		,	dn:	43		65 dE 93			0 dBA 201		dBA 33
		CNI		43 45		93			201		33 53
		CN	-L.	45		98			210	4	55

Tuesday, July 02, 2019

Ce	io: HY With Pr	aiaat				Project	Vama	Delect	ino		
	ie: Second St.	ojeci					imber:				
	nt: e/o Pacific	Av.				000740	inibor.	11795			
ů	SPECIFIC IN					N	OISE N	IODE		s	
Highway Data				s	ite Con				oft = 15)		
Average Daily	Traffic (Adt):	18.648 vehicles	6					Autos:	15		
Peak Hour	Percentage:	10%			Mee	dium Tru	cks (2 A	xles):	15		
Peak H	lour Volume:	1,865 vehicles			Hea	avy Truc	ks (3+ A	xles):	15		
Ve	hicle Speed:	35 mph		1	ehicle l	Ai~					
Near/Far La	ne Distance:	10 feet				cleType		Day	Evening	Night	Daily
Site Data				-	10.11			76.3%	-	12.6%	
	rrier Height:	0.0 feet			Me	dium Tr		73.3%		17.6%	
Barrier Type (0-V		0.0			H	leavy Tr	ucks:	84.4%	3.2%	12.5%	2.19%
Centerline Di		30.0 feet							41		
Centerline Dist.	to Observer:	30.0 feet		~	loise So	Autos		5 (IN T)00	eet)		
Barrier Distance	to Observer:	0.0 feet			Modium	Autos n Trucks		97			
Observer Height	(Above Pad):	5.0 feet				n Trucks v Trucks		297)04	Grade Ad	iustmon	+ 0.0
P	ad Elevation:	0.0 feet			neav	y mucks	. 0.0	104	Grade Auj	usunen	2. 0.0
Ro	ad Elevation:	0.0 feet		L	ane Equ	uivalent	Distand	e (in:	feet)		
	Road Grade:	0.0%				Autos	: 30.0	000			
	Left View:	-90.0 degrees	5			n Trucks					
	Right View:	90.0 degrees	5		Heav	y Trucks	: 29.	733			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	се	Finite	Road	Fresn	el	Barrier Atte	en Be	rm Atten
Autos:	64.30	1.62		3.22		-1.20		-4.49	0.0		0.00
Medium Trucks:		-10.69		3.29		-1.20		-4.86	0.0		0.000
Heavy Trucks:	81.57	-14.64		3.28		-1.20		-5.77	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and b	arrier a	ttenu	uation)						
VehicleType	Leq Peak Hou			eq Ev	ening	Leq I	·		Ldn	-	NEL
Autos:	67		6.0		63.6		59.4		67.4		67.9
Medium Trucks:			5.0		62.0		60.0		67.5		67.8
Heavy Trucks:	69		7.5		59.2		60.4		68.5		68.6
Vehicle Noise:	72	.9 7	1.0		66.7		64.8		72.6	6	72.
Centerline Distan	ce to Noise Co	ontour (in feet)									
				70 d		65 0			60 dBA	55	5 dBA
		L CN	dn:	45 47		90 10	-		207 217		447 467

	FH\	NA-RD-77-108	HIGH	WAY N	NOISE PR	REDICTI	ON MOD	EL			
	io: HY With Pr						Name: P		0		
	ne: Second St.					Job Ni	umber: 1	1795			
Road Segme	nt: w/o Mounta	ain Av.									
	SPECIFIC IN	IPUT DATA							INPUTS	5	
Highway Data				4	Site Con	ditions	(Hard = 1	0, Sof	t = 15)		
Average Daily	Traffic (Adt):	19,965 vehicl	es					utos:	15		
	Percentage:	10%					icks (2 Ax		15		
Peak F	lour Volume:	1,996 vehicle	s		Hea	avy Truc	:ks (3+ Ax	(les):	15		
Ve	hicle Speed:	35 mph			Vehicle I	Nix					
Near/Far La	ne Distance:	10 feet		-		cleType	E	ay .	Evening	Night	Daily
Site Data						A	utos: 7	6.3%	11.0%	12.6%	
Ba	rrier Height:	0.0 feet			Me	edium Tr	ucks: 7	3.3%	9.2%	17.6%	5.45
Barrier Type (0-W		0.0			H	leavy Tr	ucks: 8	4.4%	3.2%	12.5%	2.20
Centerline Di	. ,	30.0 feet		H	Naiaa Ca	uree El	evations	(in for	-41		
Centerline Dist.	to Observer:	30.0 feet		E E	NUISE 30	Autos			=()		
Barrier Distance	to Observer:	0.0 feet			Madium	n Trucks					
Observer Height	(Above Pad):	5.0 feet				y Trucks			Grade Adj	ustmont	
P	ad Elevation:	0.0 feet			neav	y TTUCKS	i. 0.00	<i>)</i> 4 (Siaue Auj	usuneni	0.0
Ro	ad Elevation:	0.0 feet		1	Lane Equ	uivalent	Distance	e (in fe	et)		
	Road Grade:	0.0%				Autos	: 30.00	00			
	Left View:	-90.0 degre	es		Mediur	n Trucks	3: 29.70)4			
	Right View:	90.0 degre	es		Heav	y Trucks	29.73	33			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresne	I E	Barrier Atte	en Ber	m Atter
Autos:	64.30	1.91		3.2	2	-1.20	-4	1.49	0.0	00	0.00
Medium Trucks:	75.75	-10.38		3.2	9	-1.20	-4	4.86	0.0	00	0.00
Heavy Trucks:	81.57	-14.32		3.2	8	-1.20	-{	5.77	0.0	00	0.00
Unmitigated Nois											
VehicleType	Leq Peak Hou			Leq E	vening	Leq I			Ldn		VEL
Autos:	68		66.3		63.9		59.7		67.7		68
Medium Trucks:	67		65.3		62.3		60.4		67.8		68
Heavy Trucks:	69		67.8		59.6		60.7		68.8		68
Vehicle Noise:			71.4		67.0		65.1		72.9		73.
Centerline Distan	ce to Noise C	ontour (in feet)	70	dBA	05	104	~			-10.4
			I dn:	70 0		65 d) dBA 217		dBA 68
			Lan: NFL:								68 90
					.9	10			227		

Tuesday, July 02, 2019

	FH\	VA-RD-77-108	HIGHWA	AY NO	ISE PR	EDICTIO	N MO	DEL			
Scenario	: HY With Pr	oject				Project N	ame:	Palomi	no		
Road Name	Second St.					Job Nur	nber:	11795			
Road Segment	e/o Mounta	in Av.									
	PECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data				Sit	te Con	ditions (H	lard =	10, Sc	oft = 15)		
Average Daily T	raffic (Adt):	21,452 vehicl	es					Autos:	15		
Peak Hour P	Percentage:	10%				dium Truc		/	15		
Peak Ho	ur Volume:	2,145 vehicle	s		Hea	avy Truck	s (3+)	Axles):	15		
Veh	icle Speed:	35 mph		Ve	hicle I	Nix					
Near/Far Lan	e Distance:	36 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						Au	tos:	76.3%	11.0%	12.6%	90.949
Barr	ier Height:	0.0 feet			Ме	dium Tru	cks:	73.3%	9.2%	17.6%	5.659
Barrier Type (0-Wa	II, 1-Berm):	0.0			H	leavy Tru	cks:	84.4%	3.2%	12.5%	3.41%
Centerline Dist		44.0 feet		No	oise So	urce Ele	ation	s (in fe	et)		
Centerline Dist. to		44.0 feet				Autos:	0.	000			
Barrier Distance to		0.0 feet			Mediur	n Trucks:	2.	297			
Observer Height (A	,	5.0 feet			Heav	v Trucks:	8.	004	Grade Ad	justment	0.0
	d Elevation:	0.0 feet									
	d Elevation:	0.0 feet		La	ne Equ	uivalent L			'eet)		
R	oad Grade:	0.0%				Autos:		460			
	Left View:	-90.0 degre				n Trucks:		241			
	Right View:	90.0 degre	es		Heav	y Trucks:	40.	262			
FHWA Noise Model		-									
VehicleType	REMEL	Traffic Flow	Distan		Finite		Fresi		Barrier Att		rm Atten
Autos:	64.30	2.16		1.28		-1.20		-4.61		000	0.00
Medium Trucks:	75.75	-9.91		1.31		-1.20		-4.87		000	0.00
Heavy Trucks:	81.57	-12.11		1.31		-1.20		-5.50	0.0	000	0.00
Unmitigated Noise			-		- í -			1			
VehicleType L Autos:	eq Peak Hou 66		64.6	eq Eve	ning 62.2	Leq N	gnt 58.0		Ldn 66.0		NEL 66.
	66		63.8		60.8		58.9		66.3	-	66.
	00		68.0		59.8		61.0		69.0		69.
Medium Trucks:	60	6			JJ.0		01.0	,	69.0	,	69.
Heavy Trucks: Vehicle Noise:	69 72	-	70.7		65.8		64.2	2	72.1	1	72.
Heavy Trucks: Vehicle Noise:	72	.4	70.7		65.8		64.2	2	72.7	1	72.
Heavy Trucks:	72	.4	70.7	70 dB		65 dE		-	72.*		72. dBA
Heavy Trucks: Vehicle Noise:	72	.4	70.7	70 dB 61		65 dE 131	BA	-		55	

	FHW	A-RD-77-108 I	HIGH	IWAY N	OISE PR	REDICTIO	N MO	DEL			
Scenario: HY Wit		ject				Project Na			ino		
Road Name: Second	d St.					Job Nun	nber:	11795			
Road Segment: e/o Dw	y. 8										
SITE SPECIFIC	C INF	PUT DATA							L INPUT	s	
Highway Data				5	Site Con	ditions (H	ard =	10, Sc	oft = 15)		
Average Daily Traffic (Ad	tt): 2	21,796 vehicles	S					Autos:	15		
Peak Hour Percentag	je:	10%			Med	dium Truck	(2 A	(xles)	15		
Peak Hour Volum	ne: 1	2,180 vehicles			Hea	avy Trucks	; (3+ A	(xles)	15		
Vehicle Spee	ed:	35 mph			ehicle N	Mix					
Near/Far Lane Distanc	e:	36 feet		F		cleType	1	Dav	Evening	Night	Dailv
Site Data						Aut		76.3%			91.099
Barrier Heigh	ht.	0.0 feet			Me	dium Truc	ks:	73.3%	9.2%	17.6%	5.56%
Barrier Type (0-Wall, 1-Bern		0.0			h	leavy Truc	ks:	84.4%	3.2%	12.5%	
Centerline Dist. to Barrie		44.0 feet				-					
Centerline Dist. to Observe		44.0 feet		۸	loise So	ource Elev			eet)		
Barrier Distance to Observe		0.0 feet				Autos:		000			
Observer Height (Above Pag		5.0 feet				n Trucks:		297			
Pad Elevatio	·	0.0 feet			Heav	y Trucks:	8.0	004	Grade Ad	justment	: 0.0
Road Elevatio		0.0 feet		L	ane Equ	uivalent D	istan	ce (in i	feet)		
Road Grad		0.0%				Autos:	40.4				
l eft Vie		-90.0 degree:			Mediun	n Trucks:					
Right Vie		90.0 degrees				y Trucks:	40.				
FHWA Noise Model Calcula	tions										
VehicleType REMEL	_	Traffic Flow	Dis	stance	Finite		Fresn	el	Barrier Att	en Ber	m Atten
Autos: 64	4.30	2.23		1.28		-1.20		-4.61	0.0	000	0.00
Medium Trucks: 75	5.75	-9.91		1.31		-1.20		-4.87	0.0	000	0.00
Heavy Trucks: 81	1.57	-12.11		1.31		-1.20		-5.50	0.0	000	0.00
Unmitigated Noise Levels (witho	ut Topo and b	arri	er atteni	uation)						
VehicleType Leq Peak				Leq Ev		Leq Ni			Ldn		NEL
Autos:	66.6		4.6		62.3		58.1		66.1		66.
Medium Trucks:	66.0		3.8		60.8		58.9		66.3		66.
Heavy Trucks:	69.6		8.0		59.8		61.0		69.0		69.
Vehicle Noise:	72.4	4 7	0.7		65.8		64.3	5	72.1	1	72
Centerline Distance to Nois	e Col	ntour (in feet)									
			L	70 d		65 dB	A	6	60 dBA		dBA
			dn:	61		131			283		510
			FI :	64		137			295		35

	FHW	A-RD-77-108 HIG	SHWAY I	NOISE PR	EDICTIO	MODEL			
	rio: HY With Pro	ject			Project Na	ame: Paloi ber: 1179			
	ne: Second St. ent: w/o Hamner	Av			JOD NUM	iber: 1179	5		
Ŷ	SPECIFIC IN				NO				
Highway Data	JFECIFIC IN	OT DATA		Site Con	ditions (H			,	
Average Daily	Traffic (Adt):	25,461 vehicles				Auto	: 15		
Peak Hour	Percentage:	10%		Mee	dium Truck	s (2 Axles): 15		
Peak I	Hour Volume:	2,546 vehicles		Hea	avy Trucks	(3+ Axles): 15		
Ve	ehicle Speed:	35 mph	-	Vehicle I	<i>Niv</i>				
Near/Far La	ane Distance:	36 feet	-		cleType	Day	Evening	Night	Daily
Site Data					Aut	os: 76.3	% 11.0%	12.6%	91.20%
Ba	rrier Height:	0.0 feet		Me	dium Truc	ks: 73.3	% 9.2%	17.6%	5.60%
Barrier Type (0-V		0.0		H	leavy Truc	ks: 84.4	% 3.2%	12.5%	3.21%
Centerline D	ist. to Barrier:	44.0 feet	ŀ	Noise So	urce Elev	ations (in	feet)		
Centerline Dist.	to Observer:	44.0 feet	-		Autos:	0.000			
Barrier Distance	to Observer:	0.0 feet		Mediur	n Trucks:	2.297			
Observer Height	• /	5.0 feet		Heav	v Trucks:	8.004	Grade Adj	ustment:	0.0
-	ad Elevation:	0.0 feet	-						
	ad Elevation:	0.0 feet	-	Lane Equ	ivalent D		i feet)		
	Road Grade:	0.0%			Autos:	40.460			
	Left View:	-90.0 degrees			n Trucks:	40.241			
	Right View:	90.0 degrees		Heav	y Trucks:	40.262			
FHWA Noise Mod	lel Calculations		1						
VehicleType	REMEL		Distance	Finite		Fresnel	Barrier Atte		m Atten
Autos:		2.91	1.2		-1.20	-4.6			0.000
Medium Trucks:		-9.21	1.3		-1.20	-4.87			0.000
Heavy Trucks:	81.57	-11.63	1.3	1	-1.20	-5.50	0.0	00	0.000
Unmitigated Nois			· · · · · · · · · · · · · · · · · · ·						
VehicleType	Leq Peak Hour			vening	Leq Nig		Ldn	-	IEL
Autos:	••••			62.9		58.8	66.8		67.2
Medium Trucks:		••		61.5 60.3		59.6	67.0		67.3 69.7
Heavy Trucks: Vehicle Noise:						61.5 64.9	69.5		73.0
			5	66.5		64.9	72.7		73.0
Centerline Distan	ce to Noise Co	ntour (in feet)	70	-10.4	05.10		00 -10 4		
				dBA	65 dB.	A	60 dBA		dBA
		Ldn:	: 6	67	144		310		68
		CNEL		0	150		323	69	

FHWA-RD-77-108 H	GHWAY	NOISE PR	EDICTIO	N MODEL			
Scenario: HY With Project Road Name: First St. Road Segment: w/o Parkridge Av.				ame: Palon nber: 11795			
SITE SPECIFIC INPUT DATA			NO	ISE MODE	EL INPUT	s	
Highway Data		Site Con	ditions (H	lard = 10, S	oft = 15)		
Average Daily Traffic (Adt): 25,345 vehicles				Autos	: 15		
Peak Hour Percentage: 10%		Med	dium Truci	ks (2 Axles)	: 15		
Peak Hour Volume: 2,534 vehicles		Hea	avy Trucks	s (3+ Axles)	: 15		
Vehicle Speed: 35 mph		Vehicle N	Niv				
Near/Far Lane Distance: 10 feet			cleType	Dav	Evening	Night	Daily
Site Data				tos: 76.3%	•	•	92.27%
Barrier Height: 0.0 feet		Me	dium Truc	cks: 73.3%	% 9.2%	17.6%	5.51%
Barrier Type (0-Wall, 1-Berm): 0.0		H	leavy Truc	cks: 84.4%	% 3.2%	12.5%	2.22%
Centerline Dist. to Barrier: 30.0 feet		Noiso So	urco Eloy	ations (in i	foot)		
Centerline Dist. to Observer: 30.0 feet		140/36 30	Autos:	0.000	ieel)		
Barrier Distance to Observer: 0.0 feet		Modium	n Trucks:	2.297			
Observer Height (Above Pad): 5.0 feet			y Trucks:	8.004	Grada An	justment:	0.0
Pad Elevation: 0.0 feet						juoumonii.	0.0
Road Elevation: 0.0 feet		Lane Equ	ıivalent D	istance (in	feet)		
Road Grade: 0.0%			Autos:	30.000			
Left View: -90.0 degrees			n Trucks:	29.704			
Right View: 90.0 degrees		Heav	y Trucks:	29.733			
FHWA Noise Model Calculations							
VehicleType REMEL Traffic Flow	Distance	Finite		Fresnel	Barrier At	ten Bern	n Atten
Autos: 64.30 2.94	3.		-1.20	-4.49		000	0.000
Medium Trucks: 75.75 -9.30		29	-1.20	-4.86		000	0.000
Heavy Trucks: 81.57 -13.24	3.	28	-1.20	-5.77	0.0	000	0.00
Unmitigated Noise Levels (without Topo and ba						1 -	
VehicleType Leq Peak Hour Leq Day		Evening	Leq Ni	0	Ldn	CN	
Autos: 69.3 67		64.9		60.7	68.		69.2
Medium Trucks: 68.5 66		63.4		61.4	68.		69.2
Heavy Trucks: 70.4 68 Vehicle Noise: 74.2 72		60.6		61.8	69. 74.		70.0
	.4	68.1		66.1	74.	U	74.5
Centerline Distance to Noise Contour (in feet)	7/	dBA	65 dB	A	60 dBA	55 0	ND A
Ld		55	119		256	55	
CNF		58	119		256 268	57	
CIVE	L.	50	124		200	57	'

Tuesday, July 02, 2019

Tuesday, July 02, 2019

	FH	WA-RD-77-108	HIGHWA	Y NOIS	E PREDICTIO	ON MOI	DEL			
Scenari	o: HY With P	roject			Project I	Vame: 1	Palomi	no		
Road Nam					Job Nu	mber: '	11795			
Road Segmer	nt: e/o Parkrid	lge Av.								
	SPECIFIC IN	NPUT DATA							s	
Highway Data				Site	Conditions (Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	25,079 vehicl	es				Autos:	15		
	Percentage:	10%			Medium Tru			15		
	our Volume:	2,508 vehicle	s		Heavy Truck	ks (3+ A	(xles):	15		
	hicle Speed:	35 mph		Vehi	cle Mix					
Near/Far Lar	ne Distance:	36 feet			VehicleType		Day	Evening	Night	Daily
Site Data					A	utos:	76.3%	11.0%	12.6%	92.34%
Bar	rier Height:	0.0 feet			Medium Tru	icks:	73.3%	9.2%	17.6%	5.46%
Barrier Type (0-W	all, 1-Berm):	0.0			Heavy Tru	icks:	84.4%	3.2%	12.5%	2.20%
Centerline Dis		44.0 feet		Nois	e Source Ele	vations	s (in fe	et)		
Centerline Dist.		44.0 feet			Autos	0.0	000			
Barrier Distance		0.0 feet		M	edium Trucks	2.2	297			
Observer Height (J	,	5.0 feet		ŀ	leavy Trucks	8.0	004	Grade Ad	iustment	: 0.0
	d Elevation:	0.0 feet			. Fault alant	D'		(4)		
	d Elevation:	0.0 feet		Lane	Equivalent			eet)		
ŀ	Road Grade:	0.0%			Autos					
	Left View: Right View:	-90.0 degre			edium Trucks Ieavy Trucks					
	Right view.	90.0 degre	es		ieavy ilucits.	40.2	202			
FHWA Noise Mode		-								
VehicleType	REMEL	Traffic Flow	Distan		inite Road	Fresn		Barrier Att		rm Atten
Autos:	64.30			1.28	-1.20		-4.61	0.0		0.00
Medium Trucks: Heavy Trucks:	75.75 81.57			1.31 1.31	-1.20 -1.20		-4.87 -5.50	0.0	000	0.00
							-5.50	0.0	00	0.00
Unmitigated Noise VehicleType	Lea Peak Ho			t tenuati q Evenir	,	liaht		l dn	0	NEL
Autos:	1 1 1		65.3		32.9	58.8		66.8		67.
Medium Trucks:	•.		64.3		51.3	59.4		66.8		67.
Heavy Trucks:			66.8		58.6	59.8		67.8		68.
Vehicle Noise:	72	2.2	70.4	(6.1	64.1		71.9)	72.
			t)							
Centerline Distance	e to Noise C	ontour (in feel								
Centerline Distanc	e to Noise C	ontour (in fee	,	70 dBA	65 d	BA	6	0 dBA	55	dBA
Centerline Distanc	e to Noise C	ontour (in fee	,	70 dBA 59	65 d 12		6	0 dBA 274		6 <i>dBA</i>

	FHWA	-RD-77-108 HI	GHWA	NOISE PI	REDICTION		-			
Scenario: Road Name: Road Segment:		ct		Project Name: Palomino Job Number: 11795						
SITE SP	ECIFIC INPL	JT DATA			NOI	SE MOI	DEL INPUT	'S		
Highway Data				Site Con	ditions (Ha					
Average Daily Tra	ffic (Adt): 24	,323 vehicles				Auto	os: 15			
• •	Peak Hour Percentage: 10%					s (2 Axle	s): 15			
Peak Hou	He	avy Trucks	(3+ Axle	s): 15						
Vehic	Vehicle	Mix								
Near/Far Lane	Distance:	36 feet			icleType	Da	/ Evening	Night	Daily	
Site Data				Ven	Auto				92.119	
				M	edium Truck					
	r Height:	0.0 feet			Heavy Truck					
Barrier Type (0-Wall, Centerline Dist.		0.0			ioury muo		0.270	12.070	2.2.7	
Centerline Dist. to		44.0 feet		Noise Se	ource Eleva	ations (ii	n feet)			
Barrier Distance to		44.0 feet			Autos:	0.000				
		0.0 feet		Mediu	m Trucks:	2.297				
Observer Height (Ab	Elevation:	5.0 feet		Heav	y Trucks:	8.004	Grade Ad	ljustment	: 0.0	
	Elevation: Elevation:	0.0 feet		Lane Fr	uivalent Di	stanco (in foot)			
	elevation: ad Grade:	0.0 feet		LaneLy	Autos:	40.460	in ieel)			
		0.0% 90.0 degrees		Modiu	m Trucks:	40.241				
		90.0 degrees			y Trucks:	40.241				
FHWA Noise Model (Calculations									
VehicleType	REMEL TI	raffic Flow	Distance	e Finite	Road I	Fresnel	Barrier At	ten Ber	m Atten	
Autos:	64.30	2.76	1	.28	-1.20	-4.6	61 0.	000	0.00	
Medium Trucks:	75.75	-9.38		.31	-1.20	-4.8		000	0.00	
Heavy Trucks:	81.57	-13.33		.31	-1.20	-5.5	50 0.	000	0.00	
Unmitigated Noise L				,						
VehicleType Le Autos:	q Peak Hour	Leq Day 65.		Evening	Leq Nig		Ldn		NEL	
	67.1	65. 64.	-	62.8		58.6	66.		67. 67.	
Medium Trucks:	66.5	66.		61.3		59.4	66. 67.			
Heavy Trucks:	68.3		•	58.6		59.8		-	68.	
Vehicle Noise:	72.2	70.	3	66.0		64.0	71.	9	72	
Centerline Distance	to Noise Cont	our (in feet)	7	0 dBA	65 dB/	1	60 dBA	55	dBA	
			/	UUDA	00 UD/	1	UU UDA	- 55	UDA	
		Ldi	n·	59	127		273	5	87	

Tuesday, July 02, 2019

	FHV	VA-RD-77-108	HIGH	WAY N	IOISE PF	REDICTIO	N MO	DEL			
	io: HY With Pr	oject			Project Name: Palomino						
	e: First St.					Job Nur	nber:	11795			
Road Segme	Road Segment: e/o Mountain Av.										
	SPECIFIC IN	IPUT DATA			0/4- 0	NO ditions (H				S	
Highway Data				1	Site Con	aitions (F					
Average Daily	, ,	11,986 vehicl	es					Autos:	15		
	Percentage:	10%				dium Truc					
	lour Volume:	1,199 vehicle	s		He	avy Truck	s (3+ /	Axles):	15		
Ve	hicle Speed:	35 mph			Vehicle I	Nix					
Near/Far La	ne Distance:	36 feet		-	Vehi	cleType		Day	Evening	Night	Daily
Site Data						Au	tos:	76.3%	11.0%	12.6%	90.68
Ba	rrier Height:	0.0 feet			Me	dium True	cks:	73.3%	9.2%	17.6%	6.029
Barrier Type (0-W		0.0			F	leavy Tru	cks:	84.4%	3.2%	12.5%	3.30
Centerline Di	. ,	44.0 feet		H	N 0-			- //- 6			
Centerline Dist.	to Observer:	44.0 feet		Ľ	voise sc	urce Elev			eet)		
Barrier Distance	to Observer:	0.0 feet				Autos:		000			
Observer Height	Above Pad):	5.0 feet				n Trucks:		297	0		
	ad Elevation:	0.0 feet			Heav	y Trucks:	8.	004	Grade Ad	justment	. 0.0
Ro	ad Elevation:	0.0 feet		1	Lane Equ	uivalent D	Distan	ce (in	feet)		
	Road Grade:	0.0%				Autos:	40.	460			
	Left View:	-90.0 degre	es		Mediur	n Trucks:	40.	241			
	Right View:	90.0 degre	es		Heav	y Trucks:	40.	262			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atter
Autos:	64.30	-0.38		1.28	3	-1.20		-4.61	0.0	000	0.00
Medium Trucks:	75.75	-12.16		1.3	1	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	81.57	-14.78		1.3	1	-1.20		-5.50	0.0	000	0.00
Unmitigated Nois	e Levels (with	out Topo and	barrie	r atten	uation)						
VehicleType	Leq Peak Hou	ir Leq Day	1	Leq E	/ening	Leq Ni	ght		Ldn	-	NEL
Autos:	64		62.0		59.6		55.5		63.5	-	63
Medium Trucks:	63		61.6		58.5		56.6		64.0	-	64
Heavy Trucks:	66	.9	65.4		57.1		58.3	3	66.4	4	66
Vehicle Noise:	69	.9	68.1		63.3		61.7	,	69.6	6	69
Centerline Distan	ce to Noise Co	ontour (in feet)								
			L	70 0		65 dE	BA	6	60 dBA		dBA
			Ldn:	4	1	89			192	4	13
			NFL:	4		93			200		30

	FHV	VA-RD-77-108 H	IGHWAY	NOISE PI	REDICTIO	N MODEL		
Road Nam	Scenario: HY With Project Road Name: First St. Road Segment: w/o Hamner Av.					ame: Palor nber: 1179		
SITE	SPECIFIC IN	PUT DATA					EL INPUTS	
Highway Data				Site Con	ditions (H	lard = 10, S	Soft = 15)	
	Traffic (Adt): Percentage: our Volume:	12,793 vehicles 10% 1,279 vehicles				Autos ks (2 Axles s (3+ Axles): 15	
Vei	hicle Speed:	35 mph		Mahlala				
Near/Far Lar	ne Distance:	36 feet		Vehicle	icleType	Dav	Evening	Night Daily
Site Data				VCII		tos: 76.3	•	12.6% 90.76%
Ba	rier Heiaht:	0.0 feet		M	edium Tru	cks: 73.3	% 9.2%	17.6% 6.01%
Barrier Type (0-W		0.0		1	Heavy True	cks: 84.4	% 3.2%	12.5% 3.24%
Centerline Dis	t. to Barrier:	44.0 feet		Noise Su	ource Elev	vations (in	feet)	
Centerline Dist.	to Observer:	44.0 feet			Autos:	0.000	1001)	
Barrier Distance	to Observer:	0.0 feet		Mediu	m Trucks:	2.297		
Observer Height (.	Above Pad):	5.0 feet			v Trucks:		Grade Adiu	stment: 0.0
Pa	d Elevation:	0.0 feet					,	
	d Elevation:	0.0 feet		Lane Eq		Distance (ir	n feet)	
F	Road Grade:	0.0%			Autos:			
	Left View: Right View:	-90.0 degrees 90.0 degrees			m Trucks: ry Trucks:	40.241 40.262		
FHWA Noise Mode	Calculation	5						
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	n Berm Atten
Autos:	64.30	-0.10	1.:	28	-1.20	-4.61	0.00	0.000
Medium Trucks:	75.75	-11.89	1.:	31	-1.20	-4.87	0.00	0.000
Heavy Trucks:	81.57	-14.58	1.3	31	-1.20	-5.50	0.00	00.00
Unmitigated Noise	e Levels (with	out Topo and ba	arrier atte	nuation)				
VehicleType	Leq Peak Hou	r Leq Day	Leq I	Evening	Leq Ni	ight	Ldn	CNEL
Autos:	64.			59.9		55.8	63.8	64.2
Medium Trucks:	64.			58.8		56.9	64.3	64.6
Heavy Trucks:	67.			57.3		58.5	66.6	66.7
Vehicle Noise:	70.		.3	63.6		62.0	69.8	70.1
Centerline Distance	e to Noise Co	ontour (in feet)	70	dBA	65 dE	24	60 dBA	55 dBA
		1.		43	65 dE 92	0/4	199	55 dBA 428
		CNF		43 45	92		199 207	428 447
		CIVE	:L.	40	96		207	447

Tuesday, July 02, 2019

	FHV	VA-RD-77-108	HIGHW	AY N		EDICTIO	ON MODEL			
Scenari	o: HY With Pr	oject			Project Name: Palomino					
Road Nam	e: Hidden Va	lley Pkwy.				Job Nu	mber: 1179	5		
Road Segmer	nt: w/o E. Park	ridge Av.								
SITE	SPECIFIC IN	IPUT DATA						EL INPUTS		
Highway Data				S	Site Cond	itions (Hard = 10, \$	Soft = 15)		
Average Daily	Traffic (Adt):	29,827 vehicle	s				Auto	s: 15		
Peak Hour	Percentage:	10%			Medi	ium Tru	cks (2 Axles): 15		
Peak H	our Volume:	2,983 vehicles	5		Hear	vy Truci	ks (3+ Axles): 15		
	hicle Speed:	45 mph		v	/ehicle M	ix				
Near/Far Lar	ne Distance:	52 feet		-		leType	Day	Evening I	Vight Daily	
Site Data							utos: 76.3	•	12.6% 92.03%	
Bar	rier Heiaht:	0.0 feet			Med	lium Tru	icks: 73.3	% 9.2%	17.6% 5.68%	
Barrier Type (0-W		0.0			He	eavy Tru	<i>icks:</i> 84.4	% 3.2%	12.5% 2.29%	
Centerline Dis		50.0 feet			laisa Sau	urco Ele	vations (in	foot)		
Centerline Dist.	to Observer:	50.0 feet		~	10136 300	Autos		leelj		
Barrier Distance	to Observer:	0.0 feet			Medium					
Observer Height (J	Above Pad):	5.0 feet				Trucks		Grade Adju	stment: 0.0	
Pa	ad Elevation:	0.0 feet							0.0	
Roa	ad Elevation:	0.0 feet		L	ane Equi		Distance (ii	n feet)		
F	Road Grade:	0.0%				Autos				
	Left View:	-90.0 degree	s		Medium					
	Right View:	90.0 degree	S		Heavy	Trucks	42.814			
FHWA Noise Mode	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite R	load	Fresnel	Barrier Atter	Berm Atten	
Autos:	68.46	2.55		0.88		-1.20	-4.6	5 0.00	0.000	
Medium Trucks:	79.45	-9.55		0.91		-1.20	-4.87	۶ 0.00	0.000	
Heavy Trucks:	84.25	-13.49		0.91		-1.20	-5.43	3 0.00	0.000	
Unmitigated Noise	e Levels (with	out Topo and	barrier	attenu	uation)					
VehicleType	Leq Peak Hou		L	eq Ev	rening	Leq N		Ldn	CNEL	
Autos:	70		68.7		66.3		62.2	70.2	70.6	
Medium Trucks:	69		67.5		64.5		62.5	69.9	70.3	
Heavy Trucks:	70	-	6.8		60.7		61.9	69.9	70.1	
Vehicle Noise:	75	.1	73.2		69.2		67.0	74.8	75.1	
	to Noise C	ontour (in feet)	1							
Centerline Distance	e to Noise Co					05		60 dBA	EE 104	
Centerline Distanc	e to Noise Co			70 d		65 d			55 dBA	
Centerline Distanc	e to Noise Co		Ldn: IEL:	70 d. 104	4	65 d 22 23	5	484 508	1,043 1.094	

	FHW	A-RD-77-108	HIGH	WAYNO	DISE PRI	EDICTIC	ON MO	DEL			
Scenario: HY				Project Name: Palomino Job Number: 11795							
Road Name: Hid						Job Nu	mber:	11795			
Road Segment: e/o	E. Parkr	idge Av.									
SITE SPEC	IFIC IN	PUT DATA							L INPUT	s	
Highway Data				S	ite Cond	itions (I	Hard =	10, Sc	oft = 15)		
Average Daily Traffic	(Adt): 3	31,318 vehicle	s				,	Autos:	15		
Peak Hour Perce	ntage:	10%			Medi	ium Truc	:ks (2 A	(xles)	15		
Peak Hour Vo	olume:	3,132 vehicles			Hear	vy Truck	:s (3+ A	(xles)	15		
Vehicle S	Vehicle Speed: 45 mph				ehicle M	iv					
Near/Far Lane Distance: 52 feet						leType		Dav	Evening	Night	Daily
Site Data								76.3%		12.6%	
Barrier H	eiaht [.]	0.0 feet			Mec	dium Tru	cks:	73.3%	9.2%	17.6%	5.759
Barrier Type (0-Wall, 1-L	•	0.0		1	He	avy Tru	cks:	84.4%	3.2%	12.5%	2.329
Centerline Dist. to E		50.0 feet		\vdash							
Centerline Dist. to Obs		50.0 feet		N	oise Sou				et)		
Barrier Distance to Obs		0.0 feet				Autos:		000			
Observer Height (Above		5.0 feet			Medium			297			
Pad Ele		0.0 feet			Heavy	Trucks:	8.0	004	Grade Ad	justment.	0.0
Road Elevation: 0.0 feet			Li	ane Equi	ivalent I	Distand	ce (in i	feet)			
Road (0.0%				Autos:			,		
Left	View:	-90.0 degree	s		Medium	Trucks:	42.	794			
Right	View:	90.0 degree	s		Heavy	Trucks:	42.	814			
FHWA Noise Model Cal	culations	;									
VehicleType RE	MEL	Traffic Flow	Dist	tance	Finite R		Fresn	el	Barrier Att	en Ber	m Atten
Autos:	68.46	2.76		0.88		-1.20		-4.65	0.0	000	0.00
Medium Trucks:	79.45	-9.28		0.91		-1.20		-4.87		000	0.00
Heavy Trucks:	84.25	-13.23		0.91		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise Leve	ls (witho	out Topo and I	oarrie	r attenu	ation)						
	eak Hou			Leq Eve		Leq N			Ldn		VEL
Autos:	70.		8.9		66.5		62.4		70.4		70.
Medium Trucks:	69.		57.7		64.7		62.8		70.2		70.
Heavy Trucks:	70.		9.2		61.0		62.2		70.2		70.
Vehicle Noise:	75.	3 7	'3.4		69.4		67.2		75.0)	75
Centerline Distance to N	loise Co	ntour (in feet)							-		
			L	70 dE		65 di		6	i0 dBA		dBA
			.dn:	108		233			503		083
			IFI :	114		245			527		136

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APPENDIX 9.1:

OPERATIONAL STATIONARY-SOURCE NOISE CALCULATIONS



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Observer Location: R1

Source: Air Conditioning Unit (Roof-Top) *Condition:* Operational

Project Name: Palomino Job Number: 11795 Analyst: B. Lawson

	NOIS	E MODEL INPUTS	
Noise Distance to Observer	289.0 feet	Barrier Height:	30.0 feet
Noise Distance to Barrier:	60.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	229.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	30.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling	

	NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	289.0	-35.2	-35.2	-35.2	-35.2	-35.2	-35.2	
Shielding (Barrier Attenuation)	60.0	-5.2	-5.2	-5.2	-5.2	-5.2	-5.2	
Raw (Distance + Barrier)		36.8	-40.4	-40.4	-40.4	-40.4	-40.4	
39 Minute Hourly Adjustmer	nt	34.9	-42.3	-42.3	-42.3	-42.3	-42.3	

S	TATIONARY SOURCE	NOISE PREDICTION MODEL	8/10/2019
Observer Location: R1 Source: Truck Idle Condition: Operation		Project Name: Palomino Job Number: 11795 Analyst: B. Lawson	
	NOISE M	ODEL INPUTS	
Noise Distance to Observer	401.0 feet	Barrier Height:	30.0 feet
Noise Distance to Barrier:	10.0 feet	Noise Source Height:	8.0 feet
Barrier Distance to Observer:	391.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation: 0.0 feet		20 = 6 dBA per doubling 15 = 4.5 dBA per doubling	

	NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	30.0	70.1	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	401.0	-22.5	-22.5	-22.5	-22.5	-22.5	-22.5	
Shielding (Barrier Attenuation)	10.0	-17.7	-17.7	-17.7	-17.7	-17.7	-17.7	
Raw (Distance + Barrier)		29.9	-40.2	-40.2	-40.2	-40.2	-40.2	
60 Minute Hourly Adjustmer	nt	29.9	-40.2	-40.2	-40.2	-40.2	-40.2	

<u>8/10/2</u>019

Observer Location: R1

Source: Parking Lot Vehicle Movements (Industria Condition: Operational

	NOISE
Noise Distance to Observer	159.0 feet
Noise Distance to Barrier:	159.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Elevation:	0.0 feet
Noise Source Elevation:	0.0 feet
Barrier Elevation:	0.0 feet

Project Name: Palomino Job Number: 11795

Analyst: B. Lawson

MODEL INPUTS	
Barrier Height:	0.0 feet
Noise Source Height:	5.0 feet
Observer Height:	5.0 feet
Barrier Type (0-Wall, 1-Berm):	0
Drop Off Coefficient:	20.0
20 = 6 dBA per doubling	

15 = 4.5 dBA per doubling of distance

8/10/2019

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	159.0	-24.0	-24.0	-24.0	-24.0	-24.0	-24.0
Shielding (Barrier Attenuation)	159.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		28.2	-24.0	-24.0	-24.0	-24.0	-24.0
60 Minute Hourly Adjustmer	nt	28.2	-24.0	-24.0	-24.0	-24.0	-24.0

S	TATIONARY SOURCE NO	ISE PREDICTION MODEL	8/10/2019
Observer Location: R2 Source: Air Condit Condition: Operation	oning Unit (Roof-Top) al	Project Name: Palomino Job Number: 11795 Analyst: B. Lawson	
	NOISE MOD	EL INPUTS	
Noise Distance to Observer Noise Distance to Barrier:	186.0 feet 30.0 feet	Barrier Height: Noise Source Height:	30.0 feet 5.0 feet
Barrier Distance to Observer:	156.0 feet	Observer Height:	5.0 feet
Observer Elevation: Noise Source Elevation:	0.0 feet 30.0 feet	Barrier Type (0-Wall, 1-Berm): Drop Off Coefficient:	0 20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doubling	

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	186.0	-31.4	-31.4	-31.4	-31.4	-31.4	-31.4
Shielding (Barrier Attenuation)	30.0	-4.9	-4.9	-4.9	-4.9	-4.9	-4.9
Raw (Distance + Barrier)		40.9	-36.3	-36.3	-36.3	-36.3	-36.3
39 Minute Hourly Adjustmen	nt	39.0	-38.2	-38.2	-38.2	-38.2	-38.2

Observer Location: R2

Source: Parking Lot Vehicle Movements (Industria Condition: Operational

ndustria	Job Number: 11795
	Analyst: B. Lawson

Project Name: Palomino

8/10/2019

NOISE MODEL INPUTS							
Noise Distance to Observer	35.0 feet	Barrier Height:	0.0 feet				
Noise Distance to Barrier:	35.0 feet	Noise Source Height:	5.0 feet				
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet				
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0				
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0				
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling					

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	35.0	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9
Shielding (Barrier Attenuation)	35.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		41.3	-10.9	-10.9	-10.9	-10.9	-10.9
60 Minute Hourly Adjustmen	t	41.3	-10.9	-10.9	-10.9	-10.9	-10.9

S	TATIONARY SOURCE	NOISE PREDICTION MODEL	8/10/2019
Observer Location: R2 Source: Truck Idle Condition: Operation	•	Project Name: Palomino Job Number: 11795 Analyst: B. Lawson	
	NOISE M	ODEL INPUTS	
Noise Distance to Observer	522.0 feet	Barrier Height:	30.0 feet
Noise Distance to Barrier:	10.0 feet	Noise Source Height:	8.0 feet
Barrier Distance to Observer:	512.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doubling	

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	30.0	70.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	522.0	-24.8	-24.8	-24.8	-24.8	-24.8	-24.8
Shielding (Barrier Attenuation)	10.0	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6
Raw (Distance + Barrier)		27.7	-42.4	-42.4	-42.4	-42.4	-42.4
60 Minute Hourly Adjustmer	t	27.7	-42.4	-42.4	-42.4	-42.4	-42.4

Observer Location: R3

Source: Air Conditioning Unit (Roof-Top) *Condition:* Operational

Project Name: Palomino Job Number: 11795 Analyst: B. Lawson <u>8/10/2</u>019

NOISE MODEL INPUTS							
Noise Distance to Observer	346.0 feet	Barrier Height:	30.0 feet				
Noise Distance to Barrier:	220.0 feet	Noise Source Height:	5.0 feet				
Barrier Distance to Observer:	126.0 feet	Observer Height:	5.0 feet				
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0				
Noise Source Elevation:	30.0 feet	Drop Off Coefficient:	20.0				
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling					

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	346.0	-36.8	-36.8	-36.8	-36.8	-36.8	-36.8
Shielding (Barrier Attenuation)	220.0	-10.7	-10.7	-10.7	-10.7	-10.7	-10.7
Raw (Distance + Barrier)		29.7	-47.5	-47.5	-47.5	-47.5	-47.5
39 Minute Hourly Adjustmen	nt	27.8	-49.4	-49.4	-49.4	-49.4	-49.4

S	TATIONARY SOURCE NOI	SE PREDICTION MODEL	8/10/2019					
Observer Location: R3 Source: Parking Lo Condition: Operation	ot Vehicle Movements (Indus al	<i>Project Name:</i> Palomino tria <i>Job Number:</i> 11795 <i>Analyst:</i> B. Lawson						
	NOISE MODEL INPUTS							
Noise Distance to Observer	158.0 feet	Barrier Height:	6.0 feet					
Noise Distance to Barrier:	70.0 feet	Noise Source Height:	5.0 feet					
Barrier Distance to Observer:	88.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	158.0	-24.0	-24.0	-24.0	-24.0	-24.0	-24.0
Shielding (Barrier Attenuation)	70.0	-5.1	-5.1	-5.1	-5.1	-5.1	-5.1
Raw (Distance + Barrier)		23.1	-29.1	-29.1	-29.1	-29.1	-29.1
60 Minute Hourly Adjustmer	nt	23.1	-29.1	-29.1	-29.1	-29.1	-29.1

Observer Location: R4

Source: Air Conditioning Unit (Roof-Top) *Condition:* Operational

Project Name: Palomino Job Number: 11795 Analyst: B. Lawson <u>8/10/2</u>019

NOISE MODEL INPUTS						
Noise Distance to Observer	224.0 feet	Barrier Height:	30.0 feet			
Noise Distance to Barrier:	60.0 feet	Noise Source Height:	5.0 feet			
Barrier Distance to Observer:	164.0 feet	Observer Height:	5.0 feet			
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0			
Noise Source Elevation:	30.0 feet	Drop Off Coefficient:	20.0			
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling				

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	224.0	-33.0	-33.0	-33.0	-33.0	-33.0	-33.0
Shielding (Barrier Attenuation)	60.0	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0
Raw (Distance + Barrier)		38.2	-39.0	-39.0	-39.0	-39.0	-39.0
39 Minute Hourly Adjustmen	it	36.3	-40.9	-40.9	-40.9	-40.9	-40.9

S	TATIONARY SOURCE NO	ISE PREDICTION MODEL	8/10/2019
Observer Location: R4 Source: Truck Unle Condition: Operation	oading/Docking Activity al	Project Name: Palomino Job Number: 11795 Analyst: B. Lawson	
	NOISE MODE	EL INPUTS	
Noise Distance to Observer	234.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	130.0 feet	Noise Source Height:	8.0 feet
Barrier Distance to Observer:	104.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doublin	

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	30.0	67.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	234.0	-17.8	-17.8	-17.8	-17.8	-17.8	-17.8
Shielding (Barrier Attenuation)	130.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		49.4	-17.8	-17.8	-17.8	-17.8	-17.8
60 Minute Hourly Adjustmen	t	49.4	-17.8	-17.8	-17.8	-17.8	-17.8

Observer Location: R4

Source: Parking Lot Vehicle Movements (Industria Condition: Operational

	NOISE M	ODEL INPUTS
Noise Distance to Observer	264.0 feet	
Noise Distance to Barrier:	264.0 feet	
Barrier Distance to Observer:	0.0 feet	
		Dor
Observer Elevation:	0.0 feet	Bar
Noise Source Elevation:	0.0 feet	

0.0 feet

Barrier Elevation:

Project Name: Palomino Job Number: 11795 Analyst: B. Lawson

Barrier Height:0.0 feetNoise Source Height:5.0 feetObserver Height:5.0 feetBarrier Type (0-Wall, 1-Berm):0

Drop Off Coefficient: 20.0

20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	264.0	-28.4	-28.4	-28.4	-28.4	-28.4	-28.4
Shielding (Barrier Attenuation)	264.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		23.8	-28.4	-28.4	-28.4	-28.4	-28.4
60 Minute Hourly Adjustmer	nt	23.8	-28.4	-28.4	-28.4	-28.4	-28.4

STATIONARY SOURCE NOISE PREDICTION MODEL				
Observer Location: R4 Source: Parking Lo Condition: Operation	ot Vehicle Movements (Comme al	Project Name: Palomino Job Number: 11795 Analyst: B. Lawson		
	NOISE MODEL	INPUTS		
Noise Distance to Observer	440.0 feet	Barrier Height:	0.0 feet	
Noise Distance to Barrier:	440.0 feet	Noise Source Height:	5.0 feet	
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet	
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0	
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0	
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doubling		

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	60.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	440.0	-38.9	-38.9	-38.9	-38.9	-38.9	-38.9
Shielding (Barrier Attenuation)	440.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		21.2	-38.9	-38.9	-38.9	-38.9	-38.9
60 Minute Hourly Adjustmer	nt	21.2	-38.9	-38.9	-38.9	-38.9	-38.9

8/10/20<u>19</u>

Observer Location: R4

Source: Drive-Through Speakerphone *Condition:* Operational

Project Name: Palomino Job Number: 11795 Analyst: B. Lawson

NOISE MODEL INPUTS								
Noise Distance to Observer	598.0 feet	Barrier Height:	10.0 feet					
Noise Distance to Barrier:	10.0 feet	Noise Source Height:	3.0 feet					
Barrier Distance to Observer:	588.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	15.0	62.0	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	598.0	-32.0	-32.0	-32.0	-32.0	-32.0	-32.0		
Shielding (Barrier Attenuation)	10.0	-12.5	-12.5	-12.5	-12.5	-12.5	-12.5		
Raw (Distance + Barrier)		17.5	-44.5	-44.5	-44.5	-44.5	-44.5		
60 Minute Hourly Adjustmen	nt	17.5	-44.5	-44.5	-44.5	-44.5	-44.5		

STATIONARY SOURCE NOISE PREDICTION MODEL			
Observer Location: R4 Source: Gas Station Activity Condition: Operational		Project Name: Palomino Job Number: 11795 Analyst: B. Lawson	
	NOISE N	NODEL INPUTS	
Noise Distance to Observer Noise Distance to Barrier: Barrier Distance to Observer:	486.0 feet 486.0 feet 0.0 feet	Barrier Height: Noise Source Height: Observer Height:	0.0 feet 5.0 feet 5.0 feet
Observer Elevation: Noise Source Elevation: Barrier Elevation:	0.0 feet 0.0 feet 0.0 feet	Barrier Type (0-Wall, 1-Berm): Drop Off Coefficient: 20 = 6 dBA per doubling 15 = 4.5 dBA per doubling	

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	5.0	68.2	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	486.0	-39.8	-39.8	-39.8	-39.8	-39.8	-39.8		
Shielding (Barrier Attenuation)	486.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		28.4	-39.8	-39.8	-39.8	-39.8	-39.8		
60 Minute Hourly Adjustmen	t	28.4	-39.8	-39.8	-39.8	-39.8	-39.8		

Observer Location: R5

Source: Air Conditioning Unit (Roof-Top) *Condition:* Operational

Project Name: Palomino Job Number: 11795 Analyst: B. Lawson

NOISE MODEL INPUTS								
Noise Distance to Observer	180.0 feet	Barrier Height:	10.0 feet					
Noise Distance to Barrier:	10.0 feet	Noise Source Height:	5.0 feet					
Barrier Distance to Observer:	170.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	10.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling c 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	180.0	-31.1	-31.1	-31.1	-31.1	-31.1	-31.1		
Shielding (Barrier Attenuation)	10.0	-10.2	-10.2	-10.2	-10.2	-10.2	-10.2		
Raw (Distance + Barrier)		35.9	-41.3	-41.3	-41.3	-41.3	-41.3		
39 Minute Hourly Adjustmen	nt	34.0	-43.2	-43.2	-43.2	-43.2	-43.2		

S	TATIONARY SOURCE NOIS	E PREDICTION MODEL	8/10/2019						
Observer Location: R5 Source: Parking Lo Condition: Operation	ot Vehicle Movements (Industr al	Project Name: Palomino a Job Number: 11795 Analyst: B. Lawson							
NOISE MODEL INPUTS									
Noise Distance to Observer	296.0 feet	Barrier Height:	0.0 feet						
Noise Distance to Barrier:	296.0 feet	Noise Source Height:	5.0 feet						
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet						
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0						
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0						
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doublin							

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	296.0	-29.4	-29.4	-29.4	-29.4	-29.4	-29.4		
Shielding (Barrier Attenuation)	296.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		22.8	-29.4	-29.4	-29.4	-29.4	-29.4		
60 Minute Hourly Adjustmer	nt	22.8	-29.4	-29.4	-29.4	-29.4	-29.4		

Observer Location: R5

Source: Parking Lot Vehicle Movements (Commer Condition: Operational

Project Name: Palomino Job Number: 11795

Analyst: B. Lawson

NOISE MODEL INPUTS								
Noise Distance to Observer	128.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	128.0 feet	Noise Source Height:	5.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	5.0	60.1	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	128.0	-28.2	-28.2	-28.2	-28.2	-28.2	-28.2		
Shielding (Barrier Attenuation)	128.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		31.9	-28.2	-28.2	-28.2	-28.2	-28.2		
60 Minute Hourly Adjustmen	nt	31.9	-28.2	-28.2	-28.2	-28.2	-28.2		

STATIONARY SOURCE NOISE PREDICTION MODEL				
Observer Location: R5 Source: Drive-Through Speakerphone Condition: Operational		Project Name: Palomino Job Number: 11795 Analyst: B. Lawson		
	NOISE MO	DEL INPUTS		
Noise Distance to Observer	281.0 feet	Barrier Height:	10.0 feet	
Noise Distance to Barrier:	10.0 feet	Noise Source Height:	3.0 feet	
Barrier Distance to Observer:	271.0 feet	Observer Height:	5.0 feet	
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0	
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0	
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doubling		

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	15.0	62.0	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	281.0	-25.5	-25.5	-25.5	-25.5	-25.5	-25.5		
Shielding (Barrier Attenuation)	10.0	-12.6	-12.6	-12.6	-12.6	-12.6	-12.6		
Raw (Distance + Barrier)		23.9	-38.1	-38.1	-38.1	-38.1	-38.1		
60 Minute Hourly Adjustmen	nt	23.9	-38.1	-38.1	-38.1	-38.1	-38.1		

Observer Location: R5

Source: Gas Station Activity Condition: Operational

Noise Distance to Observer111.0 feetNoise Distance to Barrier:111.0 feetBarrier Distance to Observer:0.0 feetObserver Elevation:0.0 feetNoise Source Elevation:0.0 feetBarrier Elevation:0.0 feetBarrier Elevation:0.0 feet

Project Name: Palomino Job Number: 11795 Analyst: B. Lawson

	Analyst. D. Edwson	
NOISE MOD	EL INPUTS	
111.0 feet	Barrier Height:	0.0 feet
111.0 feet	Noise Source Height:	5.0 feet
0.0 feet	Observer Height:	5.0 feet
0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
0.0 feet	Drop Off Coefficient:	20.0
0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling	

NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	5.0	68.2	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	111.0	-26.9	-26.9	-26.9	-26.9	-26.9	-26.9	
Shielding (Barrier Attenuation)	111.0	0.0	0.0	0.0	0.0	0.0	0.0	
Raw (Distance + Barrier)		41.3	-26.9	-26.9	-26.9	-26.9	-26.9	
60 Minute Hourly Adjustmer	nt	41.3	-26.9	-26.9	-26.9	-26.9	-26.9	

S	TATIONARY SOURCE NO	ISE PREDICTION MODEL	8/10/2019					
Observer Location: R6 Source: Air Condit Condition: Operation	ioning Unit (Roof-Top) al	Project Name: Palomino Job Number: 11795 Analyst: B. Lawson						
NOISE MODEL INPUTS								
Noise Distance to Observer Noise Distance to Barrier:	166.0 feet 10.0 feet	Barrier Height: Noise Source Height:	10.0 feet 5.0 feet					
Barrier Distance to Observer:	156.0 feet	Observer Height:	5.0 feet					
Observer Elevation: Noise Source Elevation:	0.0 feet 10.0 feet	Barrier Type (0-Wall, 1-Berm): Drop Off Coefficient:	0 20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doublin						

NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	166.0	-30.4	-30.4	-30.4	-30.4	-30.4	-30.4	
Shielding (Barrier Attenuation)	10.0	-10.1	-10.1	-10.1	-10.1	-10.1	-10.1	
Raw (Distance + Barrier)		36.7	-40.5	-40.5	-40.5	-40.5	-40.5	
39 Minute Hourly Adjustmen	nt	34.8	-42.4	-42.4	-42.4	-42.4	-42.4	

Observer Location: R6

Source: Truck Unloading/Docking Activity *Condition:* Operational

Project Name: Palomino Job Number: 11795 Analyst: B. Lawson

NOISE MODEL INPUTS								
Noise Distance to Observer	579.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	579.0 feet	Noise Source Height:	8.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	30.0	67.2	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	579.0	-25.7	-25.7	-25.7	-25.7	-25.7	-25.7		
Shielding (Barrier Attenuation)	579.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		41.5	-25.7	-25.7	-25.7	-25.7	-25.7		
60 Minute Hourly Adjustmen	nt	41.5	-25.7	-25.7	-25.7	-25.7	-25.7		

S	TATIONARY SOURCE NOISE	PREDICTION MODEL	8/10/2019					
Observer Location: R6 Source: Parking Lo Condition: Operation	ot Vehicle Movements (Industri al	Project Name: Palomino a Job Number: 11795 Analyst: B. Lawson						
NOISE MODEL INPUTS								
Noise Distance to Observer	488.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	488.0 feet	Noise Source Height:	5.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doublin						

NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	488.0	-33.8	-33.8	-33.8	-33.8	-33.8	-33.8	
Shielding (Barrier Attenuation)	488.0	0.0	0.0	0.0	0.0	0.0	0.0	
Raw (Distance + Barrier)		18.4	-33.8	-33.8	-33.8	-33.8	-33.8	
60 Minute Hourly Adjustmen	it	18.4	-33.8	-33.8	-33.8	-33.8	-33.8	

Observer Location: R6

Source: Parking Lot Vehicle Movements (Commer Condition: Operational

Project Name: Palomino Job Number: 11795

Analyst: B. Lawson

NOISE MODEL INPUTS								
Noise Distance to Observer	161.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	161.0 feet	Noise Source Height:	5.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	5.0	60.1	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	161.0	-30.2	-30.2	-30.2	-30.2	-30.2	-30.2		
Shielding (Barrier Attenuation)	161.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		29.9	-30.2	-30.2	-30.2	-30.2	-30.2		
60 Minute Hourly Adjustmen	it	29.9	-30.2	-30.2	-30.2	-30.2	-30.2		

S	TATIONARY SOURCE N	OISE PREDICTION MODEL	8/10/2019					
Observer Location: R6 Source: Drive-Through Speakerphone <i>Condition:</i> Operational		Project Name: Palomino Job Number: 11795 Analyst: B. Lawson						
NOISE MODEL INPUTS								
Noise Distance to Observer	307.0 feet	Barrier Height:	10.0 feet					
Noise Distance to Barrier:	65.0 feet	Noise Source Height:	3.0 feet					
Barrier Distance to Observer:	242.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doublin						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	15.0	62.0	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	307.0	-26.2	-26.2	-26.2	-26.2	-26.2	-26.2		
Shielding (Barrier Attenuation)	65.0	-8.0	-8.0	-8.0	-8.0	-8.0	-8.0		
Raw (Distance + Barrier)		27.8	-34.2	-34.2	-34.2	-34.2	-34.2		
60 Minute Hourly Adjustmen	it	27.8	-34.2	-34.2	-34.2	-34.2	-34.2		

Observer Location: R6

Source: Gas Station Activity Condition: Operational Project Name: Palomino Job Number: 11795 Analyst: B. Lawson

NOISE MODEL INPUTS								
Noise Distance to Observer	122.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	122.0 feet	Noise Source Height:	5.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	5.0	68.2	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	122.0	-27.7	-27.7	-27.7	-27.7	-27.7	-27.7		
Shielding (Barrier Attenuation)	122.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		40.5	-27.7	-27.7	-27.7	-27.7	-27.7		
60 Minute Hourly Adjustmen	it	40.5	-27.7	-27.7	-27.7	-27.7	-27.7		

S	TATIONARY SOURCE NO	ISE PREDICTION MODEL	8/10/2019					
Observer Location: R7 Source: Air Conditioning Unit (Roof-Top) Condition: Operational		Project Name: Palomino Job Number: 11795 Analyst: B. Lawson						
NOISE MODEL INPUTS								
Noise Distance to Observer	300.0 feet	Barrier Height:	30.0 feet					
Noise Distance to Barrier:	160.0 feet	Noise Source Height:	5.0 feet					
Barrier Distance to Observer:	140.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	30.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doublin						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	300.0	-35.6	-35.6	-35.6	-35.6	-35.6	-35.6		
Shielding (Barrier Attenuation)	160.0	-9.6	-9.6	-9.6	-9.6	-9.6	-9.6		
Raw (Distance + Barrier)		32.0	-45.2	-45.2	-45.2	-45.2	-45.2		
39 Minute Hourly Adjustmer	nt	30.1	-47.1	-47.1	-47.1	-47.1	-47.1		

Observer Location: R7

Source: Parking Lot Vehicle Movements (Industria Condition: Operational

	NOISE MODEL	INPUTS
Noise Distance to Observer	202.0 feet	
Noise Distance to Barrier:	202.0 feet	
Barrier Distance to Observer:	0.0 feet	
Observer Elevation:	0.0 feet	Bar
Noise Source Elevation:	0.0 feet	
Barrier Elevation:	0.0 feet	

Project Name: Palomino Job Number: 11795 Analyst: B. Lawson

Noise Source Height:5.0 feetObserver Height:5.0 feetBarrier Type (0-Wall, 1-Berm):0Drop Off Coefficient:20.0

Barrier Height:

20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance

8/10/2019

0.0 feet

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	202.0	-26.1	-26.1	-26.1	-26.1	-26.1	-26.1		
Shielding (Barrier Attenuation)	202.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		26.1	-26.1	-26.1	-26.1	-26.1	-26.1		
60 Minute Hourly Adjustmen	nt	26.1	-26.1	-26.1	-26.1	-26.1	-26.1		

STATIONARY SOURCE NOISE PREDICTION MODEL 8/10/201								
Observer Location: R7 Source: Parking Lo Condition: Operation	ot Vehicle Movements (Com al	Project Name: Palomino Imer Job Number: 11795 Analyst: B. Lawson						
NOISE MODEL INPUTS								
Noise Distance to Observer	684.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	684.0 feet	Noise Source Height:	5.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	5.0	60.1	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	684.0	-42.7	-42.7	-42.7	-42.7	-42.7	-42.7		
Shielding (Barrier Attenuation)	684.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		17.4	-42.7	-42.7	-42.7	-42.7	-42.7		
60 Minute Hourly Adjustmer	nt	17.4	-42.7	-42.7	-42.7	-42.7	-42.7		

Observer Location: R7

Source: Drive-Through Speakerphone *Condition:* Operational

Project Name: Palomino Job Number: 11795 Analyst: B. Lawson

NOISE MODEL INPUTS								
Noise Distance to Observer	1,027.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	1,027.0 feet	Noise Source Height:	3.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	15.0	62.0	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	1,027.0	-36.7	-36.7	-36.7	-36.7	-36.7	-36.7		
Shielding (Barrier Attenuation)	1,027.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		25.3	-36.7	-36.7	-36.7	-36.7	-36.7		
60 Minute Hourly Adjustmen	it	25.3	-36.7	-36.7	-36.7	-36.7	-36.7		

STATIONARY SOURCE NOISE PREDICTION MODEL				
Observer Location: R7 Source: Gas Station Activity Condition: Operational		Project Name: Palomino Job Number: 11795 Analyst: B. Lawson		
	NOISE N	IODEL INPUTS		
Noise Distance to Observer 1	,027.0 feet	Barrier Height:	0.0 feet	
Noise Distance to Barrier: 1	,027.0 feet	Noise Source Height:	5.0 feet	
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet	
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0	
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0	
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling		

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	5.0	68.2	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	1,027.0	-46.3	-46.3	-46.3	-46.3	-46.3	-46.3		
Shielding (Barrier Attenuation)	1,027.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		21.9	-46.3	-46.3	-46.3	-46.3	-46.3		
60 Minute Hourly Adjustmer	nt	21.9	-46.3	-46.3	-46.3	-46.3	-46.3		

Observer Location: R8

Source: Air Conditioning Unit (Roof-Top) *Condition:* Operational

Project Name: Palomino Job Number: 11795 Analyst: B. Lawson

NOISE MODEL INPUTS							
Noise Distance to Observer	339.0 feet	Barrier Height:	30.0 feet				
Noise Distance to Barrier:	30.0 feet	Noise Source Height:	5.0 feet				
Barrier Distance to Observer:	309.0 feet	Observer Height:	5.0 feet				
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0				
Noise Source Elevation:	30.0 feet	Drop Off Coefficient:	20.0				
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling					

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	339.0	-36.6	-36.6	-36.6	-36.6	-36.6	-36.6
Shielding (Barrier Attenuation)	30.0	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0
Raw (Distance + Barrier)		34.6	-42.6	-42.6	-42.6	-42.6	-42.6
39 Minute Hourly Adjustmen	it	32.7	-44.5	-44.5	-44.5	-44.5	-44.5

S	TATIONARY SOURCE NOIS	E PREDICTION MODEL	8/10/2019						
Observer Location: R8 Source: Parking Lo Condition: Operation	ot Vehicle Movements (Industr al	Project Name: Palomino ia Job Number: 11795 Analyst: B. Lawson							
	NOISE MODEL INPUTS								
Noise Distance to Observer	147.0 feet	Barrier Height:	0.0 feet						
Noise Distance to Barrier:	147.0 feet	Noise Source Height:	5.0 feet						
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet						
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0						
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0						
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doublin							

	NOISE MODEL PROJECTIONS						
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	147.0	-23.3	-23.3	-23.3	-23.3	-23.3	-23.3
Shielding (Barrier Attenuation)	147.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		28.9	-23.3	-23.3	-23.3	-23.3	-23.3
60 Minute Hourly Adjustmen	nt	28.9	-23.3	-23.3	-23.3	-23.3	-23.3

Observer Location: R8

Source: Truck Idle/Reefer Activity Condition: Operational Project Name: Palomino Job Number: 11795 Analyst: B. Lawson

NOISE MODEL INPUTS							
Noise Distance to Observer	394.0 feet	Barrier Height:	30.0 feet				
Noise Distance to Barrier:	10.0 feet	Noise Source Height:	8.0 feet				
Barrier Distance to Observer:	384.0 feet	Observer Height:	5.0 feet				
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0				
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0				
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling c 15 = 4.5 dBA per doubling					

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	30.0	70.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	394.0	-22.4	-22.4	-22.4	-22.4	-22.4	-22.4
Shielding (Barrier Attenuation)	10.0	-17.7	-17.7	-17.7	-17.7	-17.7	-17.7
Raw (Distance + Barrier)		30.0	-40.1	-40.1	-40.1	-40.1	-40.1
60 Minute Hourly Adjustmen	t	30.0	-40.1	-40.1	-40.1	-40.1	-40.1

S	TATIONARY SOURCE NO	ISE PREDICTION MODEL	8/10/2019	
Observer Location: R9 Source: Air Conditioning Unit (Roof-Top) <i>Condition:</i> Operational		Project Name: Palomino Job Number: 11795 Analyst: B. Lawson		
	NOISE MOD	EL INPUTS		
Noise Distance to Observer Noise Distance to Barrier:	350.0 feet 10.0 feet	Barrier Height: Noise Source Height:	30.0 feet 5.0 feet	
Barrier Distance to Observer:	340.0 feet	Observer Height:	5.0 feet	
Observer Elevation: Noise Source Elevation:	0.0 feet 30.0 feet	Barrier Type (0-Wall, 1-Berm): Drop Off Coefficient:	0 20.0	
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance		

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	350.0	-36.9	-36.9	-36.9	-36.9	-36.9	-36.9
Shielding (Barrier Attenuation)	10.0	-9.7	-9.7	-9.7	-9.7	-9.7	-9.7
Raw (Distance + Barrier)		30.6	-46.6	-46.6	-46.6	-46.6	-46.6
39 Minute Hourly Adjustmer	nt	28.7	-48.5	-48.5	-48.5	-48.5	-48.5

Observer Location: R9

Source: Parking Lot Vehicle Movements (Industria Condition: Operational

		NOISE
Noise Distance to Observer	156.0 feet	:
Noise Distance to Barrier:	156.0 feet	:
Barrier Distance to Observer:	0.0 feet	:
Observer Elevation:	0.0 feet	t
Noise Source Elevation:	0.0 feet	t
Barrier Elevation:	0.0 feet	t

Project Name: Palomino Job Number: 11795

Analyst: B. Lawson

NOISE MODEL INP	UTS	
et	Barrier Height:	0.0 feet
et	Noise Source Height:	5.0 feet
t	Observer Height:	5.0 feet
et	Barrier Type (0-Wall, 1-Berm):	0
et	Drop Off Coefficient:	20.0
et	20 = 6 dBA per doubling 15 = 4.5 dBA per doublir	

	NOISE MODEL PROJECTIONS						
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	156.0	-23.9	-23.9	-23.9	-23.9	-23.9	-23.9
Shielding (Barrier Attenuation)	156.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		28.3	-23.9	-23.9	-23.9	-23.9	-23.9
60 Minute Hourly Adjustmer	nt	28.3	-23.9	-23.9	-23.9	-23.9	-23.9

S	TATIONARY SOURCE NO	ISE PREDICTION MODEL	8/10/2019					
Observer Location: R10 Source: Air Conditioning Unit (Roof-Top) Condition: Operational		Project Name: Palomino Job Number: 11795 Analyst: B. Lawson						
NOISE MODEL INPUTS								
Noise Distance to Observer Noise Distance to Barrier: Barrier Distance to Observer:	191.0 feet 10.0 feet 181.0 feet	<i>Barrier Height:</i> Noise Source Height: Observer Height:	30.0 feet 5.0 feet 5.0 feet					
Observer Elevation: Noise Source Elevation: Barrier Elevation:	0.0 feet 30.0 feet 0.0 feet	Barrier Type (0-Wall, 1-Berm): Drop Off Coefficient: 20 = 6 dBA per doubling 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	191.0	-31.6	-31.6	-31.6	-31.6	-31.6	-31.6	
Shielding (Barrier Attenuation)	10.0	-8.7	-8.7	-8.7	-8.7	-8.7	-8.7	
Raw (Distance + Barrier)		36.9	-40.3	-40.3	-40.3	-40.3	-40.3	
39 Minute Hourly Adjustmen	t	35.0	-42.2	-42.2	-42.2	-42.2	-42.2	

Observer Location: R10

Source: Parking Lot Vehicle Movements (Indust Condition: Operational

tria	Job Number: 11795
	Analyst: B. Lawson

Project Name: Palomino

8/10/2019

NOISE MODEL INPUTS Barrier Height: Noise Distance to Observer 118.0 feet 0.0 feet Noise Source Height: 5.0 feet Noise Distance to Barrier: 118.0 feet **Observer Height:** 5.0 feet Barrier Distance to Observer: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0 Observer Elevation: 0.0 feet Drop Off Coefficient: 20.0 Noise Source Elevation: 0.0 feet 20 = 6 dBA per doubling of distance Barrier Elevation: 0.0 feet 15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	118.0	-21.4	-21.4	-21.4	-21.4	-21.4	-21.4
Shielding (Barrier Attenuation)	118.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		30.8	-21.4	-21.4	-21.4	-21.4	-21.4
60 Minute Hourly Adjustmen	it	30.8	-21.4	-21.4	-21.4	-21.4	-21.4

Observer Location: R1

Source: Air Conditioning Unit (Roof-Top) *Condition:* Operational

Project Name: Palomino Job Number: 11795 Analyst: B. Lawson

NOISE MODEL INPUTS							
Noise Distance to Observer	289.0 feet	Barrier Height:	30.0 feet				
Noise Distance to Barrier:	60.0 feet	Noise Source Height:	5.0 feet				
Barrier Distance to Observer:	229.0 feet	Observer Height:	5.0 feet				
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0				
Noise Source Elevation:	30.0 feet	Drop Off Coefficient:	20.0				
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling					

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	289.0	-35.2	-35.2	-35.2	-35.2	-35.2	-35.2
Shielding (Barrier Attenuation)	60.0	-5.2	-5.2	-5.2	-5.2	-5.2	-5.2
Raw (Distance + Barrier)		36.8	-40.4	-40.4	-40.4	-40.4	-40.4
39 Minute Hourly Adjustmen	t	34.9	-42.3	-42.3	-42.3	-42.3	-42.3

S	TATIONARY SOURCE	NOISE PREDICTION MODEL	8/11/2019
Observer Location: R1 Source: Truck Idle/Reefer Activity Condition: Operational		Project Name: Palomino Job Number: 11795 Analyst: B. Lawson	
	NOISE M	ODEL INPUTS	
Noise Distance to Observer	401.0 feet	Barrier Height:	30.0 feet
Noise Distance to Barrier:	10.0 feet	Noise Source Height:	8.0 feet
Barrier Distance to Observer:	391.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling	

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	30.0	70.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	401.0	-22.5	-22.5	-22.5	-22.5	-22.5	-22.5
Shielding (Barrier Attenuation)	10.0	-17.7	-17.7	-17.7	-17.7	-17.7	-17.7
Raw (Distance + Barrier)		29.9	-40.2	-40.2	-40.2	-40.2	-40.2
60 Minute Hourly Adjustmer	nt	29.9	-40.2	-40.2	-40.2	-40.2	-40.2

Observer Location: R1

Source: Parking Lot Vehicle Movements (Industria Condition: Operational

stria Job Number: 11795 Analyst: B. Lawson

Project Name: Palomino

NOISE MODEL INPUTS Barrier Height: Noise Distance to Observer 159.0 feet 0.0 feet Noise Source Height: 5.0 feet Noise Distance to Barrier: 159.0 feet **Observer Height:** 5.0 feet Barrier Distance to Observer: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0 Observer Elevation: 0.0 feet Drop Off Coefficient: 20.0 Noise Source Elevation: 0.0 feet 20 = 6 dBA per doubling of distance Barrier Elevation: 0.0 feet 15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	159.0	-24.0	-24.0	-24.0	-24.0	-24.0	-24.0
Shielding (Barrier Attenuation)	159.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		28.2	-24.0	-24.0	-24.0	-24.0	-24.0
60 Minute Hourly Adjustmen	nt	28.2	-24.0	-24.0	-24.0	-24.0	-24.0

S	TATIONARY SOURCE NO	ISE PREDICTION MODEL	8/11/2019
Observer Location: R2 Source: Air Condit Condition: Operation	ioning Unit (Roof-Top) al	Project Name: Palomino Job Number: 11795 Analyst: B. Lawson	
	NOISE MOD	EL INPUTS	
Noise Distance to Observer	186.0 feet	Barrier Height:	30.0 feet
Noise Distance to Barrier:	30.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	156.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	30.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doublin	

NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	186.0	-31.4	-31.4	-31.4	-31.4	-31.4	-31.4	
Shielding (Barrier Attenuation)	30.0	-4.9	-4.9	-4.9	-4.9	-4.9	-4.9	
Raw (Distance + Barrier)		40.9	-36.3	-36.3	-36.3	-36.3	-36.3	
39 Minute Hourly Adjustmer	nt	39.0	-38.2	-38.2	-38.2	-38.2	-38.2	

Observer Location: R2

Source: Parking Lot Vehicle Movements (Indu Condition: Operational

nts (Industria	Job Number: 11795
	Analyst: B. Lawson

Project Name: Palomino

NOISE MODEL INPUTS							
Noise Distance to Observer	35.0 feet	Barrier Height:	0.0 feet				
Noise Distance to Barrier:	35.0 feet	Noise Source Height:	5.0 feet				
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet				
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0				
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0				
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling					

	NOISI	E MODEL F	ROJECTI	ONS			
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	35.0	-10.9	-10.9	-10.9	-10.9	-10.9	-10.9
Shielding (Barrier Attenuation)	35.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		41.3	-10.9	-10.9	-10.9	-10.9	-10.9
60 Minute Hourly Adjustmen	it	41.3	-10.9	-10.9	-10.9	-10.9	-10.9

STATIONARY SOURCE NOISE PREDICTION MODEL 8/11				
Observer Location: R2 Source: Truck Idle Condition: Operation	•	Project Name: Palomino Job Number: 11795 Analyst: B. Lawson		
	NOISE M	ODEL INPUTS		
Noise Distance to Observer	522.0 feet	Barrier Height:	30.0 feet	
Noise Distance to Barrier:	10.0 feet	Noise Source Height:	8.0 feet	
Barrier Distance to Observer:	512.0 feet	Observer Height:	5.0 feet	
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0	
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0	
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling		

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	30.0	70.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	522.0	-24.8	-24.8	-24.8	-24.8	-24.8	-24.8
Shielding (Barrier Attenuation)	10.0	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6
Raw (Distance + Barrier)		27.7	-42.4	-42.4	-42.4	-42.4	-42.4
60 Minute Hourly Adjustmer	nt	27.7	-42.4	-42.4	-42.4	-42.4	-42.4

Observer Location: R3

Source: Air Conditioning Unit (Roof-Top) *Condition:* Operational

Project Name: Palomino Job Number: 11795 Analyst: B. Lawson

	NOIS	SE MODEL INPUTS	
Noise Distance to Observer	346.0 feet	Barrier Height:	30.0 feet
Noise Distance to Barrier:	220.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	126.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	30.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling	

	NOISE	MODEL F	ROJECTI	ONS			
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	346.0	-36.8	-36.8	-36.8	-36.8	-36.8	-36.8
Shielding (Barrier Attenuation)	220.0	-10.7	-10.7	-10.7	-10.7	-10.7	-10.7
Raw (Distance + Barrier)		29.7	-47.5	-47.5	-47.5	-47.5	-47.5
39 Minute Hourly Adjustmen	nt	27.8	-49.4	-49.4	-49.4	-49.4	-49.4

s	TATIONARY SOUF	RCE NOISE PREDICTION MODEL	8/11/2019
Observer Location: R3 Source: Parking Lo Condition: Operation	ot Vehicle Movemen al	<i>Project Name:</i> Palomino nts (Industria <i>Job Number:</i> 11795 <i>Analyst:</i> B. Lawson	
	NOISE	E MODEL INPUTS	
Noise Distance to Observer	158.0 feet	Barrier Height:	6.0 feet
Noise Distance to Barrier:	70.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	88.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of di 15 = 4.5 dBA per doubling of	

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	158.0	-24.0	-24.0	-24.0	-24.0	-24.0	-24.0
Shielding (Barrier Attenuation)	70.0	-5.1	-5.1	-5.1	-5.1	-5.1	-5.1
Raw (Distance + Barrier)		23.1	-29.1	-29.1	-29.1	-29.1	-29.1
60 Minute Hourly Adjustmer	it	23.1	-29.1	-29.1	-29.1	-29.1	-29.1

Observer Location: R4

Source: Air Conditioning Unit (Roof-Top) *Condition:* Operational

Project Name: Palomino Job Number: 11795 Analyst: B. Lawson

	NOISE	MODEL INPUTS	
Noise Distance to Observer	224.0 feet	Barrier Height:	30.0 feet
Noise Distance to Barrier:	60.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	164.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	30.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling	

	NOISE	MODEL P	ROJECTI	ONS			
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	224.0	-33.0	-33.0	-33.0	-33.0	-33.0	-33.0
Shielding (Barrier Attenuation)	60.0	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0
Raw (Distance + Barrier)		38.2	-39.0	-39.0	-39.0	-39.0	-39.0
39 Minute Hourly Adjustmen	nt	36.3	-40.9	-40.9	-40.9	-40.9	-40.9

S	TATIONARY SOURCE NO	ISE PREDICTION MODEL	8/11/2019
Observer Location: R4 Source: Truck Unle Condition: Operation	oading/Docking Activity al	Project Name: Palomino Job Number: 11795 Analyst: B. Lawson	
	NOISE MODE	EL INPUTS	
Noise Distance to Observer	234.0 feet	Barrier Height:	10.0 feet
Noise Distance to Barrier:	130.0 feet	Noise Source Height:	8.0 feet
Barrier Distance to Observer:	104.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	30.0	67.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	234.0	-17.8	-17.8	-17.8	-17.8	-17.8	-17.8
Shielding (Barrier Attenuation)	130.0	-6.1	-6.1	-6.1	-6.1	-6.1	-6.1
Raw (Distance + Barrier)		43.3	-23.9	-23.9	-23.9	-23.9	-23.9
60 Minute Hourly Adjustmen	it	43.3	-23.9	-23.9	-23.9	-23.9	-23.9

Observer Location: R4

Source: Parking Lot Vehicle Movements (Industria Condition: Operational

Project Name: Palomino
Job Number: 11795
Analyst: B. Lawson

8/11/2019

NOISE MODEL INPUTS Barrier Height: Noise Distance to Observer 264.0 feet 0.0 feet Noise Source Height: 5.0 feet Noise Distance to Barrier: 264.0 feet **Observer Height:** 5.0 feet Barrier Distance to Observer: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0 Observer Elevation: 0.0 feet Drop Off Coefficient: 20.0 Noise Source Elevation: 0.0 feet 20 = 6 dBA per doubling of distance Barrier Elevation: 0.0 feet 15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	264.0	-28.4	-28.4	-28.4	-28.4	-28.4	-28.4
Shielding (Barrier Attenuation)	264.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		23.8	-28.4	-28.4	-28.4	-28.4	-28.4
60 Minute Hourly Adjustmen	nt	23.8	-28.4	-28.4	-28.4	-28.4	-28.4

S	TATIONARY SOURCE NOIS	E PREDICTION MODEL	8/11/2019
Observer Location: R4 Source: Parking Lo <i>Condition:</i> Operation	ot Vehicle Movements (Comm al	Project Name: Palomino er Job Number: 11795 Analyst: B. Lawson	
	NOISE MODEL	. INPUTS	
Noise Distance to Observer	440.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	440.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doublin	

NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	5.0	60.1	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	440.0	-38.9	-38.9	-38.9	-38.9	-38.9	-38.9	
Shielding (Barrier Attenuation)	440.0	0.0	0.0	0.0	0.0	0.0	0.0	
Raw (Distance + Barrier)		21.2	-38.9	-38.9	-38.9	-38.9	-38.9	
60 Minute Hourly Adjustmer	nt	21.2	-38.9	-38.9	-38.9	-38.9	-38.9	

Observer Location: R4

Source: Drive-Through Speakerphone *Condition:* Operational

Project Name: Palomino Job Number: 11795 Analyst: B. Lawson

	NOISE MODEL INPUTS									
Noise Distance to Observer	598.0 feet	Barrier Height:	10.0 feet							
Noise Distance to Barrier:	10.0 feet	Noise Source Height:	3.0 feet							
Barrier Distance to Observer:	588.0 feet	Observer Height:	5.0 feet							
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0							
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0							
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling								

NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	15.0	62.0	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	598.0	-32.0	-32.0	-32.0	-32.0	-32.0	-32.0	
Shielding (Barrier Attenuation)	10.0	-12.5	-12.5	-12.5	-12.5	-12.5	-12.5	
Raw (Distance + Barrier)		17.5	-44.5	-44.5	-44.5	-44.5	-44.5	
60 Minute Hourly Adjustmen	nt	17.5	-44.5	-44.5	-44.5	-44.5	-44.5	

STATIONARY SOURCE NOISE PREDICTION MODEL			
Observer Location: R4 Source: Gas Station Activity Condition: Operational		Project Name: Palomino Job Number: 11795 Analyst: B. Lawson	
	NOISE N	NODEL INPUTS	
Noise Distance to Observer Noise Distance to Barrier:	486.0 feet 486.0 feet	Barrier Height: Noise Source Height: Observer Height:	0.0 feet 5.0 feet 5.0 feet
Barrier Distance to Observer: Observer Elevation: Noise Source Elevation:	0.0 feet 0.0 feet 0.0 feet	Barrier Type (0-Wall, 1-Berm): Drop Off Coefficient:	0 20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling	

NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	5.0	68.2	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	486.0	-39.8	-39.8	-39.8	-39.8	-39.8	-39.8	
Shielding (Barrier Attenuation)	486.0	0.0	0.0	0.0	0.0	0.0	0.0	
Raw (Distance + Barrier)		28.4	-39.8	-39.8	-39.8	-39.8	-39.8	
60 Minute Hourly Adjustmer	nt	28.4	-39.8	-39.8	-39.8	-39.8	-39.8	

Observer Location: R5

Source: Air Conditioning Unit (Roof-Top) *Condition:* Operational

Project Name: Palomino Job Number: 11795 Analyst: B. Lawson

NOISE MODEL INPUTS								
Noise Distance to Observer	180.0 feet	Barrier Height:	10.0 feet					
Noise Distance to Barrier:	10.0 feet	Noise Source Height:	5.0 feet					
Barrier Distance to Observer:	170.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	10.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling c 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	180.0	-31.1	-31.1	-31.1	-31.1	-31.1	-31.1	
Shielding (Barrier Attenuation)	10.0	-10.2	-10.2	-10.2	-10.2	-10.2	-10.2	
Raw (Distance + Barrier)		35.9	-41.3	-41.3	-41.3	-41.3	-41.3	
39 Minute Hourly Adjustmen	nt	34.0	-43.2	-43.2	-43.2	-43.2	-43.2	

S	TATIONARY SOURCE	NOISE PREDICTION MODEL	8/11/2019
Observer Location: R5 Source: Parking Lo Condition: Operation	ot Vehicle Movements (al	Project Name: Palomino Industria Job Number: 11795 Analyst: B. Lawson	
	NOISE N	IODEL INPUTS	
Noise Distance to Observer	296.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	296.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling	

NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	296.0	-29.4	-29.4	-29.4	-29.4	-29.4	-29.4	
Shielding (Barrier Attenuation)	296.0	0.0	0.0	0.0	0.0	0.0	0.0	
Raw (Distance + Barrier)		22.8	-29.4	-29.4	-29.4	-29.4	-29.4	
60 Minute Hourly Adjustmen	it	22.8	-29.4	-29.4	-29.4	-29.4	-29.4	

Observer Location: R5

Source: Parking Lot Vehicle Movements (Commer Condition: Operational

Project Name: Palomino Job Number: 11795

Analyst: B. Lawson

NOISE MODEL INPUTS									
Noise Distance to Observer	128.0 feet	Barrier Height:	0.0 feet						
Noise Distance to Barrier:	128.0 feet	Noise Source Height:	5.0 feet						
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet						
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0						
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0						
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling							

NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	5.0	60.1	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	128.0	-28.2	-28.2	-28.2	-28.2	-28.2	-28.2	
Shielding (Barrier Attenuation)	128.0	0.0	0.0	0.0	0.0	0.0	0.0	
Raw (Distance + Barrier)		31.9	-28.2	-28.2	-28.2	-28.2	-28.2	
60 Minute Hourly Adjustmen	nt	31.9	-28.2	-28.2	-28.2	-28.2	-28.2	

S	TATIONARY SOURCE N	OISE PREDICTION MODEL	8/11/2019
Observer Location: R5 Source: Drive-Thro Condition: Operation	ough Speakerphone al	Project Name: Palomino Job Number: 11795 Analyst: B. Lawson	
	NOISE MO	DEL INPUTS	
Noise Distance to Observer	281.0 feet	Barrier Height:	10.0 feet
Noise Distance to Barrier:	10.0 feet	Noise Source Height:	3.0 feet
Barrier Distance to Observer:	271.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doubling	

NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	15.0	62.0	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	281.0	-25.5	-25.5	-25.5	-25.5	-25.5	-25.5	
Shielding (Barrier Attenuation)	10.0	-12.6	-12.6	-12.6	-12.6	-12.6	-12.6	
Raw (Distance + Barrier)		23.9	-38.1	-38.1	-38.1	-38.1	-38.1	
60 Minute Hourly Adjustmer	nt	23.9	-38.1	-38.1	-38.1	-38.1	-38.1	

Observer Location: R5

Source: Gas Station Activity Condition: Operational

Noise Distance to Observer
Noise Distance to Barrier:111.0 feet
111.0 feetBarrier Distance to Observer:0.0 feetObserver Elevation:
Noise Source Elevation:
Barrier Elevation:0.0 feet0.0 feet
0.0 feet0.0 feet

Project Name: Palomino Job Number: 11795 Analyst: B. Lawson

011		/ maryor. D. Edwoon	
	NOISE MO	DDEL INPUTS	
er	111.0 feet	Barrier Height:	0.0 feet
r:	111.0 feet	Noise Source Height:	5.0 feet
r:	0.0 feet	Observer Height:	5.0 feet
ı:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
ı:	0.0 feet	Drop Off Coefficient:	20.0
ı:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling	

NOISE MODEL PROJECTIONS									
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax		
Reference (Sample)	5.0	68.2	0.0	0.0	0.0	0.0	0.0		
Distance Attenuation	111.0	-26.9	-26.9	-26.9	-26.9	-26.9	-26.9		
Shielding (Barrier Attenuation)	111.0	0.0	0.0	0.0	0.0	0.0	0.0		
Raw (Distance + Barrier)		41.3	-26.9	-26.9	-26.9	-26.9	-26.9		
60 Minute Hourly Adjustmen	nt	41.3	-26.9	-26.9	-26.9	-26.9	-26.9		

STATIONARY SOURCE NOISE PREDICTION MODEL					
Observer Location: R6 Source: Air Conditioning Unit (Roof-Top) Condition: Operational		Project Name: Palomino Job Number: 11795 Analyst: B. Lawson			
	NOISE MOD	EL INPUTS			
Noise Distance to Observer	166.0 feet	Barrier Height:	10.0 feet		
Noise Distance to Barrier:	10.0 feet	Noise Source Height:	5.0 feet		
Barrier Distance to Observer:	156.0 feet	Observer Height:	5.0 feet		
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0		
Noise Source Elevation:	10.0 feet	Drop Off Coefficient:	20.0		
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doubling			

NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	166.0	-30.4	-30.4	-30.4	-30.4	-30.4	-30.4	
Shielding (Barrier Attenuation)	10.0	-10.1	-10.1	-10.1	-10.1	-10.1	-10.1	
Raw (Distance + Barrier)		36.7	-40.5	-40.5	-40.5	-40.5	-40.5	
39 Minute Hourly Adjustmen	ıt	34.8	-42.4	-42.4	-42.4	-42.4	-42.4	

Observer Location: R6

Source: Truck Unloading/Docking Activity *Condition:* Operational

Project Name: Palomino Job Number: 11795 Analyst: B. Lawson

NOISE MODEL INPUTS									
Noise Distance to Observer	579.0 feet	Barrier Height:	0.0 feet						
Noise Distance to Barrier:	579.0 feet	Noise Source Height:	8.0 feet						
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet						
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0						
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0						
Barrier Elevation:	0.0 feet		20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance						

NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	30.0	67.2	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	579.0	-25.7	-25.7	-25.7	-25.7	-25.7	-25.7	
Shielding (Barrier Attenuation)	579.0	0.0	0.0	0.0	0.0	0.0	0.0	
Raw (Distance + Barrier)		41.5	-25.7	-25.7	-25.7	-25.7	-25.7	
60 Minute Hourly Adjustmen	it	41.5	-25.7	-25.7	-25.7	-25.7	-25.7	

S	TATIONARY SOURCE NOIS	E PREDICTION MODEL	8/11/2019
Observer Location: R6 Source: Parking Lo Condition: Operation	ot Vehicle Movements (Industri al	Project Name: Palomino a Job Number: 11795 Analyst: B. Lawson	
	NOISE MODEL	INPUTS	
Noise Distance to Observer	488.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	488.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doublin	

NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	488.0	-33.8	-33.8	-33.8	-33.8	-33.8	-33.8	
Shielding (Barrier Attenuation)	488.0	0.0	0.0	0.0	0.0	0.0	0.0	
Raw (Distance + Barrier)		18.4	-33.8	-33.8	-33.8	-33.8	-33.8	
60 Minute Hourly Adjustmen	it	18.4	-33.8	-33.8	-33.8	-33.8	-33.8	

Observer Location: R6

Condition: Operational

Project Name: Palomino Source: Parking Lot Vehicle Movements (Commer Job Number: 11795

Analyst: B. Lawson

NOISE MODEL INPUTS									
Noise Distance to Observer	161.0 feet	Barrier Height:	0.0 feet						
Noise Distance to Barrier:	161.0 feet	Noise Source Height:	5.0 feet						
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet						
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0						
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0						
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling	of distance of distance						

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	60.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	161.0	-30.2	-30.2	-30.2	-30.2	-30.2	-30.2
Shielding (Barrier Attenuation)	161.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		29.9	-30.2	-30.2	-30.2	-30.2	-30.2
60 Minute Hourly Adjustmer	nt	29.9	-30.2	-30.2	-30.2	-30.2	-30.2

S	8/11/2019		
Observer Location: R6 Source: Drive-Through Speakerphone <i>Condition:</i> Operational		Project Name: Palomino Job Number: 11795 Analyst: B. Lawson	
	NOISE MOI	DEL INPUTS	
Noise Distance to Observer	307.0 feet	Barrier Height:	10.0 feet
Noise Distance to Barrier:	65.0 feet	Noise Source Height:	3.0 feet
Barrier Distance to Observer:	242.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doublin	

	NOISE MODEL PROJECTIONS						
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	15.0	62.0	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	307.0	-26.2	-26.2	-26.2	-26.2	-26.2	-26.2
Shielding (Barrier Attenuation)	65.0	-8.0	-8.0	-8.0	-8.0	-8.0	-8.0
Raw (Distance + Barrier)		27.8	-34.2	-34.2	-34.2	-34.2	-34.2
60 Minute Hourly Adjustmer	nt	27.8	-34.2	-34.2	-34.2	-34.2	-34.2

Observer Location: R6

Source: Gas Station Activity Condition: Operational Project Name: Palomino Job Number: 11795 Analyst: B. Lawson

NOISE MODEL INPUTS								
Noise Distance to Observer	122.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	122.0 feet	Noise Source Height:	5.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	68.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	122.0	-27.7	-27.7	-27.7	-27.7	-27.7	-27.7
Shielding (Barrier Attenuation)	122.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		40.5	-27.7	-27.7	-27.7	-27.7	-27.7
60 Minute Hourly Adjustmen	it	40.5	-27.7	-27.7	-27.7	-27.7	-27.7

S	8/11/2019		
Observer Location: R7 Source: Air Conditioning Unit (Roof-Top) <i>Condition:</i> Operational		Project Name: Palomino Job Number: 11795 Analyst: B. Lawson	
	NOISE MOD	EL INPUTS	
Noise Distance to Observer	300.0 feet	Barrier Height:	30.0 feet
Noise Distance to Barrier:	160.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	140.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	30.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doublin	

	NOISE MODEL PROJECTIONS						
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	300.0	-35.6	-35.6	-35.6	-35.6	-35.6	-35.6
Shielding (Barrier Attenuation)	160.0	-9.6	-9.6	-9.6	-9.6	-9.6	-9.6
Raw (Distance + Barrier)		32.0	-45.2	-45.2	-45.2	-45.2	-45.2
39 Minute Hourly Adjustmer	nt	30.1	-47.1	-47.1	-47.1	-47.1	-47.1

Observer Location: R7

Source: Parking Lot Vehicle Movements (Industria Condition: Operational

	NOISE MODEL II
Noise Distance to Observer	202.0 feet
Noise Distance to Barrier:	202.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Elevation:	0.0 feet
Noise Source Elevation:	0.0 feet
Barrier Elevation:	0.0 feet

Project Name: Palomino Job Number: 11795 Analyst: B. Lawson

INPUTSBarrier Height:0.0 feetNoise Source Height:5.0 feetObserver Height:5.0 feetBarrier Type (0-Wall, 1-Berm):0Drop Off Coefficient:20.020 = 6 dBA per doubling of distance

15 = 4.5 dBA per doubling of distance

	NOISE MODEL PROJECTIONS						
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	202.0	-26.1	-26.1	-26.1	-26.1	-26.1	-26.1
Shielding (Barrier Attenuation)	202.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		26.1	-26.1	-26.1	-26.1	-26.1	-26.1
60 Minute Hourly Adjustmen	nt	26.1	-26.1	-26.1	-26.1	-26.1	-26.1

STATIONARY SOURCE NOISE PREDICTION MODEL				
Observer Location: R7 Source: Parking Lo Condition: Operation	ot Vehicle Movements (Commo al	Project Name: Palomino er Job Number: 11795 Analyst: B. Lawson		
	NOISE MODEL	INPUTS		
Noise Distance to Observer	684.0 feet	Barrier Height:	0.0 feet	
Noise Distance to Barrier:	684.0 feet	Noise Source Height:	5.0 feet	
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet	
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0	
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0	
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doublin		

	NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	5.0	60.1	0.0	0.0	0.0	0.0	0.0	
Distance Attenuation	684.0	-42.7	-42.7	-42.7	-42.7	-42.7	-42.7	
Shielding (Barrier Attenuation)	684.0	0.0	0.0	0.0	0.0	0.0	0.0	
Raw (Distance + Barrier)		17.4	-42.7	-42.7	-42.7	-42.7	-42.7	
60 Minute Hourly Adjustmer	nt	17.4	-42.7	-42.7	-42.7	-42.7	-42.7	

Observer Location: R7

Source: Drive-Through Speakerphone *Condition:* Operational

Project Name: Palomino Job Number: 11795 Analyst: B. Lawson

NOISE MODEL INPUTS								
Noise Distance to Observer	1,027.0 feet	Barrier Height:	0.0 feet					
Noise Distance to Barrier:	1,027.0 feet	Noise Source Height:	3.0 feet					
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet					
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0					
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0					
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling						

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	15.0	62.0	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,027.0	-36.7	-36.7	-36.7	-36.7	-36.7	-36.7
Shielding (Barrier Attenuation)	1,027.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		25.3	-36.7	-36.7	-36.7	-36.7	-36.7
60 Minute Hourly Adjustmen	nt	25.3	-36.7	-36.7	-36.7	-36.7	-36.7

S	TATIONARY SOURCE	E NOISE PREDICTION MODEL	8/11/2019		
Observer Location: R7 Source: Gas Station Activity		Project Name: Palomino Job Number: 11795			
Condition: Operational		Analyst: B. Lawson			
NOISE MODEL INPUTS					
Noise Distance to Observer	,027.0 feet	Barrier Height:	0.0 feet		
Noise Distance to Barrier:	,027.0 feet	Noise Source Height:	5.0 feet		
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet		
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0		
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0		
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling			

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	68.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,027.0	-46.3	-46.3	-46.3	-46.3	-46.3	-46.3
Shielding (Barrier Attenuation)	1,027.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		21.9	-46.3	-46.3	-46.3	-46.3	-46.3
60 Minute Hourly Adjustmen	nt	21.9	-46.3	-46.3	-46.3	-46.3	-46.3

Observer Location: R8

Source: Air Conditioning Unit (Roof-Top) *Condition:* Operational

Project Name: Palomino Job Number: 11795 Analyst: B. Lawson

NOISE MODEL INPUTS									
Noise Distance to Observer	339.0 feet	Barrier Height:	30.0 feet						
Noise Distance to Barrier:	30.0 feet	Noise Source Height:	5.0 feet						
Barrier Distance to Observer:	309.0 feet	Observer Height:	5.0 feet						
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0						
Noise Source Elevation:	30.0 feet	Drop Off Coefficient:	20.0						
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling							

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	339.0	-36.6	-36.6	-36.6	-36.6	-36.6	-36.6
Shielding (Barrier Attenuation)	30.0	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0
Raw (Distance + Barrier)		34.6	-42.6	-42.6	-42.6	-42.6	-42.6
39 Minute Hourly Adjustmen	nt	32.7	-44.5	-44.5	-44.5	-44.5	-44.5

S	TATIONARY SOURCE NOISE	PREDICTION MODEL	8/11/2019
Observer Location: R8 Source: Parking Lo Condition: Operation	ot Vehicle Movements (Industria al	Project Name: Palomino a Job Number: 11795 Analyst: B. Lawson	
	NOISE MODEL	INPUTS	
Noise Distance to Observer	147.0 feet	Barrier Height:	0.0 feet
Noise Distance to Barrier:	147.0 feet	Noise Source Height:	5.0 feet
Barrier Distance to Observer:	0.0 feet	Observer Height:	5.0 feet
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doubling	

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	147.0	-23.3	-23.3	-23.3	-23.3	-23.3	-23.3
Shielding (Barrier Attenuation)	147.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		28.9	-23.3	-23.3	-23.3	-23.3	-23.3
60 Minute Hourly Adjustmen	nt	28.9	-23.3	-23.3	-23.3	-23.3	-23.3

Observer Location: R8

Source: Truck Idle/Reefer Activity Condition: Operational

Project Name: Palomino Job Number: 11795 Analyst: B. Lawson

NOISE MODEL INPUTS									
Noise Distance to Observer	394.0 feet	Barrier Height:	30.0 feet						
Noise Distance to Barrier:	10.0 feet	Noise Source Height:	8.0 feet						
Barrier Distance to Observer:	384.0 feet	Observer Height:	5.0 feet						
Observer Elevation:	0.0 feet	Barrier Type (0-Wall, 1-Berm):	0						
Noise Source Elevation:	0.0 feet	Drop Off Coefficient:	20.0						
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling c 15 = 4.5 dBA per doubling							

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	30.0	70.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	394.0	-22.4	-22.4	-22.4	-22.4	-22.4	-22.4
Shielding (Barrier Attenuation)	10.0	-17.7	-17.7	-17.7	-17.7	-17.7	-17.7
Raw (Distance + Barrier)		30.0	-40.1	-40.1	-40.1	-40.1	-40.1
60 Minute Hourly Adjustment 30.0 -40.1 -40.1 -40.1 -40.1						-40.1	

S	TATIONARY SOURCE NO	ISE PREDICTION MODEL	8/11/2019
Observer Location: R9 Source: Air Conditioning Unit (Roof-Top) Condition: Operational		Project Name: Palomino Job Number: 11795 Analyst: B. Lawson	
	NOISE MOD	EL INPUTS	
Noise Distance to Observer	350.0 feet	Barrier Height:	30.0 feet
Noise Distance to Barrier: Barrier Distance to Observer:	10.0 feet 340.0 feet	Noise Source Height: Observer Height:	5.0 feet 5.0 feet
Observer Elevation: Noise Source Elevation:	0.0 feet 30.0 feet	Barrier Type (0-Wall, 1-Berm): Drop Off Coefficient:	0 20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling 15 = 4.5 dBA per doublin	

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	350.0	-36.9	-36.9	-36.9	-36.9	-36.9	-36.9
Shielding (Barrier Attenuation)	10.0	-9.7	-9.7	-9.7	-9.7	-9.7	-9.7
Raw (Distance + Barrier)		30.6	-46.6	-46.6	-46.6	-46.6	-46.6
39 Minute Hourly Adjustment 28.7 -48.5 -48.5 -48.5 -48.5						-48.5	

Observer Location: R9

Source: Parking Lot Vehicle Movements (Industria Condition: Operational

	NOISE MODEL	INPUTS
Noise Distance to Observer	156.0 feet	
Noise Distance to Barrier:	156.0 feet	
Barrier Distance to Observer:	0.0 feet	
Observer Elevation:	0.0 feet	Bar
Noise Source Elevation:	0.0 feet	
Barrier Elevation:	0.0 feet	

Project Name: Palomino Job Number: 11795

Analyst: B. Lawson

Barrier Height:	0.0 feet
Noise Source Height:	5.0 feet
Observer Height:	5.0 feet
Barrier Type (0-Wall, 1-Berm):	0
Drop Off Coefficient:	20.0
20 = 6 dBA per doubling o 15 = 4.5 dBA per doubling	

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	156.0	-23.9	-23.9	-23.9	-23.9	-23.9	-23.9
Shielding (Barrier Attenuation)	156.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		28.3	-23.9	-23.9	-23.9	-23.9	-23.9
60 Minute Hourly Adjustmer	nt	28.3	-23.9	-23.9	-23.9	-23.9	-23.9

S	TATIONARY SOURCE NO	DISE PREDICTION MODEL	8/11/2019
Observer Location: R10 Source: Air Conditioning Unit (Roof-Top) Condition: Operational		Project Name: Palomino Job Number: 11795 Analyst: B. Lawson	
	NOISE MOD	EL INPUTS	
Noise Distance to Observer Noise Distance to Barrier:	191.0 feet 10.0 feet	Barrier Height: Noise Source Height:	30.0 feet 5.0 feet
Barrier Distance to Observer: Observer Elevation:	181.0 feet	Observer Height: Barrier Type (0-Wall, 1-Berm):	5.0 feet 0
Observer Elevation: Noise Source Elevation: Barrier Elevation:	30.0 feet 0.0 feet	Drop Off Coefficient: 20 = 6 dBA per doubling 15 = 4.5 dBA per doubling	

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	191.0	-31.6	-31.6	-31.6	-31.6	-31.6	-31.6
Shielding (Barrier Attenuation)	10.0	-8.7	-8.7	-8.7	-8.7	-8.7	-8.7
Raw (Distance + Barrier)		36.9	-40.3	-40.3	-40.3	-40.3	-40.3
39 Minute Hourly Adjustmen	nt	35.0	-42.2	-42.2	-42.2	-42.2	-42.2

Observer Location: R10

Source: Parking Lot Vehicle Movements (Industr Condition: Operational

ria	Job Number: 11795
	Analyst: B. Lawson

Project Name: Palomino

NOISE MODEL INPUTS Barrier Height: Noise Distance to Observer 118.0 feet 0.0 feet Noise Source Height: 5.0 feet Noise Distance to Barrier: 118.0 feet **Observer Height:** 5.0 feet Barrier Distance to Observer: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0 Observer Elevation: 0.0 feet Drop Off Coefficient: 20.0 Noise Source Elevation: 0.0 feet 20 = 6 dBA per doubling of distance Barrier Elevation: 0.0 feet 15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	118.0	-21.4	-21.4	-21.4	-21.4	-21.4	-21.4
Shielding (Barrier Attenuation)	118.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		30.8	-21.4	-21.4	-21.4	-21.4	-21.4
60 Minute Hourly Adjustmen	it	30.8	-21.4	-21.4	-21.4	-21.4	-21.4