

Canterwood (Tentative Tract Map No. 37439)

NOISE IMPACT ANALYSIS COUNTY OF RIVERSIDE

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11304-05 Noise Study



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LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
ANSI	American National Standards Institute
Calveno	California Vehicle Noise
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
dBA	A-weighted decibels
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
I-215	Interstate 215
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
PPV	Peak Particle Velocity
Project	Canterwood (Tentative Tract Map No. 37439)
REMEL	Reference Energy Mean Emission Level
RMS	Root-mean-square
VdB	Vibration Decibels



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EXECUTIVE SUMMARY

Urban Crossroads, Inc. has prepared this noise study to determine the noise exposure and the necessary noise mitigation measures for the proposed Canterwood (Tentative Tract Map No. 37439) development ("Project"). The proposed Canterwood (Tentative Tract Map No. 37439) site is located on the northeast corner of Leon Road and Craig Avenue in unincorporated County of Riverside. The Project is proposed to consist of up to 574 single-family residential dwelling units across two phases (Phase 1 and Project Buildout). This noise impact analysis was prepared to satisfy the County of Riverside noise level standards and significance criteria based on guidance provided by Appendix G of the California Environmental Quality Act (CEQA). (1)

OFF-SITE TRAFFIC NOISE ANALYSIS

Traffic generated by the operation of the proposed Project will influence the traffic noise levels in surrounding off-site areas. To quantify the traffic noise increases on the surrounding off-site areas, the changes in traffic noise levels on 18 roadway segments surrounding the Project site were calculated based on the change in the average daily traffic (ADT) volumes. The traffic noise levels provided in this analysis are based on the traffic forecasts found in *Canterwood (Tentative Tract Map No. 37439) Traffic Impact Analysis* prepared by Urban Crossroads, Inc. (2) To assess the off-site noise level impacts associated with the proposed Project on neighboring noisesensitive land use noise contour boundaries were developed for Existing, Existing plus Ambient Growth (EA) 2021, EA 2025, EA plus Cumulative Developments (EAC) 2021, and EAC 2025 conditions.

The results of the off-site traffic noise level analysis indicate that Project-related off-site traffic noise level increases will result in *potentially significant* noise impacts at noise-sensitive land uses adjacent to three of the 18 study area roadway segments, as identified below:

- Leon Road south of Craig Avenue (Segment #6);
 - Existing residential homes (approximately 4) and future residential-designated use.
- Leon Road south of Garbani Road (Segment #7);
 - Existing residential homes (approximately 5) and future residential-designated use.
- Holland Road west of Leon Road (Segment #12).
 - Existing residential homes (approximately 3), and future residential-designated use.

Rubberized asphalt is required as a noise mitigation measure to reduce the *potentially significant* Project-related off-site traffic noise level increases under all with Project scenarios. However, this mitigation would not entirely eliminate the off-site traffic noise level increases associated with Project trips at the adjacent land uses, and will still result in a *significant and unavoidable* impact at one of the impacted roadway segments:

• Leon Road south of Craig Avenue (Segment #6).

Due to the low without Project traffic volumes on these roadway segments, the addition of Project-only traffic volumes results in a *significant and unavoidable* impact with mitigation. Since



many of these roadway segments are not yet built out to their Circulation Element classification specifications, the Project will be one of the earlier developments generating traffic on these roadway segments. All other roadway segments will experience *less than significant* off-site traffic noise level increases with Project traffic and the rubber asphalt mitigation, however, impacts on Segment 6 remain *significant and unavoidable*. The off-site roadway segments within the County of Riverside requiring implementation of a rubberized asphalt hot mix overlay are listed below:

- Leon Road south of Craig Avenue (Segment #6);
- Leon Road south of Garbani Road (Segment #7);
- Holland Road west of Leon Road (Segment #12).

ON-SITE TRAFFIC NOISE ANALYSIS

The future unmitigated exterior traffic noise levels are expected to range from 65.3 to 75.1 dBA CNEL and will exceed the County of Riverside 65 dBA CNEL standard for outdoor living areas (backyards) of residential uses. Therefore, on-site traffic noise level impacts are considered *potentially significant*. To satisfy the County of Riverside 65 dBA CNEL exterior noise level standards for residential land use, the construction of the following noise barriers is required:

- 8-foot high noise barriers for outdoor living areas (backyards) of lots 31 to 50, 136 to 149,151 to 153, and 334 to 340 adjacent to Leon Road and Holland Road;
- 6-foot high noise barriers for outdoor living areas (backyards) of lots 7 to 30, 154, 157 to 162, 287 to 296, 347 to 360, 464 to 472, and 558 to 574 adjacent to Eucalyptus Road and Craig Avenue.

With the recommended noise barriers shown on Exhibit ES-A, the mitigated future exterior noise levels will range from 59.7 to 64.6 dBA CNEL and impacts will be reduced to *less than significant*. This noise analysis shows that the recommended noise barriers will satisfy the County of Riverside 65 dBA CNEL exterior noise level standards for residential land use. The effective noise barrier height recommendations represent the minimum wall and/or berm combination height required to satisfy the County of Riverside exterior noise level standards.

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

- Masonry block;
- Stucco veneer over wood framing (or foam core), or one-inch thick tongue and groove wood of sufficient weight per square foot;



- Glass (1/4-inch-thick), or other transparent material with sufficient weight per square foot capable of providing a minimum transmission loss of 20 dBA;
- Earthen berm;
- Any combination of these construction materials.

INTERIOR NOISE MITIGATION

To satisfy the County of Riverside 45 dBA CNEL residential interior noise level standard, Project residential homes will require a Noise Reduction (NR) of up to 29.5 dBA and a windows-closed condition requiring a means of mechanical ventilation (e.g. air conditioning). With the following noise mitigation measures, the Project will satisfy the interior noise level standards:

- <u>Windows/Sliding Glass Doors</u>: All residential units require windows and sliding glass doors that have well-fitted, well-weather-stripped assemblies, and the following sound transmission class (STC) ratings:
 - Upgraded windows and sliding glass doors with minimum STC ratings of 32 are required for all windows/glass doors facing Leon Road and Holland Road in lots 31 to 50, 136 to 149,151 to 153, and 334 to 340;
 - All other residential lots require windows/glass doors with minimum sound transmission class (STC) ratings of 27.
- <u>Exterior Doors (Non-Glass)</u>: All exterior doors shall be well weather-stripped and have well-sealed perimeter gaps to achieve minimum sound transmission class (STC) ratings of 27. (3)
- <u>Exterior Walls</u>: At any penetrations of exterior walls by pipes, ducts, or conduits, the space between the wall and pipes, ducts, or conduits shall be caulked or filled with mortar to form an airtight seal.
- <u>Roof</u>: Roof sheathing of wood construction shall be per manufacturer's specification or caulked plywood of at least one-half inch thick. Ceilings shall be per manufacturer's specification or well-sealed gypsum board of at least one-half inch thick. Insulation with at least a rating of R-19 shall be used in the attic space.
- <u>Ventilation</u>: Arrangements for any habitable room shall be such that any exterior door or window can be kept closed when the room is in use and still receive circulated air. A forced air circulation system (e.g. air conditioning) or active ventilation system (e.g. fresh air supply) shall be provided which satisfies the requirements of the Uniform Building Code.

With the interior noise mitigation measures provided in this study, the proposed Project is expected to satisfy the County of Riverside 45 dBA CNEL interior noise level standard for residential development.

CONSTRUCTION NOISE ANALYSIS

Construction-related noise impacts are expected to create temporary and intermittent high-level noise conditions at receivers surrounding the Project site when certain activities occur at the closest point to the nearby receiver locations from both primary on-site and off-site Project construction activities. Using sample reference noise levels to represent the planned construction activities of the Canterwood (Tentative Tract Map No. 37439) site, this analysis



estimates the Project-related construction noise levels at nearby sensitive receiver locations. Since the County of Riverside General Plan and Municipal Code 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 results of the analysis show that the worst-case Project-related short-term construction noise levels are expected to range from 51.1 to 71.0 dBA L_{eq} and will satisfy the 85 dBA L_{eq} threshold identified by NIOSH at all receiver locations. Therefore, temporary noise level impacts related to Project construction noise levels will be *less than significant*.

CONSTRUCTION VIBRATION ANALYSIS

At distances ranging from 50 to 540 feet from both on-site and off-site Project construction activities, Project-related construction vibration levels are expected to range from 0.001 to 0.022 in/sec RMS at the nearby sensitive receiver locations, which will exceed the County of Riverside vibration level threshold of 0.01 in/sec RMS at one off-site receiver location, OR2, if Project construction activities occur within 85 feet of occupied noise-sensitive receiver locations. Therefore, the Project-related vibration impacts will be *potentially significant* at receiver location OR2 during the off-site construction activities. All other receiver locations will experience *less than significant* vibration impacts due to Project construction.

Therefore, the use of large mobile equipment (greater than 80,000 pounds) and loaded trucks within 85 feet of nearby sensitive land uses shall be prohibited unless the vibration levels are shown to be less than the County of Riverside vibration level threshold of 0.01 in/sec RMS. Instead, smaller, rubber-tired mobile equipment (less than 80,000 pounds) or equivalent alternative equipment shall be used within 85 feet of sensitive land uses during Project construction to reduce vibration effects. Exhibit ES-B shows the Project construction vibration mitigation at receiver location OR2. With the recommended mitigation measures in this study, the Project-related vibration impacts at the nearby receiver locations represents a *less than significant* impact during the worst-case construction activities.

Further, the vibration levels due to Project construction do not represent vibration 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 0.031 in/sec PPV will remain below the FTA vibration levels for building damage at the residential homes near the Project site. Further, the levels 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.



CONSTRUCTION VIBRATION MITIGATION MEASURES

The following mitigation measure is required to reduce construction vibration levels produced by the construction equipment to the nearby sensitive land uses.

• Large loaded trucks and mobile equipment (greater than or equal to 80,000 pounds) (5) shall not be used within 85 feet of land uses represented by receiver location OR2 if occupied at the time of Project construction, as shown on Exhibit ES-B. Instead, smaller, rubber-tired mobile equipment (less than 80,000 pounds) or equivalent alternative equipment shall be used within this area during Project construction to reduce vibration effects.

CONSTRUCTION NOISE AND VIBRATION BEST PRACTICES

Though construction noise and vibration are temporary, intermittent, will be short in duration, and will not present any long-term impacts, the following best practices would further reduce noise and vibration levels produced by the construction equipment to the nearby sensitive residential land uses.

- Prior to approval of grading plans and/or issuance of building permits, plans shall include a note indicating that noise-generating Project construction activities shall only occur between the hours of 6:00 a.m. to 6:00 p.m. June through September, and 7:00 a.m. to 6:00 p.m. October through May (County of Riverside Municipal Code, Section 9.52.020). The Project construction supervisor shall ensure compliance with the note and the County shall conduct periodic inspection at its discretion.
- During all Project site construction, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the Project site.
- The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receivers nearest the Project site during all Project construction (i.e., to the center).
- The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment (between the hours of 6:00 a.m. to 6:00 p.m. June through September, and 7:00 a.m. to 6:00 p.m. October through May). The contractor shall design delivery routes to minimize the exposure of sensitive land uses or residential dwellings to delivery truck-related noise.



SUMMARY OF SIGNIFICANCE FINDINGS

The results of this Canterwood (Tentative Tract Map No. 37439) 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 impact before and after any needed mitigation measures.

Anghuin	Report	Significance Findings			
Anaiysis	Section	Unmitigated	Mitigated		
Off-Site Traffic Noise	7	Significant and Unavoidable	n/a		
On-Site Traffic Noise	8	Potentially Significant	Less Than Significant		
Construction Noise 10		Less Than Significant	n/a		
		Potentially Significant	Less Than Significant		

TABLE ES-1:	SUMMARY	OF SIGNIFICANCE	FINDINGS
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"n/a" = No mitigation is required since the unmitigated impact will be less than significant.



EXHIBIT ES-A: SUMMARY OF RECOMMENDATIONS

Recommended Noise Barrier





EXHIBIT ES-B: CONSTRUCTION VIBRATION MITIGATION



1 INTRODUCTION

This noise analysis has been completed to determine the noise impacts associated with the development of the proposed Canterwood (Tentative Tract Map No. 37439) ("Project"). This noise study describes the proposed Project, provides information regarding noise fundamentals, outlines the local regulatory setting, provides the study methods and procedures for traffic noise analysis, and evaluates the future exterior noise environment. In addition, this study includes an analysis of the potential Project-related short-term construction noise and vibration impacts.

1.1 SITE LOCATION

The proposed Canterwood (Tentative Tract Map No. 37439) site is located on the northeast corner of Leon Road and Craig Avenue in unincorporated County of Riverside, as shown on Exhibit 1-A. The Project site is currently vacant. Existing residential uses are located west across Leon Road, and south of the Project site on Leon Road. Existing agricultural uses in the Project study area are located north, east, and southeast of the Project site. Vacant, residential-designated uses are located immediately north and south of the Project site boundaries, and to the east on Craig Avenue. The Interstate 215 (I-215) freeway right-of-way is located roughly 3 miles west of the Project site.

1.2 PROJECT DESCRIPTION

Consistent with the *Traffic Impact Analysis*, potential impacts have been assessed for two development phases. Exhibit 1-B identifies the proposed land use and planning areas which are included in Phase 1 and Phase 2. In addition to the Project, this noise study analyzes off-site improvements including a channel, sewer line, and lift station associated with Project construction. The two phases and their anticipated opening years are as follows:

- Phase 1 (2021) 317 single-family residential units and an 8.2-acre park.
- Phase 2 (2025) Phase 1 development plus 257 additional single-family residential units.





EXHIBIT 1-A: LOCATION MAP



EXHIBIT 1-B: SITE PLAN



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2 FUNDAMENTALS

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

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	D 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	CLEED
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		NO EFFECT
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0		

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. (6) The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud jet engine noises equate to 110 dBA



at approximately 100 feet, which can cause serious discomfort. (7) Another important aspect of noise is the duration of the sound and the way it is described and distributed in time.

2.2 NOISE DESCRIPTORS

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

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

2.3 SOUND PROPAGATION

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

2.3.1 GEOMETRIC SPREADING

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





2.3.2 GROUND ABSORPTION

The propagation path of noise from a highway to a receptor is usually very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 ft. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receptor, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receptor such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source.

2.3.3 Atmospheric Effects

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

2.3.4 SHIELDING

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

2.4 NOISE CONTROL

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





2.5 Noise Barrier Attenuation

Effective noise barriers can reduce noise levels by 10 to 15 dBA, cutting the loudness of traffic noise in half. A noise barrier is most effective when placed close to the noise source or receptor. Noise barriers, however, do have limitations. For a noise barrier to work, it must be high enough and long enough to block the path of the noise source. (8)

2.6 LAND USE COMPATIBILITY WITH NOISE

Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are more sensitive to noise intrusion than are commercial or industrial developments and related activities. As ambient noise levels affect the perceived amenity or livability of a development, so too can the mismanagement of noise impacts impair the economic health and growth potential of a community by reducing the area's desirability as a place to live, shop and work. For this reason, land use compatibility with the noise environment is an important consideration in the planning and design process. The FHWA encourages State and Local government to regulate land development in such a way that noise-sensitive land uses are either prohibited from being located adjacent to a highway, or that the developments are planned, designed, and constructed in such a way that noise impacts are minimized. (9)

2.7 COMMUNITY RESPONSE TO NOISE

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

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

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

Despite this variability in behavior on an individual level, the population as a whole can be expected to exhibit the following responses to changes in noise levels as shown on Exhibit 2-B. An increase or decrease of 1 dBA cannot be perceived except in carefully controlled laboratory



experiments, a change of 3 dBA are considered *barely perceptible*, and changes of 5 dBA are considered *readily perceptible*. (8)



EXHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION

2.8 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. (11)

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. Further, periodic exposure to high noise levels in short duration, such as Project construction, is typically considered an annoyance and not impactful to human health. It would take several years of exposure to high noise levels to result in hearing impairment. (12)

2.9 VIBRATION

According to the Federal Transit Administration (FTA) *Transit Noise Impact and Vibration Assessment* (4), vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure-borne noise. Sources of ground-



borne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency.

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

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





EXHIBIT Z-C: TYPICAL LEVELS OF GROUND-BORNE VIBRATION	Ехнівіт 2-С:	TYPICAL LEVELS	OF GROUND-		VIBRATION
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* 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 fairly constant with time. Air and rail traffic, and commercial and industrial activities are also major sources of noise in some areas. Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies.

3.1 STATE OF CALIFORNIA NOISE REQUIREMENTS

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared according to guidelines adopted by the Governor's Office of Planning and Research. (13) The purpose of the Noise Element is to *limit the exposure of the community to excessive noise levels*. In addition, the California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including the potential environmental noise impacts.

3.2 STATE OF CALIFORNIA BUILDING CODE

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

3.3 COUNTY OF RIVERSIDE GENERAL PLAN NOISE ELEMENT

County of Riverside has adopted a Noise Element of the General Plan to control and abate environmental noise, and to protect the citizens of County of Riverside from excessive exposure to noise. (14) The Noise Element specifies the maximum allowable exterior noise levels for new developments impacted by transportation noise sources such as arterial roads, freeways, airports and railroads. In addition, the Noise Element identifies several polices to minimize the impacts of excessive noise levels throughout the community and establishes noise level requirements for



all land uses. To protect County of Riverside residents from excessive noise, the Noise Element contains the following policies related to the Project:

- N 1.1 Protect noise-sensitive land uses from high levels of noise by restricting noise-producing land uses from these areas. If the noise-producing land use cannot be relocated, then noise buffers such as setbacks, landscaping, or block walls shall be used.
- N 1.3 Consider the following uses noise-sensitive and discourage these uses in areas in excess of 65 CNEL:
 - Schools
 - Hospitals
 - Rest Homes
 - Long Term Care Facilities
 - Mental Care Facilities
 - Residential Uses
 - Libraries

- Passive Recreation Uses
 - Places of Worship
- N 1.5 Prevent and mitigate the adverse impacts of excessive noise exposure on the residents, employees, visitors, and noise-sensitive uses of Riverside County.
- N 1.7 Require proposed land uses, affected by unacceptable high noise levels, to have an acoustical specialist prepare a study of the noise problems and recommend structural and site design features that will adequately mitigate the noise problem.
- *N* 4.1 *Prohibit facility-related noise, received by any sensitive use, from exceeding the following worst-case noise levels:*
 - a. 45 dBA 10-minute Leq between 10:00 p.m. and 7:00 a.m.;
 - b. 65 dBA 10-minute Leq between 7:00 a.m. and 10:00 p.m.
- N 13.1 Minimize the impacts of construction noise on adjacent uses within acceptable standards.
- N 13.2 Ensure that construction activities are regulated to establish hours of operation in order to prevent and/or mitigate the generation of excessive or adverse impacts on surrounding areas.
- N 13.3 Condition subdivision approval adjacent to developed/occupied noise-sensitive land uses (see policy N 1.3) by requiring the developer to submit a construction-related noise mitigation plan to the City for review and approval prior to issuance of a grading permit. The plan must depict the location of construction equipment and how the noise from this equipment will be mitigated during construction of this project, through the use of such methods as:
 - *i.* Temporary noise attenuation fences;
 - *ii.* Preferential location and equipment; and
 - *iii.* Use of current noise suppression technology and equipment.
- N 14.1 Enforce the California Building Standards that sets standards for building construction to mitigate interior noise levels to the tolerable 45 CNEL limit. These standards are utilized in conjunction with the Uniform Building Code by the County's Building Department to ensure that noise protection is provided to the public. Some design features may include extra-dense insulation, double-paned windows, and dense construction materials.
- N 16.3 Prohibit exposure of residential dwellings to perceptible ground vibration from passing trains as perceived at the ground or second floor. Perceptible motion shall be presumed to be a motion velocity of 0.01 inches/second over a range of 1 to 100 Hz.

To ensure noise-sensitive land uses are protected from high levels of noise (N 1.1), Table N-1 of the Noise Element identifies guidelines to evaluate proposed developments based on exterior and interior noise level limits for land uses and requires a noise analysis to determine needed mitigation measures if necessary. The Noise Element identifies residential use as a noisesensitive land use (N 1.3) and discourages new development in areas with 65 CNEL or greater existing ambient noise levels. To prevent and mitigate noise impacts for its residents (N 1.5), County of Riverside requires noise attenuation measures for sensitive land use exposed to noise levels higher than 65 CNEL. The intent of policy N 1.7 is to require a noise analysis for land uses impacted by unacceptably high noise levels and include mitigation measures in the design. Policy N 4.1 of the Noise Element sets a stationary-source exterior noise limit not to be exceeded for a cumulative period of more than ten minutes in any hour of 65 dBA Leg for daytime hours of 7:00 a.m. to 10:00 p.m., and 45 dBA Leg during the noise-sensitive nighttime hours of 10:00 p.m. to 7:00 a.m. To prevent high levels of construction noise from impacting noise-sensitive land uses, policies N 13.1 through 13.3 identify construction noise mitigation requirements for new development located near existing noise-sensitive land uses. Policy 16.3 establishes the vibration perception threshold for rail-related vibration levels, used in this analysis as a threshold for determining potential vibration impacts due to Project construction. (14)

3.3.1 LAND USE COMPATIBILITY

The noise criteria identified in the County of Riverside Noise Element (Table N-1) are guidelines to evaluate the land use compatibility of transportation related noise. The compatibility criteria, shown on Exhibit 3-A, provides the County with a planning tool to gauge the compatibility of land uses relative to existing and future exterior noise levels.

The Land Use Compatibility for Community Noise Exposure matrix describes categories of compatibility and not specific noise standards. Noise-sensitive residential land use is considered normally acceptable with exterior noise levels of less than 60 dBA CNEL, and conditionally acceptable with exterior noise levels approaching 70 dBA CNEL. For conditionally acceptable exterior noise levels, approaching 70 dBA CNEL for residential Project land uses, new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and the needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice. (14)



LAND USE CATEGORY	COMMUNITY	Y NO	ISE EX	POSURI	E LEVEI	L Ldn or	CNEL, dBA
		55	60	65	70	75	80
Residential-Low Density		1	_				1
Single Family, Duplex, Mobile	Homes	1					
Single Funny, Dupter, Proble	in our co						
Residential-Multiple Family		I		-			
•				T.			
Transient Lodging-Motels, Ho	tels	1					
						1	
Schools, Libraries, Churches,	Hospitals,		_				
Nursing Homes				1			
Auditoriums, Concert Halls, A	mphitheaters	I					
					Ť	Î	i i
Sports Arena, Outdoor Specta	tor Sports	ì	- î	- î			
Playgrounds, Neighborhood Pa	arks	I					
					T		
Golf Courses, Riding Stables, V Cemeteries	Water Recreation,	r –	1	1		-	
Office Buildings, Businesses, C	ommercial,	i i	-i	1	-		
and I foressional							
Industrial, Manufacturing, Uti	lities,						
Agriculture		ſ	1	1		1	
							T
Legend:		5). 192			1.0		
Specified land use is satisfactory based upon	Conditionally Acceptable: New construction or development should be	No	construction or o	ceptable: development shoul	d generally	Clearly U New constru	nacceptable: ction or development should
the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.	undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but	be d does redu nois	iscouraged. If ne proceed, a detail action requirement c insulation feature	w construction or led analysis of the its must be made w res included in the	levelopment ioise ith needed design.	generally not costs to make acceptable w outdoor envi	be undertaken. Construction the indoor environment ould be prohibitive and the comment would not be usable.
Source: California Office of Noise Control	with closed windows and fresh air supply systems or air conditioning will normally suffice. Outdoor environment will seem noisy	Out	door areas must b	e shielded.	040850		and the second se

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

Source: County of Riverside General Plan Noise Element, Table N-1.

3.4 CONSTRUCTION NOISE STANDARDS

To analyze noise impacts originating from the construction of the Canterwood (Tentative Tract Map No. 37439) Project, noise from construction activities are typically limited to the hours of operation established under a jurisdiction's Municipal Code. To accurately describe the potential Project-related construction noise level contributions to the existing noise environment, this analysis presents the appropriate construction noise standards of the County of Riverside, as shown on Table 3-1.

Section 9.52.020 of the County's Noise Regulation ordinance, provided in Appendix 3.1, indicates that noise associated with any private construction activity located within one-quarter of a mile from an inhabited dwelling is considered exempt between the hours of 6:00 a.m. and 6:00 p.m., during the months of June through September, and 7:00 a.m. and 6:00 p.m., during the months of October through May. (15) However, neither the County of Riverside 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*.

3.4.1 CONSTRUCTION NOISE LEVEL THRESHOLD

To evaluate whether the Project will generate a substantial periodic increase in short-term 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). (16) 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. (16) For the purposes of this analysis, the lowest, more conservative construction noise level threshold of 85 dBA Leq 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 period, 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.

The 85 dBA L_{eq} threshold is also consistent with the FTA *Transit Noise and Vibration Impact Assessment* criteria for construction noise which identifies an hourly construction noise level threshold of 90 dBA L_{eq} during daytime hours, and 80 dBA L_{eq} during nighttime hours for construction for general assessment at residential uses. (4) Detailed assessment, according to the FTA, identifies an 8-hour dBA L_{eq} noise level threshold specific to residential uses of 80 dBA L_{eq}. Therefore, the Noise Study relies on the NIOSH 85 dBA L_{eq} threshold, consistent with FTA general and detailed assessment criteria for residential uses and represents an appropriate threshold for construction noise analysis.

11304-05 Noise Study



3.4.2 CONSTRUCTION-RELATED HEARING CONSERVATION

The Occupational Safety and Health Administration (OSHA) requires hearing protection be provided by employers in workplaces where the noise levels may, over long periods of exposure to high noise levels, endanger the hearing of their employees. Standard 29 CFR, Part 1910 indicates the noise levels under which a hearing conservation program is required to be provided to workers exposed to high noise levels. (11) This analysis does not evaluate the noise exposure of construction workers within the Project site based on CEQA requirements, and instead, evaluates the Project-related construction noise levels at the nearby sensitive receiver locations in the Project study area. Further, periodic exposure to high noise levels in short duration, such as Project construction, is typically considered an annoyance and not impactful to human health. It would take several years of exposure to high noise levels to result in hearing impairment. (12)

Jurisdiction	Permitted Hours of Construction Activity
County of	6:00 a.m. to 6:00 p.m. June to September;
Riverside	7:00 a.m. to 6:00 p.m. October to May

TABLE 3-1: CONSTRUCTION NOISE STANDARDS

Source: County of Riverside Municipal Code, Section 9.52.020 (I) (Appendix 3.2).

3.5 VIBRATION STANDARDS

The County of Riverside does not have vibration standards for temporary construction, but the County's General Plan Noise Element does contain the human reaction to typical vibration levels. Vibration levels with peak particle velocity of 0.787 inches per second are considered readily perceptible and above 0.1968 in/sec are considered annoying to people in buildings. Further, County of Riverside General Plan Policy N 16.3 identifies a motion velocity perception threshold for vibration due to passing trains of 0.01 inches per second (in/sec) over the range of one to 100 Hz. (14) For the purposes of this analysis, the perception threshold of 0.01 in/sec shall be used to assess the potential impacts due to Project construction at nearby sensitive receiver locations. Table 3-2 shows the County of Riverside vibration standard used in this analysis.

Typically, the human response at the perception threshold for vibration includes annoyance in residential areas as previously shown on Exhibit 2-B, when vibration levels expressed in vibration decibels (VdB) approach 75 VdB. County of Riverside, however, identifies a vibration perception threshold of 0.01 in/sec. For vibration levels expressed in velocity, the human body responds to the average vibration amplitude often described as the root-mean-square (RMS). The RMS of a signal is the average of the squared amplitude of the signal, typically calculated over a one-second period. As with airborne sound, the RMS velocity is often expressed in decibel notation as vibration decibels (VdB), which serves to reduce the range of numbers used to describe human

response to vibration. Therefore, County of Riverside vibration standard of 0.01 in/sec in RMS velocity levels is used in this analysis to assess the human perception of vibration levels due to Project-related construction activities.

Jurisdiction	Root-Mean-Square (RMS) Velocity (in/sec)
County of Riverside ¹	0.01

TABLE 3-2: VIBRATION NOISE STANDARDS

¹ Source: County of Riverside General Plan Noise Element, Policy N 16.3.



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4 SIGNIFICANCE CRITERIA

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

- A. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- B. Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels.
- C. A substantial permanent increase in ambient noise levels in the Project vicinity above existing levels without the proposed Project; or
- D. A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above noise levels existing without the proposed Project.
- E. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the Project area to excessive noise levels.
- F. For a project within the vicinity of a private airstrip, expose people residing or working in the Project area to excessive noise levels.

While the CEQA Guidelines and the County of Riverside General Plan Guidelines provide direction on noise compatibility and establish noise standards by land use type that are sufficient to assess the significance of noise impacts under CEQA Guideline A, they do not define the levels at which increases are considered substantial for use under Guidelines B, C, and D. CEQA Guidelines E and F apply to nearby public and private airports, if any, and the Project's land use compatibility. The Project site is not located within two miles of an airport or the vicinity of a private airstrip which would require additional noise analysis under CEQA guidelines E and F. Therefore, the potential impacts under CEQA guidelines E and F are *less than significant* and are not further analyzed in this noise study. 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.

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) or hourly logarithmic average noise levels (L_{eq}).

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

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 County of Riverside General Plan Noise Element, Table N-1, *Land Use Compatibility for Community Noise Exposure* was used to establish the satisfactory noise levels of significance for non-noise-sensitive land uses in the Project study area, such as industrial land uses. 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 *Land Use Compatibility for Community Noise Exposure*. (14)

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 County of Riverside General Plan Noise Element, Table N-1, *Land Use Compatibility for Community Noise Exposure normally acceptable* 70 dBA CNEL exterior noise level criteria. Table 4.2 provides a summary of the noise impact significance 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 noise level increase; or
 - already exceed 65 dBA CNEL, and the Project creates a community noise level impact of greater than 1.5 dBA CNEL (FICON, 1992).
- When the noise levels at existing and future non-noise-sensitive land uses (e.g., commercial, etc.):
 - are less than the County of Riverside General Plan Noise Element, Table N-1, normally acceptable 70 dBA CNEL and the Project creates a readily perceptible 5 dBA CNEL or greater Project related noise level increase; or
 - are greater than the County of Riverside General Plan Noise Element, Table N-1, *normally acceptable* 70 dBA CNEL and the Project creates a *barely perceptible* 3 dBA CNEL or greater Project noise level increase.

ON-SITE TRAFFIC NOISE

 If the on-site exterior noise levels exceed 65 dBA CNEL at outdoor living areas (backyards) of the single-family residential land uses within the Project site. Interior noise levels shall not exceed 45 dBA CNEL for all residential land uses (County of Riverside General Plan Noise Element, Policies N 1.3 & N 14.1).

CONSTRUCTION NOISE AND VIBRATION

- If Project-related construction activities:
 - occur at any time other than the permitted hours of 6:00 a.m. and 6:00 p.m., during the months of June through September, and 7:00 a.m. and 6:00 p.m., during the months of October through May (County of Riverside Municipal Code, Section 9.52.020); or





- generate 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 Nosie Exposure).
- If short-term Project generated construction vibration levels exceed the County of Riverside acceptable vibration standard of 0.01 in/sec RMS at sensitive receiver locations (County of Riverside General Plan, Policy N 16.3).

Analysia	Receiving (a)		Significance C	riteria		
Analysis	Land Use	Jurisdiction	Condition(s)	Daytime	Nighttime	
			If ambient is < 60 dBA CNEL	≥ 5 dBA CNEL Proje	ct increase	
	Noise- Sensitive ¹		If ambient is 60 - 65 dBA CNEL	≥ 3 dBA CNEL Proje	ct increase	
Off-Site	Sensitive	All	If ambient is > 65 dBA CNEL	≥ 1.5 dBA CNEL Proj	ect increase	
	Non-Noise-		if ambient is < 70 dBA CNEL	≥ 5 dBA CNEL Proje	ct increase	
	Sensitive ²		if ambient is > 70 dBA CNEL	≥ 3 dBA CNEL Proje	ct increase	
On Sito	Residential ³	County of	Exterior Noise Level Criteria	65 dBA CN	EL	
On-Site		Riverside	Interior Noise Level Standard	45 dBA CNEL		
Construction		County of Riverside	Permitted hours of 6:00 a.m. to 6:00 p.m. June to September; 7:00 a.m. to 6:00 p.m. October to May. ⁴			
Construction	Sensitive		Noise Level Threshold ⁵	85 dBA L _{eq}	n/a	
		All	Vibration Level Threshold ⁶	0.01 in/sec RMS	n/a	

TABLE 4-2: SIGNIFICANCE CRITERIA SUMMARY

¹ Source: FICON, 1992.

³ Source: County of Riverside General Plan Noise Element, Policies N 1.3 & N 14.1.

⁴ Source: County of Riverside Municipal Code, Section 9.52.020 (I) (Appendix 3.2).

⁵ Source: NIOSH, Criteria for Recommended Standard: Occupational Noise Exposure, June 1998.

⁶ Source: County of Riverside General Plan Noise Element, Policy N 16.3.

"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.; "n/a" = No nighttime construction activity is permitted, so no nighttime construction noise level limits are identified.



² Source: County of Riverside General Plan Noise Element, Table N-1.

5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, six 24-hour noise level measurements were taken at sensitive receiver locations in the Project study area. The receiver locations were selected to describe and document the existing noise environment within the Project study area. Exhibit 5-A provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Wednesday, February 21st, 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 any 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. (6) 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 west of the Project site on Leon Road near an existing residential home. The noise level measurements collected show an overall 24-hour exterior noise level of 64.4 dBA CNEL. The hourly noise levels measured at location L1 ranged from 56.1 to 64.3 dBA L_{eq} during the daytime hours and from 48.8 to 62.3 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 61.2 dBA L_{eq} with an average nighttime noise level of 56.1 dBA L_{eq}.
- Location L2 represents the noise levels west of the Project site on Leon Road near existing residential homes. The noise level measurements collected show an overall 24-hour exterior noise level of 59.8 dBA CNEL. The hourly noise levels measured at location L2 ranged from 47.9 to 63.4 dBA L_{eq} during the daytime hours and from 40.5 to 54.5 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 57.2 dBA L_{eq} with an average nighttime noise level of 49.1 dBA L_{eq}.
- Location L3 represents the noise levels north of the Project site on Holland Road near existing agricultural uses. The 24-hour CNEL indicates that the overall exterior noise level is 56.8 dBA CNEL. At location L3 the background ambient noise levels ranged from 42.4 to 56.7 dBA L_{eq} during the daytime hours to levels of 43.3 to 53.8 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 51.0 dBA L_{eq} with an average nighttime noise level of 49.7 dBA L_{eq}.
- Location L4 represents the noise levels near the northeast Project site boundary adjacent to an existing agricultural use and residential home on Holland Road. The noise level measurements collected show an overall 24-hour exterior noise level of 54.0 dBA CNEL. The hourly noise levels measured at location L4 ranged from 39.5 to 59.1 dBA L_{eq} during the daytime hours and from 38.3 to 53.3 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 52.7 dBA L_{eq} with an average nighttime noise level of 45.3 dBA L_{eq}.
- Location L5 represents the noise levels on Eucalyptus Road adjacent to vacant land east of the Project site. The 24-hour CNEL indicates that the overall exterior noise level is 55.9 dBA CNEL. At location L5 the background ambient noise levels ranged from 43.7 to 60.2 dBA L_{eq} during the daytime hours to levels of 38.4 to 55.3 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 54.4 dBA L_{eq} with an average nighttime noise level of 47.3 dBA L_{eq}.
- Location L6 represents the noise levels south of the Project site adjacent to vacant land on Craig Avenue. The noise level measurements collected show an overall 24-hour exterior noise level of 50.1 dBA CNEL. The hourly noise levels measured at location L6 ranged from 39.8 to 54.3 dBA L_{eq} during the daytime hours and from 37.2 to 46.0 dBA L_{eq} during the nighttime hours. The energy





(logarithmic) average daytime noise level was calculated at 48.5 dBA L_{eq} with an average nighttime noise level of 41.6 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 the arterial roadway network. The 24-hour existing noise level measurements shown on Table 5-1 present the existing ambient noise conditions.

Location ¹	Distance to Project	Description	Energy Hourly N (dBA	Average oise Level (L _{eq}) ²	CNEL
	Boundary (Feet)		Daytime	Nighttime	
L1	20'	Located west of the Project site on Leon Road near an existing residential home.	61.2	56.1	64.4
L2	40'	Located west of the Project site on Leon Road near existing residential homes.		49.1	59.8
L3	25'	Located north of the Project site on Holland Road near existing agricultural uses.		49.7	56.8
L4	Located near the northeast Project site boundary adjacent to an existing agricultural use and residential home on Holland Road.		52.7	45.3	54.0
L5	L5 0' Located on Eucalyptus Road adjacent to vacant land east of the Project site.		54.4	47.3	55.9
L6	35'	Located south of the Project site adjacent to vacant land on Craig Avenue.	48.5	41.6	50.1

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

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

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

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





EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS



6 METHODS AND PROCEDURES

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

6.1 FHWA TRAFFIC NOISE PREDICTION MODEL

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

This is methodology is consistent with the County of Riverside Office of Industrial Hygiene *Requirements for Determining and Mitigating Traffic Noise Impacts to Residential Structures,* which specifically requires the FHWA RD-77-108 model to be used in analysis within the County's jurisdiction. (22)

6.1.1 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 18 study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per each applicable General Plan Circulation Element, and the vehicle speeds consistent with the *Canterwood (Tentative Tract Map No. 37439) Traffic Impact Analysis* prepared by Urban Crossroads, Inc. (2) The average daily traffic volumes used for this study are presented on Table 6-2 for each scenario consistent with the *Traffic Impact Analysis*. For this analysis, soft site conditions are used to analyze the traffic noise impacts within the Project study area. Soft site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. Caltrans' research has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model as used in this off-site traffic noise analysis. (23)



ID	Roadway	Segment	Adjacent Land Use ¹	Distance from Centerline to Nearest Adjacent Land Use (Feet) ²	Vehicle Speed (mph) ³
1	Haun Rd.	n/o Scott Rd.	Economic Dev. Corridor	59'	50
2	Zeiders Rd.	s/o Scott Rd.	Economic Dev. Corridor	59'	50
3	Antelope Rd.	s/o Scott Rd.	Commercial	59'	50
4	Menifee Rd.	n/o Holland Rd.	Residential	64'	45
5	Menifee Rd.	s/o Holland Rd.	Residential	64'	45
6	Leon Rd.	s/o Craig Av.	Residential	59'	35
7	Leon Rd.	s/o Garbani Rd.	Residential	59'	55
8	Leon Rd.	s/o Scott Rd.	Residential	59'	55
9	Holland Rd.	w/o Menifee Rd.	Residential	59'	45
10	Holland Rd.	e/o Menifee Rd.	Residential	59'	45
11	Holland Rd.	w/o Briggs Rd.	Residential	59'	45
12	Holland Rd.	w/o Leon Rd.	Residential	59'	45
13	Scott Rd.	w/o Haun Rd.	Economic Dev. Corridor	76'	50
14	Scott Rd.	e/o Haun Rd.	Economic Dev. Corridor	76'	50
15	Scott Rd.	w/o Menifee Rd.	Residential	76'	55
16	Scott Rd.	w/o Briggs Rd.	Residential	76'	55
17	Scott Rd.	w/o Leon Rd.	Residential	76'	55
18	Scott Rd.	e/o Leon Rd.	Residential	76'	55

TABLE 6-1: OFF-SITE ROADWAY PARAMETERS

¹ Sources: County of Riverside General Plan, Harvest Area Land Use Plan and the City of Menifee 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 County of Riverside and City of Menifee General Plan Circulation Elements.

³ Source: Canterwood (Tentative Tract Map No. 37439) Traffic Impact Analysis, February 2018.



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						Av	erage Da	ily Traffic	: (1,000's)1			
9		+		Existing		EA 2	021	EA 2(025	EAC 2	:021	EAC 2	025
2	Apagaway	Juguren	Without Project	With Phase 1	With Buildout	Without Project	With Project	Without Project	With Project	Without Project	With Project	Without Project	Wit Proje
1	Haun Rd.	n/o Scott Rd.	6.7	6.9	7.1	7.1	7.3	7.7	8.1	18.2	18.4	22.4	22
2	Zeiders Rd.	s/o Scott Rd.	1.2	1.3	1.3	1.3	1.4	1.4	1.5	5.6	5.7	7.2	7
3	Antelope Rd.	s/o Scott Rd.	10.6	10.8	11.0	11.3	11.5	12.1	12.5	15.9	16.1	18.3	18
4	Menifee Rd.	n/o Holland Rd.	6.0	6.2	6.4	6.4	6.6	6.9	7.3	13.7	13.9	16.7	17
5	Menifee Rd.	s/o Holland Rd.	5.3	5.4	5.5	5.7	5.8	6.1	6.3	14.1	14.2	17.4	17
6	Leon Rd.	s/o Craig Av.	0.4	2.9	5.0	0.4	2.9	0.4	5.0	1.8	4.3	3.0	7
7	Leon Rd.	s/o Garbani Rd.	0.7	3.2	5.3	0.8	3.3	0.8	5.4	2.6	5.1	3.2	7
8	Leon Rd.	s/o Scott Rd.	2.7	3.0	3.2	2.9	3.2	3.1	3.6	6.2	6.5	7.6	8
6	Holland Rd.	w/o Menifee Rd.	3.1	3.1	3.2	3.3	3.3	3.5	3.6	8.5	8.5	10.4	10
10	Holland Rd.	e/o Menifee Rd.	2.9	3.3	3.7	3.1	3.5	3.3	4.1	8.5	8.9	10.5	11
11	Holland Rd.	w/o Briggs Rd.	0.3	0.8	1.2	0.3	0.8	0.4	1.3	1.3	1.8	1.6	2
12	Holland Rd.	w/o Leon Rd.	n/a	0.7	1.1	0.2	0.7	0.2	1.1	0.6	1.1	0.8	1
13	Scott Rd.	w/o Haun Rd.	10.6	10.8	11.0	11.2	11.4	12.2	12.6	18.2	18.4	21.4	21
14	Scott Rd.	e/o Haun Rd.	15.5	16.0	16.5	16.5	17.0	17.8	18.8	30.0	30.5	35.8	36
15	Scott Rd.	w/o Menifee Rd.	14.0	16.1	17.7	14.8	16.9	16.1	19.8	26.5	28.6	31.7	35
16	Scott Rd.	w/o Briggs Rd.	11.7	13.8	15.5	12.4	14.5	13.4	17.2	23.2	25.3	27.8	31
17	Scott Rd.	w/o Leon Rd.	11.3	13.3	15.0	12.0	14.0	13.0	16.7	19.9	21.9	23.5	27
18	Scott Rd.	e/o Leon Rd.	5.1	5.4	5.5	5.4	5.7	5.9	6.3	10.7	11.0	13.0	13
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TABLE 6-2: AVERAGE DAILY TRAFFIC VOLUMES

¹ Source: Canterwood (Tentative Tract Map No. 37439) Traffic Impact Analysis, February 2018. "EA" = Existing plus Ambient Growth; "EAC" = Existing plus Ambient Growth plus Cumulative Developments; "n/a" = Roadway segment does is not yet paved (e.g., existing dirt road or the segment does not exist under the current scenario).

Table 6-3 presents the time of day vehicle splits and Table 6-4 presents the traffic flow distributions (vehicle mix) used for this analysis. The vehicle mix provides the hourly distribution percentages of automobile, medium trucks, and heavy trucks for input into the FHWA noise prediction model.

Vahiele Ture		Time of Day Splits ¹		Total of Time of
venicie Type	Daytime	Evening	Nighttime	Day Splits
	Riverside Co	unty (Expressway, Art	terial, Major)	
Autos	77.50%	12.90%	9.60%	100.00%
Medium Trucks	84.80%	4.90%	10.30%	100.00%
Heavy Trucks	86.50%	2.70%	10.80%	100.00%
	Riverside	County (Secondary, G	Collector)	
Autos	75.55%	13.96%	10.49%	100.00%
Medium Trucks	48.91%	2.17%	48.91%	100.00%
Heavy Trucks	47.30%	5.41%	47.30%	100.00%

TABLE 6-3: TIME OF DAY VEHICLE SPLITS

¹ Source: County of Riverside Office of Industrial Hygiene, 2017.

"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.

97.42%

			•	•
Classification	I	Total % Traffic Flow	,1	Total
Classification	Autos	Medium Trucks	Heavy Trucks	TOLAI
Major, Arterial, Urban Arterial	92.00%	3.00%	5.00%	100.00%

1.84%

0.74%

TABLE 6-4: DISTRIBUTION OF TRAFFIC FLOW BY VEHICLE TYPE (VEHICLE MIX)

¹ Source: County of Riverside Office of Industrial Hygiene.

Secondary, Collector

6.1.2 ON-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

The on-site roadway parameters including the ADT volumes used for this study are presented on Table 6-5. Based on the County of Riverside General Plan Circulation Element, Leon Road is classified as a 4-lane Arterial, Holland Road is classified as a 4-lane Major, and Eucalyptus Road and Craig Avenue are classified as 4-lane Secondary roadways. The maximum two-way traffic volumes at a level of service C, shown on Table 6-5, were obtained from Figure C-3 of the County of Riverside General Plan Circulation Element and reflect future long-range traffic conditions needed to assess the future on-site traffic noise environment and to identify the appropriate noise mitigation measures that address the worst-case future noise conditions. (24) Consistent with the County of Riverside Office of Industrial Hygiene noise study requirements, hard site conditions were used to analyze the potential on-site traffic noise impacts for the Project study area. (22) Hard site conditions account for the sound propagation loss over a reflective surface between the source and the receiver.





100.00%

Roadway	Lanes	Classification ¹	Average Daily Traffic Volume ²	Speed Limit (mph) ³	Site Conditions⁴
Leon Rd.	4	Arterial	28,700	40	Hard
Holland Rd.	4	Major	27,300	40	Hard
Eucalyptus Rd.	4	Secondary	20,700	40	Hard
Craig. Av.	4	Secondary	20,700	40	Hard

TABLE 6-5: ON-SITE ROADWAY PARAMETERS

¹ Road classifications based upon the County of Riverside General Plan Circulation Element.

² Source: County of Riverside General Plan Circulation Element, Figure C-3, based on the County of Riverside Office of Industrial Hygiene

Requirements for Determining and Mitigating Traffic Noise Impacts to Residential Structures.

³ Roadway speeds are based on the County of Riverside Office of Industrial Hygiene 40 mph noise study guideline speed.

⁴ Source: County of Riverside Office of Industrial Hygiene.

To predict the future noise environment at residential lots within the Project site, coordinate information was collected to identify the noise transmission path between the noise source and receiver. The coordinate information is based on the Project site plan, previously shown on Exhibit 1-B, showing the plotting of the residential lots in relationship to Leon Road, Holland Road, Eucalyptus Road, and Craig Avenue.

The outdoor living area (backyard) and first-floor exterior noise level receivers were placed five feet above the pad elevation, or three feet above the pad elevation (backyard) when the barrier height exceeds six feet per County of Riverside Office of Industrial Hygiene noise study guidelines. All second-floor receivers were located 14 feet above the proposed finished floor elevation.

6.2 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 6-6. 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 6-6: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006.



7 OFF-SITE TRANSPORTATION NOISE IMPACTS

To assess the off-site transportation CNEL noise level impacts associated with development of the proposed Project, noise contours were developed based on *Canterwood (Tentative Tract Map No. 37439) 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:

- <u>Existing Conditions Without / With Phase 1</u>: This scenario refers to the existing present-day noise conditions without and with Phase 1 of the proposed Project.
- <u>Existing Conditions Without / With Project Buildout</u>: This scenario refers to the existing presentday noise conditions without and with Buildout of the proposed Project.
- <u>Existing plus Ambient Growth (EA) Year 2021 Without / With Phase 1</u>: This scenario refers to existing present-day noise conditions, plus ambient growth, without and with Phase 1 of the proposed Project.
- <u>EA Year 2025 Without / With Project Buildout</u>: This scenario refers to existing present-day noise conditions, plus ambient growth, without and with Buildout the proposed Project.
- <u>EA plus Cumulative Developments (EAC) Year 2021 Without / With Phase 1</u>: This scenario refers to existing present-day noise conditions, plus ambient growth, without and with Phase 1 of the proposed Project. This scenario includes all cumulative projects identified in the *Traffic Impact Analysis*.
- <u>EAC Year 2025 Without / With Project Buildout</u>: This scenario refers to existing present-day noise conditions, plus ambient growth, without and with Buildout the proposed Project. This scenario 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 and 7-11 present a summary of the exterior traffic noise levels, without barrier attenuation, for the 18 study area roadway segments analyzed from both the without Project to the with Project conditions under Existing, EA 2021, EA 2025, EAC 2021, and EAC 2025 conditions. Appendix 7.1 includes a summary of the traffic noise level contours for each of the traffic scenarios.





			Adjacent	CNEL at Nearest	Distar from C	nce to Co enterline	ontour e (Feet)
ID	Road	Segment	Land Use ¹	Adjacent Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Haun Rd.	n/o Scott Rd.	Economic Dev. Corridor	67.3	RW	84	180
2	Zeiders Rd.	s/o Scott Rd.	Economic Dev. Corridor	59.8	RW	RW	RW
3	Antelope Rd.	s/o Scott Rd.	Commercial	69.3	RW	114	245
4	Menifee Rd.	n/o Holland Rd.	Residential	65.3	RW	67	144
5	Menifee Rd.	s/o Holland Rd.	Residential	64.7	RW	RW	132
6	Leon Rd.	s/o Craig Av.	Residential	56.8	RW	RW	RW
7	Leon Rd.	s/o Garbani Rd.	Residential	62.7	RW	RW	90
8	Leon Rd.	s/o Scott Rd.	Residential	68.6	RW	102	220
9	Holland Rd.	w/o Menifee Rd.	Residential	62.9	RW	RW	92
10	Holland Rd.	e/o Menifee Rd.	Residential	62.6	RW	RW	88
11	Holland Rd.	w/o Briggs Rd.	Residential	52.7	RW	RW	RW
12	Holland Rd.	w/o Leon Rd.	Residential	n/a	n/a	n/a	n/a
13	Scott Rd.	w/o Haun Rd.	Economic Dev. Corridor	68.0	RW	121	261
14	Scott Rd.	e/o Haun Rd.	Economic Dev. Corridor	69.7	RW	156	336
15	Scott Rd.	w/o Menifee Rd.	Residential	70.2	79	169	364
16	Scott Rd.	w/o Briggs Rd.	Residential	69.4	RW	150	323
17	Scott Rd.	w/o Leon Rd.	Residential	69.3	RW	147	316
18	Scott Rd.	e/o Leon Rd.	Residential	70.1	77	166	358

TABLE 7-1: EXISTING WITHOUT PROJECT CONDITIONS NOISE CONTOURS

¹ Sources: County of Riverside General Plan, Harvest Area Land Use Plan and the City of Menifee General Plan Land Use Map. 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.

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

"n/a" = Roadway segment does is not yet paved (e.g., existing dirt road or the segment does not exist under the current scenario).

			Adiacent	CNEL at Nearest	Distar from C	nce to Co enterline	ontour e (Feet)
ID	Koad Segment	Segment	Land Use ¹	Adjacent Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Haun Rd.	n/o Scott Rd.	Economic Dev. Corridor	67.4	RW	85	184
2	Zeiders Rd.	s/o Scott Rd.	Economic Dev. Corridor	60.2	RW	RW	60
3	Antelope Rd.	s/o Scott Rd.	Commercial	69.4	RW	115	248
4	Menifee Rd.	n/o Holland Rd.	Residential	65.4	RW	68	147
5	Menifee Rd.	s/o Holland Rd.	Residential	64.8	RW	RW	134
6	Leon Rd.	s/o Craig Av.	Residential	65.4	RW	63	135
7	Leon Rd.	s/o Garbani Rd.	Residential	69.3	RW	114	247
8	Leon Rd.	s/o Scott Rd.	Residential	69.0	RW	110	236
9	Holland Rd.	w/o Menifee Rd.	Residential	62.9	RW	RW	92
10	Holland Rd.	e/o Menifee Rd.	Residential	63.1	RW	RW	96
11	Holland Rd.	w/o Briggs Rd.	Residential	57.0	RW	RW	RW
12	Holland Rd.	w/o Leon Rd.	Residential	61.1	RW	RW	70
13	Scott Rd.	w/o Haun Rd.	Economic Dev. Corridor	68.1	RW	123	264
14	Scott Rd.	e/o Haun Rd.	Economic Dev. Corridor	69.8	RW	159	343
15	Scott Rd.	w/o Menifee Rd.	Residential	70.8	86	186	400
16	Scott Rd.	w/o Briggs Rd.	Residential	70.1	78	168	361
17	Scott Rd.	w/o Leon Rd.	Residential	70.0	76	163	352
18	Scott Rd.	e/o Leon Rd.	Residential	70.4	80	173	372

TABLE 7-2: EXISTING WITH PHASE 1 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. "RW" = Location of the respective noise contour falls within the right-of-way of the road.

			Adjacent	CNEL at Nearest	Distar from C	Distance to Contour from Centerline (Feet)		
ID	Koad Segment	Segment	Land Use ¹	Adjacent Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	
1	Haun Rd.	n/o Scott Rd.	Economic Dev. Corridor	67.5	RW	87	187	
2	Zeiders Rd.	s/o Scott Rd.	Economic Dev. Corridor	60.2	RW	RW	60	
3	Antelope Rd.	s/o Scott Rd.	Commercial	69.4	RW	117	251	
4	Menifee Rd.	n/o Holland Rd.	Residential	65.5	RW	70	150	
5	Menifee Rd.	s/o Holland Rd.	Residential	64.9	RW	RW	136	
6	Leon Rd.	s/o Craig Av.	Residential	67.8	RW	90	194	
7	Leon Rd.	s/o Garbani Rd.	Residential	71.5	74	160	345	
8	Leon Rd.	s/o Scott Rd.	Residential	69.3	RW	114	247	
9	Holland Rd.	w/o Menifee Rd.	Residential	63.0	RW	RW	94	
10	Holland Rd.	e/o Menifee Rd.	Residential	63.6	RW	RW	103	
11	Holland Rd.	w/o Briggs Rd.	Residential	58.8	RW	RW	RW	
12	Holland Rd.	w/o Leon Rd.	Residential	63.1	RW	RW	95	
13	Scott Rd.	w/o Haun Rd.	Economic Dev. Corridor	68.2	RW	124	267	
14	Scott Rd.	e/o Haun Rd.	Economic Dev. Corridor	70.0	RW	163	350	
15	Scott Rd.	w/o Menifee Rd.	Residential	71.2	92	198	426	
16	Scott Rd.	w/o Briggs Rd.	Residential	70.7	84	181	390	
17	Scott Rd.	w/o Leon Rd.	Residential	70.5	82	177	382	
18	Scott Rd.	e/o Leon Rd.	Residential	70.4	81	175	377	

TABLE 7-3 :	EXISTING WIT	H PROJECT E	BUILDOUT	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. "RW" = Location of the respective noise contour falls within the right-of-way of the road.



	Road	Road Segment	Adiacent	CNEL at Nearest	Distance to Contour from Centerline (Feet)		
ID			Land Use ¹	Adjacent Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Haun Rd.	n/o Scott Rd.	Economic Dev. Corridor	67.5	RW	87	187
2	Zeiders Rd.	s/o Scott Rd.	Economic Dev. Corridor	60.2	RW	RW	60
3	Antelope Rd.	s/o Scott Rd.	Commercial	69.5	RW	119	256
4	Menifee Rd.	n/o Holland Rd.	Residential	65.5	RW	70	150
5	Menifee Rd.	s/o Holland Rd.	Residential	65.0	RW	64	139
6	Leon Rd.	s/o Craig Av.	Residential	56.8	RW	RW	RW
7	Leon Rd.	s/o Garbani Rd.	Residential	63.3	RW	RW	98
8	Leon Rd.	s/o Scott Rd.	Residential	68.9	RW	107	231
9	Holland Rd.	w/o Menifee Rd.	Residential	63.1	RW	RW	96
10	Holland Rd.	e/o Menifee Rd.	Residential	62.9	RW	RW	92
11	Holland Rd.	w/o Briggs Rd.	Residential	53.0	RW	RW	RW
12	Holland Rd.	w/o Leon Rd.	Residential	56.0	RW	RW	RW
13	Scott Rd.	w/o Haun Rd.	Economic Dev. Corridor	68.3	RW	126	271
14	Scott Rd.	e/o Haun Rd.	Economic Dev. Corridor	70.0	RW	163	350
15	Scott Rd.	w/o Menifee Rd.	Residential	70.5	81	176	378
16	Scott Rd.	w/o Briggs Rd.	Residential	69.7	RW	156	336
17	Scott Rd.	w/o Leon Rd.	Residential	69.5	RW	153	329
18	Scott Rd.	e/o Leon Rd.	Residential	70.4	80	173	372

TABLE 7-4:	EA 2021 WITHOUT	PHASE 1 C	ONDITIONS NO	ISE 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.

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



	Road Segment	Adiacent	CNEL at Nearest	Distance to Contour from Centerline (Feet)			
ID		Segment	Land Use ¹	Adjacent Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Haun Rd.	n/o Scott Rd.	Economic Dev. Corridor	67.7	RW	89	191
2	Zeiders Rd.	s/o Scott Rd.	Economic Dev. Corridor	60.5	RW	RW	64
3	Antelope Rd.	s/o Scott Rd.	Commercial	69.6	RW	120	259
4	Menifee Rd.	n/o Holland Rd.	Residential	65.7	RW	71	153
5	Menifee Rd.	s/o Holland Rd.	Residential	65.1	RW	65	140
6	Leon Rd.	s/o Craig Av.	Residential	65.4	RW	63	135
7	Leon Rd.	s/o Garbani Rd.	Residential	69.5	RW	117	252
8	Leon Rd.	s/o Scott Rd.	Residential	69.3	RW	114	247
9	Holland Rd.	w/o Menifee Rd.	Residential	63.1	RW	RW	96
10	Holland Rd.	e/o Menifee Rd.	Residential	63.4	RW	RW	99
11	Holland Rd.	w/o Briggs Rd.	Residential	57.0	RW	RW	RW
12	Holland Rd.	w/o Leon Rd.	Residential	61.1	RW	RW	70
13	Scott Rd.	w/o Haun Rd.	Economic Dev. Corridor	68.4	RW	127	274
14	Scott Rd.	e/o Haun Rd.	Economic Dev. Corridor	70.1	77	166	357
15	Scott Rd.	w/o Menifee Rd.	Residential	71.0	89	192	413
16	Scott Rd.	w/o Briggs Rd.	Residential	70.4	80	173	373
17	Scott Rd.	w/o Leon Rd.	Residential	70.2	79	169	364
18	Scott Rd.	e/o Leon Rd.	Residential	70.6	83	179	386

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



		Road Segment	Adiacent	CNEL at Nearest	Distance to Contour from Centerline (Feet)		
ID	Road		Land Use ¹	Adjacent Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Haun Rd.	n/o Scott Rd.	Economic Dev. Corridor	67.9	RW	92	198
2	Zeiders Rd.	s/o Scott Rd.	Economic Dev. Corridor	60.5	RW	RW	64
3	Antelope Rd.	s/o Scott Rd.	Commercial	69.8	RW	124	267
4	Menifee Rd.	n/o Holland Rd.	Residential	65.9	RW	73	158
5	Menifee Rd.	s/o Holland Rd.	Residential	65.3	RW	67	145
6	Leon Rd.	s/o Craig Av.	Residential	56.8	RW	RW	RW
7	Leon Rd.	s/o Garbani Rd.	Residential	63.3	RW	RW	98
8	Leon Rd.	s/o Scott Rd.	Residential	69.2	RW	112	241
9	Holland Rd.	w/o Menifee Rd.	Residential	63.4	RW	RW	99
10	Holland Rd.	e/o Menifee Rd.	Residential	63.1	RW	RW	96
11	Holland Rd.	w/o Briggs Rd.	Residential	54.3	RW	RW	RW
12	Holland Rd.	w/o Leon Rd.	Residential	56.3	RW	RW	RW
13	Scott Rd.	w/o Haun Rd.	Economic Dev. Corridor	68.6	RW	133	287
14	Scott Rd.	e/o Haun Rd.	Economic Dev. Corridor	70.3	79	171	369
15	Scott Rd.	w/o Menifee Rd.	Residential	70.8	86	186	400
16	Scott Rd.	w/o Briggs Rd.	Residential	70.0	76	164	354
17	Scott Rd.	w/o Leon Rd.	Residential	69.9	RW	161	347
18	Scott Rd.	e/o Leon Rd.	Residential	70.7	85	183	395

TABLE 7-6: E	A 2025 WITHOUT	PROJECT BUILDOU	T 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. "RW" = Location of the respective noise contour falls within the right-of-way of the road.



	Road Seg	Segment Adjacent Land Use ¹	Adjacent	CNEL at Nearest	Distance to Contour from Centerline (Feet)		
ID			Land Use ¹	Adjacent Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Haun Rd.	n/o Scott Rd.	Economic Dev. Corridor	68.1	RW	95	205
2	Zeiders Rd.	s/o Scott Rd.	Economic Dev. Corridor	60.8	RW	RW	67
3	Antelope Rd.	s/o Scott Rd.	Commercial	70.0	59	127	273
4	Menifee Rd.	n/o Holland Rd.	Residential	66.1	RW	76	164
5	Menifee Rd.	s/o Holland Rd.	Residential	65.5	RW	69	148
6	Leon Rd.	s/o Craig Av.	Residential	67.8	RW	90	194
7	Leon Rd.	s/o Garbani Rd.	Residential	71.6	75	162	350
8	Leon Rd.	s/o Scott Rd.	Residential	69.8	RW	124	267
9	Holland Rd.	w/o Menifee Rd.	Residential	63.5	RW	RW	101
10	Holland Rd.	e/o Menifee Rd.	Residential	64.1	RW	RW	111
11	Holland Rd.	w/o Briggs Rd.	Residential	59.1	RW	RW	RW
12	Holland Rd.	w/o Leon Rd.	Residential	63.1	RW	RW	95
13	Scott Rd.	w/o Haun Rd.	Economic Dev. Corridor	68.8	RW	136	293
14	Scott Rd.	e/o Haun Rd.	Economic Dev. Corridor	70.5	82	177	382
15	Scott Rd.	w/o Menifee Rd.	Residential	71.7	99	213	459
16	Scott Rd.	w/o Briggs Rd.	Residential	71.1	90	194	418
17	Scott Rd.	w/o Leon Rd.	Residential	71.0	88	190	410
18	Scott Rd.	e/o Leon Rd.	Residential	71.0	89	192	413

TABLE 7-7: FA 202	5 WITH PROJECT		CONDITIONS	NOISE CONTOURS
		DOILDOOI	CONDITIONS	

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.

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



	Road Segment	Adiacent	CNEL at Nearest	Distance to Contour from Centerline (Feet)			
ID		Segment	Land Use ¹	Adjacent Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Haun Rd.	n/o Scott Rd.	Economic Dev. Corridor	71.6	76	163	351
2	Zeiders Rd.	s/o Scott Rd.	Economic Dev. Corridor	66.5	RW	74	160
3	Antelope Rd.	s/o Scott Rd.	Commercial	71.0	69	149	321
4	Menifee Rd.	n/o Holland Rd.	Residential	68.9	RW	116	249
5	Menifee Rd.	s/o Holland Rd.	Residential	69.0	RW	118	254
6	Leon Rd.	s/o Craig Av.	Residential	63.3	RW	RW	98
7	Leon Rd.	s/o Garbani Rd.	Residential	68.4	RW	100	215
8	Leon Rd.	s/o Scott Rd.	Residential	72.2	83	178	383
9	Holland Rd.	w/o Menifee Rd.	Residential	67.3	RW	83	180
10	Holland Rd.	e/o Menifee Rd.	Residential	67.3	RW	83	180
11	Holland Rd.	w/o Briggs Rd.	Residential	59.2	RW	RW	RW
12	Holland Rd.	w/o Leon Rd.	Residential	60.6	RW	RW	65
13	Scott Rd.	w/o Haun Rd.	Economic Dev. Corridor	70.4	81	174	374
14	Scott Rd.	e/o Haun Rd.	Economic Dev. Corridor	72.6	112	242	522
15	Scott Rd.	w/o Menifee Rd.	Residential	73.0	120	259	558
16	Scott Rd.	w/o Briggs Rd.	Residential	72.4	110	237	510
17	Scott Rd.	w/o Leon Rd.	Residential	71.7	99	214	461
18	Scott Rd.	e/o Leon Rd.	Residential	73.3	127	273	587

TABLE 7-8:	EAC 2021 WITHOUT	PHASE 1 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.

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



	Road Segment		Adiacent	CNEL at Nearest	Distance to Contour from Centerline (Feet)		
ID		Segment	Land Use ¹	Adjacent Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Haun Rd.	n/o Scott Rd.	Economic Dev. Corridor	71.7	76	164	354
2	Zeiders Rd.	s/o Scott Rd.	Economic Dev. Corridor	66.6	RW	75	162
3	Antelope Rd.	s/o Scott Rd.	Commercial	71.1	70	150	324
4	Menifee Rd.	n/o Holland Rd.	Residential	68.9	RW	117	251
5	Menifee Rd.	s/o Holland Rd.	Residential	69.0	RW	118	255
6	Leon Rd.	s/o Craig Av.	Residential	67.1	RW	82	176
7	Leon Rd.	s/o Garbani Rd.	Residential	71.3	72	156	337
8	Leon Rd.	s/o Scott Rd.	Residential	72.4	85	184	396
9	Holland Rd.	w/o Menifee Rd.	Residential	67.3	RW	83	180
10	Holland Rd.	e/o Menifee Rd.	Residential	67.5	RW	86	185
11	Holland Rd.	w/o Briggs Rd.	Residential	60.5	RW	RW	64
12	Holland Rd.	w/o Leon Rd.	Residential	63.1	RW	RW	95
13	Scott Rd.	w/o Haun Rd.	Economic Dev. Corridor	70.4	81	175	377
14	Scott Rd.	e/o Haun Rd.	Economic Dev. Corridor	72.6	114	245	528
15	Scott Rd.	w/o Menifee Rd.	Residential	73.3	126	272	587
16	Scott Rd.	w/o Briggs Rd.	Residential	72.8	116	251	541
17	Scott Rd.	w/o Leon Rd.	Residential	72.2	106	228	491
18	Scott Rd.	e/o Leon Rd.	Residential	73.4	129	278	598

TABLE 7-9:	EAC 2021 WITH PHASE 1	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. "RW" = Location of the respective noise contour falls within the right-of-way of the road.



			Adjacent	CNEL at Nearest	Distance to Contour from Centerline (Feet)		
ID	Road	ad Segment Land Use ¹		Adjacent Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Haun Rd.	n/o Scott Rd.	Economic Dev. Corridor	72.5	87	187	403
2	Zeiders Rd.	s/o Scott Rd.	Economic Dev. Corridor	67.6	RW	88	189
3	Antelope Rd.	s/o Scott Rd.	Commercial	71.6	76	164	352
4	Menifee Rd.	n/o Holland Rd.	Residential	69.7	RW	132	284
5	Menifee Rd.	s/o Holland Rd.	Residential	69.9	RW	136	292
6	Leon Rd.	s/o Craig Av.	Residential	65.5	RW	64	138
7	Leon Rd.	s/o Garbani Rd.	Residential	69.3	RW	114	247
8	Leon Rd.	s/o Scott Rd.	Residential	73.1	95	204	439
9	Holland Rd.	w/o Menifee Rd.	Residential	68.1	RW	95	206
10	Holland Rd.	e/o Menifee Rd.	Residential	68.2	RW	96	207
11	Holland Rd.	w/o Briggs Rd.	Residential	60.1	RW	RW	60
12	Holland Rd.	w/o Leon Rd.	Residential	61.9	RW	RW	79
13	Scott Rd.	w/o Haun Rd.	Economic Dev. Corridor	71.1	90	193	417
14	Scott Rd.	e/o Haun Rd.	Economic Dev. Corridor	73.3	127	273	587
15	Scott Rd.	w/o Menifee Rd.	Residential	73.8	135	292	628
16	Scott Rd.	w/o Briggs Rd.	Residential	73.2	124	267	576
17	Scott Rd.	w/o Leon Rd.	Residential	72.5	111	239	515
18	Scott Rd.	e/o Leon Rd.	Residential	74.2	144	310	669

TABLE 7-10:	EAC 2025 WITHOU	JT PROJECT BUILDO	UT CONDITIONS NO	SE CONTOURS

¹ Sources: County of Riverside General Plan, Harvest Area Land Use Plan and the City of Menifee General Plan Land Use Map. 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.

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



			Adjacent	CNEL at Nearest	Distance to Contour from Centerline (Feet)		
ID	Road	Land Use ¹		Adjacent Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Haun Rd.	n/o Scott Rd.	Economic Dev. Corridor	72.6	88	189	408
2	Zeiders Rd.	s/o Scott Rd.	Economic Dev. Corridor	67.7	RW	89	191
3	Antelope Rd.	s/o Scott Rd.	Commercial	71.7	77	166	358
4	Menifee Rd.	n/o Holland Rd.	Residential	69.8	RW	134	289
5	Menifee Rd.	s/o Holland Rd.	Residential	69.9	RW	137	294
6	Leon Rd.	s/o Craig Av.	Residential	69.6	RW	119	257
7	Leon Rd.	s/o Garbani Rd.	Residential	73.2	96	207	447
8	Leon Rd.	s/o Scott Rd.	Residential	73.4	99	213	458
9	Holland Rd.	w/o Menifee Rd.	Residential	68.2	RW	96	207
10	Holland Rd.	e/o Menifee Rd.	Residential	68.5	RW	101	217
11	Holland Rd.	w/o Briggs Rd.	Residential	61.9	RW	RW	79
12	Holland Rd.	w/o Leon Rd.	Residential	65.0	RW	59	127
13	Scott Rd.	w/o Haun Rd.	Economic Dev. Corridor	71.2	91	196	422
14	Scott Rd.	e/o Haun Rd.	Economic Dev. Corridor	73.4	129	278	598
15	Scott Rd.	w/o Menifee Rd.	Residential	74.2	146	314	676
16	Scott Rd.	w/o Briggs Rd.	Residential	73.7	135	291	627
17	Scott Rd.	w/o Leon Rd.	Residential	73.1	122	263	567
18	Scott Rd.	e/o Leon Rd.	Residential	74.3	147	317	682

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¹ Sources: County of Riverside General Plan, Harvest Area Land Use Plan and the City of Menifee General Plan Land Use Map. 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.

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



7.2 EXISTING CONDITION PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-1 presents the Existing without Project conditions CNEL noise levels. The without Project exterior noise levels are expected to range from 52.7 to 70.2 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography.

7.2.1 EXISTING WITH PHASE 1 PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-2 shows the Existing with Phase 1 conditions will range from 57.0 to 70.8 dBA CNEL. As shown on Table 7-12, Phase 1 Project traffic will generate noise level increases ranging from 0.0 to 8.6 dBA CNEL on the study area roadway segments. Based on the significance criteria in Section 4, the Project-related noise level increases are considered *potentially significant* under Existing with Phase 1 conditions at noise-sensitive the land uses adjacent to the roadway segments identified below:

- Leon Road south of Craig Avenue (Segment #6);
- Leon Road south of Garbani Road (Segment #7).

Due to low existing traffic volumes on these roadway segments, the Phase 1 Project traffic volume contributions would result in *potentially significant* off-site traffic noise level increases under Existing with Phase 1 conditions, even though this scenario will not actually occur until Phase 1 is built and occupied under Year 2021 conditions. All other roadway segments would experience *less than significant* off-site traffic noise level impacts.

7.2.2 EXISTING WITH PROJECT BUILDOUT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-3 shows the Existing with Project Buildout conditions will range from 58.8 to 71.5 dBA CNEL. As shown on Table 7-13, Project Buildout traffic will generate noise level increases ranging from 0.0 to 11.0 dBA CNEL on the study area roadway segments. Based on the significance criteria in Section 4, the Project-related noise level increases are considered *potentially significant* under Existing with Project Buildout conditions at the noise-sensitive land uses adjacent to the following roadway segments:

- Leon Road south of Craig Avenue (Segment #6);
- Leon Road south of Garbani Road (Segment #7);
- Holland Road west of Briggs Road (Segment #11).

Due to low existing traffic volumes on these roadway segments, the Project Buildout traffic volume contributions would result in *potentially significant* off-site traffic noise level increases under Existing with Project Buildout conditions, even though this scenario will not actually occur until the Project is built out and occupied under Year 2025 conditions. All other roadway segments would experience *less than significant* off-site traffic noise level impacts.



ID	Road	Segment	Adjacent Land Use ¹	CN La	EL at Adjac nd Use (dB	Noise- Sensitive Land	Threshold Exceeded? ³	
				No Project	With Project	Project Addition	Use?	
1	Haun Rd.	n/o Scott Rd.	Economic Dev. Corridor	67.3	67.4	0.1	No	No
2	Zeiders Rd.	s/o Scott Rd.	Economic Dev. Corridor	59.8	60.2	0.3	No	No
3	Antelope Rd.	s/o Scott Rd.	Commercial	69.3	69.4	0.1	No	No
4	Menifee Rd.	n/o Holland Rd.	Residential	65.3	65.4	0.1	Yes	No
5	Menifee Rd.	s/o Holland Rd.	Residential	64.7	64.8	0.1	Yes	No
6	Leon Rd.	s/o Craig Av.	Residential	56.8	65.4	8.6	Yes	Yes
7	Leon Rd.	s/o Garbani Rd.	Residential	62.7	69.3	6.6	Yes	Yes
8	Leon Rd.	s/o Scott Rd.	Residential	68.6	69.0	0.5	Yes	No
9	Holland Rd.	w/o Menifee Rd.	Residential	62.9	62.9	0.0	Yes	No
10	Holland Rd.	e/o Menifee Rd.	Residential	62.6	63.1	0.6	Yes	No
11	Holland Rd.	w/o Briggs Rd.	Residential	52.7	57.0	4.3	Yes	No
12	Holland Rd.	w/o Leon Rd.	Residential	n/a	n/a	n/a	n/a	n/a
13	Scott Rd.	w/o Haun Rd.	Economic Dev. Corridor	68.0	68.1	0.1	No	No
14	Scott Rd.	e/o Haun Rd.	Economic Dev. Corridor	69.7	69.8	0.1	No	No
15	Scott Rd.	w/o Menifee Rd.	Residential	70.2	70.8	0.6	Yes	No
16	Scott Rd.	w/o Briggs Rd.	Residential	69.4	70.1	0.7	Yes	No
17	Scott Rd.	w/o Leon Rd.	Residential	69.3	70.0	0.7	Yes	No
18	Scott Rd.	e/o Leon Rd.	Residential	70.1	70.4	0.2	Yes	No

TABLE 7-12: EXISTING WITH PHASE 1 OFF-SITE TRAFFIC NOISE IMPACTS

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

³ Significance Criteria (Section 4).

"n/a" = Roadway segment does is not yet paved (e.g., existing dirt road or the segment does not exist under the current scenario).



ID	Road	Segment	Adjacent Land Use ¹	CNEL at Adjacent Land Use (dBA) ² No With Project Project Project Addition		Noise- Sensitive Land Use?	Threshold Exceeded? ³	
1	Llaura Del	a la Caatt Dal	Francis Day, Camidan				N -	Nia
1	Haun Ka.	n/o Scott Rd.	Economic Dev. Corridor	67.3	67.5	0.3	NO	NO
2	Zeiders Rd.	s/o Scott Rd.	Economic Dev. Corridor	59.8	60.2	0.3	NO	NO
3	Antelope Rd.	s/o Scott Rd.	Commercial	69.3	69.4	0.2	No	No
4	Menifee Rd.	n/o Holland Rd.	Residential	65.3	65.5	0.3	Yes	No
5	Menifee Rd.	s/o Holland Rd.	Residential	64.7	64.9	0.2	Yes	No
6	Leon Rd.	s/o Craig Av.	Residential	56.8	67.8	11.0	Yes	Yes
7	Leon Rd.	s/o Garbani Rd.	Residential	62.7	71.5	8.8	Yes	Yes
8	Leon Rd.	s/o Scott Rd.	Residential	68.6	69.3	0.7	Yes	No
9	Holland Rd.	w/o Menifee Rd.	Residential	62.9	63.0	0.1	Yes	No
10	Holland Rd.	e/o Menifee Rd.	Residential	62.6	63.6	1.1	Yes	No
11	Holland Rd.	w/o Briggs Rd.	Residential	52.7	58.8	6.0	Yes	Yes
12	Holland Rd.	w/o Leon Rd.	Residential	n/a	n/a	n/a	n/a	n/a
13	Scott Rd.	w/o Haun Rd.	Economic Dev. Corridor	68.0	68.2	0.2	No	No
14	Scott Rd.	e/o Haun Rd.	Economic Dev. Corridor	69.7	70.0	0.3	No	No
15	Scott Rd.	w/o Menifee Rd.	Residential	70.2	71.2	1.0	Yes	No
16	Scott Rd.	w/o Briggs Rd.	Residential	69.4	70.7	1.2	Yes	No
17	Scott Rd.	w/o Leon Rd.	Residential	69.3	70.5	1.2	Yes	No
18	Scott Rd.	e/o Leon Rd.	Residential	70.1	70.4	0.3	Yes	No

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

³ Significance Criteria (Section 4).

"n/a" = Roadway segment does is not yet paved (e.g., existing dirt road or the segment does not exist under the current scenario).

7.3 EA 2021 Phase 1 Traffic Noise Level Contributions

Table 7-4 presents the Existing plus Ambient Growth (EA) 2021 without Phase 1 Project conditions CNEL noise levels. The without Project exterior noise levels are expected to range from 53.0 to 70.5 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-5 shows the EA 2021 with Phase 1 conditions will range from 57.0 to 71.0 dBA CNEL. As shown on Table 7-14, Phase 1 Project traffic will generate noise level increases ranging from 0.0 to 8.6 dBA CNEL on the study area roadway segments. Based on the significance criteria in Section 4, the Project-related noise level increases are considered *potentially significant* under EA 2021 with Phase 1 conditions at noise-sensitive the land uses adjacent to the roadway segments identified below:

- Leon Road south of Craig Avenue (Segment #6);
- Leon Road south of Garbani Road (Segment #7);
- Holland Road west of Leon Road (Segment #12).



Due to low without Project traffic volumes on these roadway segments, the Phase 1 Project traffic volume contributions would result in *potentially significant* off-site traffic noise level increases under EA 2021 with Phase 1 conditions. All other roadway segments would experience *less than significant* off-site traffic noise level impacts.

ID	Road	Segment	Adjacent Land Use ¹	CNEL at Adjacent Land Use (dBA) ² No With Project Project Project Addition		Noise- Sensitive Land Use?	Threshold Exceeded? ³	
1	Haun Rd.	n/o Scott Rd.	Economic Dev. Corridor	67.5	67.7	0.1	No	No
2	Zeiders Rd.	s/o Scott Rd.	Economic Dev. Corridor	60.2	60.5	0.3	No	No
3	Antelope Rd.	s/o Scott Rd.	Commercial	69.5	69.6	0.1	No	No
4	Menifee Rd.	n/o Holland Rd.	Residential	65.5	65.7	0.1	Yes	No
5	Menifee Rd.	s/o Holland Rd.	Residential	65.0	65.1	0.1	Yes	No
6	Leon Rd.	s/o Craig Av.	Residential	56.8	65.4	8.6	Yes	Yes
7	Leon Rd.	s/o Garbani Rd.	Residential	63.3	69.5	6.2	Yes	Yes
8	Leon Rd.	s/o Scott Rd.	Residential	68.9	69.3	0.4	Yes	No
9	Holland Rd.	w/o Menifee Rd.	Residential	63.1	63.1	0.0	Yes	No
10	Holland Rd.	e/o Menifee Rd.	Residential	62.9	63.4	0.5	Yes	No
11	Holland Rd.	w/o Briggs Rd.	Residential	53.0	57.0	4.0	Yes	No
12	Holland Rd.	w/o Leon Rd.	Residential	56.0	61.1	5.1	Yes	Yes
13	Scott Rd.	w/o Haun Rd.	Economic Dev. Corridor	68.3	68.4	0.1	No	No
14	Scott Rd.	e/o Haun Rd.	Economic Dev. Corridor	70.0	70.1	0.1	No	No
15	Scott Rd.	w/o Menifee Rd.	Residential	70.5	71.0	0.6	Yes	No
16	Scott Rd.	w/o Briggs Rd.	Residential	69.7	70.4	0.7	Yes	No
17	Scott Rd.	w/o Leon Rd.	Residential	69.5	70.2	0.7	Yes	No
18	Scott Rd.	e/o Leon Rd.	Residential	70.4	70.6	0.2	Yes	No

TABLE 7-14: EA 2021 WITH PHASE 1 OFF-SITE TRAFFIC NOISE IMPACTS

¹Sources: County of Riverside General Plan, Harvest Area Land Use Plan and the City of Menifee General Plan Land Use Map.

² The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use. ³ Significance Criteria (Section 4).

7.4 EA 2025 PROJECT BUILDOUT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-6 presents the EA 2025 without Project Buildout conditions CNEL noise levels. The without Project exterior noise levels are expected to range from 54.3 to 70.8 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-7 shows the EA 2025 with Project Buildout conditions will range from 59.1 to 71.7 dBA CNEL. As shown on Table 7-15, Project Buildout traffic will generate noise level increases ranging from 0.1 to 11.0 dBA CNEL on the study area roadway segments. Based on the significance criteria in Section 4, the Project-related noise level increases are considered *potentially significant* under EA 2025 with Project Buildout conditions at noise-sensitive the land uses adjacent to the roadway segments identified below:



- Leon Road south of Craig Avenue (Segment #6);
- Leon Road south of Garbani Road (Segment #7);
- Holland Road west of Leon Road (Segment #12).

Due to low without Project traffic volumes on these roadway segments, the Project Buildout traffic volume contributions would result in *potentially significant* off-site traffic noise level increases under EA 2025 with Project Buildout conditions. All other roadway segments would experience *less than significant* off-site traffic noise level impacts.

ID	Road	Segment	Adjacent Land Use ¹	CN La	EL at Adjac nd Use (dB	Noise- Sensitive Land	Threshold Exceeded? ³	
				No Project	With Project	Project Addition	Use?	
1	Haun Rd.	n/o Scott Rd.	Economic Dev. Corridor	67.9	68.1	0.2	No	No
2	Zeiders Rd.	s/o Scott Rd.	Economic Dev. Corridor	60.5	60.8	0.3	No	No
3	Antelope Rd.	s/o Scott Rd.	Commercial	69.8	70.0	0.1	No	No
4	Menifee Rd.	n/o Holland Rd.	Residential	65.9	66.1	0.2	Yes	No
5	Menifee Rd.	s/o Holland Rd.	Residential	65.3	65.5	0.1	Yes	No
6	Leon Rd.	s/o Craig Av.	Residential	56.8	67.8	11.0	Yes	Yes
7	Leon Rd.	s/o Garbani Rd.	Residential	63.3	71.6	8.3	Yes	Yes
8	Leon Rd.	s/o Scott Rd.	Residential	69.2	69.8	0.6	Yes	No
9	Holland Rd.	w/o Menifee Rd.	Residential	63.4	63.5	0.1	Yes	No
10	Holland Rd.	e/o Menifee Rd.	Residential	63.1	64.1	0.9	Yes	No
11	Holland Rd.	w/o Briggs Rd.	Residential	54.3	59.1	4.8	Yes	No
12	Holland Rd.	w/o Leon Rd.	Residential	56.3	63.1	6.8	Yes	Yes
13	Scott Rd.	w/o Haun Rd.	Economic Dev. Corridor	68.6	68.8	0.1	No	No
14	Scott Rd.	e/o Haun Rd.	Economic Dev. Corridor	70.3	70.5	0.2	No	No
15	Scott Rd.	w/o Menifee Rd.	Residential	70.8	71.7	0.9	Yes	No
16	Scott Rd.	w/o Briggs Rd.	Residential	70.0	71.1	1.1	Yes	No
17	Scott Rd.	w/o Leon Rd.	Residential	69.9	71.0	1.1	Yes	No
18	Scott Rd.	e/o Leon Rd.	Residential	70.7	71.0	0.3	Yes	No

TABLE 7-15: EA 2025 WITH PROJECT BUILDOUT OFF-SITE TRAFFIC NOISE IMPACTS

¹Sources: County of Riverside General Plan, Harvest Area Land Use Plan and the City of Menifee General Plan Land Use Map. ²The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.

³ Significance Criteria (Section 4).

7.5 EAC 2021 Phase 1 Traffic Noise Level Contributions

Table 7-8 presents the Existing plus Ambient Growth plus Cumulative Developments (EAC) 2021 without Phase 1 Project conditions CNEL noise levels. The without Project exterior noise levels are expected to range from 59.2 to 73.3 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-9 shows the EAC 2021 with Phase 1 conditions will range from 60.5 to 73.4 dBA CNEL. As shown on Table 7-16, Phase 1 Project traffic will generate noise level increases ranging from 0.0 to 3.8 dBA CNEL on the study area roadway



segments. Based on the significance criteria in Section 4, the Project-related noise level increases are considered *potentially significant* under EAC 2021 with Phase 1 conditions at noise-sensitive the land uses adjacent to the roadway segments identified below:

- Leon Road south of Craig Avenue (Segment #6);
- Leon Road south of Garbani Road (Segment #7).

Due to low without Project traffic volumes on these roadway segments, the Phase 1 Project traffic volume contributions would result in *potentially significant* off-site traffic noise level increases under EAC 2021 with Phase 1 conditions. Note that with the addition of background traffic from cumulative developments in the Project study area, the Project increases will be reduced, however, Project-only off-site traffic noise level increases will still result in *potentially significant* impacts on roadway segments 6 and 7. All other roadway segments would experience *less than significant* off-site traffic noise level impacts.

ID	Road	Segment	Adjacent Land Use ¹	CN La	EL at Adjac nd Use (dB	Noise- Sensitive Land Use?	Threshold Exceeded? ³	
				No Project	With Project	Project Addition	036:	
1	Haun Rd.	n/o Scott Rd.	Economic Dev. Corridor	71.6	71.7	0.0	No	No
2	Zeiders Rd.	s/o Scott Rd.	Economic Dev. Corridor	66.5	66.6	0.1	No	No
3	Antelope Rd.	s/o Scott Rd.	Commercial	71.0	71.1	0.1	No	No
4	Menifee Rd.	n/o Holland Rd.	Residential	68.9	68.9	0.1	Yes	No
5	Menifee Rd.	s/o Holland Rd.	Residential	69.0	69.0	0.0	Yes	No
6	Leon Rd.	s/o Craig Av.	Residential	63.3	67.1	3.8	Yes	Yes
7	Leon Rd.	s/o Garbani Rd.	Residential	68.4	71.3	2.9	Yes	Yes
8	Leon Rd.	s/o Scott Rd.	Residential	72.2	72.4	0.2	Yes	No
9	Holland Rd.	w/o Menifee Rd.	Residential	67.3	67.3	0.0	Yes	No
10	Holland Rd.	e/o Menifee Rd.	Residential	67.3	67.5	0.2	Yes	No
11	Holland Rd.	w/o Briggs Rd.	Residential	59.2	60.5	1.4	Yes	No
12	Holland Rd.	w/o Leon Rd.	Residential	60.6	63.1	2.5	Yes	No
13	Scott Rd.	w/o Haun Rd.	Economic Dev. Corridor	70.4	70.4	0.0	No	No
14	Scott Rd.	e/o Haun Rd.	Economic Dev. Corridor	72.6	72.6	0.1	No	No
15	Scott Rd.	w/o Menifee Rd.	Residential	73.0	73.3	0.3	Yes	No
16	Scott Rd.	w/o Briggs Rd.	Residential	72.4	72.8	0.4	Yes	No
17	Scott Rd.	w/o Leon Rd.	Residential	71.7	72.2	0.4	Yes	No
18	Scott Rd.	e/o Leon Rd.	Residential	73.3	73.4	0.1	Yes	No

TABLE 7-16: EAC 2021 WITH PHASE 1 OFF-SITE TRAFFIC NOISE IMPACTS

¹Sources: County of Riverside General Plan, Harvest Area Land Use Plan and the City of Menifee General Plan Land Use Map.

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

³ Significance Criteria (Section 4).



7.6 EAC 2025 PROJECT BUILDOUT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-10 presents the EAC 2025 without Project Buildout conditions CNEL noise levels. The without Project exterior noise levels are expected to range from 60.1 to 74.2 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-11 shows the EAC 2025 with Project Buildout conditions will range from 61.9 to 74.3 dBA CNEL. As shown on Table 7-17, Project Buildout traffic will generate noise level increases ranging from 0.0 to 4.4 dBA CNEL on the study area roadway segments. Based on the significance criteria in Section 4, the Project-related noise level increases are considered *potentially significant* under EAC 2025 with Project Buildout conditions at noise-sensitive the land uses adjacent to the roadway segments identified below:

- Leon Road south of Craig Avenue (Segment #6);
- Leon Road south of Garbani Road (Segment #7);
- Holland Road west of Leon Road (Segment #12).

Due to low without Project traffic volumes on these roadway segments, the Project Buildout traffic volume contributions would result in *potentially significant* off-site traffic noise level increases under EAC 2025 with Project Buildout conditions. Note that with the addition of background traffic from cumulative developments in the Project study area, the Project increases will be reduced, however, Project-only off-site traffic noise level increases will still result in *potentially significant* impacts on roadway segments 6, 7, and 12. All other roadway segments would experience *less than significant* off-site traffic noise level impacts.



ID	Road	Segment	Adjacent Land Use ¹	CNEL at Adjacent Land Use (dBA) ² No With Project Project Project Addition		Noise- Sensitive Land Use?	Threshold Exceeded? ³	
1	Haun Rd.	n/o Scott Rd.	Economic Dev. Corridor	72.5	72.6	0.1	No	No
2	Zeiders Rd.	s/o Scott Rd.	Economic Dev. Corridor	67.6	67.7	0.1	No	No
3	Antelope Rd.	s/o Scott Rd.	Commercial	71.6	71.7	0.1	No	No
4	Menifee Rd.	n/o Holland Rd.	Residential	69.7	69.8	0.1	Yes	No
5	Menifee Rd.	s/o Holland Rd.	Residential	69.9	69.9	0.0	Yes	No
6	Leon Rd.	s/o Craig Av.	Residential	65.5	69.6	4.0	Yes	Yes
7	Leon Rd.	s/o Garbani Rd.	Residential	69.3	73.2	3.9	Yes	Yes
8	Leon Rd.	s/o Scott Rd.	Residential	73.1	73.4	0.3	Yes	No
9	Holland Rd.	w/o Menifee Rd.	Residential	68.1	68.2	0.0	Yes	No
10	Holland Rd.	e/o Menifee Rd.	Residential	68.2	68.5	0.3	Yes	No
11	Holland Rd.	w/o Briggs Rd.	Residential	60.1	61.9	1.9	Yes	No
12	Holland Rd.	w/o Leon Rd.	Residential	61.9	65.0	3.1	Yes	Yes
13	Scott Rd.	w/o Haun Rd.	Economic Dev. Corridor	71.1	71.2	0.1	No	No
14	Scott Rd.	e/o Haun Rd.	Economic Dev. Corridor	73.3	73.4	0.1	No	No
15	Scott Rd.	w/o Menifee Rd.	Residential	73.8	74.2	0.5	Yes	No
16	Scott Rd.	w/o Briggs Rd.	Residential	73.2	73.7	0.6	Yes	No
17	Scott Rd.	w/o Leon Rd.	Residential	72.5	73.1	0.6	Yes	No
18	Scott Rd.	e/o Leon Rd.	Residential	74.2	74.3	0.1	Yes	No

TABLE 7-17: EAC 2025 WITH PROJECT BUILDOUT OFF-SITE TRAFFIC NOISE IMPACTS

¹Sources: County of Riverside General Plan, Harvest Area Land Use Plan and the City of Menifee General Plan Land Use Map.

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

³ Significance Criteria (Section 4).

7.7 OFF-SITE PROJECT TRAFFIC NOISE LEVEL IMPACTS

The findings of this off-site traffic noise level analysis indicate that Project-related off-site traffic noise level increases will result in *potentially significant* noise impacts at noise-sensitive land uses adjacent to three of the 18 study area roadway segments, as identified below:

- Leon Road south of Craig Avenue (Segment #6);
- Leon Road south of Garbani Road (Segment #7);
- Holland Road west of Leon Road (Segment #12).

To reduce the *potentially significant* Project traffic noise level increases on study area roadways, potential noise mitigation measures are identified below. Potential mitigation using rubberized asphalt hot mix pavement is discussed below for the impacted roadway segments.

7.5.1 RUBBERIZED ASPHALT

Due to the potential noise attenuation benefits, rubberized asphalt is considered as a mitigation measure for the Project-related roadway improvements associated with Project construction. In an effort to reduce traffic noise levels at the noise source, Caltrans research has shown that rubberized asphalt can provide noise attenuation of approximately 4 dBA for automobile traffic noise levels. (25) Changing the pavement type of a roadway has been shown to reduce the amount of tire/pavement noise produced at the source under both near-term and long-term conditions. Traffic noise is generated primarily by the interaction of the tires and pavement, the engine, and exhaust systems. For automobiles noise, as much as 75 to 90-percent of traffic noise is generated by the interaction of the tires and pavement, especially when traveling at higher and constant speeds. (26) According to research conducted by Caltrans (25) and the Canadian Ministry of Transportation and Highways (27) a 4 dBA reduction in tire/pavement noise is attainable using rubberized asphalt under typical operating conditions. The 4 dBA reduction is the average reduction at distant receiving sites per the *I-80 Davis OGAC Pavement Noise Study* prepared in December 2002 and is used in this noise study as a conservative noise reduction so as to not overstate the effectiveness of rubberized asphalt mitigation over time.

By incorporating rubberized asphalt overlays into off-site roadway improvements within the County of Riverside, the off-site traffic noise level increases from automobile traffic can be reduced by roughly 4 dBA at the adjacent land uses. While rubberized asphalt will provide some noise reduction, this noise study recognizes that this is only effective for tire-on-pavement noise at higher speeds of Project automobile traffic, as rubberized asphalt would not reduce truck-related off-site traffic noise levels associated with truck engine and exhaust stacks to less than significant impacts.

While off-site Project-related traffic noise level increases at adjacent land uses under all scenarios would be reduced, a *significant and unavoidable* impact would remain at uses adjacent to Leon Road south of Craig Avenue (Segment #6). The use of rubberized asphalt mitigation by the Project would serve to reduce the noise level increases at neighboring noise-sensitive land uses and shall be required as an off-site traffic noise mitigation measure. The off-site roadway



segments within the County of Riverside requiring implementation of a rubberized asphalt hot mix overlay are listed below:

- Leon Road south of Craig Avenue (Segment #6);
- Leon Road south of Garbani Road (Segment #7);
- Holland Road west of Leon Road (Segment #12).

7.5.2 OFF-SITE NOISE BARRIERS

Existing and future noise-sensitive residential homes are and would be located adjacent to the impacted roadway segments in the Project study area, and therefore, off-site noise barriers are considered in this analysis as potential traffic noise mitigation to reduce the impacts at the noise-sensitive land uses. Off-site noise barriers are estimated to provide a *readily perceptible* 5 dBA reduction which, according to the FHWA, is *simple* to attain when blocking the line-of-sight from the noise source to the receiver. (8)

As previously discussed, Caltrans guidance in the Highway Design Manual, Section 1102.3(3), indicates that for design purposes, *the noise barrier should intercept the line of sight from the exhaust stack of a truck to the receptor*, and an 11.5-foot-high truck stack height is assumed to represent the truck engine and exhaust noise source. (28) Therefore, any exterior noise barriers at residential homes experiencing Project-related traffic noise level increases would need to be high enough and long enough to block the line-of-sight from the noise source (at 11.5 feet high per Caltrans) to the receiver (at 5 feet high per FHWA guidance) in order to provide a 5 dBA reduction per FHWA guidance. (8; 28) To break the line of sight, a minimum exterior noise barrier height of 8 feet is estimated to be required for the residential outdoor living areas adjacent to the impacted roadway segments. According to FHWA guidance, outdoor living areas are generally limited to outdoor living areas of frequent human use (e.g., backyards of single-family homes). Therefore, front and side yards of residential homes adjacent to off-site roadway segments do not represent noise-sensitive areas of frequent human use that require exterior noise mitigation. (8)

Exterior noise mitigation in the form of minimum 8-foot high noise barriers for the land uses adjacent to the impacted roadway segments is not anticipated to provide the FHWA attainable reduction of 5 dBA required to reduce the off-site traffic noise level increases as their construction would also require potential openings for driveway access for, and the approval of, individual residential lots adjacent to each road. As such, for this analysis, off-site noise barriers are not anticipated to reduce impacts at all impacted sensitive uses, and therefore, would not lower the off-site traffic noise levels below a level of significance.


7.5.3 SIGNIFICANT OFF-SITE TRAFFIC NOISE IMPACTS

Rubberized asphalt is considered as potential noise mitigation measure to reduce the *potentially significant* Project-related off-site traffic noise level increases under all with Project scenarios. However, this mitigation would not entirely eliminate the off-site traffic noise level increases associated with Project trips at the adjacent land uses, and will still result in a *significant and unavoidable* impact at one of the impacted roadway segments:

• Leon Road south of Craig Avenue (Segment #6).

A review of Nearmap aerial imagery (dated September 6, 2018) indicates that the existing land uses adjacent to Leon Road, south of Craig Avenue, include residential homes which have driveways and front yards adjacent to Leon Road. As such, off-site noise barriers at these locations are not considered as mitigation for these existing residential uses as they would not provide a continuous barrier required to provide the reduction previously described based on FHWA guidance due to driveway openings at Leon Road. Further, construction of off-site noise barriers may require approval of individual property owners and cannot be guaranteed by this noise study. Future residential uses adjacent to this roadway segment would be analyzed based on County of Riverside noise study guidelines which require a noise study be prepared which identifies exterior noise mitigation for each individual project based on future traffic conditions. Therefore, with the rubberized asphalt hot mix mitigation identified in this study, the impacts would be reduced but not eliminated at the existing sensitive uses adjacent to Leon Road, south of Craig Avenue.

Moreover, due to the low without Project traffic volumes on the impacted roadway segments, the addition of Project-only traffic volumes results in a *significant and unavoidable* impact with mitigation. Since many of these roadway segments are not yet built out to their Circulation Element classification specifications, the Project will be one of the earlier developments generating traffic on these roadway segments. All other roadway segments will experience *less than significant* off-site traffic noise level increases with Project traffic and the rubber asphalt mitigation, however, impacts on Segment 6 remain *significant and unavoidable*.



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8 ON-SITE TRANSPORTATION NOISE IMPACTS

An on-site exterior noise impact analysis has been completed to determine the traffic noise exposure and to identify potential necessary noise abatement measures for the proposed Canterwood (Tentative Tract Map No. 37439) Project. It is expected that the primary source of noise impacts to the Project site will be traffic noise from Leon Road, Holland Road, Eucalyptus Road, and Craig Avenue. The Project will also experience some background traffic noise impacts from the Project's internal local streets, however, due to the low traffic volume/speeds, traffic noise from these roads will not make a significant contribution to the noise environment beyond of the right-of-way of the roadways.

8.1 ON-SITE EXTERIOR NOISE ANALYSIS

Using the FHWA traffic noise prediction model and the parameters outlined in Tables 6-3 to 6-5, the expected future exterior noise levels at the outdoor living areas (backyards) of single-family lots were calculated. Table 8-1 presents a summary of future exterior noise level impacts at the outdoor living areas (backyards) within the Project site. The future unmitigated exterior traffic noise levels are shown to range from 65.3 to 75.1 dBA CNEL and exceed the County of Riverside 65 dBA CNEL standard for residential uses, therefore, impacts are considered *potentially significant*. The on-site traffic noise analysis calculations are provided in Appendix 5.1.

To satisfy the County of Riverside 65 dBA CNEL exterior noise level standards for residential land use, the construction of the following noise barriers is required:

- 8-foot high noise barriers for outdoor living areas (backyards) of lots 31 to 50, 136 to 149,151 to 153, and 334 to 340 adjacent to Leon Road and Holland Road;
- 6-foot high noise barriers for outdoor living areas (backyards) of lots 7 to 30, 154, 157 to 162, 287 to 296, 347 to 360, 464 to 472, and 558 to 574 adjacent to Eucalyptus Road and Craig Avenue.

With the recommended noise barriers shown on Exhibit ES-A, the mitigated future exterior noise levels will range from 59.7 to 64.6 dBA CNEL and impacts will be reduced to *less than significant*. This noise analysis shows that the recommended noise barriers will satisfy the County of Riverside 65 dBA CNEL exterior noise level standards for residential land use. The effective noise barrier height recommendations represent the minimum wall and/or berm combination height required to satisfy the County of Riverside exterior noise level standards.



Lot Number	Roadway	Unmitigated Exterior Noise Level (dBA CNEL)	Mitigated Exterior Noise Level (dBA CNEL)	Barrier Height (Feet)	Exterior Noise Level Threshold (dBA CNEL) ¹	Threshold Exceeded?
38	Holland Rd.	74.8	63.5	8.0'	65	No
146	Holland Rd.	74.8	64.6	8.0'	65	No
29	Leon Rd.	70.9	62.9	6.0'	65	No
344	Leon Rd.	75.1	64.3	8.0'	65	No
158	Eucalyptus Rd.	70.1	63.4	6.0'	65	No
472	Eucalyptus Rd.	65.3	59.7	6.0'	65	No
350	Craig. Av.	70.1	63.8	6.0'	65	No
564	Craig. Av.	70.0	63.8	6.0'	65	No

TABLE 8-1: EXTERIOR NOISE LEVELS (CNEL)

¹Source: County of Riverside Office of Industrial Hygiene noise study guidelines.

8.2 ON-SITE INTERIOR NOISE ANALYSIS

To ensure that the interior noise levels comply with the County of Riverside 45 dBA CNEL interior noise standard for residential land use, future noise levels were calculated at the first and second-floor building façades.

8.2.1 NOISE REDUCTION METHODOLOGY

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

8.2.2 INTERIOR NOISE LEVEL ASSESSMENT

To provide the necessary interior noise level reduction, Tables 8-2 and 8-3 indicate that the residential homes within the Project site will require a windows-closed condition and a means of mechanical ventilation (e.g. air conditioning). Table 8-2 shows that the future unmitigated noise levels at first-floor building façades are expected to range from 59.8 to 67.8 dBA CNEL and standard windows and sliding glass doors with minimum sound transmission class (STC) ratings of 27 will satisfy the County of Riverside 45 dBA CNEL interior noise standard for residential land use.



Table 8-3 shows that the future unmitigated noise levels at second-floor building façades are expected to range from 65.1 to 74.5 dBA CNEL and upgraded windows and sliding glass doors with minimum STC ratings of 32 are required for all windows/glass doors facing Leon Road and Holland Road in lots 31 to 50, 136 to 149,151 to 153, and 334 to 340 to satisfy the County of Riverside 45 dBA CNEL interior noise standard for residential land use. All other residential lots will satisfy the County of Riverside 45 dBA CNEL interior noise standard for residential land use with standard second-floor windows/glass doors with minimum STC ratings of 27. Additional interior noise reduction recommendations are outlined in the Executive Summary.

Lot Number	Roadway	Noise Level @ Façade ¹	Required Interior NR ²	Estimated Interior NR ³	Upgraded Windows⁴	Interior Noise Level⁵	Threshold	Threshold Exceeded?
38	Holland Rd.	66.3	21.3	25.0	No	41.3	45	No
146	Holland Rd.	67.8	22.8	25.0	No	42.8	45	No
29	Leon Rd.	65.5	20.5	25.0	No	40.5	45	No
344	Leon Rd.	67.1	22.1	25.0	No	42.1	45	No
158	Eucalyptus Rd.	63.1	18.1	25.0	No	38.1	45	No
472	Eucalyptus Rd.	59.8	14.8	25.0	No	34.8	45	No
350	Craig. Av.	63.2	18.2	25.0	No	38.2	45	No
564	Craig. Av.	63.3	18.3	25.0	No	38.3	45	No

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

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

² Noise reduction to satisfy the interior noise standard of 45 dBA CNEL for residential use.

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

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

 $^{\rm 5}$ Estimated interior noise level with minimum STC rating for all windows.

"NR" = Noise Reduction

Lot Number	Roadway	Noise Level @ Façade ¹	Required Interior NR ²	Estimated Interior NR ³	Upgraded Windows⁴	Interior Noise Level ⁵	Threshold	Threshold Exceeded?
38	Holland Rd.	74.2	29.2	30.0	Yes	44.2	45	No
146	Holland Rd.	74.2	29.2	30.0	Yes	44.2	45	No
29	Leon Rd.	70.7	25.7	30.0	Yes	40.7	45	No
344	Leon Rd.	74.5	29.5	30.0	Yes	44.5	45	No
158	Eucalyptus Rd.	69.4	24.4	25.0	No	44.4	45	No
472	Eucalyptus Rd.	65.1	20.1	25.0	No	40.1	45	No
350	Craig. Av.	69.4	24.4	25.0	No	44.4	45	No
564	Craig. Av.	69.3	24.3	25.0	No	44.3	45	No

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

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

² Noise reduction to satisfy the interior noise standard of 45 dBA CNEL for residential use.

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

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

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

"NR" = Noise Reduction



9 **RECEIVER LOCATIONS**

To assess the potential for short-term construction noise and vibration impacts, the following six receiver locations as shown on Exhibit 9-A were identified as representative locations for analysis. Sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include: schools, hospitals, single-family dwellings, mobile home parks, churches, libraries, and recreation areas. Moderately noise-sensitive land uses typically include: multi-family dwellings, hotels, motels, dormitories, out-patient clinics, cemeteries, golf courses, country clubs, athletic/tennis clubs, and equestrian clubs. Land uses that are considered relatively insensitive to noise include business, commercial, and professional developments. Land uses that are typically not affected by noise include: industrial, manufacturing, utilities, agriculture, natural open space, undeveloped land, parking lots, warehousing, liquid and solid waste facilities, salvage yards, and transit terminals.

Sensitive receiver locations near the Project site include existing residential homes and future residential-designated land use. 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 274 feet west of the Project site, R1 represents the existing residential home on Leon Road. A 24-hour noise level measurement was taken near this location, L1, to describe the existing ambient noise environment.
- R2: Location R2 represents existing residential homes west of the Project site across Leon Road at roughly 237 feet. A 24-hour noise level measurement was taken near this location, L2, to describe the existing ambient noise environment.
- R3: Location R3 represents existing agricultural use and vacant land north of the Project site which is designated as residential land use at approximately 90 feet. A 24-hour noise level measurement was taken near this location, L3, to describe the existing ambient noise environment.
- R4: Location R4 represents existing residential home within agricultural use located approximately 505 feet east of the Project site. A 24-hour noise level measurement was taken near this location, L4, to describe the existing ambient noise environment.
- R5: Location R5 represents vacant land east of the Project site which is designated as residential land use at approximately 90 feet. A 24-hour noise level measurement was taken near this location, L5, to describe the existing ambient noise environment.
- R6: Location R6 represents vacant land south of the Project site which is designated as residential land use at approximately 90 feet. A 24-hour noise level measurement was taken near this location, L6, to describe the existing ambient noise environment.







EXHIBIT 9-A: RECEIVER LOCATIONS



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 activity boundaries in relation to the nearby sensitive receiver locations.

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:

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

This construction noise analysis was prepared using reference noise level measurements taken by Urban Crossroads, Inc. to describe the typical construction activity noise levels for each stage of Project construction. 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 62 dBA to in excess of 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 data used to support the construction emissions in the *Canterwood (Tentative Tract Map No. 37439) Air Quality Impact Analysis* prepared by Urban Crossroads Inc. (29)

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, all construction noise level measurements presented on Table 10-1 have been adjusted to describe a common reference distance of 50 feet.





ID	Noise Source	Reference Distance From Source (Feet)	Reference Noise Levels @ Reference Distance (dBA L _{eq})	Reference Noise Levels @ 50 Feet (dBA L _{eq}) ⁶
1	Truck Pass-Bys & Dozer Activity ¹	30'	63.6	59.2
2	Dozer Activity ¹	30'	68.6	64.2
3	Construction Vehicle Maintenance Activities ²	30'	71.9	67.5
4	Foundation Trenching ²	30'	72.6	68.2
5	Rough Grading Activities ²	30'	77.9	73.5
6	Framing ³	30'	66.7	62.3
7	Two Scrapers Pass-By ⁴	30'	83.7	79.3
8	Concrete Mixer Truck Movements ⁵	50'	71.2	71.2
9	Concrete Paver Activities ⁵	30'	70.0	65.6
10	Concrete Mixer Pour & Paving Activities ⁵	30'	70.3	65.9
11	Concrete Mixer Backup Alarms & Air Brakes ⁵	50'	71.6	71.6
12	Concrete Mixer Pour Activities ⁵	50'	67.7	67.7

TABLE 10-1: CONSTRUCTION REFERENCE NOISE LEVELS

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 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

Tables 10-2 to 10-6 show the Project construction stages and the reference construction noise levels used for each stage. Table 10-8 provides a summary of the noise levels from each stage of construction at each of the sensitive receiver locations. Based on the reference construction noise levels, the unmitigated Project-related construction noise levels when the highest reference noise level is operating at a single point nearest the sensitive receiver location from the center of primary construction activity will range from 58.6 to 71.0 dBA L_{eq} at the sensitive receiver locations in the County of Riverside. Exhibit 10-A shows the construction activity noise source location and the distance to each nearby sensitive receiver location.



Reference Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA L _{eq})
Truck Pass-Bys & Dozer Activity	59.2
Dozer Activity	64.2
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	64.2

TABLE 10-2: SITE PREPARATION EQUIPMENT NOISE LEVELS

Receiver Location	Distance to 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	318'	-16.1	0.0	48.1
R2	282'	-15.0	0.0	49.1
R3	130'	-8.3	0.0	55.9
R4	540'	-20.7	0.0	43.5
R5	130'	-8.3	0.0	55.9
R6	130'	-8.3	0.0	55.9

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 Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA L _{eq})
Truck Pass-Bys & Dozer Activity	59.2
Dozer Activity	64.2
Rough Grading Activities	73.5
Two Scrapers Pass-By	79.3
Highest Reference Noise Level at 50 Feet (dBA L _{eq}):	79.3

TABLE 10-3: GRADING EQUIPMENT N	IOISE LEVELS
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Receiver Location	Distance to Construction Activity	Distance Attenuation (dBA L _{eq}) ³	Estimated Noise Barrier Attenuation	Construction Noise Level (dBA L _{eq})
	(reet)-			
R1	318'	-16.1	0.0	63.2
R2	282'	-15.0	0.0	64.2
R3	130'	-8.3	0.0	71.0
R4	540'	-20.7	0.0	58.6
R5	130'	-8.3	0.0	71.0
R6	130'	-8.3	0.0	71.0

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 Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA L _{eq})
Construction Vehicle Maintenance Activities	67.5
Foundation Trenching	68.2
Framing	62.3
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	68.2

TABLE 10-4: BUILDING CONSTRUCTION EQUIPMENT NOISE LEVELS

Receiver Location	Distance to 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	318'	-16.1	0.0	52.1
R2	282'	-15.0	0.0	53.1
R3	130'	-8.3	0.0	59.9
R4	540'	-20.7	0.0	47.5
R5	130'	-8.3	0.0	59.9
R6	130'	-8.3	0.0	59.9

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

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 Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA L _{eq})
Concrete Mixer Truck Movements	71.2
Concrete Paver Activities	65.6
Concrete Mixer Pour & Paving Activities	65.9
Concrete Mixer Backup Alarms & Air Brakes	71.6
Concrete Mixer Pour Activities	67.7
Highest Reference Noise Level at 50 Feet (dBA L _{eq}):	71.6

TABLE 10-5: PAVING EQUIPMENT NOISE LEVELS

Receiver Location	Distance to 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	318'	-16.1	0.0	55.5
R2	282'	-15.0	0.0	56.6
R3	130'	-8.3	0.0	63.3
R4	540'	-20.7	0.0	50.9
R5	130'	-8.3	0.0	63.3
R6	130'	-8.3	0.0	63.3

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

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.



Reference Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA L _{eq})		
Framing	62.3		
Highest Reference Noise Level at 50 Feet (dBA L _{eq}):	62.3		

TABLE 10-6: ARCHITECTURAL COATING EQUIPMENT NOISE LEVELS

Distance to Construction Activity (Feet) ²	Distance Attenuation (dBA L _{eq}) ³	Estimated Noise Barrier Attenuation (dBA L _{eq}) ⁴	Construction Noise Level (dBA L _{eq})
318'	-16.1	0.0	46.2
282'	-15.0	0.0	47.2
130'	-8.3	0.0	54.0
540'	-20.7	0.0	41.6
130'	-8.3	0.0	54.0
130'	-8.3	0.0	54.0
	Distance to Construction Activity (Feet) ² 318' 282' 130' 540' 130' 130'	Distance to Construction Activity (Feet) ² Distance Attenuation (dBA Leq) ³ 318' -16.1 282' -15.0 130' -8.3 540' -20.7 130' -8.3 130' -8.3	Distance to Construction Activity (Feet)2Distance Attenuation (dBA Leq)3Estimated Noise Barrier Attenuation (dBA Leq)4318'-16.10.0282'-15.00.0130'-8.30.0540'-20.70.0130'-8.30.0130'-8.30.0

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

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

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

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

OFF-SITE CONSTRUCTION ACTIVITY NOISE ANALYSIS

As a part of Project construction, an off-site channel, sewer line, and lift station will be constructed adjacent to receiver locations located further from the Project site. As such, this analysis identifies off-site receiver ("OR") locations, OR1 to OR5, adjacent to Project off-site construction activity locations as shown on Exhibit 10-A and described below:

- OR1: This receiver location represents existing residential homes on Tres Lagos Drive.
- OR2: This receiver location represents the existing Wilderness Lakes Recreational Vehicle Resort south of Tres Lagos Drive.
- OR3: This receiver location represents existing residential homes on the northeast corner of Briggs Road and Tres Lagos Drive.
- OR4: This receiver location represents the existing Wilderness Lakes Recreational Vehicle Resort west of Briggs Road.
- OR5: This receiver location represents residential homes under construction on the southeast corner of Briggs Road and Holland Road.

Table 10-7 shows the off-site construction activity noise levels at both the off-site receiver locations, and receiver locations R1 and R2 which are located adjacent to the Project site and off-site construction activities. As shown on Table 10-7, off-site construction activity noise levels are expected to range from 44.5 to 68.2 dBA L_{eq} at distances ranging from 50 to 766 feet from off-site construction activities.



Reference Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA L _{eq})
Truck Pass-Bys & Dozer Activity	59.2
Dozer Activity	64.2
Foundation Trenching	68.2
Concrete Paver Activities	65.6
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	68.2

Receiver Location	Distance to Construction Activity (Feet) ²	Distance Attenuation (dBA L _{eq}) ³	Estimated Noise Barrier Attenuation (dBA L _{eq}) ⁴	Construction Noise Level (dBA L _{eq})
OR1	355'	-17.0	0.0	51.1
OR2	50'	0.0	0.0	68.2
OR3	205'	-12.3	0.0	55.9
OR4	211'	-12.5	0.0	55.7
OR5	137'	-8.8	0.0	59.4
R1	766'	-23.7	0.0	44.5
R2	662'	-22.4	0.0	45.7

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.

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

"OR" = Off-Site Receiver







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 edge of primary Project construction activities. As shown on Table 10-8, the unmitigated construction noise levels are expected to range from 51.1 to 71.0 dBA L_{eq} at the sensitive receiver locations.

			Construc	tion Noise Lev	Level (dBA L _{eq})			
Receiver Location ¹	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Off-Site Channel & Sewer	Highest Activity Noise Levels ²	
R1	48.1	63.2	52.1	55.5	46.2	44.5	63.2	
R2	49.1	64.2	53.1	56.6	47.2	45.7	64.2	
R3	55.9	71.0	59.9	63.3	54.0	-	71.0	
R4	43.5	58.6	47.5	50.9	41.6	-	58.6	
R5	55.9	71.0	59.9	63.3	54.0	-	71.0	
R6	55.9	71.0	59.9	63.3	54.0	-	71.0	
OR1	-	-	-	-	-	51.1	51.1	
OR2	-	-	-	-	-	68.2	68.2	
OR3	-	-	-	-	-	55.9	55.9	
OR4	-	-	-	-	-	55.7	55.7	
OR5	-	-	-	-	-	59.4	59.4	

TABLE 10-8: UNMITIGATED CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY

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

² Estimated construction noise levels during peak operating conditions.

"OR" = Off-Site Receiver

Table 10-9 shows the highest on-site and off-site construction noise levels at the potentially impacted receiver locations approaching 71.0 dBA L_{eq} will satisfy the NIOSH 85 dBA L_{eq} significance threshold during temporary Project construction activities. Therefore, the unmitigated noise impact due to Project construction is considered *less than significant*.



	Construction Noise Levels (dBA Leq)						
Receiver Location ¹	Highest Construction Noise Levels ² Threshold ³		Threshold Exceeded? ⁴				
R1	63.2	85	No				
R2	64.2	85	No				
R3	71.0	85	No				
R4	58.6	85	No				
R5	71.0	85	No				
R6	71.0	85	No				
OR1	51.1	85	No				
OR2 68.2		85	No				
OR3	55.9	85	No				
OR4	55.7	85	No				
OR5	59.4	85	No				

TABLE 10-9: CONSTRUCTION NOISE LEVEL COMPLIANCE

¹Noise 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 standards 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 building, the vibration is usually short-term and is not of sufficient magnitude to cause building damage. It is not expected that heavy equipment such as large bulldozers would operate close enough to any residences to cause a vibration impact.
- Trucks: Trucks hauling building materials to construction sites can be sources of vibration intrusion if the haul routes pass through residential neighborhoods on streets with bumps or potholes. Repairing the bumps and potholes generally eliminates the problem.

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

Based on the reference vibration levels provided by the FTA, a large bulldozer represents the peak source of vibration with a reference velocity of 0.089 in/sec PPV at 25 feet. At distances ranging from 50 to 540 feet from the Project construction activities, construction vibration velocity levels are expected to range from 0.001 to 0.031 in/sec PPV, as shown on Table 10-10.

To assess the human perception of vibration levels in PPV, as previously discussed in Section 3, the velocities are converted to RMS vibration levels based on the Caltrans *Transportation and Construction Vibration Guidance Manual* conversion factor of 0.71. Table 10-11 shows the construction vibration levels in RMS are expected to range from 0.001 to 0.022 in/sec at the nearby sensitive receiver locations, which will exceed the County of Riverside vibration level threshold of 0.01 in/sec RMS at one off-site receiver location, OR2, if Project construction activities occur within 85 feet of occupied noise-sensitive receiver locations. Therefore, the Project-related vibration impacts will be *potentially significant* at receiver location OR2 during the off-site construction activities. All other receiver locations will experience *less than significant* vibration impacts due to Project construction.

	Distance		Receiver	RMS				
Receiver ¹ to Con Activit (Feet	to Const. Activity (Feet)	Small Bulldozer	Jack- hammer	Loaded Trucks	Large Bulldozer	Peak Vibration	Velocity Levels (in/sec) ³	Exceeded? ⁴
R1	318'	0.000	0.001	0.002	0.002	0.002	0.001	No
R2	282'	0.000	0.001	0.002	0.002	0.002	0.002	No
R3	130'	0.000	0.003	0.006	0.008	0.008	0.005	No
R4	540'	0.000	0.000	0.001	0.001	0.001	0.001	No
R5	130'	0.000	0.003	0.006	0.008	0.008	0.005	No
R6	130'	0.000	0.003	0.006	0.008	0.008	0.005	No
OR1	355'	0.000	0.001	0.001	0.002	0.002	0.001	No
OR2	50'	0.001	0.012	0.027	0.031	0.031	0.022	Yes
OR3	205'	0.000	0.001	0.003	0.004	0.004	0.003	No
OR4	211'	0.000	0.001	0.003	0.004	0.004	0.003	No
OR5	137'	0.000	0.003	0.006	0.007	0.007	0.005	No

TABLE 10-10: UNMITIGATED CONSTRUCTION EQUIPMENT VIBRATION LEVELS

¹Receiver locations are shown on Exhibit 10-A.

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

³ Vibration levels in PPV are converted to RMS velocity using a 0.71 conversion factor identified in the Caltrans Transportation and Construction Vibration Guidance Manual, September 2013.

⁴ Does the vibration level exceed the maximum acceptable vibration threshold?



Therefore, the use of large mobile equipment (greater than 80,000 pounds) and loaded trucks within 85 feet of nearby sensitive land uses shall be prohibited unless the vibration levels are shown to be less than the County of Riverside vibration level threshold of 0.01 in/sec RMS. Instead, smaller, rubber-tired mobile equipment (less than 80,000 pounds) or equivalent alternative equipment shall be used within 85 feet of sensitive land uses during Project construction to reduce vibration effects. Table 10-11 shows the mitigated Project construction vibration levels with the 85-foot buffer zone. With the recommended mitigation measures in this study, the Project-related vibration impacts at the nearby receiver locations represents a *less than significant* impact during the worst-case construction activities.

TABLE 10-11: MITIGATED CONSTRUCTION EQUIPMENT VIBRATION LEVELS

Dist	Distance		Receiver	RMS				
Receiver ¹	to Const. Activity (Feet)	Small Bulldozer	Jack- hammer	Loaded Trucks	Large Bulldozer	Peak Vibration	Velocity Levels (in/sec) ³	Threshold Exceeded? ⁴
OR2	50'	0.001	0.012	-	-	0.012	0.009	No

¹Receiver locations are shown on Exhibit 10-A.

 $^{\rm 2}$ Based on the Vibration Source Levels of Construction Equipment included on Table 6-6.

³ Vibration levels in PPV are converted to RMS velocity using a 0.71 conversion factor identified in the Caltrans Transportation and

Construction Vibration Guidance Manual, September 2013.

⁴ Does the vibration level exceed the maximum acceptable vibration threshold?

Further, the vibration levels due to Project construction do not represent vibration 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 0.031 in/sec PPV, will remain below the FTA vibration levels for building damage at the residential homes near the Project site. Further, the levels 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.

10.6 CONSTRUCTION VIBRATION MITIGATION MEASURES

The following mitigation measure is required to reduce construction vibration levels produced by the construction equipment to the nearby sensitive land uses.

 Large loaded trucks and mobile equipment (greater than or equal to 80,000 pounds) (5) shall not be used within 85 feet of land uses represented by receiver location OR2 if occupied at the time of Project construction, as shown on Exhibit ES-B. Instead, smaller, rubber-tired mobile equipment (less than 80,000 pounds) or equivalent alternative equipment shall be used within this area during Project construction to reduce vibration effects.

10.7 CONSTRUCTION NOISE AND VIBRATION BEST PRACTICES

Though construction noise and vibration are temporary, intermittent, will be short in duration, and will not present any long-term impacts, the following best practices would further reduce



noise and vibration levels produced by the construction equipment to the nearby sensitive residential land uses.

- Prior to approval of grading plans and/or issuance of building permits, plans shall include a note indicating that noise-generating Project construction activities shall only occur between the hours of 6:00 a.m. to 6:00 p.m. June through September, and 7:00 a.m. to 6:00 p.m. October through May (County of Riverside Municipal Code, Section 9.52.020). The Project construction supervisor shall ensure compliance with the note and the County shall conduct periodic inspection at its discretion.
- During all Project site construction, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the Project site.
- The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receivers nearest the Project site during all Project construction (i.e., to the center).
- The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment (between the hours of 6:00 a.m. to 6:00 p.m. June through September, and 7:00 a.m. to 6:00 p.m. October through May). The contractor shall design delivery routes to minimize the exposure of sensitive land uses or residential dwellings to delivery truck-related noise.



11 REFERENCES

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- 28. California Department of Transportation. *Highway Design Manual, Chapter 1100 Highway Traffic Noise Abatement*. May 2012.
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12 CERTIFICATION

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed Canterwood (Tentative Tract Map No. 37439) 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:

COUNTY OF RIVERSIDE MUNICIPAL CODE



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Chapter 9.52 - NOISE REGULATION

Sections:

9.52.010 - Intent.

At certain levels, sound becomes noise and may jeopardize the health, safety or general welfare of Riverside County residents and degrade their quality of life. Pursuant to its police power, the board of supervisors declares that noise shall be regulated in the manner described in this chapter. This chapter is intended to establish county-wide standards regulating noise. This chapter is not intended to establish thresholds of significance for the purpose of any analysis required by the California Environmental Quality Act and no such thresholds are established.

(Ord. 847 § 1, 2006)

9.52.020 - 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 on land designated "Agriculture" in the Riverside County general plan, or land zoned A-I (light agriculture), A-P (light agriculture with poultry), A-2 (heavy agriculture), A-D (agriculture-dairy) or C/V (citrus/vineyard), 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;
- G. Wind energy conversion systems (WECS), provided such systems comply with the WECS noise provisions of Riverside County Ordinance No. 348;
- H. Private construction projects located one-quarter of a mile or more from an inhabited dwelling;
- I. Private construction projects located within one-quarter of a mile from an inhabited dwelling, provided that:
 - Construction does not occur between the hours of six p.m. and six a.m. during the months of June through September, and

- 2. Construction does not occur between the hours of six p.m. and seven a.m. during the months of October through May;
- J. Property maintenance, including, but not limited to, the operation of lawnmowers, leaf blowers, etc., provided such maintenance occurs between the hours of seven a.m. and eight p.m.;
- K. Motor vehicles, other than off-highway vehicles. This exemption does not include sound emanating from motor vehicle sound systems;
- L. Heating and air conditioning equipment;
- M. Safety, warning and alarm devices, including, but not limited to, house and car alarms, and other warning devices that are designed to protect the public health, safety, and welfare;
- N. The discharge of firearms consistent with all state laws.

(Ord. 847 § 2, 2006)

APPENDIX 5.1:

STUDY AREA PHOTOS



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JN:11304 Canterwood



L1_E 33, 39' 51.590000", 117, 7' 9.980000"



L1_N 33, 39' 51.640000", 117, 7' 9.980000"



L1_S 33, 39' 51.640000", 117, 7' 9.980000"



L1_W 33, 39' 51.590000", 117, 7' 9.980000"



L2_E 33, 40' 7.170000", 117, 7' 10.310000"



L2_N 33, 40' 7.240000", 117, 7' 10.330000"

JN:11304 Canterwood



L2_S 33, 40' 7.240000", 117, 7' 10.330000"



L2_W 33, 40' 7.160000", 117, 7' 10.330000"



L3_E 33, 40' 14.960000", 117, 7' 1.410000"



L3_N 33, 40' 14.960000", 117, 7' 1.350000"



L3_S 33, 40' 14.970000", 117, 7' 1.410000"



L3_W 33, 40' 14.990000", 117, 7' 1.410000"

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JN:11304 Canterwood

L5_N 33, 39' 56.570000", 117, 6' 38.780000"





33, 40' 14.370000", 117, 6' 38.580000"



L4_E 33, 40' 14.370000", 117, 6' 38.560000"



L4_N 33, 40' 14.370000", 117, 6' 38.530000"

33, 39' 56.57(



L5_E 33, 39' 56.560000", 117, 6' 38.800000"

JN:11304 Canterwood



L5_S 33, 39' 56.570000", 117, 6' 38.780000"



L5_W 33, 39' 56.560000", 117, 6' 38.800000"



L6_E 33, 39' 47.840000", 117, 6' 55.720000"



L6_N 33, 39' 47.850000", 117, 6' 55.750000"



L6_S 33, 39' 47.850000", 117, 6' 55.750000"



L6_W 33, 39' 47.850000", 117, 6' 55.720000"
APPENDIX 5.2:

NOISE LEVEL MEASUREMENT WORKSHEETS



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	13	60.1	84.1	34.8	73.0	69.0	63.0	60.0	48.0	42.0	35.0	35.0	35.0
Day	14 1	55.3 54.0	81.7 75.2	34.8 34.8	66.0 67.0	63.0 65.0	58.0 60.0	53.0 56.0	44.0 44.0	39.0 39.0	36.0 35.0	35.0 35.0	35.0 35.0
	16	52.0	79.1	34.8	65.0	61.0	53.0	50.0	43.0	39.0	37.0	37.0	35.0
	17	52.2	72.1	37.7	66.0	63.0	58.0	53.0	43.0	41.0	38.0	37.0	37.0
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Night	22	45.0	71.8	34.8	55.0	51.0	47.0	43.0	39.0	38.0	36.0	35.0	35.0
y	23	42.4	63.1	34.8	50.0	49.0	46.0	44.0	41.0	39.0	37.0	36.0	35.0

d	roiect Name:	Canterwood		1					:NL	11304	Energy Avi	erage Lea	24-Hour
									Analyst:	A. Wolfe	Dav	Night	CNFL
	Location:	L3 - Located n	orth of the P	roject site off (of Holland Roa	.be						5	
									Date:	2/21/2018	51.0	49.7	56.8
Hourly Leg d	BA Readings	(unadjusted)											
RE D													
() 80.0													
48k													
d (0,200 65.0													
0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0													
1000 2000 10000	8	0	8	8	8	Z	2	Z	0 t	o z	ע 	<u>ع</u>	3
6H 4500	•TS ES	•6⊅ •τς	43	13	·St	5	•57	25 25	57 .74	.84 .84	•TS •TS	85	:0S
- 0.65	- - -) 2 3	4	9	~	9 10	11 12	13 14	15 16	17 18	19 20	.0 10	23
	1 D)	-))	Ť	Jur Beginning					1)
					140/	/0C 1	0	1001			/0001	1054/	
lime Period	ноцг	рад	Lmax		11%	L 2%	دی	18% 13.0	% 671	27 0 27 0	130% 23	22% 22%	%661 %661
Day	Min Max	42.4 56.7	د./د 84.3	37.8 50.1	51.0 71.0	50.0 65.0	45.0 57.0	43.0 56.0	39.0 54.0	37.0 53.0	37.0 50.0	37.0 50.0	37.0 50.0
Energy	Average:	51.0	Ave	rage:	57.9	54.9	50.7	48.6	43.9	41.3	39.8	39.8	39.7
Night	Min	43.3	52.7	37.8	49.0	47.0	45.0	45.0	42.0	41.0	40.0	40.0	40.0
, ,	Max	53.8	60.1	50.7	58.0	58.0	57.0	56.0	54.0	52.0	51.0	51.0	51.0
Energy	Average:	49.7	Ave	rage:	52.2	51.6	50.6	50.0	48.3	46.9	45.9	45.6	45.6
						Hourly	Summary						
	0	53.8	60.1	50.7	58.0	58.0	57.0	56.0	54.0	52.0	51.0	51.0	51.0
	-1 C	51.0	54.0 52 7	48.8	53.0	52.0	52.0	52.0	51.0	50.0	49.0 50.0	49.0	49.0 50.0
Night	νm	49.0	56.2	45.3	51.0	51.0	51.0	51.0	50.0	48.0	46.0	45.0	45.0
)	4	43.8	53.7	38.1	49.0	47.0	45.0	45.0	44.0	43.0	40.0	40.0	40.0
	ы	43.3	54.6	40.5	50.0	49.0	47.0	46.0	42.0	41.0	40.0	40.0	40.0
	0 r	43.8	1.10	57.0 07.0	0.1.6	0.02	48.U	47.0	43.0	41.0	40.0	40.U	40.U
	~ ∞	40.0 45.8	04.1 64.4	37.8	58.0 58.0	55.0	52.0	49.0	44.U 42.0	40.0 37.0	37.0 37.0	37.0	37.0 37.0
	6	42.4	61.2	37.8	53.0	51.0	47.0	45.0	40.0	37.0	37.0	37.0	37.0
	10	55.7	79.6	37.8	65.0	61.0	55.0 48.0	52.0	42.0	37.0	37.0	37.0	37.0
	12	44.0	00.U 65.0	37.8	59.0	56.0	46.U 50.0	46.0 46.0	40.0	37.0	37.0 37.0	37.0	37.0 37.0
	13	56.7	77.8	37.8	71.0	65.0	57.0	51.0	43.0	40.0	37.0	37.0	37.0
Day	14	52.2	84.3	37.8	53.0	50.0	45.0	43.0	40.0	37.0	37.0	37.0	37.0
	15	47.4	69.6	37.8	59.0	54.0	48.0	45.0	40.0	37.0	37.0	37.0	37.0
	16	45.0 48.2	64.6 68 5	37.8 27.8	59.0	55.0	48.0	45.0	39.0 46.0	37.0	37.0 27.0	37.0	37.0 27.0
	, F	47.0	00.00 7 07	0.75 7.24	51.0	0.02	49.0	0.04	47.0	46.0	0.75	0.75	0.75 43 0
	19	51.1	57.5	46.6	54.0	53.0	53.0	53.0	51.0	50.0	48.0	48.0	47.0
	20	51.7	62.4	50.1	56.0	55.0	53.0	52.0	51.0	51.0	50.0	50.0	50.0
	17	53./ 40.6	55.4	49.U	58.U	57.0	50.U	50.0	54.U	0.55.U	49.0	49.0	49.0
Night	77 52	49.6 50.3	54.6	47.5	53.0	52.0 53.0	52.0	51.0	50.0	48.0 49.0	48.0 49.0	47.0	47.0 48.0
	1					2.22		2.10		2.01	200		0.01

Hour	NEL	4.0		[ε	01	7	23		<i>6</i> 6	5.0	8.0	36.3	\$5.0	10.0	37.9		15.0	88.0	88.0	88.U	8.0	10.0	88.0 7	0.U	5.0	15.0	15.0	35.0	\$5.0 	35.0 6 0		8.0	8.0	8.0	88.0	88.0		
24-	Ċ	ц)		-				$\left \right $	L	01	7	22				(1)			7					, (., (1		7		., (., - (i	. (1)					,							
ge Leq	Night	45.3		-			+		S	.68	E	21		195%	35.0	38.0	36.6	35.0	40.0	37.9		35.0	38.0	38.0	38.U 38.D	38.0	40.0	38.0 25.0	35.U	35.0	35.0	35.0	38.0	35.0	35.U 20 0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	トレ
gy Avera									0	13.0	7	20																															
Energ	Day	52.7							S	•tt	7	19		<i>*061</i>	35.0	39.0	36.9	35.0	40.0	37.9		35.0	38.0	38.0	38.0	38.0	40.0	38.0	35.U	35.0	35.0	38.0	38.0	35.0	35.U 38.0	0.05 0.85	39.0	38.0	38.0	38.0	38.0	38.0	
t t	olfe	2018		_					Z	15.	7	18		20%	88.0	14.0	9.5	8.0	12.0	8.7		8.0	8.0	8.0	0.0	0.0	12.0	0.0	0.0	0.0	0.0	1.0	4.0	0.0	0.88	0.0	0.0	0.0	8.0	88.0	8.0	8.0	
: 1130	:: A. Wo	: 2/21/		-					6	81	7	17		1	(7)		(1)	(1)	4	(1)			(1)	(1) (<u>, , , , , , , , , , , , , , , , , , , </u>	14	4	7	4 (n) (1) (1)	4	4	4			· •	4	(1)	(1)	(1) (
N,	Analyst	Date		-	-		+		s	'Et	7 7	15 16		125%	38.0	48.0	42.6	38.0	45.0	39.6		38.0	38.0	38.0	38.U	42.0	45.0	43.0	40.0	44.0	44.0	46.0	48.0	45.0	42.0 40.0	41.0	41.0	41.0	39.0	38.0	39.0	38.0	
								T	: 69	5		14		%	0	0.	3.7	3.0	0.1	0.0		0.1	3.0	0.0	0.0	0.0	0.	0.0	0.0	0.0	0	0.	0.7	0.0	0.0		0.	3.0	0.	0.0	0.0	.0	
							T	T	: 69	5		13	6	18	40	57	48	38	52	42		38	38	380	40	4 8	52	50	Ω Γ	0 L	52	52	57	52	50 ۲	04 70	46	48	41	40	42	40	
	Holland								0	61	7	12	Beginnin	L5%	41.0	61.0	51.3	40.0	54.0	43.9	nary	40.0	40.0	40.0	40.0	50.0	54.0	53.0	0.00	40.0 58.0	55.0	55.0	61.0	56.0	53.0 47.0	47.0	47.0	51.0	43.0	41.0	45.0	42.0	
	toad and			-	-		+			27		0 11	Hour E						_		urly Sumı																						100
	alvptus F	:		_								1		12%	45.(69.0	56.3	42.0	62.(47.3	ЮН	44.(42.0	42.0	43.0	51.0	62.(59.0	0.L0	9770 1970	59.0	59.0	69.0	63.0	57.L	2000	49.0	53.(46.0	45.0	48.0	40.0	
	C of Euca			_					0		, 5	∞		1%	18.0	73.0	50.1	14 . 0	59.0	51.2		47.0	47.0	14.0	0.00	52.0	59.0	53.0	04.U	0.00	54.0	51.0	73.0	59.0	51.0	0.20	51.0	55.0	51.0	18.0	51.0	10.6t	
	ar the SE			-					9	.03	5	7						,	-														•					_,		`			
	ct site nea								3	.53.		9		Lmin	35.3	38.2	ge:	35.3	39.7	se:		35.3	37.9	38.1	38.2 38.7	38.2	39.7	36.5 25 2	35.3 2 7 2	35.3	35.3	35.3	35.3	35.3	35.3 25.3	2.00 2.85	38.2	38.2	38.1	38.0	38.0	38.0	
	the Proje			_					Z	: 61	7	ъ		XD	9	.6	Averag	.6	.4	Averag		·.0	0.	.6	4. U		.4	.5	- 0	<u>.</u>	i 1	4.	.4	9.	υ, c	i 4	. 9.	0.	0	.6	4	1	
	east of i			-					S	71	7	4		Tm	52	6		47	73			54	23	47	ς α	2 22	73	72	T 2	5 F	76	67	83	9	96		212	64	99	52	54	P4	
nterwood	- Located	.pe	djusted)	-					8	88		2 3		Lea	39.5	59.1	52.7	38.3	53.3	45.3		38.7	38.6	38.3	39.8 47 5	43.7	53.3	50.6	0.10	4.0.5 56.7	51.7	49.0	59.1	59.1	47.4 7.5 c r	48.9	42.7	44.5	43.0	39.5	40.7	40.3	
<i>ime:</i> Car	- L4	on: Roi	ungs (una						9	.88		1							~			_									_												
roject Nc		Locativ	BA Readi	-					2	.88	E	0		Hou	Min	Max	Average:	Min	Max	Average:		0	-1	7 7	η	tω	9	2	×	u (11	12	13	14	15 16	17	18	19	20	21	22	23	
ď			Hourly Leq d	85.0 -	∀)	(9 B)	6 2.0	λ Γε	nrl	4 5.0	- 40.0 35.0			Time Period		Day	Energy /	Night	1119111	Energy				Ni~b+	NIGHL									Day							Night		

łour	IEL	6.5		[0.	Ttz	ε		%6	5.0	1.0	7.1	0.0	7.3	2	0	5.0	5.0	5.0	0.0	3.0	1.0	5.0	0.0	0.0	5.0	5.0	3.0	8.0 2	0.2	9.0	9.0	3.0	8.0	3.0	0.0	
24-F	CV	56							8	57	2 2		67	36	4:	3.	16 17	3	0	36	36	36	ж ¦	n m	6.4	4:	ñ	Ϋ́ Α̈́	ń ř		35	Ř	ñ h	n m	55	55	ŝ	ŝ	ñ	2	
bə† əbt	Night	47.3							۲.	57	21 2		195%	35.0	42.0	37.7	35.0 44.0	37.7		35.0	36.0	36.0	36.0	39.0 39.0	44.0	42.0	36.0	35.U	35.0	35.0	36.0	39.0	38.0	38.0	40.0	40.0	39.0	39.0	39.0	37.0) 1
Energy Avero	Day	54.4							۲. ۲.	97	19 20		%061	35.0	43.0	38.3	35.0 45.0	38.0	2000	35.0	36.0	36.0	36.0	38.U 40.0	45.0	43.0	36.0	36.0	36.0	35.0	36.0	40.0	39.0	0.05 39.0	40.0	41.0	40.0	39.0	39.0	37.0	
04	Volfe	1/2018							Þ'	St7	7 18		150%	38.0	45.0	40.9	36.0 47 0	40.1	1	36.0	38.0	37.0	38.0	40.0 42.0	47.0	45.0	40.0	39.0 20.0	39.0	38.0	41.0	41.0	41.0	40.0 40.0	42.0	44.0	43.0	42.0	44.0	39.0	
JN: 113	Analyst: A.V	Date: 2/2							8.	97	5 16 1		125%	41.0	47.0	44.0	37.0 48.0	41.2		37.0	39.0	38.0	38.0	41.0	48.0	46.0	45.0	42.0	43.0	42.0	46.0	45.0	45.0	42.0 41.0	44.0	47.0	45.0	43.0	46.0	40.0	
									7't	75	3 14 1		78%	44.0	56.0	50.1	39.0 54.0	44.0		39.0	40.0	40.0	40.0	43.0	54.0	50.0	53.0	49.0 EA O	0.02	51.0	56.0	54.0	53.0	40.0	47.0	51.0	48.0	46.0	48.0	43.0	
									8.93	5 5 	1 12 1	Beginning	15%	46.0	61.0	52.8	40.0 56.0	45.2		40.0	41.0	41.0	41.0	51.0 51.0	56.0	52.0	57.0	51.0	54.0	56.0	61.0	55.0	55.0	46.0	50.0	53.0	49.0	47.0	49.0	44.0	
		.be									10 1	Hour	12%	50.0	68.0	58.2	42.0 61.0	48.6	Hourly Sur		44.0	42.0	45.0	49.0 53.0	61.0	59.0	66.0	50.U	60.0	63.0	68.0	58.0	59.0	56.0	53.0	57.0	51.0	50.0	52.0	47.0	107
		Eucalyptus Roa						2 .	09		- 8 -		11%	51.0	74.0	61.8	44.0 64.0	51.6	0	48.0	47.0	44.0	50.0	55.0	64.0	65.0	74.0	60.U	64.0	67.0	71.0	61.0	62.0 E2.0	0.09	55.0	59.0	53.0	51.0	54.0	50.0	
	:	ect site off of l							5.3		6 7		Lmin	35.1	39.5	ige:	35.1 47.2	ige:		35.1	35.5	35.4	35.7	30.3 37.9	42.2	39.5	35.1	35.1 25.1	35.1	35.1	35.1	36.8	37.2	37.2	38.0	37.8	37.2	36.7	37.4	35.6	
		ast of the Proj							4. 8.	54 77	4 5		Lmax	59.0	88.6	Avera	55.3 90.5	Avera		58.7	58.0	55.3	59.3	63.4 68.9	90.5	85.1	85.8	/9.3 07.6	84.6	88.6	85.1	86.4	79.1	7.77 6.69	64.8	73.7	67.2	59.0	63.0	57.0	
Canterwood		-5 - Located e	nadjusted)						ь. 0.	0 1 7	2		Lea	43.7	60.2	54.4	38.4 55 3	47.3	2	38.8	39.3	38.4	40.0	42.4 45.8	55.3	55.3	60.2	5.05 7 7 3	55.0	56.8	57.6	54.2	52.1 46 0	40.0	45.4	49.2	46.7	43.7	45.8	41.0	
oject Name: 1		Location:	A Readings (u						8. E.	68 88	0		Hour	Min	Max	verage:	Min	verage:	0	C) (2	m ·	4 ru	0 0	7	∞ (υ ç	9 5	12	13	14	15 16	170	18	19	20	21	22	23	
Pr			Hourly Leq dB	85.0 +	(A 0.05	(10.07 (10.07 (10.07 (10.07) (6 2.0		20.0 45.0 45.0 45.0 45.0 45.0 45.0 45.0 4	P P P P P P P P			Time Period	ć	Лау	Energy A	Night	Energy A	10				Night									Day							Night	,	

24-Hour	CNEL	50.1							۲.	38	23	2		%667	36.0	39.0	36.2	36.0 39.0	36.3		0.96	36.0	36.0	36.0	36.0	30.0 39.0	36.0	36.0	36.0	36.0	36.U 26.0	36.0	36.0	36.0	36.0	36.0	39.0 36.0	36.U 26.0	30.0 36.0	36.0	36.0	RBAN Ssroads
erage Leq	Night	41.6							8.	68	- 1C	17		767%	36.0	39.0	36.3	36.0 39.0	36.3		0.36	36.0	36.0	36.0	36.0	39.0 39.0	36.0	36.0	36.0	36.0	36.U	36.0	36.0	36.0	36.0	36.0	39.0	38.U 26.0	30.0 36.0	36.0	36.0	
Energy Av	Day	48.5							9' 9'	τ ν 57	19 70			%067	36.0	39.0	36.4	36.0 39.0	36.3		0.96	36.0	36.0	36.0	36.0	30.0 39.0	36.0	36.0	36.0	36.0	36.U	36.0	36.0	36.0	36.0	36.0	39.0 20.0	39.U	30.0 36.0	36.0	36.0	
1304	A. Wolfe	2/21/2018							6' t/	43 49	17 18			72 <i>0%</i>	36.0	40.0	37.8	36.0 41.0	37.1		0.96	36.0	36.0	36.0	38.0	39.0 41.0	39.0	39.0	38.0	37.0	36.U	0.05	36.0	37.0	36.0	40.0	40.0	39.U	39.0 36.0	36.0	36.0	
ry JN: 1	Analyst: /	Date: 2							۲. ۲.	40 73	ר - 16 -			125%	38.0	45.0	41.4	36.0 45.0	38.6		0.36	36.0	36.0	37.0	39.0	42.0 45.0	45.0	45.0	41.0	42.0	41.0	44.0	40.0	41.0	39.0	42.0	42.0	42.0	39.0 38.0	39.0	37.0	
nt summa									9	57	13 14			%8 7	40.0	53.0	47.3	38.0 51.0	41.8	0	0.00	0.05	38.0	39.0	42.0	49.U 51.0	53.0	52.0	47.0	52.0	48.0	0, 1, 0 0 0	46.0	47.0	43.0	44.0	47.0	0.05	42.0	41.0	39.0	
easuremei									6' T'	87	1 1	· ·	r Beginning	L5%	43.0	57.0	49.8	39.0 52.0	43.7			40.0	39.0	40.0	44.0	51.0	57.0	54.0	50.0	55.0	52.0	54.0	47.0	49.0	45.0	46.0	49.0 73.0	52.U	43.U 44.0	46.0	41.0	
e Level Mi									5.1	75	- 1		Нои	12%	47.0	62.0	54.5	42.0 54.0	47.2	Hourby Su		44.0	42.0	44.0	47.0	53.U 54.0	62.0	57.0	55.0	61.0	54.0	62.0	52.0	53.0	48.0	56.0	51.0	0.42 0.70	47.0	50.0	45.0	10
-Hour Nois		Craig Avenue							8.	27 74	σ - α	ר		L1%	50.0	67.0	57.5	45.0 55.0	50.7		0.01	48.0	45.0	52.0	51.0	54.U 55.0	65.0	59.0	57.0	66.0 5 5 5	0.02	67.0	57.0	55.0	50.0	59.0	54.0	50.U	50.0 50.0	53.0	49.0	
24	:	ject site off of							0	TS 97		2		Lmin	36.1	38.7	ge:	36.1 37.5	ge:		1 30	36.1	36.1	36.1	36.1	30.1 37.5	36.1	36.1	36.1	36.1	36.1 26.1	36.1	36.1	36.1	36.1	36.1	38.7	36.1 26.1	30.1 36.1	36.1	36.1	
		uth of the Pro							ר סי	74 77	- - -	r		Ттах	56.1	77.2	Avera	50.9 60.6	Avera		EG 0	53.7	50.9	55.1	59.6	58.9 60.6	72.9	66.1	63.4	77.2	63.9 72.0	76.4	66.6	63.6	58.3	67.0	59.5 50.0	59.9 61 0	56.1	57.3	52.8	
anterwood	-	6 - Located so	nadjusted)						5' 7'	68 78	ر ۲	1		ted	39.8	54.3	48.5	37.2 46.0	41.6		0 00	37.8	37.2	39.5	41.0	44.5 46.0	51.8	47.8	44.8	54.3	45.1 10 0	0.04	45.6	43.7	40.7	46.4	43.9	45.3 716	41.0 39.8	41.1	38.7	
iject Name: C	:	Location: L	Areadings (un						8. 8.	28 88		+ D		Hour	Min	Max	erage:	Min Max	erage:	0	_) (- 7	c	4 L	o م	2	∞	6	10	15	4 6	14	15	16	17	100	19	21	22	23	
Pro			Hourly Leq dBA	85 0	(∀ 80.0 80.0	(1 80)	62.0	22:0. 22:0.		0.04 740.0 1				Time Period	Dav		Energy Av	Night	Energy Av	6				Night									Day								Night	

APPENDIX 7.1:

OFF-SITE TRAFFIC NOISE CONTOURS



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	FH	WA-RD-77-108	HIGH	WAY NO	DISE P	REDICTIC	N MODE	iL			
Scenar Road Nan Road Segme	io: Existing W ne: Haun Rd. nt: n/o Scott R	ithout Project				Project N Job Nur	lame: Ca nber: 11	nterwood 304			
SITE	SPECIFIC IN	IPUT DATA				NC	ISE MC	DEL INPUT	ſS		
Highway Data				S	ite Cor	nditions (H	lard = 10), Soft = 15)			
Average Daily	Traffic (Adt):	6,700 vehicle	S				Au	tos: 15			
Peak Hour	Percentage:	10%			Me	edium Truc	ks (2 Axl	es): 15			
Peak H	lour Volume:	670 vehicle	s		He	avy Truck	s (3+ Axl	es): 15			
Ve	hicle Speed:	50 mph		V	ehicle	Mix					
Near/Far La	ne Distance:	48 feet		-	Veh	nicleType	Da	ay Evening	Ni	ght	Daily
Site Data						Au	tos: 75	.5% 14.0%	10).5% 9	7.42%
Ba	rrier Heiaht:	0.0 feet			М	edium Tru	cks: 48	.9% 2.2%	48	3.9%	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0				Heavy Tru	cks: 47	.3% 5.4%	47	7.3%	0.74%
Centerline Di	st. to Barrier:	59.0 feet		N	loise S	ource Elev	vations (in feet)			
Centerline Dist.	to Observer:	59.0 feet				Autos:	0.00)			-
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.29	7			
Observer Height	(Above Pad):	5.0 feet			Hea	v Trucks:	8.00	6 Grade A	diustr	nent: (0.0
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent L	Distance	(in feet)			
	Road Grade:	0.0%				Autos:	54.12	9			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	53.96	6			
	Right View:	90.0 degre	es		Hear	vy Trucks:	53.98	2			
FHWA Noise Mod	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresnel	Barrier A	tten	Berm	Atten
Autos:	70.20	-4.15		-0.62		-1.20	-4	.69 0.	000		0.000
Medium Trucks:	81.00	-21.39		-0.60		-1.20	-4	.88 0.	000		0.000
Heavy Trucks:	85.38	-25.34		-0.60		-1.20	-5	.35 0.	.000		0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	r attenu	uation)						
VehicleType	Leq Peak Ho	ur Leq Da	v	Leq Eve	ening	Leq N	ight	Ldn		CNE	EL
Autos:	64	1.2	62.2		60.9		54.9	63	.3		63.9
Medium Trucks:	57	⁷ .8	53.9		46.4		55.2	61	.3		61.4
Heavy Trucks:	58	3.2	54.2		50.8		55.4	61	.6		61.7
Vehicle Noise:	65	5.9	63.4		61.5		59.9	67	.0		67.3
Centerline Distan	ce to Noise C	ontour (in fee	t)			r			-		
			L	70 dł	BA	65 dł	BA	60 dBA		55 dl	3A
			Ldn:	37		80		172		370)
		C	NEL:	39		84		180		389)

	FHW	A-RD-77-108 HIG	HWAY I	NOISE PR	REDICTIO	NMOD	EL		
Scenario Road Name	o: Existing With e: Zeiders Rd.	out Project			Project Na Job Nun	ame: Ca nber: 11	anterwood I 304		
Road Segmen	t: s/o Scott Rd.								
SITE S	SPECIFIC INF	UT DATA			NO	ISE M	ODEL INPU	TS	
Highway Data				Site Con	ditions (H	ard = 1	0, Soft = 15)		
Average Daily	Traffic (Adt): 1	,200 vehicles				Au	utos: 15		
Peak Hour I	Percentage:	10%		Mee	dium Trucl	ks (2 Ax	les): 15		
Peak He	our Volume:	120 vehicles		Hea	avy Trucks	s (3+ Ax	les): 15		
Vel	hicle Speed:	50 mph	ŀ	Vehicle I	Vix				
Near/Far Lar	ne Distance:	48 feet	ŀ	Vehi	icleTvpe	D	av Evenin	a Niaht	Dailv
Site Data					Aut	os: 7	5.5% 14.0%	6 10.5%	97.42
Bar	rier Height:	0.0 feet		Me	edium Truc	ks: 4	8.9% 2.2%	6 48.9%	5 1.84
Barrier Type (0-Wa	all. 1-Berm):	0.0		F	leavy Truc	ks: 4	7.3% 5.4%	6 47.3%	0.74
Centerline Dis	t. to Barrier:	59.0 feet	ŀ	Noice Co	uree Elev	otiono	(in feet)		
Centerline Dist. t	to Observer:	59.0 feet	ŀ	140/36 30	Autoo:	0.00			
Barrier Distance t	to Observer:	0.0 feet		Modiur	n Trucks	2 20	17		
Observer Height (/	Above Pad):	5.0 feet		Heav	v Trucks:	8.00)6 Grade A	Adiustmen	t: 0.0
Pa	d Elevation:	0.0 feet		mour	y maono.	0.00		,	
Roa	d Elevation:	0.0 feet	-	Lane Equ	uivalent D	istance	e (in feet)		
F	Road Grade:	0.0%			Autos:	54.12	29		
	Left View:	-90.0 degrees		Mediur	n Trucks:	53.96	56		
	Right View:	90.0 degrees		Heav	y Trucks:	53.98	32		
FHWA Noise Mode	el Calculations								
VehicleType	REMEL	Traffic Flow Di	istance	Finite	Road	Fresne	I Barrier A	Atten Be	rm Atter
Autos:	70.20	-11.62	-0.6	2	-1.20	-4	4.69 (0.000	0.00
Medium Trucks:	81.00	-28.86	-0.6	0	-1.20	-4	4.88 (0.000	0.00
Heavy Trucks:	85.38	-32.81	-0.6	0	-1.20	-5	5.35 (0.000	0.00
Unmitigated Noise	Levels (witho	ut Topo and barr	ier atter	nuation)					
VehicleType	Leq Peak Hour	Leq Day	Leq E	vening	Leq Ni	ght	Ldn	C	NEL
Autos:	56.8	54.8		53.4		47.4	55	5.9	56
Medium Trucks:	50.3	46.4		38.9		47.7	53	3.9	53
Heavy Trucks:	50.8	46.7		43.3		48.0	54	4.2	54
Vehicle Noise:	58.5	55.9		54.0		52.5	59	9.5	59
Contorlino Distanc	e to Noise Cor	ntour (in feet)	70		05 IS				
Ochicinine Distanc			70	dBA	65 dH	A	60 dBA	55	о авА
Centenine Distance				0					440
Centenine Distance		Ldn:	1	2	25		55 57	1	118

	FH\	WA-RD-77-108	HIGH	NAY NO	DISE P	REDICT	ION MO	DEL			
Scenar Road Narr Road Segme	io: Existing Wi ne: Antelope R nt: s/o Scott R	ithout Project d. d.				Project Job N	Name: umber:	Canter 11304	wood		
SITE	SPECIFIC IN	IPUT DATA				Ν	IOISE I	MODE	L INPUT	s	
Highway Data				S	ite Cor	nditions	(Hard =	: 10, So	oft = 15)		
Average Daily	Traffic (Adt):	10,600 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Tru	ucks (2 J	Axles):	15		
Peak H	lour Volume:	1,060 vehicle	s		He	eavy Truc	cks (3+)	Axles):	15		
Ve	hicle Speed:	50 mph		V	ehicle	Mix					-
Near/Far La	ne Distance:	48 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	75.5%	14.0%	10.5%	97.42%
Ba	rrier Height:	0.0 feet			М	edium Ti	rucks:	48.9%	2.2%	48.9%	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0				Heavy Ti	rucks:	47.3%	5.4%	47.3%	0.74%
Centerline Di	st. to Barrier:	59.0 feet		Ν	loise S	ource El	evation	s (in f	eet)		
Centerline Dist.	to Observer:	59.0 feet				Auto	s: 0.	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s: 2.	297			
Observer Height	Above Pad):	5.0 feet			Hear	vy Truck	s: 8.	006	Grade Ad	iustment	: 0.0
Pi	ad Elevation:	0.0 feet					Distant	//	6		
Roi	ad Elevation:	0.0 feet		L	ane Eq	uivaiem	Distan	ce (In	reet)		
	Road Grade:	0.0%			Martin	Auto	s: 54.	129			
	Left View:	-90.0 degre	es		wealu	m Truck	5: 53.	966			
	Right view:	90.0 degre	es		пеа	y muck	5. 53.	982			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresi	nel	Barrier Att	en Bei	m Atten
Autos:	70.20	-2.16		-0.62		-1.20		-4.69	0.0	000	0.000
Medium Trucks:	81.00	-19.39		-0.60		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-23.35		-0.60		-1.20		-5.35	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	r attenu	uation)						
VehicleType	Leq Peak Hou	ur Leq Day	· .	Leq Ev	ening	Leq	Night		Ldn	С	NEL
Autos:	66	i.2	64.2		62.9		56.9	Э	65.3	3	65.9
Medium Trucks:	59	.8	55.9		48.4		57.2	2	63.3	3	63.4
Heavy Trucks:	60	0.2	56.2		52.8		57.4	1	63.6	6	63.7
venicie ivolse:	67	.9	00.4		ხა.4		1.50	9	69.0	,	69.3
Centerline Distan	ce to Noise Co	ontour (in feel)	70 d	RA	65	dBA	6	SO dBA	55	dBA
			I dn	50		10	18	1	233	50	502
		С	NEL:	53		1	14		245	ŗ	528
		0.		50							

	FH	WA-RD-77-108 F	IIGHWAY	NOISE P	REDICTIC	ON MOD	EL			
Scena Road Nar Road Segme	rio: Existing W ne: Menifee Re ent: n/o Holland	ithout Project d. d Rd.			Project N Job Nu	<i>lame:</i> C mber: 1	anterw 1304	lood		
SITE	SPECIFIC I	NPUT DATA			NO	DISE M	ODEL	INPUT	s	
Highway Data				Site Cor	nditions (l	Hard = 1	10, Sof	t = 15)		
Average Daily	Traffic (Adt):	6,000 vehicles				Α	utos:	15		
Peak Hou	r Percentage:	10%		Me	edium Truc	cks (2 A)	kles):	15		
Peak	Hour Volume:	600 vehicles		He	eavy Truck	(3+ A)	kles):	15		
V	ehicle Speed:	45 mph		Vehicle	Mix					
Near/Far La	ane Distance:	54 feet		Vel	nicleTvpe	L	Dav	Evenina	Niaht	Dailv
Site Data					AL	itos: 7	5.5%	14.0%	10.5%	97.42%
B	arrior Hoight	0.0 feet		M	ledium Tru	cks: 4	8.9%	2.2%	48.9%	1.84%
Barrier Type (0-V	Vall. 1-Berm):	0.0			Heavy Tru	cks: 4	7.3%	5.4%	47.3%	0.74%
Centerline D	ist. to Barrier:	64.0 feet		Noiso S	ourco Elo	vations	(in for	(
Centerline Dist	to Observer:	64.0 feet		NOISe 3	Ource Ele	vauons	(111 100	:()		
Barrier Distance	to Observer:	0.0 feet		A 4 - 16	Autos.	0.00	00			
Observer Height	(Above Pad):	5.0 feet		Weald	III TIUCKS.	2.2	oe (Srada Ad	iustmon	+ 0.0
F	Pad Elevation:	0.0 feet		пеа	vy mucks.	0.0	00 0	Jiado Adj	usunen	. 0.0
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent l	Distance	e (in fe	et)		
	Road Grade:	0.0%			Autos:	58.2	41			
	Left View:	-90.0 degrees		Mediu	m Trucks:	58.0	89			
	Right View:	90.0 degrees		Hea	vy Trucks:	58.1	04			
FHWA Noise Mod	lel Calculation	is								
VehicleType	REMEL	Traffic Flow	Distance	e Finite	Road	Fresne	el E	arrier Att	en Be	rm Atten
Autos.	68.46	-4.17	-1	.10	-1.20	-	4.70	0.0	000	0.000
Medium Trucks	79.45	-21.41	-1	.08	-1.20		4.88	0.0	000	0.000
Heavy Trucks	84.25	-25.36	-1	.08	-1.20	-	5.31	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and b	arrier atte	enuation)						
VehicleType	Leq Peak Ho	ur Leq Day	Leq	Evening	Leq N	light	1	dn	С	NEL
Autos.	62	2.0 60	0.0	58.7		52.7		61.1		61.7
Medium Trucks.	55	5.8 5	1.9	44.4		53.1		59.3	3	59.3
Heavy Trucks	56	6.6 52	2.6	49.2		53.8		60.0)	60.1
Vehicle Noise	63	3.8 6	1.2	59.3		58.0		65.0)	65.3
Centerline Distar	ice to Noise C	ontour (in feet)								
			70) dBA	65 d	BA	60) dBA	55	dBA
		L	dn:	30	64		1	137	2	295
		CNI	EL:	31	67			144		309

Tuesday, March 06, 2018

Tuesday, March 06, 2018

	FH	WA-RD-77-108	HIGHW	AY NO	DISE P	REDICTIC	N MOD	EL _	_	_	
Scenar Road Nan Road Segme	io: Existing W ne: Menifee Re nt: s/o Holland	ithout Project d. I Rd.				Project N Job Nu	lame: Ca mber: 11	anterw 1304	bood		
SITE	SPECIFIC IN	NPUT DATA				NC	DISE M	ODEL	INPUTS	s	
Highway Data				S	ite Cor	nditions (H	Hard = 1	0, Soft	t = 15)		
Average Daily	Traffic (Adt):	5,300 vehicle	s				A	utos:	15		
Peak Hour	Percentage:	10%			Me	edium Truc	ks (2 Ax	des):	15		
Peak H	lour Volume:	530 vehicle	s		He	avy Truck	s (3+ Ax	des):	15		
Ve	hicle Speed:	45 mph		V	ehicle	Mix					
Near/Far La	ne Distance:	54 feet			Veh	nicleType	D	ay E	Evening	Night	Daily
Site Data						AL	itos: 7	5.5%	14.0%	10.5%	6 97.42%
Ba	rrier Heiaht:	0.0 feet			М	edium Tru	cks: 4	8.9%	2.2%	48.9%	6 1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0				Heavy Tru	cks: 4	7.3%	5.4%	47.3%	6 0.74%
Centerline Di	st. to Barrier:	64.0 feet		N	oise S	ource Ele	vations	(in fee	t)		
Centerline Dist.	to Observer:	64.0 feet				Autos:	0.00	00	<i>,</i>		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.29	97			
Observer Height	(Above Pad):	5.0 feet			Hear	v Trucks:	8.00)6 G	Grade Adj	ustmen	t: 0.0
P	ad Elevation:	0.0 feet		-							
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distance	e (in fe	et)		
	Road Grade:	0.0%				Autos:	58.24	11			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	58.08	39			
	Right View:	90.0 degre	es		Hear	vy Trucks:	58.10)4			
FHWA Noise Mod	el Calculation	IS		_							
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresne	I Bi	arrier Atte	en Be	erm Atten
Autos:	68.46	-4.71		-1.10		-1.20	-4	4.70	0.0	00	0.000
Medium Trucks:	79.45	-21.95		-1.08		-1.20	-4	4.88	0.0	00	0.000
Heavy Trucks:	84.25	-25.90		-1.08		-1.20	-8	5.31	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Daj	V L	eq Eve	ening	Leq N	ight	L	.dn	0	ONEL
Autos:	61	.5	59.4		58.1		52.1		60.5		61.2
Medium Trucks:	55	5.2	51.3		43.8		52.6		58.7		58.8
Heavy Trucks:	56	6.1	52.0		48.6		53.3		59.5	, ,	59.6
Vehicle Noise:	63	3.3	60.7		58.7		57.5		64.4	Ļ	64.7
Centerline Distan	ce to Noise C	ontour (in fee	t)			r				T	
				70 dł	BA	65 dl	BA	60	dBA	5	5 dBA
		-	Ldn:	27		59		1	26		272
		С	NEL:	28		61		1	32		285

	FH\	NA-RD-77-108	HIGH	IWAY N	OISE PR	EDICTIC	ON MO	DEL			
Scenario	b: Existing Wi	ithout Project				Project N	lame:	Canter	wood		
Road Name	e: Leon Rd.					Job Nu	mber:	11304			
Road Segmen	t: s/o Craig A	ν.									
SITE S	PECIFIC IN	IPUT DATA				N	DISE N	NODE	L INPUT	s	
Highway Data				3	Site Cond	ditions (Hard =	10, So	oft = 15)		
Average Daily 1	raffic (Adt):	400 vehicle	s				,	Autos:	15		
Peak Hour I	Percentage:	10%			Med	lium True	cks (2 A	Axles):	15		
Peak Ho	our Volume:	40 vehicle	s		Hea	avy Truck	ks (3+ A	Axles):	15		
Veh	icle Speed:	35 mph		1	/ehicle N	lix					
Near/Far Lan	e Distance:	48 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	14.0%	10.5%	92.00%
Bar	rier Heiaht:	0.0 feet			Me	dium Tru	icks:	48.0%	2.0%	50.0%	3.00%
Barrier Type (0-Wa	all, 1-Berm):	0.0			н	leavy Tru	icks:	48.0%	2.0%	50.0%	5.00%
Centerline Dis	t. to Barrier:	59.0 feet			Voise So	urco Ele	vation	s (in fa	oot)		
Centerline Dist. t	o Observer:	59.0 feet		<i>'</i>	10/36 30	Autor	vau011	000			
Barrier Distance t	o Observer:	0.0 feet			Modium	Trucke	2	207			
Observer Height (A	Above Pad):	5.0 feet			Heave	/ Trucks	- 81	006	Grade Ad	iustment	. 0.0
Pa	d Elevation:	0.0 feet			neavy	indons.	0.0	000	onddo ma	Juoumoni	. 0.0
Roa	d Elevation:	0.0 feet		1	.ane Equ	ivalent	Distan	ce (in i	feet)		
F	load Grade:	0.0%				Autos:	54.	129			
	Left View:	-90.0 degre	es		Mediun	n Trucks:	53.	966			
	Right View:	90.0 degre	es		Heavy	/ Trucks:	53.	982			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite I	Road	Fresn	nel	Barrier Att	en Ber	m Atten
Autos:	64.30	-15.09		-0.62	2	-1.20		-4.69	0.0	000	0.00
Medium Trucks:	75.75	-29.95		-0.60)	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	81.57	-27.74		-0.60)	-1.20		-5.35	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Hou	ur Leq Day	/	Leq E	ening/	Leq N	light		Ldn	C	NEL
Autos:	47	.4	45.5		44.1		38.1		46.5	5	47.
Medium Trucks:	44	.0	40.0		32.2		41.4	Ļ	47.6	6	47.
Heavy Trucks:	52		48.0		40.3		49.5)	55.6	5 -	55.
Vehicle Noise:	53	.8	50.4		45.8		50.4	1	56.	7	56.
Centerline Distanc	e to Noise Co	ontour (in feet)	70 6	IDΛ	65 d	DA.	6	OdPA	55	dRA
			I dn	700	1	17		1 0	36	1 35	77
		0	NEL ·	0		17			36		78
			• – – – .	0					00		

	FHV	VA-RD-77-108	HIGHW	AY NO	DISE PI	REDICT		DEL				
Scenar Road Nam Road Segmei	io: Existing Wit ne: Leon Rd. nt: s/o Garbani	thout Project Rd.				Project Job N	Name: umber:	Cante 11304	rwood			
SITE	SPECIFIC IN	PUT DATA				N	IOISE I	MODE	L INPU	TS		
Highway Data				S	ite Con	ditions	(Hard =	: 10, S	oft = 15)			
Average Daily Peak Hour Peak H	Traffic (Adt): Percentage: lour Volume:	700 vehicles 10% 70 vehicles	3		Me He	dium Tri avv Tru	ucks (2) cks (3+)	Autos: Axles): Axles);	15 15 15			
Ve	hicle Sneed	55 mph				,						
Near/Far La	ne Distance:	48 feet		V	ehicle I Veh	Mix icleType		Day	Evening	N	ight	Daily
Site Data						/	Autos:	77.5%	5 14.0%	5 1	0.5%	92.00%
Ba ı Barrier Type (0-W	r rier Height: /all, 1-Berm):	0.0 feet 0.0			M F	edium Ti Heavy Ti	rucks: rucks:	48.0% 48.0%	5 2.0% 5 2.0%	5 5	0.0% 0.0%	3.00% 5.00%
Centerline Dis	st. to Barrier:	59.0 feet		N	oise So	ource El	evation	s (in f	eet)			
Centerline Dist. Barrier Distance Observer Height (to Observer: to Observer: (Above Pad):	59.0 feet 0.0 feet 5.0 feet			Mediui Heav	Auto: m Truck: y Truck:	s: 0. s: 2. s: 8.	000 297 006	Grade A	djust	ment:	0.0
Ro	ad Elevation:	0.0 feet		L	ane Ea	uivalen	Distan	ce (in	feet)			
	Road Grade: Left View: Right View:	0.0% -90.0 degree 90.0 degree	es es		Mediui Heav	Auto: m Truck: ry Truck:	s: 54. s: 53. s: 53.	129 966 982	,			
FHWA Noise Mod	el Calculation:	5										
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresi	nel	Barrier A	tten	Ben	m Atten
Autos: Medium Trucks:	71.78 82.40	-14.62		-0.62		-1.20		-4.69 -4.88	0	.000		0.000
Heavy Trucks:	86.40	-27.27		-0.60		-1.20		-5.35	C	.000		0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	attenu	ation)							
VehicleType	Leq Peak Hou	r Leq Day	L	.eq Ev	ening	Leq	Night		Ldn		CI	VEL
Autos:	55.	3 !	53.4		52.0		46.0	C	54	.5		55.1
Medium Trucks:	51.	.1 4	47.1		39.4		48.6	6	54	.7		54.8
Heavy Trucks:	57.	.3 !	53.3		45.6		54.8	3	60	.9		61.0
Vehicle Noise:	60.	.0 .	56.9		53.1		56.	1	62	2.6		62.7
Centerline Distant	ce to Noise Co	ntour (in feet))	70 d	RA	65	dBA		60 dBA	-	55	dBA
			l dn:	19	<i>ar</i> 1	4	1	1 '	88		1	89
		Ch	IEL:	19		4	2		90		1	93

	FH	WA-RD-77-108 H	IIGHWAY	NOISE P	REDICTIO	N MODEL		
Scenai Road Nan Road Segme	rio: Existing W ne: Leon Rd. ent: s/o Scott R	ithout Project			Project Na Job Nun	ame: Cante aber: 11304	rwood 1	
SITE	SPECIFIC I	NPUT DATA			NO	ISE MODI	EL INPUTS	
Highway Data				Site Cor	nditions (H	ard = 10, S	oft = 15)	
Average Daily	Traffic (Adt):	2,700 vehicles				Autos	: 15	
Peak Hour	Percentage:	10%		Me	edium Trucl	s (2 Axles)	: 15	
Peak H	Hour Volume:	270 vehicles		He	eavy Trucks	(3+ Axles)	: 15	
Ve	ehicle Speed:	55 mph		Vohiclo	Mix			
Near/Far La	ane Distance:	48 feet		Vehicle	nicleType	Dav	Evening	Night Daily
Site Data					Aut	os: 77.5%	6 14.0%	10.5% 92.00%
Pa	verior Hoight:	0.0 foot		M	ledium Truc	ks: 48.0%	6 2.0%	50.0% 3.00%
Barrier Type (0-V	Vall 1-Berm)	0.0 1001			Heavy Truc	ks: 48.0%	6 2.0%	50.0% 5.00%
Centerline D	ist. to Barrier:	59.0 feet		Noise O		-ti (in	(4)	
Centerline Dist.	to Observer:	59.0 feet		Noise S	ource Elev	ations (in i	reet)	
Barrier Distance	to Observer:	0.0 feet			Autos:	0.000		
Observer Height	(Above Pad):	5.0 feet		Mediu	m Trucks:	2.297	Crada Adi	ofmonti 0.0
P	ad Elevation:	0.0 feet		Hea	vy Trucks:	8.006	Grade Adju	sument. 0.0
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent D	istance (in	feet)	
	Road Grade:	0.0%			Autos:	54.129		
	Left View:	-90.0 degrees		Mediu	m Trucks:	53.966		
	Right View:	90.0 degrees		Hea	vy Trucks:	53.982		
FHWA Noise Mod	lel Calculation	is						
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	n Berm Atten
Autos:	71.78	-8.76	-0.	62	-1.20	-4.69	0.00	0.000
Medium Trucks:	82.40	-23.62	-0.	60	-1.20	-4.88	0.00	0.000
Heavy Trucks:	86.40	-21.41	-0.	60	-1.20	-5.35	0.00	00 0.000
Unmitigated Nois	e Levels (with	out Topo and b	arrier atte	enuation)				
VehicleType	Leq Peak Ho	ur Leq Day	Leq	Evening	Leq Ni	ght	Ldn	CNEL
Autos:	61	1.2 59	9.3	57.9	1	51.9	60.3	61.0
Medium Trucks:	57	7.0 53	3.0	45.2		54.4	60.6	60.6
Heavy Trucks:	63	3.2 59	9.2	51.4		60.6	66.8	66.8
Vehicle Noise:	65	5.9 62	2.8	59.0	1	62.0	68.4	68.6
Centerline Distan	ce to Noise C	ontour (in feet)						
			70) dBA	65 dB	A	60 dBA	55 dBA
		Le	dn:	47	100		216	465
		CNE	EL:	47	102		220	474

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	FH	WA-RD-77-108	B HIGHW	VAY NO	DISE P	REDICTIC	N MODE	EL			
Scenar Road Nam Road Segme	io: Existing W ne: Holland Ro nt: w/o Menife	ithout Project I. e Rd.				Project N Job Nur	ame: Ca nber: 11	interwood 304			
SITE	SPECIFIC I	NPUT DATA				NC	ISE MO	DEL INF	UTS		
Highway Data				S	ite Cor	nditions (H	lard = 10), Soft = 1	5)		
Average Daily	Traffic (Adt):	3,100 vehicle	s				Au	tos: 15			
Peak Hour	Percentage:	10%			Me	edium Truc	ks (2 Axi	les): 15			
Peak H	lour Volume:	310 vehicle	s		He	avy Truck	s (3+ Axi	les): 15			
Ve	hicle Speed:	45 mph		V	obielo	Miy					
Near/Far La	ne Distance:	48 feet			Veh	iviix nicleTvpe	Di	av Even	ina Ni	aht	Dailv
Site Data						Au	tos: 75	5.5% 14.	0% 10).5%	97.42%
Ba	rrier Height	0.0 feet			М	edium Tru	cks: 48	3.9% 2.	2% 48	3.9%	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0				Heavy Tru	cks: 47	7.3% 5.	4% 47	7.3%	0.74%
Centerline Di	st. to Barrier:	59.0 feet		N	oise S	ource Elev	ations ((in feet)			
Centerline Dist.	to Observer:	59.0 feet			0.00 0	Autos:	0.00	0			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2 29	7			
Observer Height	(Above Pad):	5.0 feet			Hear	v Trucks:	8.00	6 Grade	- Adiusti	ment:	0.0
Pa	ad Elevation:	0.0 feet			mou	iy maana.	0.00				
Roi	ad Elevation:	0.0 feet		Li	ane Eq	uivalent L	Distance	(in feet)			
	Road Grade:	0.0%				Autos:	54.12	9			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	53.96	6			
	Right View:	90.0 degre	es		Hear	vy Trucks:	53.98	2			
FHWA Noise Mod	el Calculatior	IS									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresnel	Barrie	r Atten	Bern	n Atten
Autos:	68.46	-7.04		-0.62		-1.20	-4	.69	0.000		0.000
Medium Trucks:	79.45	-24.28		-0.60		-1.20	-4	.88	0.000		0.000
Heavy Trucks:	84.25	-28.23		-0.60		-1.20	-5	.35	0.000		0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	y L	Leq Eve	ening	Leq N	ight	Ldn		CN	EL
Autos:	59	9.6	57.6		56.3		50.3		58.7		59.3
Medium Trucks:	53	3.4	49.5		42.0		50.7		56.9		56.9
Heavy Trucks:	54	1.2	50.2		46.8		51.4		57.6		57.7
Vehicle Noise:	61	1.4	58.8		56.9		55.6		62.6		62.9
Centerline Distan	ce to Noise C	ontour (in fee	t)								
			L	70 dE	BA	65 dE	ЗA	60 dBA		55 0	1BA
			Ldn:	19		41		88		18	19
		С	NEL:	20		43		92		19	8

	FH	VA-RD-77-108	HIGH	IWAY N	OISE PR	EDICTIC		DEL			
Scenario	b: Existing Wi	thout Project				Project N	lame: (Canter	wood		
Road Name	e: Holland Rd					Job Nu	mber:	1304			
Road Segmen	t: e/o Menifee	e Rd.									
SITE S	PECIFIC IN	IPUT DATA				NC	DISE N	IODE	L INPUT	s	
Highway Data				5	Site Cond	litions (l	Hard =	10, Sc	oft = 15)		
Average Daily 1	raffic (Adt):	2,900 vehicle	s					Autos:	15		
Peak Hour I	Percentage:	10%			Med	lium Truc	:ks (2 A	xles):	15		
Peak Ho	our Volume:	290 vehicle	S		Hea	vy Truck	:s (3+ A	xles):	15		
Veh	icle Speed:	45 mph		١	/ehicle N	lix					
Near/Far Lan	e Distance:	48 feet			Vehi	leType		Day	Evening	Night	Daily
Site Data						AL	itos:	75.5%	14.0%	10.5%	97.42%
Bar	rier Heiaht:	0.0 feet			Me	dium Tru	cks:	48.9%	2.2%	48.9%	1.84%
Barrier Type (0-Wa	all, 1-Berm):	0.0			н	eavy Tru	cks:	47.3%	5.4%	47.3%	0.74%
Centerline Dis	t. to Barrier:	59.0 feet			Voise So	urce Ele	vation	: (in fa	of)		
Centerline Dist. t	o Observer:	59.0 feet		Ľ.	10/30 00	Autos	0.0	000			
Barrier Distance t	o Observer:	0.0 feet			Mediun	Trucks	2:2	97			
Observer Height (A	Above Pad):	5.0 feet			Heav	/ Trucks:	8.0	006	Grade Ad	iustment	: 0.0
Pa	d Elevation:	0.0 feet			,						
Roa	d Elevation:	0.0 feet		1	.ane Equ	ivalent	Distand	e (in i	feet)		
F	load Grade:	0.0%				Autos:	54.	129			
	Left View:	-90.0 degree	es		Mediun	1 Trucks:	53.9	966			
	Right View:	90.0 degree	es		Heavy	/ Trucks:	53.9	982			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite I	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	68.46	-7.33		-0.62	2	-1.20		-4.69	0.0	000	0.00
Medium Trucks:	79.45	-24.57		-0.60)	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	84.25	-28.52		-0.60)	-1.20		-5.35	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	<i>,</i>	Leq Ev	ening	Leq N	ïght		Ldn	C	NEL
Autos:	59	.3	57.3		56.0		50.0		58.4	1	59.0
Medium Trucks:	53	.1	49.2		41.7		50.4		56.6	6	56.0
Heavy Trucks:	53	.9	49.9		46.5		51.1		57.3	3	57.4
Vehicle Noise:	61	.2	58.6		56.6		55.3		62.3	3	62.0
Centerline Distanc	e to Noise Co	ontour (in feet)	70	0.4	05.	04		0.0		-10.4
			L	70 a	IBA	65 d	BA	6	iU dBA	55	aBA
			Lan:	18	5	39			84	1	80
		~ ~ ~	VH(·	10		41			NH NH	1	XЧ

	5 111	VA DD 77 400						DEI			
	FHV	VA-RD-77-108	HIGHW	AY NO	JISE PI	REDICT		DEL			
Scenari	o: Existing Wi	thout Project				Project	Name:	Cante	rwood		
Road Nam	e: Holland Rd					Job N	lumber:	11304			
Road Segmer	nt: w/o Briggs	Rd.									
SITE	SPECIFIC IN	PUT DATA				Ν	IOISE I	NODE	L INPUT	s	
Highway Data				S	ite Cor	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	300 vehicles						Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2)	Axles):	15		
Peak H	our Volume:	30 vehicles			He	avy Tru	cks (3+)	Axles):	15		
Vei	hicle Speed:	45 mph		V	obiolo	Mix					
Near/Far Lai	ne Distance:	48 feet			Voh	icleType		Dav	Evening	Niaht	Daily
Site Data				-	ven	ioic rype	Autos:	75.5%	14.0%	10.5%	6 97 42%
0.10 2414		0.0 (М	edium T	rucks:	48.9%	2.2%	48.9%	6 1.84%
Bar Barrier Turne (0.14)	rier Height:	0.0 feet				leavy T	rucks:	47.3%	5.4%	47.3%	6 0.74%
Contorlino Dir	all, 1-Dellin).	50.0 foot				,					
Centerline Dist	to Obsenver	59.0 feet		N	oise S	ource E	levation	s (in f	eet)		
Barrier Distance	to Observer:	0.0 feet				Auto	s: 0.	000			
Obsonior Hoight /	Abovo Rod):	5.0 foot			Mediu	m Truck	s: 2.	297			
Diserver Height (Above Fau).	5.0 feet			Heav	y Truck	s: 8.	006	Grade Ad	justmen	t: 0.0
Pos	d Elevation:	0.0 feet		L	ane Eo	uivalen	t Distan	ce (in	feet)		
100	Road Grade:	0.0%		F		Auto	s [.] 54	129			
1	Left View:	0.0 %	~		Mediu	m Truck	s [.] 53	966			
	Right View:	-90.0 degree	5 C		Heat	v Truck	s [.] 53	082			
	ragin nom.	50.0 degree	3			,		002			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresr	nel	Barrier Att	en Be	erm Atten
Autos:	68.46	-17.18		-0.62		-1.20		-4.69	0.0	000	0.000
Medium Trucks:	79.45	-34.42		-0.60		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-38.37		-0.60		-1.20		-5.35	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Hou	r Leq Day	L	.eq Ev	ening	Leq	Night		Ldn	0	NEL
Autos:	49	.5 4	7.5		46.1		40.1	ľ	48.	5	49.2
Medium Trucks:	43	.2 3	9.3		31.8		40.6	6	46.	3	46.8
Heavy Trucks:	44	.1 4	0.0		36.6		41.3	3	47.	5	47.6
Vehicle Noise:	51	.3 4	8.7		46.7		45.5	5	52.4	4	52.7
Centerline Distance	e to Noise Co	ontour (in feet)									
				70 di	BA	65	dBA	(60 dBA	55	5 dBA
		l	dn:	4			9		18		40
		CA	IEL:	4			9		19		42

	FH	NA-RD-77-108	B HIGHV	VAY NO	DISE P	REDICTIC	ON MOD	DEL			
Scenar Road Nam Road Segme	io: Existing W ie: Holland Ro nt: w/o Leon F	ithout Project td.				Project N Job Nu	lame: C mber: 1	Cante 1304	rwood		
SITE	SPECIFIC IN	IPUT DATA				NC	DISE M	IODE	L INPUTS	5	
Highway Data				S	ite Cor	nditions (I	Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	200 vehicle	s				A	Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Truc	cks (2 A	xles):	15		
Peak H	lour Volume:	20 vehicle	s		He	avy Truck	(3+ A	xles):	15		
Ve	hicle Speed:	45 mph		V	ohiclo	Mix					
Near/Far La	ne Distance:	48 feet		-	Veh	nicleType		Dav	Evenina	Niaht	Daily
Site Data					1011	AL	itos:	77.5%	5 14.0%	10.5%	6 92.00%
Ba	rrior Hoiaht	0.0 feet			М	edium Tru	icks: 4	48.0%	2.0%	50.0%	6 3.00%
Barrier Type (0-W	all. 1-Berm):	0.0			1	Heavy Tru	icks: 4	48.0%	2.0%	50.0%	6 5.00%
Centerline Di	st. to Barrier:	59.0 feet			0				41		
Centerline Dist.	to Observer:	59.0 feet		//	uise a	Autoor	vauons	s (III 1	eel)		
Barrier Distance	to Observer:	0.0 feet				Autos:	0.0	00			
Observer Height (Above Pad):	5.0 feet			Mealu	m Trucks:	2.2	.97	Grado Adi	uetmor	+ 0.0
Pa	ad Elevation:	0.0 feet			nea	vy mucks.	0.0	00	Grade Adj	usunor	1. 0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distanc	e (in	feet)		
	Road Grade:	0.0%				Autos:	54.1	29			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	53.9	966			
	Right View:	90.0 degre	es		Heav	vy Trucks:	53.9	82			
FHWA Noise Mod	el Calculation	s									-
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresne	e/	Barrier Atte	en Be	erm Atten
Autos:	68.46	-19.19		-0.62		-1.20	-	4.69	0.0	00	0.000
Medium Trucks:	79.45	-34.06		-0.60		-1.20	-	4.88	0.0	00	0.000
Heavy Trucks:	84.25	-31.84		-0.60		-1.20	-	-5.35	0.0	00	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	r attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	y I	Leq Eve	ening	Leq N	light		Ldn	(ONEL
Autos:	47	.5	45.6		44.1		38.1		46.6		47.2
Medium Trucks:	43	.6	39.6		31.8		41.0		47.2		47.2
Heavy Trucks:	50	.6	46.6		38.9		48.1		54.2		54.2
Vehicle Noise:	52	.9	49.6		45.5		49.2		55.6		55.7
Centerline Distant	ce to Noise C	ontour (in fee	t)								
				70 dl	BA	65 di	BA		60 dBA	5	5 dBA
			Ldn:	6		14			30		65
		С	NEL:	7		14			30		66

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	FH	WA-RD-77-108	HIGHW	AY NO	OISE PI	REDICTIC	N MODE	EL			
Scenai Road Nan Road Segme	rio: Existing W ne: Scott Rd. nt: w/o Haun F	ithout Project Rd.				Project N Job Nu	lame: Ca mber: 11	interwood 304			
SITE	SPECIFIC IN	IPUT DATA				NC	DISE MO	DEL INF	PUTS		
Highway Data				S	lite Cor	ditions (F	Hard = 10), Soft = 1	5)		
Average Daily	Traffic (Adt):	10,600 vehicle	S				Au	tos: 15			
Peak Hour	Percentage:	10%			Me	dium Truc	ks (2 Axi	les): 15			
Peak H	Hour Volume:	1,060 vehicle	s		He	avy Truck	's (3+ Axi	es): 15			
Ve	ehicle Speed:	50 mph		V	ehicle	Mix					_
Near/Far La	ne Distance:	78 feet			Veh	icleType	Di	ay Even	ing Ni	ght Daily	/
Site Data						AL	itos: 75	5.5% 14.	0% 10	0.5% 97.42	%
Ba	rrier Height:	0.0 feet			М	edium Tru	cks: 48	3.9% 2.	2% 48	8.9% 1.84	%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tru	cks: 47	'.3% 5.	4% 47	7.3% 0.74	%
Centerline Di	ist. to Barrier:	76.0 feet		N	loise Se	ource Ele	vations ((in feet)			
Centerline Dist.	to Observer:	76.0 feet				Autos:	0.00	0			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.29	7			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks:	8.00	6 Grade	e Adjusti	nent: 0.0	
P	ad Elevation:	0.0 feet							,		
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distance	(in feet)			
	Road Grade:	0.0%				Autos:	65.42	2			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	65.28	6			
	Right View:	90.0 degre	es		Heav	y Trucks:	65.30	0			
FHWA Noise Mod	lel Calculation	IS									_
VehicleType	REMEL	Traffic Flow	Distar	се	Finite	Road	Fresnel	Barrie	r Atten	Berm Atter	n
Autos:	70.20	-2.16		-1.85		-1.20	-4	.73	0.000	0.00	00
Medium Trucks:	81.00	-19.39		-1.84		-1.20	-4	.88	0.000	0.00	00
Heavy Trucks:	85.38	-23.35		-1.84		-1.20	-5	.25	0.000	0.00	00
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenu	lation)						_
VehicleType	Leq Peak Ho	ur Leq Daj	V L	eq Ev	ening	Leq N	ight	Ldn		CNEL	
Autos:	65	5.0	63.0		61.7		55.7		64.1	64	1.7
Medium Trucks:	58	3.6	54.7		47.2		55.9		62.1	62	2.1
Heavy Trucks:	59	9.0	54.9		51.5		56.2		62.4	62	2.5
Vehicle Noise:	66	6.7	64.1		62.2		60.7		67.7	68	3.0
Centerline Distan	ce to Noise C	ontour (in fee	t)			0					-
				70 dl	BA	65 dl	BA	60 dBA	1	55 dBA	
			Ldn:	54	Ļ	115	5	248		535	
		С	NEL:	56	6	121		261		562	

	FHV	VA-RD-77-108	HIGH	IWAY NO	ISE PF	REDICTI	ON MOI	DEL			
Scenario Road Name Road Segmen	: Existing Wit : Scott Rd. : e/o Haun R	thout Project d.				Project Job Ni	Name: (umber: 1	Canter I 1304	wood		
SITE S	PECIFIC IN	PUT DATA				N	OISE N	IODE	L INPUT	s	
Highway Data				Si	te Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily T	raffic (Adt): 1	5,500 vehicle	s					Autos:	15		
Peak Hour F	Percentage:	10%			Me	dium Tru	icks (2 A	xles):	15		
Peak Ho	ur Volume:	1,550 vehicle	s		He	avy Truc	ks (3+ A	xles):	15		
Veh	icle Speed:	50 mph		V	hicle l	Mix					
Near/Far Lan	e Distance:	78 feet		-	Veh	icleTvpe		Dav	Evenina	Niaht	Dailv
Site Data						A	utos:	75.5%	14.0%	10.5%	97.429
Par	ior Hoight:	0.0 foot			Me	edium Tr	ucks:	48.9%	2.2%	48.9%	1.849
Barrier Type (0-Wa	Il 1-Rorm)	0.0 1001			ŀ	leavy Tr	ucks:	47.3%	5.4%	47.3%	0.749
Centerline Dist	to Barrier:	76.0 feet									
Centerline Dist. to	Observer:	76.0 feet		N	oise So	ource El	evations	s (in te	eet)		
Barrier Distance to	Observer:	0.0 feet				Autos	.: 0.0	000			
Observer Height (A	bove Pad):	5.0 feet			Mediui	n Trucks	. 2.2	297	Crada Ad	i of moni	
Pa	d Elevation:	0.0 feet			Heav	y Trucks	:: 8.0	106	Grade Ad	justment	. 0.0
Road	d Elevation:	0.0 feet		Lá	ne Eq	uivalent	Distand	e (in :	feet)		
R	oad Grade:	0.0%				Autos	65.4	122			
	Left View:	-90.0 degre	es		Mediui	n Trucks	: 65.2	286			
	Right View:	90.0 degre	es		Heav	y Trucks	65.3	300			
FHWA Noise Mode	Calculation:	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	el	Barrier Att	en Bei	m Atter
Autos:	70.20	-0.51		-1.85		-1.20		-4.73	0.0	000	0.00
Medium Trucks:	81.00	-17.74		-1.84		-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	85.38	-21.70		-1.84		-1.20		-5.25	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er attenu	ation)						
VehicleType I	eq Peak Hou	r Leq Day	/	Leq Eve	ning	Leq I	Vight		Ldn	C	NEL
Autos:	66.	.6	64.6		63.3		57.3		65.7	7	66
Medium Trucks:	60.	.2	56.3		48.8		57.6		63.7	7	63
Heavy Trucks:	60.	.6	56.6		53.2		57.8		64.0)	64
Vehicle Noise:	68	.3	65.8		63.9		62.3		69.4	4	69
Centerline Distance	e to Noise Co	ontour (in feet	()	70 -15		05	104		0.104		-10.4
			1 day	70 dE	2/4	050	IDA IO	6	220	1 55	UBA
		0	Lan:	69		14	19		320	-	090
		C.	NEL:	12		15	0		530	-	24

	FH	WA-RD-77-108	HIGHV	VAY NO	DISE PF	REDICTIO	ON MODE	L			
Scenari Road Nam Road Segmer	io: Existing W e: Scott Rd. nt: w/o Menife	ithout Project				Project N Job Nu	lame: Ca mber: 113	nterwood 304			
SITE	SPECIFIC I	NPUT DATA				N	DISE MO	DEL INPU	TS		
Highway Data				S	ite Con	ditions (Hard = 10	, Soft = 15)			
Average Daily Peak Hour Peak H	Traffic (Adt): Percentage: lour Volume:	14,000 vehicle 10% 1,400 vehicle	s		Me He	dium Truc avy Trucł	Aut cks (2 Axle cs (3+ Axle	os: 15 es): 15 es): 15			
Near/Far I a	ne Distance	79 feet		V	ehicle l	Mix					
iveain ai Ea	ne bistance.	78 1001			Veh	icleType	Da	y Evening	y Ni	ght [Daily
Site Data						A	itos: 75	.5% 14.0%	6 10).5% 9	7.42%
Bar	rrier Height:	0.0 feet			Me	edium Tru	icks: 48	.9% 2.2%	6 48	3.9%	1.84%
Barrier Type (0-W	'all, 1-Berm):	0.0			ŀ	Heavy Iru	icks: 47	.3% 5.4%	6 47	.3% ().74%
Centerline Dis	st. to Barrier:	76.0 feet		N	oise So	ource Ele	vations (i	n feet)			
Centerline Dist.	to Observer:	76.0 feet				Autos:	0.000)			-
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks:	2.297				
Observer Height (Above Pad):	5.0 feet			Heav	v Trucks:	8.006	Grade A	djustr	nent: 0.	.0
Pa	ad Elevation:	0.0 feet					D'	(In fa a t)			
Roa	ad Elevation:	0.0 teet		L	ane Eq	avalent	Distance				
	Road Grade:	0.0%			Modiu	Autos:	05.422	<u> </u>			
	Right View:	90.0 degre	es es		Heav	y Trucks.	65.300)			
FHWA Noise Mode	el Calculatior	15									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresnel	Barrier A	tten	Berm /	Atten
Autos:	71.78	-1.36		-1.85		-1.20	-4.	73 0	0.000		0.000
Medium Trucks:	82.40	-18.60		-1.84		-1.20	-4.	88 C	0.000		0.000
Heavy Trucks:	86.40	-22.56		-1.84		-1.20	-5.	25 0	0.000		0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Daj	/ 1	Leq Ev	ening	Leq N	light	Ldn		CNE	Ĺ
Autos:	67	7.4	65.4		64.0		58.0	66	6.5		67.1
Medium Trucks:	60).8	56.9		49.4		58.1	64	1.3		64.3
Heavy Trucks:	60).8	56.8		53.4		58.0	64	1.2		64.3
Vehicle Noise:	68	3.9	66.4		64.5		62.8	69	9.9		70.2
Centerline Distant	ce to Noise C	ontour (in fee	t)								
				70 di	BA	65 d	BA	60 dBA		55 dB	A
			Ldn:	75		16	1	346		746	
		С	NEL:	79		16	9	364		785	

	FH\	NA-RD-77-108	HIGHWA	AY NO	DISE PREDICTI	ON MODEL			
Scenar	io: Existing W	ithout Project			Project	Name: Cant	erwood		
Road Nam Road Segme	e: Scott Rd.	Rd			Job Ni	umber: 1130	4		
SITE Highway Data	SPECIFIC IN	IPUT DATA		6	ito Conditions	UISE MOD	EL INPUT	5	
Tilgitway Data				3	the Conditions	naru = 10, .	3011 = 13)		
Average Daily	I raffic (Adt):	11,700 vehicle	5			Autos	S: 15		
Peak Hour	Percentage:	10%			Medium Tru	ICKS (2 AXIES): 15		
Peak H	lour Volume:	1,170 vehicle	5		Heavy Truc	KS (3+ Axles): 15		
Ve	nicle Speed:	55 mpn		V	ehicle Mix				
Near/Far La	ne Distance:	78 feet			VehicleType	Day	Evening	Night	Daily
Site Data					A	utos: 75.5	% 14.0%	10.5%	97.42%
Bai	rrier Height:	0.0 feet			Medium Tr	ucks: 48.9	% 2.2%	48.9%	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0			Heavy Tr	ucks: 47.3	% 5.4%	47.3%	0.74%
Centerline Di	st. to Barrier:	76.0 feet		N	oise Source El	evations (in	feet)		
Centerline Dist.	to Observer:	76.0 feet			Autos	: 0.000	,		
Barrier Distance	to Observer:	0.0 feet			Medium Trucks	2.297			
Observer Height (Above Pad):	5.0 feet			Heavy Trucks	8.006	Grade Ad	justment.	0.0
Pa	ad Elevation:	0.0 feet							
Roa	ad Elevation:	0.0 feet		L	ane Equivalent	Distance (ii	1 feet)		
	Road Grade:	0.0%			Autos	65.422			
	Left View:	-90.0 degree	es		Medium Trucks	65.286			
	Right View:	90.0 degree	es		Heavy Trucks	65.300			
FHWA Noise Mod	el Calculation	s							
VehicleType	REMEL	Traffic Flow	Distan	се	Finite Road	Fresnel	Barrier Att	en Ber	m Atten
Autos:	71.78	-2.14		-1.85	-1.20	-4.73	3 0.0	000	0.000
Medium Trucks:	82.40	-19.38		-1.84	-1.20	-4.88	3 0.0	000	0.000
Heavy Trucks:	86.40	-23.33		-1.84	-1.20	-5.28	5 0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier a	ttenu	ation)				
VehicleType	Leq Peak Hou	ır Leq Day	Le	q Eve	ening Leq I	Vight	Ldn	CI	VEL
Autos:	66	.6	64.6		63.3	57.3	65.7	,	66.3
Medium Trucks:	60	.0	56.1		48.6	57.3	63.5	i	63.5
Heavy Trucks:	60	.0	56.0		52.6	57.2	63.4	ļ	63.5
Vehicle Noise:	68	.2	65.6		63.8	62.0	69.1	l	69.4
Centerline Distant	ce to Noise C	ontour (in feet)						
				70 dl	BA 65 d	1BA	60 dBA	55	dBA
			Ldn:	66	14	13	307	6	.62
		CI	VEL:	70	15	50	323	6	97

Tuesday, March 06, 2018

Tuesday, March 06, 2018

	FH	WA-RD-77-108	HIGHW	AY NO		REDICTIC		DEL	_	_	_
Scenar Road Nan Road Segme	rio: Existing W ne: Scott Rd. nt: w/o Leon F	ithout Project				Project N Job Nur	lame: (nber: 1	Cantei 1304	wood		
SITE	SPECIFIC II	VPUT DATA				NC	ISE N	10DE	L INPUT	s	
Highway Data				S	ite Cor	nditions (H	lard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	11,300 vehicle	s				A	Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Truc	ks (2 A	xles):	15		
Peak H	our Volume:	1,130 vehicle	s		He	avy Truck	s (3+ A	xles):	15		
Ve	hicle Speed:	55 mph		V	ohiclo	Mix					
Near/Far La	ne Distance:	78 feet			Veh	nicleType		Dav	Evenina	Niaht	Daily
Site Data						Au	tos:	75.5%	14.0%	10.5%	97.42%
Ba	rrier Height	0.0 feet			М	edium Tru	cks: 4	48.9%	2.2%	48.9%	1.84%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tru	cks: 4	47.3%	5.4%	47.3%	0.74%
Centerline Di	ist. to Barrier:	76.0 feet		N	oise Si	ource Elev	vations	: (in fi	eet)		
Centerline Dist.	to Observer:	76.0 feet		Ë	0.00 0	Autos:	0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.2	97			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks:	8.0	006	Grade Adi	iustmen	t: 0.0
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent L	Distanc	e (in	feet)		
	Road Grade:	0.0%				Autos:	65.4	122			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	65.2	286			
	Right View:	90.0 degre	es		Heav	vy Trucks:	65.3	300			
FHWA Noise Mod	lel Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Distar	ice	Finite	Road	Fresn	el	Barrier Atte	en Be	rm Atten
Autos:	71.78	-2.29		-1.85		-1.20		4.73	0.0	000	0.000
Medium Trucks:	82.40	-19.53		-1.84		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	86.40	-23.49		-1.84		-1.20		-5.25	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	ttenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Daj	/ L	eq Eve	ening	Leq N	ight		Ldn	C	NEL
Autos:	66	6.4	64.4		63.1		57.1		65.5	5	66.1
Medium Trucks:	59	9.8	55.9		48.4		57.2		63.4	ļ.	63.4
Heavy Trucks:	59	9.9	55.8		52.4		57.1		63.3	3	63.4
Vehicle Noise:	68	3.0	65.5		63.6		61.9		69.0)	69.3
Centerline Distan	ce to Noise C	ontour (in fee)								
				70 dł	BA	65 dE	ЗA	6	60 dBA	55	dBA
		-	Ldn:	65		139			300		647
		С	NEL:	68		147			316		581

Scenario: Existing Without Project Road Name: Project Name: Canterwood Job Number: Road Segment: e'o Leon Rd. Job Number: 11304 Site SpecIFIC INPUT DATA NOISE MODEL INPUTS Highway Data Site Conditions (Hard = 10, Soft = 15) Average Daily Traffic (Adt): 5,100 vehicles Autos: 15 Peak Hour Volume: 510 vehicles Autos: 15 Vehicle Speed: 55 mph Medium Trucks (2 Axles): 15 Vehicle Speed: 55 mph Vehicle Mix Vehicle Mix Site Data Autos: 77.5% 14.0% 10.5% Barrier Height: 0.0 feet Autos: 77.5% 14.0% 10.5% Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Desrver: 76.0 feet Autos: 30.0% Barrier Distance to Observer: 0.0 feet Medium Trucks: 48.0% 2.0% 50.0% Barrier Distance to Observer: 0.0 feet Autos: 8.006 Grade Adjustment: Pad Elevation: 0.0 feet Autos: 65.300 Feavy Trucks: 65.300 Road Grade: 0.0% Autos: 65.300 Feavy Trucks: 65.300 FHWA Noise Model Calculations Tr	Daily 92.00% 3.00% 5.00%
SITE SPECIFIC INPUT DATA NOISE MODEL INPUTS Highway Data Site Conditions (Hard = 10, Soft = 15) Average Daily Traffic (Adi): 5,100 vehicles Autrace: 15 Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Peak Hour Volume: 510 vehicles Medium Trucks (2 Axles): 15 Vehicle Speed: 55 mph Medium Trucks (2 Axles): 15 Vehicle Speed: 55 mph Vehicle Type Day Evening Night Site Data Autos: 77.5% 14.0% 10.5% Barrier Height: 0.0 feet Medium Trucks: 48.0% 2.0% 50.0% Barrier Type (O-Walt): 14.0% 16.5% Medium Trucks: 48.0% 2.0% 50.0% Barrier Type (O-Walt): 14.0% 16.6 Medium Trucks: 48.0% 2.0% 50.0% Centerline Dist. to Barrier: 76.0 feet Autos: 0.000 Medium Trucks: 2.29% 50.0% Observer Height (Above Pad): 5.0 feet Autos: 0.006 Grade Adjustment:<	Daily 92.00% 3.00% 5.00%
Highway Data Site Conditions (Hard = 10, Soft = 15) Average Daily Traffic (Adt): 5,100 vehicles Autos:: 15 Peak Hour Percentage: 10% Medium Trucks (24 Avles): 15 Peak Hour Volume: 510 vehicles Heavy Trucks (3+ Avles): 15 Vehicle Speed: 55 mph Vehicle Mix Vehicle Mix Site Data Autos:: 77.5% 14.0% 10.5% Barrier Height: 0.0 feet Autos:: 77.5% 14.0% 0.0% Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Dserver: 76.0 feet Noise Source Elevations (in feet) Confeet Barrier Distance to Observer: 0.0 feet Medium Trucks: 48.0% 2.0% 50.0% Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297 Observer Height (Above Pad): 5.0 feet Autos:: 5.0 degrees Road Grade: 0.0% Equivalent Distance (in feet) Autos:: 65.300 Feavy Trucks: 65.300 FHWA Noise Model Calculations 90.0 degrees Heavy Trucks: 65.300	Daily 92.00% 3.00% 5.00%
Average Daily Traffic (Adt): 5,100 vehicles Autos: 15 Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Peak Hour Volum: 510 vehicles Heavy Trucks (2 Axles): 15 Vehicle Speed: 55 mph Yehicle Type Day Evening Night Site Data Autos: 77 feet Vehicle Type Day Evening Night Barrier Height: 0.0 feet Medium Trucks: 48.0% 2.0% 50.0% Centerline Dist. to Diserver: 76.0 feet Medium Trucks: 48.0% 2.0% 50.0% Barrier Type (0-Wall, 1-Berm): 0.0 feet Molse Source Elevations (in feet) 60.0% Barrier Type (0-Wall, 1-Berm): 0.0 feet Autos: 0.0% Centerline Dist. to Diserver: 0.0 feet Molse Source Elevations (in feet) Barrier Type (Jewation: 0.0 feet Autos: 8.006 Grade Adjustment: Pad Elevation: 0.0 feet Autos: 65.286 Heavy Trucks: 65.286 Road Grade: 0.0% Heavy Trucks: 65.286 Heavy Trucks: 65.300 Left View: 90.0 degrees Heavy Trucks: 65.300 Heavy Trucks: 65.300 H	Daily 92.00% 3.00% 5.00%
Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Peak Hour Volume: 510 vehicles Heavy Trucks (2 Axles): 15 Vehicle Speed: 55 mph Vehicle Mix Vehicle Mix Site Data Autos: 77.5% 14.0% 10.5% Barrier Height: 0.0 feet Autos: 77.5% 14.0% 10.5% Barrier Type (0-Wall, 1-Berm): 0.0 0 6et Autos: 76.0% Centerline Dist. to Barrier: 76.0 feet Autos: 0.00 6et Medium Trucks: 48.0% 2.0% 50.0% Deserver Height (Above Pad): 5.0 feet Feet Autos: 0.00 Medium Trucks: 8.006 Grade Adjustment: Road Grade: 0.0% Left View:<-90.0 degrees	Daily 92.00% 3.00% 5.00%
Peak Hour Volume: 510 vehicles Ste Data Heavy Trucks (3+ Axles): 15 Vehicle Speed: 55 mph Ste Data Vehicle Mix Vehicle Mix Site Data Vehicle Mix Vehicle Mix Barrier Height: 0.0 feet Autos: 77.5% 14.0% 10.5% Barrier Height: 0.0 feet Medium Trucks: 48.0% 2.0% 50.0% Barrier Dist. to Barrier: 76.0 feet Medium Trucks: 48.0% 2.0% 50.0% Centerline Dist. to Dserver: 76.0 feet Moise Source Elevations (in feet) Autos: 0.00 Deserver Height (Above Pad): 5.0 feet Autos: 0.006 Medium Trucks: 2.297 Pad Elevation: 0.0 feet Autos: 0.006 Grade Adjustment: Pad Elevation: 0.0 feet Autos: 65.422 Road Grade: 0.0% Autos: 65.300 EHt View: 90.0 degrees Heavy Trucks: 65.300 FHWA Noise Model Calculations Vehicle Type ReMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bernier	Daily 92.00% 3.00% 5.00%
Vehicle Speed: 55 mph Near/Far Lane Distance: 78 feet Site Data Autos: 77.5% Barrier Height: 0.0 feet Medium Trucks: 48.0% 2.0% 50.0% Barrier Type (0-Wall, 1-Berm): 0.0 Medium Trucks: 48.0% 2.0% 50.0% Centerline Dist to Dasriver: 76.0 feet Noise Source Elevations (in feet) Centerline Dist: to Dasriver: 0.0 feet Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297 Observer Height (Above Pad): 5.0 feet Medium Trucks: 2.297 Observer Height (Above Pad): 5.0 feet Autos: 8.006 Grade Adjustment: Pad Elevation: 0.0 feet Autos: 65.300 Medium Trucks: 65.300 Elevation: 0.0 feet Autos: 65.300 Feevy Trucks: 65.300 FHWA Noise Model Calculations Vehicle Type ReMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berrier	Daily 92.00% 3.00% 5.00%
Near/Far Lane Distance: 78 feet Site Data VehicleType Day Evening Night Site Data Autos: 77.5% 14.0% 0.5% Barrier Height: 0.0 feet Medilium Trucks: 48.0% 2.0% 50.0% Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Diserver: 76.0 feet Moles Source Elevations (in feet) Centerline Dist. to Diserver: 0.0 feet Moles Source Elevations (in feet) Autos: 0.00 Deserver Height (Above Pad): 5.0 feet Medium Trucks: 48.0% 2.0% 50.0% Mediatum Trucks: 2.297 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: Pad Elevation: 0.0 feet Left View: -0.0 degrees Medium Trucks: 65.286 Right View: -0.0 degrees Medium Trucks: 65.286 Heavy Trucks: 65.300 FHWA Noise Model Calculations Traffic Flow Distance Finite Road Fresnel Barrier Atten Bernier Atten	Daily 92.00% 3.00% 5.00%
Site Data Autos: 77.5% 14.0% 10.5% Barrier Tyte (Walt) 0.0 feet Medium Trucks: 48.0% 2.0% 50.0% Barrier Tyte (Walt) 0.0 feet Medium Trucks: 48.0% 2.0% 50.0% Centerline Dist. to Barrier: 76.0 feet Moise Source Elevations (in feet) Noise Source Elevations (in feet) Observer Height (Above Pad): 5.0 feet Medium Trucks: 2.297 Pad Elevation: 0.0 feet Medium Trucks: 2.297 Road Grade: 0.0% Left View: 90.0 degrees Right View: 90.0 degrees Medium Trucks: 65.422 Medium Trucks: 65.206 Heavy Trucks: 65.300 FHWA Noise Model Calculations Traffic Flow Distance Finite Road Fresnet Barrier Atten Bernier	92.00% 3.00% 5.00% 0.0
Barrier Height: 0.0 feet Medium Trucks: 48.0% 2.0% 50.0% Barrier Type (0-Wall, 1-Berm): 0.0 1-Berm): 0.0 Heavy Trucks: 48.0% 2.0% 50.0% Centerline Dist. to Barrier: 76.0 feet Molise 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 Medium Trucks: 2.297 Heavy Trucks: 8.006 Grade Adjustment: Pad Elevation: 0.0 feet Autos: 65.422 Autos: 65.422 Left (View: 90.0 degrees Heavy Trucks: 65.300 Heavy Trucks: 65.300 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berrier	3.00% 5.00% 0.0
Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 76.0 feet Centerline Dist. to Doserver: 76.0 feet Deserver: 76.0 feet Deserver: 0.0 feet Deserver: 0.0 feet Pad Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees Heavy Trucks: 65.286 Heavy Trucks: 65.300	5.00% 0.0
Centerline Dist. to Barrier: 76.0 feet Centerline Dist. to Doserver: 76.0 feet Barrier Distance to Doserver: 76.0 feet Doserver 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 Heavy Trucks: 65.286 Heavy Trucks: 65.300	0.0
Centerline Dist. to Observer: 76.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees HWA Noise Model Calculations Traffic Flow VehicleType REMEL Traffic Flow	0.0
Barrier Distance to Observer: 0.0 feet 0.0 feet Observer Height (Above Pad): 5.0 feet Medium Trucks: 2.297 Pad Elevation: 0.0 feet Heavy Trucks: 8.006 Grade Adjustment: Road Grade: 0.0% Autos: 65.422 Left View: -90.0 degrees Medium Trucks: 65.286 Heavy Trucks: 65.300 Fesnel Barrier Atten FHWA Noise Model Calculations Traffic Flow Distance Finite Road Fresnel Barrier Atten	0.0
Observer Height (Above Pad): 5.0 feet Interview (Mathin Tidoxs): 2.23 Pad Elevation: 0.0 feet Heavy Trucks: 8.006 Grade Adjustment: Road Elevation: 0.0 feet Lare Equivalent Distance (In feet) Road Grade: 0.0% Autos: 65.286 Right View: 90.0 degrees Heavy Trucks: 65.200 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnet Barrier Atten Bernet Atten	0.0
Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees Heavy Trucks: 65.300	0.0
Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Road Grade: 0.0% Autos: 65.422 Left View: -90.0 degrees Medium Trucks: 65.286 Right View: 90.0 degrees Heavy Trucks: 65.300 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnet Barrier Atten Berrier	
Road Grade: 0.0% Autos: 65.422 Left View: -90.0 degrees Medium Trucks: 65.286 Right View: 90.0 degrees Heavy Trucks: 65.300 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bernier Atten	
Left View: -90.0 degrees Right View: 90.0 degrees FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bern	
Right View: 90.0 degrees Heavy Trucks: 65.300 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bernier Atten	
FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berrier Atten	
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bern	
	n Atten
Autos: 71.78 -6.00 -1.85 -1.20 -4.73 0.000	0.00
Medium Trucks: 82.40 -20.86 -1.84 -1.20 -4.88 0.000	0.00
Heavy Trucks: 86.40 -18.64 -1.84 -1.20 -5.25 0.000	0.00
Unmitigated Noise Levels (without Topo and barrier attenuation)	
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CN	IEL
Autos: 62.7 60.8 59.4 53.4 61.9	62.
Medium Trucks: 58.5 54.5 46.7 55.9 62.1	62.
Heavy Irucks: 64.7 60.7 52.9 62.2 68.3	68.3
Vehicle Noise: 67.4 64.3 60.5 63.5 70.0	70.
Centerline Distance to Noise Contour (in feet)	10.4
70 dBA 65 dBA 60 dBA 55 d	dBA
Lan: 76 163 351 75	
UNEL: 17 166 358 77	57

	FHV	VA-RD-77-108	IIGHWA	Y N	OISE PI	REDICT	ION MC	DEL				
		IA 100-11-100 1				LDION						
Scenar	io: E+P 2021					Project	Name:	Cante	rwood			
Road Nan	ie: Haun Rd.	a				JOD N	umber:	11304				
Road Seyme	ni. 11/0 Scoll R	u.		1								
SITE	SPECIFIC IN	PUT DATA				N	OISE	MODE	L INPU	TS		
Highway Data				S	lite Con	ditions	(Hard =	: 10, S	oft = 15)			
Average Daily	Traffic (Adt):	6,900 vehicles						Autos:	15			
Peak Hour	Percentage:	10%			Me	dium Tru	ucks (2	Axles):	15			
Peak F	lour Volume:	690 vehicles			He	avy Truc	cks (3+ .	Axles):	15			
Ve	hicle Speed:	50 mph		ν	ehicle	Mix						
Near/Far La	ne Distance:	48 feet			Veh	icleType		Day	Evening	N	ight	Daily
Site Data						/	Autos:	75.5%	5 14.0%	6 1	0.5%	97.42%
Ba	rrier Height	0.0 feet			M	edium Ti	rucks:	48.9%	5 2.2%	6 4	8.9%	1.84%
Barrier Type (0-V	/all, 1-Berm):	0.0			ŀ	leavy Ti	rucks:	47.3%	5.4%	. 4	7.3%	0.74%
Centerline Di	st. to Barrier:	59.0 feet		Δ	loise So	ource El	evatior	ns (in f	eet)			
Centerline Dist.	to Observer:	59.0 feet		-		Auto	s: 0	000				
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s [.] 2.	297				
Observer Height	(Above Pad):	5.0 feet			Heav	v Truck	s: 8.	006	Grade A	djust	ment:	0.0
P	ad Elevation:	0.0 feet								,		
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distan	ce (in	feet)			
	Road Grade:	0.0%				Auto	s: 54	.129				
	Left View:	-90.0 degrees	6		Mediui	m Truck	s: 53	.966				
	Right View:	90.0 degree:	6		Heav	y Truck	s: 53	.982				
FHWA Noise Mod	el Calculation	s										
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fres	nel	Barrier A	tten	Ben	m Atten
Autos:	70.20	-4.02	-	0.62		-1.20		-4.69	C	0.000		0.000
Medium Trucks:	81.00	-21.26	-	0.60		-1.20		-4.88	C	0.000		0.000
Heavy Trucks:	85.38	-25.21	-	0.60		-1.20		-5.35	(.000		0.000
Unmitigated Nois	e Levels (with	out Topo and b	arrier a	ttenı	uation)							
VehicleType	Leq Peak Hou	r Leq Day	Le	q Ev	ening	Leq	Night		Ldn		CI	VEL
Autos:	64	.4 6	2.4		61.0		55.	0	63	.4		64.1
Medium Trucks:	57	.9 5	4.0		46.5		55.	3	61	.5		61.5
Heavy Trucks:	58	.4 5	4.3		50.9		55.	6	61	.8		61.9
Vehicle Noise:	66	.1 6	3.5		61.6		60.	1	67	'.1		67.4
Centerline Distan	ce to Noise Co	ontour (in feet)										
				70 d	ВA	65	dBA		60 dBA		55	dBA
		L	dn:	38	5	8	1		175		3	77
		CN	EL:	40)	8	5		184		3	96

	FH	WA-RD-77-10	3 HIGH	WAYN	OISE PI	KEDICTI		JEL			
Scenar	io: E+P 2021					Project	Name: 0	Cante	rwood		
Road Nam	e: Zeiders Ro	1.				Job Ni	umber: 1	1304			
Road Segme	nt: s/o Scott R	td.									
SITE	SPECIFIC I	VPUT DATA				N	OISE N	IODE	L INPUTS		
Highway Data				5	Site Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	1,300 vehicle	es				A	Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	icks (2 A	xles):	15		
Peak H	lour Volume:	130 vehicle	es		He	avy Truc	ks (3+ A	xles):	15		
Ve	hicle Speed:	50 mph		1	/ehicle	Mix					-
Near/Far La	ne Distance:	48 feet			Veh	icleTvpe		Dav	Evenina	Niaht	Daily
Site Data				-		A	utos:	75.5%	5 14.0%	10.5%	97.42%
Pa	rrior Hoight:	0.0 foot			Me	edium Tr	ucks:	48.9%	2.2%	48.9%	1.84%
Barrier Type (0-W	/all 1-Berm)	0.0			ŀ	leavy Tr	ucks:	47.3%	5.4%	47.3%	0.74%
Centerline Di	st. to Barrier:	59.0 feet			1-1 0				41		
Centerline Dist.	to Observer:	59.0 feet		r	voise so	ource El	evations	5 (IN T	eet)		
Barrier Distance	to Observer:	0.0 feet				Autos	. 0.0	00			
Observer Height ((Above Pad):	5.0 feet			wealu	TI TTUCKS	. 2.2	.97	Grado Adii	istmon	H 0.0
Pa	ad Elevation:	0.0 feet			Heav	y Trucks	: 8.0	06	Grade Adju	Sunen	. 0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distanc	e (in	feet)		
	Road Grade:	0.0%				Autos	: 54.1	29			
	Left View:	-90.0 degre	es		Mediui	m Trucks	: 53.9	966			
	Right View:	90.0 degre	es		Heav	ry Trucks	53.9	82			
FHWA Noise Mod	el Calculation	15									
VehicleType	REMEL	Traffic Flow	Disi	tance	Finite	Road	Fresn	e/	Barrier Atte	n Be	rm Atten
Autos:	70.20	-11.27		-0.62	2	-1.20		4.69	0.00	00	0.000
Medium Trucks:	81.00	-28.51		-0.60)	-1.20		4.88	0.00	00	0.000
Heavy Trucks:	85.38	-32.46		-0.60)	-1.20		-5.35	0.00	00	0.000
Unmitigated Noise	e Levels (with	out Topo and	l barrie	r atten	uation)						
VehicleType	Leg Peak Ho	ur Leq Da	y	Leg Ev	ening	Leq I	Vight		Ldn	С	NEL
Autos:	57	7.1	55.1		53.8		47.8		56.2		56.8
Medium Trucks:	50).7	46.8		39.3		48.0		54.2		54.3
Heavy Trucks:	51	1.1	47.1		43.7		48.3		54.5		54.6
Vehicle Noise:	58	3.8	56.3		54.3		52.8		59.8		60.2
Centerline Distant	ce to Noise C	ontour (in fee	t)								
				70 a	BA .	65 0	1BA		60 dBA	55	dBA
			Ldn:	12	2	2	7		58	1	24
		C	NEL:	13	3	2	8		60	1	30

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	FH	WA-RD-77-108	HIGHW	AY N	OISE PI	REDICTIO	ON MO	DEL			
Scenai Road Nan Road Segme	FHWA-RD-77-108 HIC Scenario: E+P 2021 Road Name: Antelope Rd. Road Segment: slo Scott Rd. SITE SPECIFIC INPUT DATA ighway Data Image: Societ Rd. Average Daily Traffic (Ad): 10,800 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 1,080 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet Image: 10% Barrier Height: 0.0 feet Barrier Height: 0.0 feet Barrier Height: 0.0 feet Barrier Height: 0.0 feet Barrier Distance to Observer: 0.0 1 feet Road Elevation: 0.0 1 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: -90.0 degrees Right View: -90.0 degrees Mutos: 70.20 -2.07 Autos: 70.20 -2.07 Autos: 70.20 -2.07 Autos: 70.20 -2.07 Medium Trucks: 85.38 -23.27 mitigated Moise Levels (without Topo and barn <td< td=""><td></td><td></td><td></td><td>Project N Job Nu</td><td>lame: (mber: `</td><td>Cante 11304</td><td>rwood</td><td></td><td></td></td<>					Project N Job Nu	lame: (mber: `	Cante 11304	rwood		
SITE	SPECIFIC II	VPUT DATA				NO	DISE N	/IODE	L INPUTS	5	
Highway Data				S	lite Cor	ditions (Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	10,800 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium True	cks (2 A	(xles)	15		
Peak F	lour Volume:	1,080 vehicle	s		He	avy Truck	ks (3+ A	(xles)	15		
Ve	ehicle Speed:	50 mph		ν	ehicle	Mix					
Near/Far La	ne Distance:	48 feet		-	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	itos:	75.5%	5 14.0%	10.5%	97.42%
Ba	rrier Heiaht:	0.0 feet			М	edium Tru	icks:	48.9%	5 2.2%	48.9%	1.84%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tru	icks:	47.3%	5.4%	47.3%	0.74%
Centerline Di	ist. to Barrier:	59.0 feet		^	loise Se	ource Ele	vation	s (in f	eet)		
Centerline Dist.	to Observer:	59.0 feet				Autos	0.0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.2	297			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks	8.0	006	Grade Adii	ustment	: 0.0
P	ad Elevation:	0.0 feet				,					
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distand	ce (in	feet)		
	Road Grade:	0.0%				Autos:	54.1	129			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	53.9	966			
	Right View:	90.0 degre	es		Heav	/y Trucks:	53.9	982			
FHWA Noise Mod	lel Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Atte	en Bei	rm Atten
Autos:	70.20	-2.07		-0.62		-1.20		-4.69	0.0	00	0.000
Medium Trucks:	81.00	-19.31		-0.60		-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	85.38	-23.27		-0.60		-1.20		-5.35	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	uation)						
VehicleType	Leq Peak Ho	ur Leq Daj	/ L	eq Ev	ening	Leq N	light		Ldn	С	NEL
Autos:	66	6.3	64.3		63.0		57.0		65.4		66.0
Medium Trucks:	59	9.9	56.0		48.5		57.2		63.4		63.4
Heavy Trucks:	60	0.3	56.3		52.9		57.5	i	63.7		63.8
Vehicle Noise:	68	3.0	65.5		63.5		62.0)	69.0		69.4
Centerline Distan	ce to Noise C	ontour (in fee)								
				70 d	BA	65 d	BA		60 dBA	55	dBA
			Ldn:	51		110	C		236	Ę	509
		С	NEL:	53	3	11	5		248	Ę	534

	FHV	/A-RD-77-108	HIGH	WAY N	OISE PF	REDICT					
Scenario:	E+P 2021					Project	Name: (Canter	wood		
Road Name:	Menifee Rd					Job N	umber: 1	1304			
Road Segment:	n/o Holland	Rd.									
SITE SP	ECIFIC IN	PUT DATA				N	OISE N	IODE	L INPUT	s	
Highway Data				S	lite Con	ditions	(Hard =	10, So	oft = 15)		-
Average Daily Tra	affic (Adt):	6,200 vehicle	s					Autos:	15		
Peak Hour Pe	ercentage:	10%			Me	dium Tru	icks (2 A	xles):	15		
Peak Hou	r Volume:	620 vehicle	s		He	avy Truc	:ks (3+ A	xles):	15		
Vehic	le Speed:	45 mph		V	ehicle l	Mix					
Near/Far Lane	Distance:	54 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						F	utos:	75.5%	14.0%	10.5%	97.42%
Barrie	er Heiaht:	0.0 feet			Me	edium Tr	ucks:	48.9%	2.2%	48.9%	1.84%
Barrier Type (0-Wall.	, 1-Berm):	0.0			ŀ	leavy Ti	ucks:	47.3%	5.4%	47.3%	0.74%
Centerline Dist.	to Barrier:	64.0 feet			loico Sa		ovation	(in f	not)		
Centerline Dist. to	Observer:	64.0 feet		~	ioise sc	Autor	evauons	s (III 16	el)		
Barrier Distance to	Observer:	0.0 feet			Modiu	n Truck	s. 0.0	00			
Observer Height (Ab	ove Pad):	5.0 feet			Hoov	v Truck	5. 2.2 5. 80	106	Grade Ad	iustment	. 0.0
Pad	Elevation:	0.0 feet			neav	y macha	5. 0.0	000	0/000 / 10	dourioni	0.0
Road	Road Elevation: 0.0 feet				ane Eq	uivalent	Distanc	e (in :	feet)		
Roa	Road Grade: 0.0%					Autos	s: 58.2	241			
	Left View:	-90.0 degre	es		Mediur	n Trucks	s: 58.0)89			
R	ight View:	90.0 degre	es		Heav	y Truck	s: 58.1	104			
FHWA Noise Model	Calculations	5									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	68.46	-4.03		-1.10	1	-1.20		-4.70	0.0	000	0.000
Medium Trucks:	79.45	-21.27		-1.08		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-25.22		-1.08		-1.20		-5.31	0.0	000	0.000
Unmitigated Noise L	evels (with	out Topo and	barrie	er attenu	uation)						
VehicleType Le	eq Peak Hou	r Leq Daj	/	Leq Ev	ening	Leq	Night		Ldn	CI	VEL
Autos:	62.	1	60.1		58.8		52.8		61.2	2	61.8
Medium Trucks:	55.	9	52.0		44.5		53.3		59.4	1	59.5
Heavy Trucks:	56.	7	52.7		49.3		54.0		60.2	2	60.3
Vehicle Noise:	64.	0	61.4		59.4		58.1		65.1	I	65.4
Centerline Distance	to Noise Co	ntour (in feet)								
			L	70 d	BA	65	dBA	6	i0 dBA	55	dBA
			Ldn:	30)	6	5		140	3	02
		-				-				-	

								D. (21)		_		
	FHV	VA-RD-77-108	HIGHW	AY N	DISE PF	REDICTIO	ом мо	DEL				
Scenar	io: E+P 2021					Project I	Vame:	Canter	wood			
Road Nam	e: Menifee Rd	Ι.				Job Nu	mber:	11304				
Road Segme	nt: s/o Holland	Rd.										
SITE	SPECIFIC IN	IPUT DATA				N	DISE I	NODE	L INPU	TS		
Highway Data				S	ite Con	ditions (Hard =	10, Sc	oft = 15)			
Average Daily	Traffic (Adt):	5,400 vehicles	;					Autos:	15			
Peak Hour	Percentage:	10%			Me	dium Tru	cks (2 /	Axles):	15			
Peak H	lour Volume:	540 vehicles			He	avy Truci	ks (3+)	Axles):	15			
Ve	hicle Speed:	45 mph		v	ehicle I	Mix						
Near/Far La	ne Distance:	54 feet		-	Vehi	cleTvpe		Dav	Evening	Ni	aht	Dailv
Site Data						A	utos:	75.5%	14.0%	5 10).5%	97.42%
Bai	rier Height	0.0 feet			Me	edium Tru	icks:	48.9%	2.2%	5 4	8.9%	1.84%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	łeavy Tru	icks:	47.3%	5.4%	5 4	7.3%	0.74%
Centerline Dis	st. to Barrier:	64.0 feet			loise Sc	urce Fle	vation	s (in fø	pet)			
Centerline Dist.	to Observer:	64.0 feet		Ë	0.00 00	Autos	. 0	000				
Barrier Distance	to Observer:	0.0 feet			Modiuu	n Trucke	. 2	207				
Observer Height (Above Pad):	5.0 feet			Hoov	n Trucks. v Trucks		006	Grade A	diust	ment [.]	0.0
Pa	ad Elevation:	0.0 feet			neav	y mucks.	. 0.	000	0.0007	ajuot		0.0
Roa	ad Elevation:	0.0 feet		L	ane Equ	uivalent	Distan	ce (in i	feet)			
	Road Grade:	0.0%				Autos.	58.	241				
	Left View:	-90.0 degree	s		Mediur	n Trucks.	58.	089				
	Right View:	90.0 degree	s		Heav	y Trucks.	58.	104				
FHWA Noise Mod	el Calculation	s										
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresi	nel	Barrier A	tten	Berr	m Atten
Autos:	68.46	-4.63		-1.10		-1.20		-4.70	C	.000		0.000
Medium Trucks:	79.45	-21.87		-1.08		-1.20		-4.88	C	.000		0.000
Heavy Trucks:	84.25	-25.82		-1.08		-1.20		-5.31	C	.000		0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	attenı	uation)							
VehicleType	Leq Peak Hou	Ir Leq Day	L	.eq Ev	ening	Leq N	light		Ldn		CN	VEL
Autos:	61	.5 .5	59.5		58.2		52.2	2	60	.6		61.2
Medium Trucks:	55	.3 .	51.4		43.9		52.	7	58	.8		58.9
Heavy Trucks:	56	.1 !	52.1		48.7		53.4	1	59	.6		59.7
Vehicle Noise:	63	.4 6	80.8		58.8		57.	5	64	.5		64.8
Centerline Distant	ce to Noise Co	ontour (in feet)										
				70 d	BA	65 d	BA	6	0 dBA		55	dBA
			.dn:	28		59)		128		2	75
Barrier Height Observer: Observer:				2	88							

	FH	WA-RD-77-108	HIGHWA	Y NOI	SE PRED	ICTION M	ODEL				
Scena	rio: E+P 2021				Pro	ject Name	: Cante	rwood			
Road Nai	ne: Leon Rd.				Jo	b Number	: 11304				
Road Segme	ent: s/o Craig A	w.									
SITE	SPECIFIC I	VPUT DATA				NOISE	MODE	L INPUT	rs		
Highway Data				Site	Conditi	ons (Hard	= 10, S	oft = 15)			
Average Daily	Traffic (Adt):	2,900 vehicles	S				Autos:	15			
Peak Hou	r Percentage:	10%			Mediur	n Trucks (2	Axles):	15			
Peak	Hour Volume:	290 vehicles	5		Heavy	Trucks (3+	Axles):	15			
V	ehicle Speed:	35 mph		Vet	icle Mix						
Near/Far L	ane Distance:	48 feet			Vehicle	Type	Day	Evening	Nig	ht	Daily
Site Data						Autos:	77.5%	14.0%	10.	5%	92.00%
B	arrier Height	0.0 feet			Mediu	m Trucks:	48.0%	2.0%	50.	0%	3.00%
Barrier Type (0-1	Vall. 1-Berm):	0.0			Hear	y Trucks:	48.0%	2.0%	50.	0%	5.00%
Centerline D	ist. to Barrier:	59.0 feet		Noi		o Elovatio	no (in f	0.041			
Centerline Dist	to Observer:	59.0 feet		NOI	se sourc			eel)			
Barrier Distance	to Observer:	0.0 feet			/	unos. (0.000				
Observer Height	(Above Pad):	5.0 feet		N	ieaium Ti	UCKS: 4	2.297	Grada Av	divotre	ont	0.0
F	Pad Elevation:	0.0 feet			Heavy II	UCKS: 0	3.006	Grade Ad	ijusun	ent.	0.0
Ro	ad Elevation:	0.0 feet		Lan	e Equiva	lent Dista	nce (in	feet)			
	Road Grade:	0.0%			/	Autos: 5	4.129				
	Left View:	-90.0 degree	es	N	ledium Ti	ucks: 5	3.966				
	Right View:	90.0 degree	es		Heavy Ti	ucks: 5	3.982				
FHWA Noise Mo	el Calculation	IS						-			
VehicleType	REMEL	Traffic Flow	Distand	e I	Finite Roa	d Fre	snel	Barrier At	tten	Berm	Atten
Autos	64.30	-6.48	-	0.62	-1	.20	-4.69	0.	.000		0.000
Medium Trucks	75.75	-21.35	-	0.60	-1	.20	-4.88	0.	.000		0.000
Heavy Trucks	81.57	-19.13	-	0.60	-1	.20	-5.35	0.	.000		0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier at	tenuat	ion)						
VehicleType	Leq Peak Ho	ur Leq Day	Le	q Even	ing	Leq Night		Ldn		CN	EL
Autos	56	6.0	54.1		52.7	46	.7	55.	.1		55.8
Medium Trucks	52	2.6	48.6		40.8	50	0.0	56.	.2		56.2
Heavy Trucks	60).6	56.7		48.9	58	.1	64.	.2		64.3
Vehicle Noise	62	2.4	59.0		54.4	59	0.0	65.	.3		65.4
Centerline Distar	ice to Noise C	ontour (in feet,)						-		
				70 dBA	1	65 dBA	(30 dBA		55 d	BA
			Ldn:	29		62		133		28	7
		CI	VFI :	29		63		135		29	1

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	FH	WA-RD-77-108	B HIGHV	NAY N	OISE PI	REDICTIO	N MOD	EL			
Scenari	o: E+P 2021					Project N	lame: Ca	anterwood			
Road Nam	e: Leon Rd.					Job Nur	nber: 11	304			
Road Segmen	nt: s/o Garbar	ni Rd.									
SITE S	SPECIFIC IN	NPUT DATA				NO	DISE MO	DDEL IN	PUTS		
Highway Data				S	Site Con	ditions (H	lard = 1	0, Soft = 1	15)		
Average Daily	Traffic (Adt):	3,200 vehicle	s				AL	itos: 15			
Peak Hour	Percentage:	10%			Me	dium Truc	ks (2 Ax	<i>les):</i> 15	;		
Peak H	our Volume:	320 vehicle	s		He	avy Truck	s (3+ Ax	<i>les):</i> 15			
Vel	hicle Speed:	55 mph		V	/ehicle	Mix					
Near/Far Lar	ne Distance:	48 feet			Veh	icleType	D	ay Ever	ning Ni	ght	Daily
Site Data						Au	tos: 7	7.5% 14	.0% 10	0.5%	92.00%
Bar	rier Height:	0.0 feet			M	edium Tru	cks: 48	3.0% 2	.0% 50	0.0%	3.00%
Barrier Type (0-Wa	all, 1-Berm):	0.0			ŀ	Heavy Tru	cks: 48	3.0% 2	.0% 50	0.0%	5.00%
Centerline Dis	at. to Barrier:	59.0 feet		٨	loise So	ource Elev	vations	(in feet)			
Centerline Dist. I	to Observer:	59.0 feet				Autos:	0.00	0			
Barrier Distance t	to Observer:	0.0 feet			Mediu	m Trucks:	2.29	7			
Observer Height (Above Pad):	5.0 feet			Heav	v Trucks:	8.00	6 Grad	le Adjust	ment:	0.0
Pa	d Elevation:	0.0 feet		-	_						
Roa	d Elevation:	0.0 feet		L	ane Eq.	uivalent L	Jistance	(in feet)			
F	Road Grade:	0.0%				Autos:	54.12	9			
	Left View:	-90.0 degre	es		wealu	T Trucks:	53.90	0			
	Right view:	90.0 degre	es		neav	y mucks.	55.90	2			
FHWA Noise Mode	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresnel	Barrie	er Atten	Bern	n Atten
Autos:	71.78	-8.02		-0.62		-1.20	-4	1.69	0.000		0.000
Medium Trucks:	82.40	-22.89		-0.60		-1.20	-4	1.88	0.000		0.000
Heavy Trucks:	86.40	-20.67		-0.60		-1.20	-5	5.35	0.000		0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	r attenu	uation)						
VehicleType	Leq Peak Ho	ur Leq Da	y I	Leq Ev	rening	Leq Ni	ight	Ldn		CN	IEL
Autos:	61	.9	60.0		58.6		52.6		61.1		61.7
Medium Trucks:	57	7.7	53.7		46.0		55.2		61.3		61.4
Heavy Trucks:	63	3.9	59.9		52.2		61.4		67.5		67.6
Vehicle Noise:	66	5.7	63.5		59.7		62.7		69.2		69.3
Centerline Distance	e to Noise C	ontour (in fee	t)								
			L	70 d	BA	65 dE	BA	60 dB	4	55 0	1BA
		-	Ldn:	52	2	112		242		52	21
		С	NEL:	53	5	114		247		53	51

	FH	WA-RD-77-108	піспі	VATIN		EDICI		DEL			
Scenari	o: E+P 2021					Project	Name:	Canter	wood		
Road Nam	e: Leon Rd.					Job N	umber:	11304			
Road Segmer	nt: s/o Scott R	td.									
SITE	SPECIFIC IN	NPUT DATA				Ν	IOISE N	NODE	L INPUT	s	
Highway Data				4	Site Cond	ditions	(Hard =	10, Se	oft = 15)		
Average Daily	Traffic (Adt):	3,000 vehicle	S					Autos:	15		
Peak Hour	Percentage:	10%			Med	lium Tri	ucks (2 A	Axles):	15		
Peak H	our Volume:	300 vehicle	s		Hea	avy Truo	cks (3+ A	Axles):	15		
Vel	hicle Speed:	55 mph			Vehicle N	lix					
Near/Far Lar	ne Distance:	48 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						/	Autos:	77.5%	14.0%	10.5%	92.00%
Bar	rier Height:	0.0 feet			Me	dium T	ucks:	48.0%	2.0%	50.0%	3.00%
Barrier Type (0-W	all, 1-Berm):	0.0			Н	leavy Ti	ucks:	48.0%	2.0%	50.0%	5.00%
Centerline Dis	t. to Barrier:	59.0 feet		-	Noise So	urce El	evation	s (in f	eet)		
Centerline Dist.	to Observer:	59.0 feet		-	10.00 00	Auto	s: 0(000			
Barrier Distance	to Observer:	0.0 feet			Mediun	1 Truck	s: 2.3	297			
Observer Height (J	Above Pad):	5.0 feet			Heav	/ Truck	s: 8.0	006	Grade Ad	iustment	: 0.0
Pa	d Elevation:	0.0 feet									
Roa	d Elevation:	0.0 feet		1	Lane Equ	iivalen	Distan	ce (in	feet)		
F	Road Grade:	0.0%				Auto	s: 54.	129			
	Left View:	-90.0 degre	es		Mediun	1 Iruck	s: 53.	966			
	Right View:	90.0 degre	es		Heavy	/ Truck	s: 53.	982			
FHWA Noise Mode	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite I	Road	Fresh	nel	Barrier Att	en Ber	m Atten
Autos:	71.78	-8.30		-0.62	2	-1.20		-4.69	0.0	000	0.00
Medium Trucks:	82.40	-23.17		-0.60	D	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	86.40	-20.95		-0.60	D	-1.20		-5.35	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrier	atten	uation)						
VehicleType	Leq Peak Ho	ur Leq Day	/ L	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	61	.7	59.8		58.4		52.3	3	60.8	3	61.
Medium Trucks:	57	7.4	53.5		45.7		54.9	•	61.0)	61.
Heavy Trucks:	63	3.6	59.7		51.9		61.1		67.2	2	67.
Vehicle Noise:	66	3.4	63.2		59.4		62.5	5	68.9	9	69.
Centerline Distance	e to Noise C	ontour (in feet)	70	0.4	05	-10.4	1 .			-10.4
				10 0	звA	65	OBA	6	DU dBA	55	aBA
			Lan:	5	U	10	71		232	4	199
		~		-			10		000		.00

	FUN	VA DD 77 400						DEL				
	FHV	VA-RD-77-108	HIGHW	AY N	DISE PI	REDICT		DEL				
Scenar	io: E+P 2021					Project	Name:	Cante	rwood			
Road Nan	e: Holland Rd.					Job N	umber:	11304	Ļ			
Road Segme	nt: w/o Menifee	e Rd.										
SITE	SPECIFIC IN	PUT DATA				Ν	IOISE I	NODE	EL INPU	TS		
Highway Data				S	ite Con	ditions	(Hard =	: 10, S	oft = 15)			
Average Daily	Traffic (Adt):	3,100 vehicles	5					Autos.	: 15			
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2)	Axles)	: 15			
Peak H	lour Volume:	310 vehicles	6		He	avy Tru	cks (3+)	Axles)	: 15			
Ve	hicle Speed:	45 mph		L.	ahiala	Mix						
Near/Far La	ne Distance:	48 feet			Veh	icleType		Dav	Evenin		iaht	Daily
FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL Scenario: E+P 2021 Road Name: Project Name: Canterwood Job Number: Canterwood Job Number: Road Segment: Wolkmilee Rd. Job Number: 11304 Site SPECIFIC INPUT DATA NOISE MODEL INPUTS Highway Data Site Conditions (Hard = 10, Soft = 15) Average Daily Traffic (Ad): 3,100 vehicles Autos: 15 Peak Hour Percentage: 10% Medium Trucks (24 Akdes): 15 Vehicle Speed: 45 mph Vehicle Mix Autos: 15 Vehicle Speed: 45 mph Vehicle Mix Autos: 75.5% 14.0% 10.5% 97.427 Barrier Height: 0.0 feet Medium Trucks: 48.9% 2.2% 48.9% 18.49 Barrier Height: 0.0 feet Matos: 75.5% 14.0% 10.5% 97.427 Centerline Dist: Dastrier: 59.0 feet Noise Source Elevations (in feet) Noise Source Elevations (in feet) Noise Model Calculations Noise Grade Adjustment: 0.0 Road Grade: 0.0%												
Ba	rrior Hoight	0.0 (act			M	edium T	rucks:	48.9%	6 2.29	6 4	8.9%	1.84%
FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL Scenario: E+P 2021 Project Name: Canterwood Road Mame: Holland Rd. Job Number: 11304 Site Second Segment: wio Menifee Rd. NOISE MODEL INPUTS Model Segment: wio Menifee Rd. NOISE MODEL INPUTS Average Daily Traffic (Adt): 3,100 vehicles Autos: 15 Average Daily Traffic (Adt): 3,100 vehicles Autos: 15 Vehicle Speed: 45 mph Vehicle Type Day Evening Night Daily Traffic (Adt): 3,100 vehicles Barrier Height: 0.0 vehicles Medium Trucks (2 Axles): 15 Vehicle Type Day Evening Night Daily Site Data Autos: 75.5% 14.0% Nearrier Theight: 0.0 feet Barrier Height: 0.0 feet Medium Trucks: 47.3% 5.4 4.0% Name: Call Fiersel Medium Trucks: 47.3% Call Adjustment: 0.0 Right View: -90.0 degrees												
Centerline Di	ist to Barrier	59.0 feet										
Centerline Dist	to Observer:	59.0 feet		^	loise So	burce E	levation	s (in f	eet)			
Barrier Distance	to Observer:	0.0 feet				Auto	s: 0.	000				
Observer Height	(Above Pad):	5.0 feet			Mediu	m Truck	s: 2.	297	- ·			
P	ad Elevation:	0.0 feet			Heav	y Truck	s: 8.	006	Grade	Adjust	ment:	0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distan	ce (in	feet)			
	Road Grade:	0.0%				Auto	s: 54.	129				
	Left View:	-90.0 degree	s		Mediu	m Truck	s: 53.	966				
	Right View:	90.0 degree	s		Heav	y Truck	s: 53.	982				
	0					-						
FHWA Noise Mod	el Calculation	s										
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresi	nel	Barrier	Atten	Ben	m Atten
Autos:	68.46	-7.04		-0.62		-1.20		-4.69		0.000		0.000
Medium Trucks:	79.45	-24.28		-0.60		-1.20		-4.88		0.000		0.000
Heavy Trucks:	84.25	-28.23		-0.60		-1.20		-5.35		0.000		0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenı	uation)							
VehicleType	Leq Peak Hou	r Leq Day	L	eq Ev	ening	Leq	Night		Ldn		CI	VEL
Autos:	59.	.6	57.6		56.3		50.3	3	5	8.7		59.3
Medium Trucks:	53.	.4 .	49.5		42.0		50.7	7	5	6.9		56.9
Heavy Trucks:	54.	.2	50.2		46.8		51.4	4	5	7.6		57.7
Vehicle Noise:	61.	.4 :	58.8		56.9		55.0	6	6	2.6		62.9
Centerline Distan	ce to Noise Co	ontour (in feet,)									
				70 d	BA	65	dBA		60 dBA		55	dBA
			Ldn:	19	1	4	11		88		1	89
		CI	IEL:	20		4	13		92		1	98

	FH	WA-RD-77-108	BHIGHW	AY NO	DISE PF	REDICTIO		DEL				
Scenar	io: E+P 2021					Project I	Vame: 0	Canter	wood			
Road Nan	ne: Holland Ro	d.				Job Nu	mber: 1	1304				
Road Segme	nt: e/o Menife	e Rd.										
SITE	SPECIFIC II	NPUT DATA				N	DISE N	IODE	L INPUT	s	-	
Highway Data				S	ite Con	ditions (Hard =	10, So	oft = 15)			
Average Daily	Traffic (Adt):	3,300 vehicle	s				A	utos:	15			
Peak Hour	Percentage:	10%			Me	dium True	cks (2 A	xles):	15			
Peak H	lour Volume:	330 vehicle	:S		He	avy Truck	ks (3+ A	xles):	15			
Ve	hicle Speed:	45 mph		V	ehicle I	Mix						
Near/Far La	ne Distance:	48 feet		Ē	Veh	icleType		Day	Evening	Nigh	it D	aily
Site Data						A	utos:	75.5%	14.0%	10.5	5% 97	.42%
Ba	rrier Heiaht:	0.0 feet			Me	edium Tru	icks:	18.9%	2.2%	48.9	9% 1	.84%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy Tru	icks:	17.3%	5.4%	47.3	3% 0	0.74%
Centerline Di	st. to Barrier:	59.0 feet		N	loise So	ource Ele	vations	in f	eet)			
Centerline Dist.	to Observer:	59.0 feet				Autos	0.0	00	,			
Barrier Distance	to Observer:	0.0 feet			Modiu	n Trucks	22	97				
Observer Height	(Above Pad):	5.0 feet			Hoo	v Trucke	8.0	06	Grade Ad	iustme	ent: 0.0	0
P	ad Elevation:	0.0 feet			near	y muono.	0.0	00				-
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distanc	e (in	feet)			
	Road Grade:	0.0%				Autos:	54.1	29				
	Left View:	-90.0 degre	es		Mediui	m Trucks:	53.9	66				
	Right View:	90.0 degre	es		Heav	y Trucks:	53.9	82				
FHWA Noise Mod	el Calculation	15										
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresn	e/	Barrier Att	en l	3erm A	ltten
Autos:	68.46	-6.77		-0.62		-1.20		4.69	0.0	000		0.000
Medium Trucks:	79.45	-24.00		-0.60		-1.20		4.88	0.0	000		0.000
Heavy Trucks:	84.25	-27.96		-0.60		-1.20		5.35	0.0	000		0.000
Unmitigated Nois	e Levels (with	hout Topo and	barrier	attenu	uation)							
VehicleType	Leq Peak Ho	ur Leq Da	V L	eq Eve	ening	Leq N	light		Ldn		CNEL	-
Autos:	59	9.9	57.9		56.6		50.5		59.0)	-	59.6
Medium Trucks:	53	3.6	49.7		42.2		51.0		57.2	2		57.2
Heavy Trucks:	54	4.5	50.4		47.1		51.7		57.9)		58.0
Vehicle Noise:	6	1.7	59.1		57.2		55.9		62.8	3		63.1
Centerline Distan	ce to Noise C	ontour (in fee	t)									
				70 dl	BA	65 d	BA	e	60 dBA		55 dB/	4
			Ldn:	20		42			91		197	_
		C	NEL:	21		44			96		206	

Tuesday, March 06, 2018

Tuesday, March 06, 2018

	FH\	WA-RD-77-108	HIGH	NAY NO	DISE P	REDICTIC	N MOD	EL			
Scenar Road Nam Road Segme	FHWA-RD-77-108 HIG Scenario: E+P 2021 Road Name: Holland Rd. Road Segment: wlo Briggs Rd. SITE SPECIFIC INPUT DATA wway Data Average Daily Traffic (Adt): 800 vehicles Peak Hour Percentage: 10% Peak Hour Vehrenetage: 10% Centerline Distance: 48 feet Data Barrier Height: 0.0 feet Centerline Dist. to Daserver: 0.0 feet Road Grade: 0.0% Left View: Pad Elevation: 0.0 feet Road Grade: 0.0% Left View: Left View: 90.0 degrees Right View: 90.0 degrees Right View: 68.46 -12.92 adutos: 68.46 -12.92 adutos: 68.46					Project N Job Nui	lame: Ca mber: 11	anterwood 304			
SITE	SPECIFIC IN	IPUT DATA				NC	DISE MO	DDEL INPUT	ſS		
Highway Data				S	ite Cor	nditions (H	Hard = 10	0, Soft = 15)			
Average Daily	Traffic (Adt):	800 vehicle	S				AL	itos: 15			
Peak Hour	Percentage:	10%			Me	edium Truc	ks (2 Ax	les): 15			
Peak H	lour Volume:	80 vehicle	s		He	avy Truck	s (3+ Ax	les): 15			
Ve	hicle Speed:	45 mph		V	ehicle	Mix					
Near/Far La	ne Distance:	48 feet			Veh	nicleType	D	ay Evening	Nig	ght Dail	y
Site Data						AL	itos: 75	5.5% 14.0%	10	0.5% 97.42	2%
Ba	rrier Height:	0.0 feet			М	edium Tru	cks: 48	3.9% 2.2%	48	.9% 1.84	4%
Barrier Type (0-W	/all, 1-Berm):	0.0				Heavy Tru	cks: 47	7.3% 5.4%	47	.3% 0.74	4%
Centerline Di	st. to Barrier:	59.0 feet		N	oise S	ource Ele	vations	(in feet)			
Centerline Dist.	to Observer:	59.0 feet				Autos:	0.00	0			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.29	7			
Observer Height ((Above Pad):	5.0 feet			Hea	v Trucks:	8.00	6 Grade A	diustr	nent: 0.0	
Pi	ad Elevation:	0.0 feet				,					
Roi	ad Elevation:	0.0 feet		Li	ane Eq	uivalent l	Distance	(in feet)			
	Road Grade:	0.0%				Autos:	54.12	9			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	53.96	6			
	Right View:	90.0 degre	es		Hear	vy Trucks:	53.98	2			
FHWA Noise Mod	el Calculation	s									-
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresnel	Barrier A	tten	Berm Atte	en
Autos:	68.46	-12.92		-0.62		-1.20	-4	.69 0.	000	0.0	000
Medium Trucks:	79.45	-30.16		-0.60		-1.20	-4	.88 0.	000	0.0	000
Heavy Trucks:	84.25	-34.11		-0.60		-1.20	-5	.35 0.	000	0.0	000
Unmitigated Nois	e Levels (with	out Topo and	barrier	r attenu	ation)						
VehicleType	Leq Peak Hou	ur Leq Da	v .	Leq Eve	ening	Leq N	ight	Ldn		CNEL	
Autos:	53	.7	51.7		50.4		44.4	52	.8	53	3.4
Medium Trucks:	47	.5	43.6		36.1		44.8	51	.0	51	1.1
Heavy Trucks:	48	.3	44.3		40.9		45.5	51	.7	51	1.8
Vehicle Noise:	55	5.6	53.0		51.0		49.7	56	.7	57	7.0
Centerline Distan	ce to Noise C	ontour (in fee	t)					-		-	
			L	70 dE	BA	65 dl	BA	60 dBA		55 dBA	
			Ldn:	8		16		35		76	
		C	NEL:	8		17		37		80	

	FHV	VA-RD-77-108 HI	GHWA	Y NOISE PI	REDICTIO	NMOD	DEL			
Scenario Road Name Road Segmen	o: E+P 2021 e: Holland Rd. t: w/o Leon Re	d.			Project N Job Nur	ame: C nber: 1	anter 1304	wood		
SITE S	Scenario: E+P 2021 Road Name: Holland Rd. Road Segment: w/o Leon Rd. SITE SPECIFIC INPUT DATA thway Data Average Daily Traffic (Adt): 700 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 700 vehicles Peak Hour Volume: 700 vehicles Peak Hour Volume: 700 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 48 feet Data Barrier Height: 0.0 feet arrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 59.0 feet Centerline Dist. to Dasrier: 59.0 feet Centerline Dist. to Observer: 50.0 feet Barrier Distance to Observer: 0.0 feet Barrier Distance to Observer: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees Right View: 90.0 degrees WA Noise Model Calculations Autos: 68.46 -13.75					ISE M	ODE		s	
Highway Data				Site Con	ditions (H	lard = 1	10, So	ft = 15)		
Average Daily 1	Traffic (Adt):	700 vehicles				A	utos:	15		
Peak Hour I	Percentage:	10%		Me	dium Truc	ks (2 A)	xles):	15		
Peak Ho	our Volume:	70 vehicles		He	avy Truck	s (3+ A)	xles):	15		
Veh	nicle Speed:	45 mph		Vehicle	Mix					
Near/Far Lan	e Distance:	48 feet		Veh	icleType	Ĺ	Day	Evening	Night	Daily
Site Data					Au	tos: 7	7.5%	14.0%	10.5%	92.00%
Bar	rier Heiaht:	0.0 feet		M	edium Tru	cks: 4	18.0%	2.0%	50.0%	3.00%
Barrier Type (0-Wa	all, 1-Berm):	0.0		1	Heavy Tru	cks: 4	18.0%	2.0%	50.0%	5.00%
Centerline Dis	t. to Barrier:	59.0 feet		Noise S	ource Elev	ations	(in fe	of)		
Centerline Dist. t	o Observer:	59.0 feet		10130 00	Autos	0.0	00			
Barrier Distance t	o Observer:	0.0 feet		Mediu	m Trucks:	2.2	97			
Observer Height (A	Above Pad):	5.0 feet		Heav	v Trucks:	8.0	06	Grade Ad	iustment	: 0.0
Pa	d Elevation:	0.0 feet			,					
Roa	d Elevation:	0.0 feet		Lane Eq	uivalent L	Distanc	e (in f	eet)		
F	Road Grade:	0.0%			Autos:	54.1	29			
	Left View:	-90.0 degrees		Mediu	m Trucks:	53.9	66			
	Right view:	90.0 degrees		near	y mucks.	55.9	02			
FHWA Noise Mode	Calculation	s								
VehicleType	REMEL	Traffic Flow	Distanc	e Finite	Road	Fresne	el l	Barrier Att	en Ber	m Atten
Autos:	68.46	-13.75	-(0.62	-1.20	-	4.69	0.0	000	0.00
Medium Trucks:	79.45	-28.62	-(0.60	-1.20	-	4.88	0.0	000	0.00
Heavy Trucks:	84.25	-26.40	-(0.60	-1.20	-	5.35	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and ba	rrier at	enuation)						
VehicleType	Leq Peak Hou	r Leq Day	Leq	Evening	Leq N	ight		Ldn	C	NEL
Autos:	52.	.9 51.	0	49.6		43.6		52.0)	52.
Medium Trucks:	49.	.0 45.	1	37.3		46.5		52.6	6	52.
Heavy Trucks:	56.	.1 52.	1	44.3		53.5		59.7	7	59.
Vehicle Noise:	58.	.3 55.	0	50.9		54.6		61.0)	61.
Centerline Distanc	e to Noise Co	ontour (in feet)								
			7	U dBA	65 dE	3A	6	U dBA	55	aBA 40
		Ld	7:	15	32			69	1	49
				4.6						

	FHV	VA-RD-77-108	HIGH	WAY N	DISE PI	REDICT	ION MO	DEL			
Scenari Road Nam Road Segmer	io: E+P 2021 e: Scott Rd. nt: w/o Haun F	۲d.				Project Job N	t Name: lumber:	Cantei 11304	wood		
SITE	SPECIFIC IN	IPUT DATA				r	NOISE N	NODE	L INPUT	S	
Highway Data				S	ite Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily Peak Hour Peak H	Traffic (Adt): Percentage: lour Volume:	10,800 vehicle 10% 1,080 vehicle	s		Me He	dium Tr avy Tru	ucks (2 / cks (3+ /	Autos: Axles): Axles):	15 15 15		
Ve	hicle Speed:	50 mph		v	ehicle l	Mix					
Near/Far La	ne Distance:	78 feet			Veh	icleType	e	Day	Evening	Night	Daily
Site Data							Autos:	75.5%	14.0%	10.5%	97.429
Bai	rier Height:	0.0 feet			M	edium T	rucks:	48.9%	2.2%	48.9%	1.84%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	Heavy T	rucks:	47.3%	5.4%	47.3%	0.74%
Centerline Dis	st. to Barrier:	76.0 feet		٨	loise So	ource E	levation	s (in f	eet)		
Centerline Dist.	to Observer:	76.0 feet				Auto	s: 0.	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s 2.	297			
Observer Height (Above Pad):	5.0 feet			Heav	y Truck	s: 8.0	006	Grade Ad	ljustmen	t: 0.0
Pa	ad Elevation:	0.0 feet			ono Ea	uivelen	4 Diatan	aa (in	fa a 4)		
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivaleli	DISTAIN	400	ieel)		
	Road Grade:	0.0%				Auto	S: 65.	422			
	Left View: Right View:	-90.0 degre 90.0 degre	es es		Heav	n Truck ry Truck	s: 65. s: 65.	286 300			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresr	nel	Barrier At	ten Be	rm Atten
Autos:	70.20	-2.07		-1.85		-1.20		-4.73	0.	000	0.00
Medium Trucks:	81.00	-19.31		-1.84		-1.20		-4.88	0.	000	0.00
Heavy Trucks:	85.38	-23.27		-1.84		-1.20		-5.25	0.	000	0.00
Unmitigated Noise	e Levels (with	out Topo and	barrie	r attenı	ation)						
VehicleType	Leq Peak Hou	ır Leq Day	/	Leq Ev	ening	Leq	Night		Ldn	0	NEL
Autos:	65	.1	63.1		61.8		55.7	,	64.	2	64.
Medium Trucks:	58	.6	54.7		47.2		56.0)	62.	2	62.
Heavy Trucks:	59	.1	55.0		51.6		56.3	3	62.	5	62.
Vehicle Noise:	66	.8	64.2		62.3		60.8	3	67.	8	68.
Centerline Distant	ce to Noise Co	ontour (in feet)								
			L	70 d	BA	65	dBA	6	50 dBA	55	5 dBA
		-	Ldn:	54		1	17		252		542
		C	NEL:	57		1	23		264		569

	FHV	VA-RD-77-108 I	lighw	AY N	OISE PI	REDICT	ION MO	DEL				
Scenar Road Narr Road Segme	io: E+P 2021 ne: Scott Rd. nt: e/o Haun R	d.				Projec Job N	Name: lumber:	Cante 11304	rwood			
SITE	SPECIFIC IN	IPUT DATA				r	IOISE I	NODE	L INPUT	s		
Highway Data				S	ite Con	ditions	(Hard =	10, S	oft = 15)			
Average Daily	Traffic (Adt): 1	6,000 vehicles						Autos	15			
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2)	Axles)	15			
Peak H	lour Volume:	1,600 vehicles			He	avy Tru	cks (3+)	Axles)	15			
Ve	hicle Speed:	50 mph			ahiala	Mix						
Near/Far La	ne Distance:	78 feet		-	Veh	icleTvn		Dav	Evenina	Nia	ht	Daily
Site Data				_	VCII	icie i ype	, Autos:	75.5%	6 14.0%	10	5%	97 42%
0.10 2010		0.0 ()			Me	edium T	rucks:	48.99	6 2.2%	48.	9%	1.84%
Ba Parrior Type (0.14	(all 1 Rorm):	0.0 feet			ŀ	Heavy T	rucks:	47.3%	5.4%	47.	.3%	0.74%
Centerline Di	st to Barrier:	76.0 feet										
Centerline Dist	to Observer:	76.0 feet		^	loise So	ource E	levation	s (in f	eet)			
Barrier Distance	to Observer:	0.0 feet				Auto	s: 0.	000				
Observer Height	(Above Pad):	5.0 feet			Mediui	m Truck	's: 2.	297				
P	ad Elevation:	0.0 feet			Heav	ry Truck	s: 8.	006	Grade Ad	justm	ent:	0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distan	ce (in	feet)			
	Road Grade:	0.0%				Auto	s: 65.	422	,			
	Left View:	-90.0 degree			Mediu	m Truck	s: 65	286				
	Right View:	90.0 degree	6		Heav	y Truck	s: 65.	300				
FHWA Noise Mod	el Calculation	s										
VehicleType	REMEL	Traffic Flow	Distan	ce	Finite	Road	Fresr	nel	Barrier Att	en	Bern	n Atten
Autos:	70.20	-0.37		-1.85		-1.20		-4.73	0.0	000		0.000
Medium Trucks:	81.00	-17.61		-1.84		-1.20		-4.88	0.0	000		0.000
Heavy Trucks:	85.38	-21.56		-1.84		-1.20		-5.25	0.0	000		0.000
Unmitigated Nois	e Levels (with	out Topo and k	arrier a	tten	uation)							
VehicleType	Leq Peak Hou	r Leq Day	Le	eq Ev	ening	Leq	Night		Ldn		CN	IEL
Autos:	66	.8 6	4.8		63.5		57.4	1	65.9	9		66.5
Medium Trucks:	60	.4 5	6.5		49.0		57.7	7	63.9	Э		63.9
Heavy Trucks:	60	.8 5	6.7		53.3		58.0)	64.2	2		64.3
Vehicle Noise:	68	.5 6	5.9		64.0		62.5	5	69.	5		69.8
Centerline Distan	ce to Noise Co	ontour (in feet)										
				70 d	BA	65	dBA		60 dBA		55 0	dBA
		L	dn:	70		1	52		327		70)4
		CN	EL:	74		1	59		343		74	40

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	FH	WA-RD-77-108	HIGHW	AY NO	OISE P	REDICTI	ON MO	DEL			
Scenar Road Nan Road Segme	io: E+P 2021 ne: Scott Rd. nt: w/o Menife	e Rd.				Project I Job Ni	Name: Imber:	Cante 11304	rwood		
SITE	SPECIFIC I	VPUT DATA				N	OISE N	NODE	L INPUTS	;	
Highway Data				S	lite Cor	nditions (Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	16,100 vehicle	s					Autos.	: 15		
Peak Hour	Percentage:	10%			Me	eaium Tru	CKS (2 A	(xies)	15		
Peak F	lour Volume:	1,610 vehicle	s		He	eavy Truc	ks (3+ A	(xles)	: 15		
Ve	hicle Speed:	55 mph		V	ehicle	Mix					
Near/Far La	ne Distance:	78 feet			Veh	nicleType		Day	Evening	Night	Daily
Site Data						A	utos:	75.5%	6 14.0%	10.5%	97.42%
Ba	rrier Height:	0.0 feet			М	ledium Tri	ucks:	48.9%	6 2.2%	48.9%	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0				Heavy Tr	ucks:	47.3%	6 5.4%	47.3%	0.74%
Centerline Di	st. to Barrier:	76.0 feet		N	loise S	ource Ele	evation	s (in f	eet)		
Centerline Dist.	to Observer:	76.0 feet				Autos	. 0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.3	297			
Observer Height	(Above Pad):	5.0 feet			Heat	vv Trucks	: 8.0	006	Grade Adiu	ıstment	: 0.0
P	ad Elevation:	0.0 feet				.,					
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%				Autos	: 65.4	422			
	Left View:	-90.0 degre	es		Mediu	m Trucks	: 65.	286			
	Right View:	90.0 degre	es		Hear	vy Trucks	: 65.	300			
FHWA Noise Mod	el Calculation	15									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Atte	n Bei	rm Atten
Autos:	71.78	-0.75		-1.85		-1.20		-4.73	0.00	00	0.000
Medium Trucks:	82.40	-17.99		-1.84		-1.20		-4.88	0.00	00	0.000
Heavy Trucks:	86.40	-21.95		-1.84		-1.20		-5.25	0.00	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	uation)						
VehicleType	Leq Peak Ho	ur Leq Daj	/ L	eq Ev	ening	Leq I	Vight		Ldn	С	NEL
Autos:	68	3.0	66.0		64.6		58.6	;	67.1		67.7
Medium Trucks:	61	1.4	57.5		50.0		58.7	,	64.9		64.9
Heavy Trucks:	61	1.4	57.4		54.0		58.6	;	64.8		64.9
Vehicle Noise:	69	9.6	67.0		65.1		63.4		70.5		70.8
Centerline Distan	ce to Noise C	ontour (in fee)								
				70 di	BA	65 0	<i>IBA</i>		60 dBA	55	dBA
			Ldn:	82	2	17	6		380	8	319
		С	NEL:	86	5	18	6		400	8	362

			0.0211	Ebiolioi					
Scenario: E+P 2021				Project Na	me: Ca	nterwood			
Road Name: Scott Rd.				Job Num	ber: 11	304			
Road Segment: w/o Briggs Rd.									
SITE SPECIFIC INPUT D	ATA			NOI	SE MC	DEL INI	PUTS		
Highway Data		S	Site Cond	ditions (Ha	ard = 10), Soft = 1	5)		
Average Daily Traffic (Adt): 13,800 v	ehicles				Au	tos: 15			
Peak Hour Percentage: 10%			Med	lium Truck	s (2 Axl	es): 15			
Peak Hour Volume: 1,380 v	ehicles		Hea	avy Trucks	(3+ Axl	es): 15			
Vehicle Speed: 55 n	nph	١	Vehicle N	lix					
Near/Far Lane Distance: 78 fe	eet		Vehi	cleType	Da	ay Ever	ning N	light	Daily
Site Data				Auto	os: 75	.5% 14	.0% 1	10.5%	97.429
Barrier Height: 0.0	feet		Me	dium Truci	ks: 48	.9% 2	.2% 4	18.9%	1.84%
Barrier Type (0-Wall, 1-Berm): 0.0			н	leavy Truci	ks: 47	.3% 5	.4% 4	17.3%	0.74%
Centerline Dist. to Barrier: 76.0	feet		Noiso So	urco Elov	tions (in foot)			
Centerline Dist. to Observer: 76.0	feet	-	10/36 30	Autos:	0.000				
Barrier Distance to Observer: 0.0	feet		Modiun	Trucke	2 20	7			
Observer Height (Above Pad): 5.0	feet		Heav	/ Trucks:	8.006	Grad	e Adius	tment:	0.0
Pad Elevation: 0.0	feet		,						
Road Elevation: 0.0	feet	L	Lane Equ	ivalent Di	stance	(in feet)			
Road Grade: 0.0%	D			Autos:	65.42	2			
Left View: -90.0	degrees		Mediun	1 I rucks:	65.28	6			
Right View: 90.0	degrees		Heavy	/ Trucks:	65.30	J			
FHWA Noise Model Calculations									
VehicleType REMEL Traffic	Flow Dista	nce	Finite I	Road I	Fresnel	Barrie	er Atten	Ber	m Atten
Autos: 71.78	-1.42	-1.85	5	-1.20	-4.	73	0.000)	0.00
Medium Trucks: 82.40 -	18.66	-1.84	4	-1.20	-4.	88	0.000)	0.00
Heavy Trucks: 86.40 -	22.62	-1.84	4	-1.20	-5.	25	0.000)	0.00
Unmitigated Noise Levels (without Top	o and barrier	atten	uation)						
VehicleType Leq Peak Hour Le	eq Day L	eq Ev	/ening	Leq Nig	ht	Ldn		CI	VEL
Autos: 67.3	65.3		64.0		58.0		66.4		67.
Medium Trucks: 60.7	56.8		49.3		58.1		64.2		64.
Heavy Trucks: 60.7	56.7		53.3		57.9		64.1		64.
Vehicle Noise: 68.9	66.4		64.5		62.8		69.8		70.
Centerline Distance to Noise Contour (i	n feet)								
		70 a	1BA	65 dB/	4	60 dB/	4	55	dBA
	Ldn:	74	4	159		343		7	39

	FH	WA-RD-77-108	HIGHW	VAY NO	DISE PI	REDICTIO	N MODE	L			
Scenari Road Nam Road Segmer	o: E+P 2021 e: Scott Rd. nt: w/o Leon F	Rd.				Project Na Job Nun	ame: Car nber: 113	nterwood 04			
SITE	SPECIFIC IN	VPUT DATA				NO	ISE MO	DEL INPUT	rs		
Highway Data				S	ite Cor	ditions (H	lard = 10,	Soft = 15)			
Average Daily Peak Hour Peak H	Traffic (Adt): Percentage: our Volume:	13,300 vehicle 10% 1,330 vehicle	is is		Me He	dium Truck avy Trucks	Aut ks (2 Axle s (3+ Axle	os: 15 s): 15 s): 15			
Vei	hicle Speed:	55 mph		V	ehicle	Mix					
Near/Far Lar	ne Distance:	78 feet		-	Veh	icleTvpe	Da	v Evenina	Nia	ht	Dailv
Site Data						Au	tos: 75.	5% 14.0%	10	.5% 9	97.42%
Bar	rior Hoight	0.0 feet			М	edium Truc	ks: 48.	9% 2.2%	48	.9%	1.84%
Barrier Type (0-W	all, 1-Berm):	0.0			1	Heavy Truc	cks: 47.	3% 5.4%	47	.3%	0.74%
Centerline Dis	at. to Barrier:	76.0 feet		N	oise S	ource Elev	ations (i	n feet)			
Centerline Dist.	to Observer:	76.0 feet				Autos:	0.000	1			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.297				
Observer Height (Above Pad):	5.0 feet			Heav	v Trucks:	8.006	Grade A	djustn	nent: (0.0
Pa	d Elevation:	0.0 feet		-					-		
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalent D	istance (in feet)			
F	Road Grade:	0.0%				Autos:	65.422				
	Left View: Right View:	-90.0 degre	es		Mediu Heav	m Trucks: /v Trucks:	65.286				
		oo.o dogro	00								
FHWA Noise Mode	el Calculation	is	D : (F 1 11					_	
Venicle I ype	REMEL	I raffic Flow	Dista	ince	Finite	Road	Fresnel	Barrier A	tten	Berm	Atten
Autos:	/1./8	-1.58		-1.85		-1.20	-4.	73 U.	.000		0.000
Heavy Trucks.	02.40	-10.02		-1.04		-1.20	-4.0	DO U.	.000		0.000
Heavy Hucks.	00.40	-22.70		-1.04		-1.20	-0	25 0.	.000		0.000
Unmitigated Noise	e Levels (with	nout Topo and	barrier	attenu	ation)	1 15	- h t	1 -1	-	0.10	-1
Venicie i ype	Leq Peak Ho	ur Leq Daj		eq Eve	ening	Leq IVI	57 0	Lan	2	CIVE	=L 66.0
Autos. Modium Trucks:	60		56.6		40.1		57.0	64	.2		64.1
Hoow Trucks:	60		56.5		43.1 52.1		57.9	64	0		6/ 1
Vehicle Noise:	68	3.7	66.2		64.3		62.6	69	.0		70.0
Centerline Distance	e to Noise C	ontour (in fee	t)								
				70 dl	BA	65 dE	A	60 dBA		55 d	BA
			Ldn:	72		155		335		72′	1
		С	NEL:	76		163		352		759	Э

	FH\	VA-RD-77-108	HIGHWA	Y N	DISE PI	REDICT		DEL			
Scena	rio: E+P 2021					Projec	t Name: (Canter	wood		
Road Nar	ne: Scott Rd.					Job N	lumber: ·	11304			
Road Segme	ent: e/o Leon R	d.									
SITE	SPECIFIC IN	IPUT DATA				ſ	NOISE	/ODE	L INPUT	s	
Highway Data				S	ite Con	ditions	(Hard =	10, Se	oft = 15)		
Average Daily	Traffic (Adt):	5,400 vehicles					,	Autos:	15		
Peak Hour	r Percentage:	10%			Me	dium Tr	ucks (2 A	(xles)	15		
Peak I	Hour Volume:	540 vehicles			He	avy Tru	cks (3+ A	(xles)	15		
Ve	ehicle Speed:	55 mph		v	ehicle	Mix					
Near/Far La	ane Distance:	78 feet		-	Veh	icleType	e	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	14.0%	10.5%	6 92.00%
Ba	arrier Height:	0.0 feet			M	edium T	rucks:	48.0%	2.0%	50.0%	% 3.00%
Barrier Type (0-V	Vall, 1-Berm):	0.0			I	Heavy T	rucks:	48.0%	2.0%	50.0%	6 5.00%
Centerline D	ist. to Barrier:	76.0 feet			loise So	ource E	levation	s (in f	eet)		
Centerline Dist.	to Observer:	76.0 feet		-		Auto	IS: 0(000			-
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s 2.2	297			
Observer Height	(Above Pad):	5.0 feet			Heav	v Truck	(s: 8)	106	Grade Adi	ustmer	nt: 0.0
F	Pad Elevation:	0.0 feet			mouri	<i>y m</i> aon					
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distand	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 65.4	422			
	Left View:	-90.0 degree	s		Mediu	m Truck	is: 65.2	286			
	Right View:	90.0 degree	s		Heav	y Truck	s: 65.3	300			
FHWA Noise Mod	lel Calculation	s		_							
VehicleType	REMEL	Traffic Flow	Distand	e	Finite	Road	Fresn	el	Barrier Atte	en Be	erm Atten
Autos:	71.78	-5.75	-	1.85		-1.20		-4.73	0.0	00	0.000
Medium Trucks:	82.40	-20.61	-	1.84		-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	86.40	-18.40	-	1.84		-1.20		-5.25	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and I	barrier at	ten	uation)						
VehicleType	Leq Peak Hou	Ir Leq Day	Le	q Ev	ening	Leq	Night		Ldn	(CNEL
Autos:	63	.0 6	51.1		59.7		53.6		62.1		62.7
Medium Trucks:	58	.7 5	4.8		47.0		56.2		62.4		62.4
Heavy Trucks:	65	.0 6	1.0		53.2		62.4		68.6		68.6
Vehicle Noise:	67	.7 6	4.5		60.7		63.8	3	70.2		70.4
Centerline Distan	ce to Noise Co	ontour (in feet)									· · · · ·
				70 d	BA	65	dBA	6	60 dBA	5	5 dBA
		L	dn:	79		1	69		365		786
		CA	IEL:	80)	1	73		372		802

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	FH	WA-RD-77-10	B HIGHV	NAY NO	OISE PI	REDICTIO	N MODE	EL			
Scenai Road Nan Road Segme	rio: E+P 2025 ne: Haun Rd. nt: n/o Scott R	td.				Project N Job Nur	lame: Ca nber: 11	interwood 304			
SITE	SPECIFIC IN	NPUT DATA				NC	ISE MO	DEL INPU	JTS		
Highway Data				S	lite Cor	ditions (H	lard = 10), Soft = 15)		
Average Daily	Traffic (Adt):	7,100 vehicle	es				Au	tos: 15			
Peak Hour	Percentage:	10%			Ме	dium Truc	ks (2 Axi	les): 15			
Peak H	our Volume:	710 vehicle	es		He	avy Truck	s (3+ Axi	les): 15			
Ve	ehicle Speed:	50 mph		V	ahiclo	Miv					
Near/Far La	ne Distance:	48 feet		v	Voh	icleType	D	av Evenir	na Mi	aht	Daily
Site Data					VCI	Au	tos: 75	5.5% 14.0	% 10).5%	97.42%
Ba	rrier Height:	0.0 feet			М	edium Tru	cks: 48	3.9% 2.2	% 48	3.9%	1.84%
Barrier Type (0-V	Vall. 1-Berm):	0.0			1	Heavy Tru	cks: 47	.3% 5.4	% 47	7.3%	0.74%
Centerline Di	ist. to Barrier:	59.0 feet			loiso S	ourco Elos	ations ((in foot)			
Centerline Dist.	to Observer:	59.0 feet		~	10/36 34	Autoor					
Barrier Distance	to Observer:	0.0 feet			Modiu	m Trucks:	2.20	7			
Observer Height	(Above Pad):	5.0 feet			Hoo	a Trucks:	2.29	r Grada	Δdiust	mont	0.0
P	ad Elevation:	0.0 feet			Tiear	ly muchs.	0.00	0 0/200	Aujusu	nom.	0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent L	Distance	(in feet)			
	Road Grade:	0.0%				Autos:	54.12	9			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	53.96	6			
	Right View:	90.0 degre	es		Heav	y Trucks:	53.98	2			
FHWA Noise Mod	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresnel	Barrier	Atten	Bern	n Atten
Autos:	70.20	-3.90	Ì	-0.62		-1.20	-4	.69	0.000		0.000
Medium Trucks:	81.00	-21.13		-0.60		-1.20	-4	.88	0.000		0.000
Heavy Trucks:	85.38	-25.09)	-0.60		-1.20	-5	.35	0.000		0.000
Unmitigated Nois	e Levels (with	out Topo and	l barrier	r attenu	uation)						
VehicleType	Leq Peak Ho	ur Leq Da	y .	Leq Ev	ening	Leq N	ight	Ldn		CN	EL
Autos:	64	1.5	62.5		61.2		55.2	6	63.6		64.2
Medium Trucks:	58	3.1	54.2		46.7		55.4	6	61.6		61.6
Heavy Trucks:	58	3.5	54.4		51.0		55.7	6	61.9		62.0
Vehicle Noise:	66	6.2	63.6		61.7		60.2	6	67.2		67.5
Centerline Distan	ce to Noise C	ontour (in fee	t)								
-				70 di	BA	65 dE	BA	60 dBA		55 0	1BA
			Ldn:	38	3	83		179		38	5
		C	NEL:	40)	87		187		40)4

Seeneric	E D 2025		_		Drojoot No	may Car	tonuood		
Scenario Road Name): E+P 2025				Project Na	me: Car bor: 112	nterwood		
Road Segmen	t: s/o Scott Rd				000 11011	007. 110	04		
SITE S	PECIFIC IN	PUT DATA	1		NO	SE MO	DEL INPUT	s	
Highway Data				Site Con	ditions (Ha	ard = 10,	Soft = 15)		
Average Daily 7	raffic (Adt):	1,300 vehicles				Auto	os: 15		
Peak Hour F	Percentage:	10%		Me	dium Truck	s (2 Axle	s): 15		
Peak Ho	our Volume:	130 vehicles		He	avy Trucks	(3+ Axle	s): 15		
Veh	icle Speed:	50 mph	ŀ	Vehicle I	Mix				
Near/Far Lan	e Distance:	48 feet	ľ	Vehi	icleType	Daj	/ Evening	Night	Daily
Site Data					Auto	os: 75.	5% 14.0%	10.5%	97.429
Bari	rier Heiaht:	0.0 feet		Me	edium Truc	ks: 48.	9% 2.2%	48.9%	1.849
Barrier Type (0-Wa	all, 1-Berm):	0.0		ŀ	leavy Truc	ks: 47.	3% 5.4%	47.3%	0.74%
Centerline Dis	t. to Barrier:	59.0 feet	-	Noise Sc	ource Eleva	ations (i	1 feet)		
Centerline Dist. to	o Observer:	59.0 feet	ŀ		Autos:	0.000			
Barrier Distance to	o Observer:	0.0 feet		Mediur	n Trucks:	2.297			
Observer Height (A	Above Pad):	5.0 feet		Heav	v Trucks:	8.006	Grade Ad	ljustment	0.0
Pa	d Elevation:	0.0 feet	-						
Roa	d Elevation:	0.0 feet	-	Lane Eq	uivalent Di	stance (in feet)		
R	load Grade:	0.0%			Autos:	54.129			
	Left View:	-90.0 degrees		Mediur	n Trucks:	53.966			
	Right View:	90.0 degrees		Heav	y Trucks:	53.982			
FHWA Noise Mode	I Calculations								
VehicleType	REMEL	Traffic Flow D	listance	Finite	Road	Fresnel	Barrier At	ten Ber	m Atten
Autos:	70.20	-11.27	-0.6	52	-1.20	-4.6	59 O.	000	0.00
Medium Trucks:	81.00	-28.51	-0.6	60	-1.20	-4.8	38 0.	000	0.00
Heavy Trucks:	85.38	-32.46	-0.6	60	-1.20	-5.3	35 0.	000	0.00
Unmitigated Noise	Levels (witho	ut Topo and barı	rier attei	nuation)					
VehicleType	Leq Peak Hour	Leq Day	Leq E	vening	Leq Nig	ht	Ldn	C	VEL
Autos:	57.1	1 55.1		53.8		47.8	56.	2	56.
Medium Trucks:	50.	7 46.8		39.3		48.0	54.	2	54.
Heavy Trucks:	51.7	1 47.1		43.7		48.3	54.	5	54.
Vehicle Noise:	58.	3 56.3		54.3		52.8	59.	8	60.
Centerline Distance	e to Noise Co	ntour (in feet)	70	dDA	ee dD	4	CO dBA	55	dD A
		I also	10		05 GB/	4	50 UBA	55	UDA 24
		CNEL:	. 1	12	2/		00	1	20
		UNEL.		10	20		00	1	30

	FH	WA-RD-77-108	HIGHW	AY NC	DISE PF	REDICTIO		ΞL		
Scenari Road Nam	o: E+P 2025 e: Antelope F	Rd.				Project N Job Nu	lame: Ca mber: 11	anterwood 304		
Road Segmen	nt: s/o Scott F	Rd.								
SITE	SPECIFIC I	NPUT DATA				N	DISE MO	DDEL INPUT	ſS	
Highway Data				S	ite Con	ditions (Hard = 10	0, Soft = 15)		
Average Daily	Traffic (Adt):	11,000 vehicle	s				AL	itos: 15		
Peak Hour	Percentage:	10%			Me	dium True	cks (2 Ax	les): 15		
Peak H	our Volume:	1,100 vehicle	s		He	avy Truck	(3+ Ax	les): 15		
Vel	hicle Speed:	50 mph		V	ehicle I	Nix				
Near/Far Lar	ne Distance:	48 feet			Vehi	cleType	D	ay Evening	Nigi	ht Daily
Site Data						A	utos: 75	5.5% 14.0%	10.	5% 97.42%
Bar	rier Height:	0.0 feet			Me	edium Tru	icks: 48	3.9% 2.2%	48.	9% 1.84%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Tru	icks: 41	7.3% 5.4%	47.	3% 0.74%
Centerline Dis	at. to Barrier:	59.0 feet		N	oise Sc	ource Ele	vations	(in feet)		
Centerline Dist. I	to Observer:	59.0 feet				Autos:	0.00	0		
Barrier Distance t	to Observer:	0.0 feet			Mediur	n Trucks:	2.29	7		
Observer Height (Above Pad):	5.0 feet			Heav	y Trucks:	8.00	6 Grade A	djustm	ent: 0.0
Pa	d Elevation:	0.0 feet			ana Ea	ulualant	Distance	(in fact)		
Roa	d Elevation:	0.0 feet		Le	ane Equ	Autoo	EA 10			
F	Road Grade:	0.0%			Modiu	Autos.	54.12	9		
	Right View:	90.0 degre	es es		Heav	y Trucks:	53.90	2		
	0-1-1-1-1-1									
VehicleType	REMEI	Traffic Flow	Dista	nce	Finito	Road	Freenel	Barrier A	Hon	Rorm Atton
Autos:	70.20	-1.99	Dista	-0.62	THILL	-1.20	-4	69 0	.000	0.000
Medium Trucks:	81.00	-19.23		-0.60		-1.20	-4	.88 0.	.000	0.000
Heavy Trucks:	85.38	-23.19		-0.60		-1.20	-5	.35 0.	.000	0.000
Unmitigated Noise	e Levels (with	hout Topo and	barrier	attenu	ation)					
VehicleType	Leq Peak Ho	ur Leq Da	V L	.eq Eve	ening	Leq N	light	Ldn		CNEL
Autos:	66	6.4	64.4		63.1		57.1	65	.5	66.1
Medium Trucks:	60	0.0	56.1		48.6		57.3	63	.5	63.5
Heavy Trucks:	60	0.4	56.3		52.9		57.6	63	.8	63.9
Venicle Noise:	68	8.1	65.5		63.6		62.1	69	.1	69.4
Centerline Distance	e to Noise C	ontour (in fee	t)	70 -1	54	CE -		eo dBA		EE dDA
			I do:	70 at	ри	05 0	1	220	1	516
		0	NEL ·	52 54		11	7	259		541
		0		54			'	201		041

	FH	WA-RD-77-108	HIGHW	AY NC	DISE PI	REDICTION		DEL			
Scenar	io: E+P 2025					Project N	lame: (Cante	rwood		
Road Nam	e: Menifee Ro	d.				Job Nu	mber:	11304			
Road Segme	nt: n/o Holland	d Rd.									
SITE	SPECIFIC IN	IPUT DATA				N	DISE N	IODE	L INPUT	s	
Highway Data				S	ite Con	ditions (Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	6,400 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium True	cks (2 A	(xles):	15		
Peak H	lour Volume:	640 vehicle	s		He	avy Truck	(3+ A	(xles)	15		
Ve	hicle Speed:	45 mph		V	ohicle	Mix					
Near/Far La	ne Distance:	54 feet		-	Veh	icleType		Dav	Evenina	Niahí	Daily
Site Data						A	itos:	75.5%	14.0%	10.5	% 97.42%
Pa	rrior Hoight:	0.0 foot			Me	edium Tru	icks:	48.9%	2.2%	48.9	% 1.84%
Barrier Type (0-W	/all 1-Berm):	0.0 1001			ŀ	Heavy Tru	icks:	47.3%	5.4%	47.3	% 0.74%
Centerline Di	st. to Barrier:	64.0 feet		-		-					
Centerline Dist.	to Observer:	64.0 feet		N	orse so	ource Ele	vation	s (in t	eet)		
Barrier Distance	to Observer:	0.0 feet				Autos:	0.0	000			
Observer Height	Above Pad):	5.0 feet			Mealui	T Trucks.	2.4	297	Grado Ad	liuctmo	nt: 0.0
P	ad Elevation:	0.0 feet			Heav	y Trucks:	8.0	006	Glade Au	jusune	n. 0.0
Ro	ad Elevation:	0.0 feet		Li	ane Eq	uivalent	Distand	ce (in	feet)		
	Road Grade:	0.0%				Autos:	58.2	241			
	Left View:	-90.0 degre	es		Mediui	m Trucks:	58.0	089			
	Right View:	90.0 degre	es		Heav	y Trucks	58.	104			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distan	ice	Finite	Road	Fresn	el	Barrier Att	en B	erm Atten
Autos:	68.46	-3.89		-1.10		-1.20		-4.70	0.0	000	0.000
Medium Trucks:	79.45	-21.13		-1.08		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-25.08		-1.08		-1.20		-5.31	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	ttenu	ation)					-	
VehicleType	Leq Peak Ho	ur Leq Day	' Le	eq Eve	ening	Leq N	light		Ldn		CNEL
Autos:	62	2.3	60.3		59.0		52.9		61.4	4	62.0
Medium Trucks:	56	6.0	52.1		44.6		53.4		59.6	ò	59.6
Heavy Trucks:	56	6.9	52.8		49.4		54.1		60.3	3	60.4
Vehicle Noise:	64	l.1	61.5		59.6		58.3		65.2	2	65.5
Centerline Distan	ce to Noise C	ontour (in feet)	_			_		-		-
				70 dE	3A	65 d	BA	(60 dBA	5	i5 dBA
			Ldn:	31		66			143		308
		C	VEL:	32		70			150		323

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	FH	WA-RD-77-10	B HIGHW	AY NO	DISE P	REDICTIC		DEL			
Scenar Road Nam Road Segme	io: E+P 2025 ne: Menifee R nt: s/o Holland	d. d Rd.				Project N Job Nu	lame: (mber: `	Cante 11304	rwood		
SITE	SPECIFIC I	NPUT DATA				NC	DISE N	IODE	L INPUT	S	
Highway Data				S	ite Cor	nditions (I	Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	5,500 vehicle	s				,	Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Truc	cks (2 A	xles):	15		
Peak H	lour Volume:	550 vehicle	es		He	avy Truck	is (3+ A	(xles):	15		
Ve	hicle Speed:	45 mph		V	ohiclo	Mix					
Near/Far La	ne Distance:	54 feet		-	Veł	nicleType		Dav	Evenina	Niaht	Daily
Site Data					101	AL	itos:	75.5%	5 14.0%	10.5%	6 97.42%
Ba	rrier Height	0.0 feet			М	edium Tru	cks:	48.9%	2.2%	48.9%	6 1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0				Heavy Tru	cks:	47.3%	5.4%	47.3%	6 0.74%
Centerline Di	st. to Barrier:	64.0 feet		N	oise S	ource Ele	vation	s (in f	eet)		
Centerline Dist.	to Observer:	64.0 feet			0.00 0	Autos:	0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.2	97			
Observer Height	Above Pad):	5.0 feet			Hea	v Trucks:	8.0	006	Grade Ad	iustmer	nt: 0.0
P	ad Elevation:	0.0 feet				.,					
Roi	ad Elevation:	0.0 feet		Li	ane Eq	uivalent l	Distand	ce (in	feet)		
	Road Grade:	0.0%				Autos:	58.2	241			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	58.0	089			
	Right View:	90.0 degre	es		Hear	vy Trucks:	58.1	104			
FHWA Noise Mod	el Calculatior	15									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Att	en Be	erm Atten
Autos:	68.46	-4.55		-1.10		-1.20		-4.70	0.0	000	0.000
Medium Trucks:	79.45	-21.79		-1.08		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-25.74		-1.08		-1.20		-5.31	0.0	000	0.000
Unmitigated Nois	e Levels (with	nout Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	y L	eq Eve	ening	Leq N	light		Ldn	(ONEL
Autos:	61	1.6	59.6		58.3		52.3		60.7	,	61.3
Medium Trucks:	55	5.4	51.5		44.0		52.7		58.9)	58.9
Heavy Trucks:	56	6.2	52.2		48.8		53.4		59.6	6	59.7
Vehicle Noise:	63	3.5	60.9		58.9		57.6		64.6	6	64.9
Centerline Distant	ce to Noise C	ontour (in fee	t)								
				70 dE	BA	65 dl	BA	(60 dBA	5	5 dBA
			Ldn:	28		60			129		279
		C	NEL:	29		63			136		292

	FHW	/A-RD-77-108 H	IIGHW	AY NOISE	PREDICTIO	N MODEL			
Scenario:	E+P 2025				Project N	ame: Cant	erwood		
Road Name:	Leon Rd.				Job Nur	nber: 1130	4		
Road Segment:	s/o Craig Av								
SITE SP	ECIFIC IN	PUT DATA			NO	ISE MOD	EL INPUT	S	
Highway Data				Site 0	Conditions (H	ard = 10, \$	Soft = 15)		
Average Daily Tra	affic (Adt):	5,000 vehicles				Autos	s: 15		
Peak Hour Pe	rcentage:	10%			Medium Truc	ks (2 Axles): 15		
Peak Hou	r Volume:	500 vehicles			Heavy Truck	(3+ Axles): 15		
Vehic	le Speed:	35 mph		Vehic	le Mix				
Near/Far Lane	Distance:	48 feet		1	/ehicleType	Day	Evening	Night	Daily
Site Data					Au	os: 77.5	% 14.0%	10.5%	92.00%
Barrie	er Heiaht:	0.0 feet			Medium True	ks: 48.0	% 2.0%	50.0%	3.00%
Barrier Type (0-Wall,	1-Berm):	0.0			Heavy True	ks: 48.0	% 2.0%	50.0%	5.00%
Centerline Dist.	to Barrier:	59.0 feet		Nois	Source Elev	ations (in	foot)		
Centerline Dist. to	Observer:	59.0 feet		140/30	Autoor	0.000	leel)		
Barrier Distance to	Observer:	0.0 feet		Mo	Autos. dium Trucks:	2 207			
Observer Height (Ab	ove Pad):	5.0 feet		IVIE	oover Trucks.	2.297	Grade An	liustmont	. 0.0
Pad	Elevation:	0.0 feet			eavy mucks.	0.000	Orade Ad	jusunent	0.0
Road	Elevation:	0.0 feet		Lane	Equivalent D	istance (ir	1 feet)		
Roa	ad Grade:	0.0%			Autos:	54.129			
1	Left View:	-90.0 degrees	5	Me	dium Trucks:	53.966			
R	ight View:	90.0 degrees	6	н	eavy Trucks:	53.982			
FHWA Noise Model (Calculations	;							
VehicleType	REMEL	Traffic Flow	Distar	ice Fii	nite Road	Fresnel	Barrier At	ten Ber	m Atten
Autos:	64.30	-4.12		-0.62	-1.20	-4.69	9 0.0	000	0.000
Medium Trucks:	75.75	-18.99		-0.60	-1.20	-4.88	3 0.0	000	0.000
Heavy Trucks:	81.57	-16.77		-0.60	-1.20	-5.35	5 0.0	000	0.000
Unmitigated Noise L	evels (witho	ut Topo and b	arrier a	ttenuatio	n)				
VehicleType Le	eq Peak Hou	 Leq Day 	Le	eq Evenin	g Leq Ni	ght	Ldn	CI	VEL
Autos:	58.	4 5	6.5	5	5.1	49.0	57.	5	58.1
	55 1	0 5	1.0	4	3.2	52.4	58.	6	58.6
Medium Trucks:	00.	-		<i>c</i>		60.4	66.	ö	66.6
Medium Trucks: Heavy Trucks:	63.	0 5	9.0	5	1.2	00.4			
Medium Trucks: Heavy Trucks: Vehicle Noise:	63. 64.	0 5 8 6	9.0 1.4	5	6.8	61.3	67.	7	67.8
Medium Trucks: Heavy Trucks: Vehicle Noise: Centerline Distance	63. 64. to Noise Co	0 5 8 6 ntour (in feet)	9.0 1.4	5	6.8	61.3	67.	7	67.8
Medium Trucks: Heavy Trucks: Vehicle Noise: Centerline Distance	63. 64. to Noise Co	0 5 8 6 ntour (in feet)	9.0	5 5 70 dBA	6.8 65 dE	61.3	67. 60 dBA	55	67.8 dBA
Medium Trucks: Heavy Trucks: Vehicle Noise: Centerline Distance	63. 64. to Noise Co	0 5 8 6 ntour (in feet)	9.0 1.4 dn:	5 70 dBA 41	6.8 65 dE	61.3	67. 60 dBA 192	7 55 4	67.8 dBA 13

	FHW	/A-RD-77-108	HIGHW	AY NO	DISE PI	REDICT	ION MC	DEL				
Scenari Road Nam Road Segmer	io: E+P 2025 le: Leon Rd. nt: s/o Garbani	Rd.				Project Job N	t Name: lumber:	Cante 11304	rwood			
SITE	SPECIFIC IN	PUT DATA				ľ	OISE	MODE	L INPU	rs		
Highway Data				S	ite Con	ditions	(Hard =	: 10, S	oft = 15)			
Average Daily	Traffic (Adt):	5,300 vehicle	5		Ma	dium Te	waka (2	Autos:	15			
Peak Hour	Percentage:	10%			IVIE LLo		oke (2)	Axles).	15			
Peak n	biolo Spood	550 venicle:	5		ne	avy nu	CN3 (3+	ALIES).	15			
Noor/Ear La	no Distanco:	35 mpn		v	ehicle l	Mix						
iveai/i ai Lai	ne Distance.	40 1661			Veh	icleType	e	Day	Evening	Ni	ght	Daily
Site Data							Autos:	77.5%	5 14.0%	10	0.5%	92.00%
Bar	rrier Height:	0.0 feet			M	edium T	rucks:	48.0%	2.0%	50	0.0%	3.00%
Barrier Type (0-W	'all, 1-Berm):	0.0			ŀ	Heavy T	rucks:	48.0%	5 2.0%	50	0.0%	5.00%
Centerline Dis	st. to Barrier:	59.0 feet		N	oise So	ource E	levatior	ıs (in f	eet)			
Centerline Dist.	to Observer:	59.0 feet				Auto	s: 0	000	,			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s 2	297				
Observer Height (Above Pad):	5.0 feet			Heav	v Truck	s: 8	006	Grade A	djusti	ment:	0.0
Pa	ad Elevation:	0.0 feet		_						<u> </u>		
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distar	ce (in	feet)			
	Road Grade:	0.0%				Auto	s: 54	.129				
	Left View:	-90.0 degree	es		Mediui	m Truck	:s: 53	.966				
	Right View:	90.0 degree	es		Heav	y Truck	's: 53	.982				
FHWA Noise Mode	el Calculations	5										
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fres	nel	Barrier A	tten	Ben	m Atten
Autos:	71.78	-5.83		-0.62		-1.20		-4.69	0	.000		0.000
Medium Trucks:	82.40	-20.70		-0.60		-1.20		-4.88	0	.000		0.000
Heavy Trucks:	86.40	-18.48		-0.60		-1.20		-5.35	0	.000		0.000
Unmitigated Noise	e Levels (witho	out Topo and	barrier a	attenu	ation)							
VehicleType	Leq Peak Hou	r Leq Day	L	eq Ev	ening	Leq	Night		Ldn		CI	VEL
Autos:	64.	1	62.2		60.8		54.	8	63	.3		63.9
Medium Trucks:	59.	9	55.9		48.1		57.	4	63	.5		63.5
Heavy Trucks:	66.	1	62.1		54.4		63.	6	69	.7		69.8
Vehicle Noise:	68.	8	65.7		61.9		64.	9	71	.4		71.5
Centerline Distant	ce to Noise Co	ntour (in feet)	70 d	DA .	6E	dD A		60 dBA		EE	dD A
			l dn:	70 00	-MC	1	57	<u> </u>	338		- 35	20
		CI	LUN.	73		1	60		345		7.	23 11
		CI	VLL.	74			00		040		1	

F	1WA-KD-77-100		IT NOISE P	REDICTIO			
Scenario: E+P 2025	5			Project N	ame: Can	terwood	
Road Name: Leon Rd.				Job Nur	nber: 113	04	
Road Segment: s/o Scott	Rd.						
SITE SPECIFIC	INPUT DATA			NC	ISE MO	DEL INPUTS	s
Highway Data			Site Co	nditions (H	lard = 10,	Soft = 15)	
Average Daily Traffic (Adt):	3,200 vehicle	s			Auto	os: 15	
Peak Hour Percentage:	10%		M	edium Truc	ks (2 Axle	s <i>):</i> 15	
Peak Hour Volume:	320 vehicle	s	He	eavy Truck	s (3+ Axle	s): 15	
Vehicle Speed:	55 mph		Vehicle	Mix			-
Near/Far Lane Distance:	48 feet		Vel	hicleType	Day	/ Evening	Night Daily
Site Data				Au	tos: 77.5	5% 14.0%	10.5% 92.00%
Barrier Height	0.0 feet		N	ledium Tru	cks: 48.0	0% 2.0%	50.0% 3.00%
Barrier Type (0-Wall, 1-Berm):	0.0			Heavy Tru	cks: 48.0	0% 2.0%	50.0% 5.00%
Centerline Dist. to Barrier:	59.0 feet		Noise S	ource Elev	ations (in	1 foot)	
Centerline Dist. to Observer:	59.0 feet		110/30 0	Autos:	0.000	neery	
Barrier Distance to Observer:	0.0 feet		Modiu	m Trucke:	2 207		
Observer Height (Above Pad):	5.0 feet		Hoo	w Trucks.	0.006	Grade Adi	iustment: 0.0
Pad Elevation:	0.0 feet		i ica	vy muchs.	0.000	erade ridj	
Road Elevation:	0.0 feet		Lane Ec	quivalent L	Distance (in feet)	
Road Grade:	0.0%			Autos:	54.129		
Left View:	-90.0 degre	es	Mediu	ım Trucks:	53.966		
Right View:	90.0 degre	es	Hea	vy Trucks:	53.982		
FHWA Noise Model Calculatio	ns						
VehicleType REMEL	Traffic Flow	Distan	ce Finite	Road	Fresnel	Barrier Atte	en Berm Atten
Autos: 71.7	8 -8.02	-	0.62	-1.20	-4.6	9 0.0	00 0.000
Medium Trucks: 82.4	0 -22.89	-	0.60	-1.20	-4.8	8 0.0	0.000
Heavy Trucks: 86.4	0 -20.67	-	0.60	-1.20	-5.3	85 0.0	00 0.000
Unmitigated Noise Levels (with	thout Topo and	barrier a	ttenuation)				
VehicleType Leq Peak H	our Leq Da	y Le	q Evening	Leq N	ight	Ldn	CNEL
Autos: 6	61.9	60.0	58.6	6	52.6	61.1	61.7
Medium Trucks: 5	57.7	53.7	46.0)	55.2	61.3	61.4
Heavy Trucks: 6	3.9	59.9	52.2	2	61.4	67.5	67.6
Vehicle Noise:	6.7	63.5	59.7	,	62.7	69.2	69.3
Centerline Distance to Noise	Contour (in fee	t)					
			70 dBA	65 dE	BA	60 dBA	55 dBA
		Ldn:	52	112		242	521
	C	NEL:	53	114	Ļ	247	531

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	FH	WA-RD-77-108	B HIGH	WAY NO	DISE P	REDICTIC	N MOD	EL			
Scenar Road Narr Road Segme	io: E+P 2025 ne: Holland Ro nt: w/o Menife	l. •e Rd.				Project N Job Nur	lame: Ci mber: 11	anterwoo 1304	bd		
SITE	SPECIFIC I	NPUT DATA				NC	DISE M	ODEL II	NPUTS		
Highway Data				S	ite Cor	nditions (H	lard = 1	0, Soft =	: 15)		
Average Daily	Traffic (Adt):	3,200 vehicle	s				A	utos:	15		
Peak Hour	Percentage:	10%			Me	edium Truc	sks (2 Ax	des):	15		
Peak H	lour Volume:	320 vehicle	s		He	avy Truck	's (3+ Ax	des):	15		
Ve	hicle Speed:	45 mph		V	ohiclo	Mix					
Near/Far La	ne Distance:	48 feet			Veh	nicleType	D	ay Ev	ening I	Vight	Daily
Site Data						Au	itos: 7	5.5%	14.0%	10.5%	97.42%
Ba	rrier Heiaht:	0.0 feet			Μ	edium Tru	cks: 4	8.9%	2.2%	48.9%	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0				Heavy Tru	cks: 4	7.3%	5.4%	47.3%	0.74%
Centerline Di	st. to Barrier:	59.0 feet		N	oise S	ource Elev	vations	(in feet)			
Centerline Dist.	to Observer:	59.0 feet				Autos:	0.00	00			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.29	97			
Observer Height (Above Pad):	5.0 feet			Hea	v Trucks:	8.00)6 <i>Gr</i> a	ade Adius	stment:	0.0
Pi	ad Elevation:	0.0 feet				,					
Roi	ad Elevation:	0.0 feet		Li	ane Eq	uivalent L	Distance	e (in feet)		
	Road Grade:	0.0%				Autos:	54.12	29			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	53.96	66			
	Right View:	90.0 degre	es		Hear	vy Trucks:	53.98	32			
FHWA Noise Mod	el Calculatior	IS									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresne	I Bar	rier Atter	Berr	n Atten
Autos:	68.46	-6.90	1	-0.62		-1.20	-4	4.69	0.00	0	0.000
Medium Trucks:	79.45	-24.14		-0.60		-1.20	-4	4.88	0.00	0	0.000
Heavy Trucks:	84.25	-28.09		-0.60		-1.20	-8	5.35	0.00	0	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	r attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	y	Leq Eve	ening	Leq N	ight	Ld	n	CN	IEL
Autos:	59	9.7	57.7		56.4		50.4		58.8		59.5
Medium Trucks:	53	3.5	49.6		42.1		50.9		57.0		57.1
Heavy Trucks:	54	1.4	50.3		46.9		51.6		57.8		57.9
Vehicle Noise:	61	1.6	59.0		57.0		55.7		62.7		63.0
Centerline Distan	ce to Noise C	ontour (in fee	t)								
			L	70 dE	BA	65 dE	BA	60 d	BA	55	dBA
		-	Ldn:	19		42		89		19	93
		C	NEL:	20		43		94	-	20	02

Scenario	: E+P 2025					Project Na	ame: (Canter	wood		
Road Name Road Segment	 Holland Rd. Ale Monifee 	Pd				JOD INUIT	iber: 1	1304			
noud ocyment	· e/o ivieninee	Ku.		-						_	
SITE S	PECIFIC IN	PUT DATA		Site	Cond	NO	ISE N	10DE	L INPUT	S	
Augura Daile T		o zoohistos		One	. 00//10	10013 (11	u/u =	10, 00	45		
Average Dally T	ramic (Adt):	3,700 venicles			Mad	ium Truci	F (0 A	AUTOS:	15		
Peak Hour P	ercentage:	10% 270 vehicles			Hoo	w Truck	(S (2 A	xies).	15		
Peak HU	iclo Spood:	45 mph			nea	vy mucka	5 (3 1 A	xies).	15		
Neer/Ferlen	o Diotonoou	45 mpn		Veh	nicle M	ix					
Neal/Fai Lan	e Distance.	40 1661			Vehic	leType		Day	Evening	Night	Daily
Site Data						Aut	os:	75.5%	14.0%	10.5%	97.429
Barr	ier Height:	0.0 feet			Mee	dium Truc	ks:	48.9%	2.2%	48.9%	1.849
Barrier Type (0-Wa	ll, 1-Berm):	0.0			He	eavy Truc	ks:	47.3%	5.4%	47.3%	0.74%
Centerline Dist	to Barrier:	59.0 feet		Noi	se Sou	ırce Elev	ations	; (in fe	eet)		
Centerline Dist. to	Observer:	59.0 feet				Autos:	0.0	00			
Barrier Distance to	Observer:	0.0 feet		A	1edium	Trucks:	2.2	97			
Observer Height (A	bove Pad):	5.0 feet			Heavv	Trucks:	8.0	06	Grade Ad	justment	0.0
Pad	d Elevation:	0.0 feet		_							
Road	d Elevation:	0.0 feet		Lan	ie Equ	ivalent D	istanc	e (in i	feet)		
R	oad Grade:	0.0%				Autos:	54.1	29			
	Left View:	-90.0 degrees		N	1edium	Trucks:	53.9	966			
	Right View:	90.0 degrees			Heavy	Trucks:	53.9	182			
FHWA Noise Model	Calculations	;		_							
VehicleType	REMEL	Traffic Flow	Distan	ce l	Finite F	Road	Fresn	el	Barrier At	en Ber	m Atten
Autos:	68.46	-6.27		-0.62		-1.20		4.69	0.0	000	0.00
Medium Trucks:	79.45	-23.51		-0.60		-1.20		4.88	0.	000	0.00
Heavy Trucks:	84.25	-27.46		-0.60		-1.20		-5.35	0.0	000	0.00
Unmitigated Noise	Levels (witho	out Topo and ba	rrier a	ttenuat	tion)						
VehicleType L	.eq Peak Hou	r Leq Day	Le	q Even	ing	Leq Nig	ght		Ldn	C	NEL
Autos:	60.	4 58	.4		57.0		51.0		59.	5	60.
Medium Trucks:	54.	1 50	.2		42.7		51.5		57.	7	57.
Heavy Trucks:	55.	0 50	.9		47.5		52.2		58.4	1	58.
Vehicle Noise:	62.	2 59	.6		57.7		56.4		63.	3	63.
Centerline Distance	e to Noise Co	ntour (in feet)									
				70 dBA	1	65 dB	A	6	60 dBA	55	dBA
		La	n:	21		46			98	2	12

	FHW	/A-RD-77-108 H	IIGHWAY	NOISE P	REDICTI	ON MODE	ïL			
Scenari	o: E+P 2025				Project	Name: Ca	nterwood			
Road Nam	e: Holland Rd.				Job Nu	umber: 11	304			
Road Segmer	nt: w/o Briggs F	Rd.								
SITE	SPECIFIC IN	PUT DATA			N	OISE MO	DEL INP	JTS		
Highway Data				Site Cor	ditions ((Hard = 10	, Soft = 15)		
Average Daily	Traffic (Adt):	1,200 vehicles				Au	tos: 15			
Peak Hour	Percentage:	10%		Me	dium Tru	icks (2 Axl	es): 15			
Peak H	our Volume:	120 vehicles		He	avy Truc	ks (3+ Axl	es): 15			
Ve	hicle Speed:	45 mph		Vehicle	Mix					
Near/Far La	ne Distance:	48 feet		Veh	icleTvpe	Da	v Evenii	na N	iaht D	Dailv
Site Data					A	utos: 75	.5% 14.0	% 1	0.5% 97	7.42%
Bai	rier Height	0.0 feet		М	edium Tr	ucks: 48	.9% 2.2	% 4	8.9% 1	.84%
Barrier Type (0-W	all, 1-Berm):	0.0			Heavy Tr	ucks: 47	.3% 5.4	% 4	7.3% 0).74%
Centerline Dis	st. to Barrier:	59.0 feet		Noise S	ource Ele	evations (in feet)			
Centerline Dist.	to Observer:	59.0 feet			Autos	: 0.000)			
Barrier Distance	to Observer:	0.0 feet		Modiu	m Trucks	2 2 2 97	7			
Observer Height (Above Pad):	5.0 feet		Hoa	n/ Trucks	. 8.004	Grade	Adiust	ment: 0.	0
Pa	ad Elevation:	0.0 feet		nea	ly mucha	. 0.000	,			-
Roa	ad Elevation:	0.0 feet		Lane Eq	uivalent	Distance	(in feet)			
I	Road Grade:	0.0%			Autos	54.12	9			
	Left View:	-90.0 degrees		Mediu	m Trucks	53.96	6			
	Right View:	90.0 degrees	:	Hear	y Trucks	53.98	2			
FHWA Noise Mode	el Calculations	3								
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier	Atten	Berm A	Atten
Autos:	68.46	-11.16	-0.	62	-1.20	-4.	69	0.000		0.000
Medium Trucks:	79.45	-28.40	-0.	60	-1.20	-4.	88	0.000		0.000
Heavy Trucks:	84.25	-32.35	-0.	60	-1.20	-5.	35	0.000		0.000
Unmitigated Noise	e Levels (with	out Topo and b	arrier atte	enuation)						
VehicleType	Leq Peak Hou	r Leq Day	Leq	Evening	Leq I	Night	Ldn		CNEL	-
Autos:	55.	5 53	3.5	52.2		46.1	Ę	54.6		55.2
Medium Trucks:	49.	3 45	5.4	37.9		46.6	Ę	52.8		52.8
Heavy Trucks:	50.	1 46	6.1	42.7		47.3	Ę	53.5		53.6
Vehicle Noise:	57.	3 54	4.7	52.8		51.5	ţ	58.4		58.8
Centerline Distance	ce to Noise Co	ntour (in feet)								
			70) dBA	65 0	dBA	60 dBA		55 dB/	A
		L	dn:	10	2	2	46		100	
		CNI	EL:	10	2	3	49		105	

	FH	WA-RD-77-108	HIGHW	AY NO	JISE P	REDICTIO		DEL			
Scena	rio: E+P 2025					Project I	Vame: (Canter	wood		
Road Nar	ne: Holland Ro	i.				Job Nu	mber: 1	1304			
Road Segme	ent: w/o Leon F	Rd.									
SITE	SPECIFIC I	NPUT DATA				N	DISE N	IODE	L INPUT	s	
Highway Data				S	ite Cor	nditions (Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	1,100 vehicle	s				/	Autos:	15		
Peak Hou	Percentage:	10%			Me	dium Tru	cks (2 A	xles):	15		
Peak I	Hour Volume:	110 vehicle	s		He	avy Truci	ks (3+ A	xles):	15		
Ve	ehicle Speed:	45 mph		V	ehicle	Mix					
Near/Far La	ane Distance:	48 feet		-	Veh	icleTvpe		Dav	Evenina	Niaht	Dailv
Site Data						A	utos:	77.5%	14.0%	10.5%	92.00%
Ba	rrier Height	0.0 feet			М	edium Tru	icks:	48.0%	2.0%	50.0%	3.00%
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy Tru	icks:	48.0%	2.0%	50.0%	5.00%
Centerline D	ist. to Barrier:	59.0 feet		N	nisa S	ource Ele	vation	: (in f	oot)		
Centerline Dist.	to Observer:	59.0 feet			0/30 0	Autos	. 00	000			
Barrier Distance	to Observer:	0.0 feet			Modiu	m Trucke	. 22	00			
Observer Height	(Above Pad):	5.0 feet			Hoo	av Trucks	. 2.2	06	Grade Adi	ustmen	r 0.0
F	ad Elevation:	0.0 feet			near	ly muchs.	. 0.0	000	0/000 / 10)	uoumom	. 0.0
Ro	ad Elevation:	0.0 feet		Li	ane Eq	uivalent	Distand	:e (in	feet)		
	Road Grade:	0.0%				Autos	54.1	129			
1	Left View:	-90.0 degre	es		Mediu	m Trucks	53.9	966			
	Right View:	90.0 degre	es		Heav	/y Trucks	53.9	982			
FHWA Noise Mod	lel Calculatior	IS									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Atte	en Be	rm Atten
Autos:	68.46	-11.79		-0.62		-1.20		4.69	0.0	00	0.000
Medium Trucks:	79.45	-26.65		-0.60		-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	84.25	-24.43		-0.60		-1.20		-5.35	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Daj	/ L	eq Eve	ening	Leq N	light		Ldn	С	NEL
Autos:	54	1.9	53.0		51.5		45.5		54.0		54.6
Medium Trucks:	51	1.0	47.0		39.2		48.4		54.6		54.6
Heavy Trucks:	58	3.0	54.0		46.3		55.5		61.6	i	61.7
Vehicle Noise:	60).3	57.0		52.9		56.6		63.0)	63.1
Centerline Distan	ce to Noise C	ontour (in fee)								
				70 dE	BA	65 d	BA	6	60 dBA	55	i dBA
			Ldn:	20		43	3		93		201
		C	NEL:	20		44	ļ.		95	2	205

Tuesday, March 06, 2018

Tuesday, March 06, 2018

	FH	WA-RD-77-108	HIGHW	AY NO	OISE PI	REDICTIC		EL			
Scenar Road Nan Road Segme	rio: E+P 2025 ne: Scott Rd. nt: w/o Haun F	Rd.				Project N Job Nui	lame: Ca mber: 11	anterwo 1304	od		
SITE	SPECIFIC IN	IPUT DATA				NC	DISE MO	ODEL I	INPUTS	;	
Highway Data				S	lite Cor	nditions (H	Hard = 1	0, Soft	= 15)		
Average Daily	Traffic (Adt):	11,000 vehicle	s				AL	utos:	15		
Peak Hour	Percentage:	10%			Me	edium Truc	:ks (2 Ax	les):	15		
Peak F	lour Volume:	1,100 vehicle	s		He	eavy Truck	's (3+ Ax	les):	15		
Ve	hicle Speed:	50 mph		v	ehicle	Mix					
Near/Far La	ne Distance:	78 feet			Veh	icleType	D	ay E	vening	Night	Daily
Site Data						AL	itos: 7	5.5%	14.0%	10.5%	97.42%
Ba	rrier Height:	0.0 feet			М	edium Tru	cks: 48	8.9%	2.2%	48.9%	1.84%
Barrier Type (0-W	Vall, 1-Berm):	0.0			1	Heavy Tru	cks: 4	7.3%	5.4%	47.3%	0.74%
Centerline Di	ist. to Barrier:	76.0 feet		N	loise S	ource Ele	vations	(in feet)		
Centerline Dist.	to Observer:	76.0 feet				Autos:	0.00		,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.29	7			
Observer Height	(Above Pad):	5.0 feet			Heav	vy Trucks:	8.00	6 G	rade Adji	ıstment	: 0.0
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distance	e (in fee	et)		
	Road Grade:	0.0%				Autos:	65.42	22			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	65.28	36			
	Right View:	90.0 degre	es		Heav	vy Trucks:	65.30	00			
FHWA Noise Mod	lel Calculation	IS									
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresnel	l Ba	arrier Atte	n Ber	m Atten
Autos:	70.20	-1.99		-1.85		-1.20	-4	1.73	0.0	00	0.000
Medium Trucks:	81.00	-19.23		-1.84		-1.20	-4	1.88	0.0	00	0.000
Heavy Trucks:	85.38	-23.19		-1.84		-1.20	-5	5.25	0.00	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	ttenu	lation)						
VehicleType	Leq Peak Ho	ur Leq Daj	/ Le	eq Ev	ening	Leq N	ight	Lo	dn	C	NEL
Autos:	65	5.2	63.1		61.8		55.8		64.2		64.9
Medium Trucks:	58	3.7	54.8		47.3		56.1		62.2		62.3
Heavy Trucks:	59	9.1	55.1		51.7		56.4		62.6		62.6
Vehicle Noise:	66	3.9	64.3		62.4		60.9		67.9		68.2
Centerline Distan	ce to Noise C	ontour (in fee)								
				70 dl	BA	65 dl	BA	60 0	dBA	55	dBA
			Ldn:	55	5	118	3	25	55	5	49
		С	NEL:	58	5	124	ļ	26	67	5	576

	FHW	A-RD-77-108	HIGH	IWAY NC	DISE PREDIC		DEL			
Scenario:	E+P 2025				Projec	t Name:	Cante	rwood		
Road Name:	Scott Rd.				Job	Number:	11304			
Road Segment:	e/o Haun Ro	d.								
SITE SPI	ECIFIC IN	PUT DATA				NOISE	MODE	L INPUT	s	
Highway Data				Si	te Condition:	s (Hard =	= 10, S	oft = 15)		
Average Daily Trai	ffic (Adt): 1	6,500 vehicle	s				Autos:	15		
Peak Hour Per	centage:	10%			Medium T	rucks (2	Axles):	15		
Peak Hour	Volume:	1,650 vehicle	s		Heavy Tri	ıcks (3+	Axles):	15		
Vehicle	e Speed:	50 mph		Ve	ehicle Mix					
Near/Far Lane L	Distance:	78 feet			VehicleTyp	e	Day	Evening	Night	Daily
Site Data						Autos:	75.5%	5 14.0%	10.5%	97.429
Barrier	r Height:	0.0 feet			Medium	Trucks:	48.9%	5 2.2%	48.9%	1.849
Barrier Type (0-Wall,	1-Berm):	0.0			Heavy	Trucks:	47.3%	5.4%	47.3%	0.749
Centerline Dist. to	o Barrier:	76.0 feet		N	nise Source P	lovation	ns (in f	oot)		
Centerline Dist. to C	Observer:	76.0 feet			Aut		000			
Barrier Distance to C	Observer:	0.0 feet			Medium Truc	ks: 2	297			
Observer Height (Abc	ove Pad):	5.0 feet			Heavy Truc	ks: 8	.006	Grade Ad	iustment	: 0.0
Pad E	levation:	0.0 feet			noary nao				,	
Road E	levation:	0.0 feet		Lá	ane Equivalei	nt Distar	ice (in	feet)		
Roa	d Grade:	0.0%			Aut	os: 65	.422			
L	.eft View:	-90.0 degre	es		Medium Truc	ks: 65	.286			
Rig	ght View:	90.0 degre	es		Heavy Truc	KS: 65	.300			
FHWA Noise Model C	alculations	;								
VehicleType F	REMEL	Traffic Flow	Dis	tance	Finite Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	70.20	-0.23		-1.85	-1.20		-4.73	0.0	000	0.00
Medium Trucks:	81.00	-17.47		-1.84	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	85.38	-21.43		-1.84	-1.20		-5.25	0.0	000	0.00
Unmitigated Noise Le	evels (witho	out Topo and	barrie	er attenu	ation)					
VehicleType Lea	q Peak Hou	 Leq Day 	/	Leq Eve	ening Leo	n Night		Ldn	C	NEL
Autos:	66.	9	64.9		63.6	57.	6	66.0)	66.
Medium Trucks:	60.	5	56.6		49.1	57.	8	64.0)	64.
Heavy Trucks:	60.	9	56.9		53.5	58.	1	64.3	3	64.
Vehicle Noise:	68.	6	66.1		64.1	62.	6	69.6	6	70.
Centerline Distance to	o Noise Co	ntour (in feel)						Т	
			L	70 dE	BA 65	5 dBA	(60 dBA	55	dBA
			Ldn:	72		155		334	7	19

	FHV	VA-RD-77-108 HI	GHWAY	NOISE P	REDICTIO	N MOD	EL					
Scenar	io: E+P 2025			Project Name: Canterwood Job Number: 11304								
Road Nam	e: Scott Rd.				Job Nur	nber: 11	304					
Road Segme	nt: w/o Menifee	e Rd.										
SITE	SPECIFIC IN	PUT DATA			NC	ISE MO	DDEL IN	PUTS				
Highway Data				Site Cor	nditions (H	lard = 10	0, Soft = 1	15)				
Average Daily	Traffic (Adt): 1	7,700 vehicles				AL	itos: 15					
Peak Hour	Percentage:	10%		Me	edium Truc	ks (2 Ax	<i>les):</i> 15					
Peak H	lour Volume:	1,770 vehicles		He	eavy Truck	s (3+ Ax	<i>les):</i> 15					
Ve	hicle Speed:	55 mph		Vehicle	Mix							
Near/Far La	ne Distance:	78 feet		Veł	nicleType	D	ay Ever	ning N	ight Daily			
Site Data					Au	tos: 75	5.5% 14	.0% 1	0.5% 97.42%			
Ba	rrier Height:	0.0 feet		M	ledium Tru	cks: 48	3.9% 2	.2% 4	8.9% 1.84%			
Barrier Type (0-W	/all, 1-Berm):	0.0			Heavy Tru	cks: 41	7.3% 5	.4% 4	7.3% 0.74%			
Centerline Di	st. to Barrier:	76.0 feet		Noise S	ource Elev	vations	(in feet)					
Centerline Dist.	to Observer:	76.0 feet			Autos:	0.00	0					
Barrier Distance	to Observer:	0.0 feet		Mediu	m Trucks:	2.29	7					
Observer Height	Above Pad):	5.0 feet		Hea	vv Trucks:	8.00	6 Grad	le Adjust	ment: 0.0			
Pi	ad Elevation:	0.0 feet					-					
Roi	ad Elevation:	0.0 feet		Lane Eq	uivalent L	Distance	(in feet)					
	Road Grade:	0.0%			Autos:	65.42	2					
	Left View:	-90.0 degrees		Mediu	m Trucks:	65.28	6					
	Right view:	90.0 degrees		пеа	vy mucks.	65.30	0					
FHWA Noise Mod	el Calculation:	5										
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrie	er Atten	Berm Atten			
Autos:	71.78	-0.34	-1.	.85	-1.20	-4	.73	0.000	0.000			
Medium Trucks:	82.40	-17.58	-1.	.84	-1.20	-4	.88	0.000	0.000			
Heavy Trucks:	86.40	-21.54	-1.	.84	-1.20	-5	.25	0.000	0.000			
Unmitigated Noise	e Levels (with	out Topo and ba	rrier atte	enuation)								
VehicleType	Leq Peak Hou	r Leq Day	Leq	Evening	Leq N	ight	Ldn		CNEL			
Autos:	68.	4 66	.4	65.1		59.0		67.5	68.			
Medium Trucks:	61.	.8 57	.9	50.4		59.1		65.3	65.3			
Heavy Trucks:	61.	.8 57	.8	54.4		59.0		65.2	65.3			
Vehicle Noise:	70.	.0 67	.4	65.6		63.8		70.9	71.3			
Centerline Distan	ce to Noise Co	ntour (in feet)			r							
			70) dBA	65 dE	BA	60 dB/	4	55 dBA			
		Ld	n:	87	188		405		873			
		CNE	L:	92	198		426		918			

	FH	WA-RD-77-108	HIGHW	AY N	IOISE PF	REDICTIO		DEL			
Scenar	io: E+P 2025					Project I	Name: (Canter	rwood		
Road Nam	ne: Scott Rd.					Job NL	imber: 1	1304			
Road Segme	nt: w/o Briggs	Rd.									
SITE	SPECIFIC I	NPUT DATA				N	OISE N	IODE	L INPUTS	5	
Highway Data					Site Con	ditions ('Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	15,500 vehicle	s				/	Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	cks (2 A	xles):	15		
Peak H	lour Volume:	1,550 vehicle	s		He	avy Truc	ks (3+ A	xles):	15		
Ve	hicle Speed:	55 mph			Vehicle I	Nix					
Near/Far La	ne Distance:	78 feet		-	Veh	icleTvpe		Dav	Evenina	Niaht	Dailv
Site Data						A	utos:	75.5%	14.0%	10.5%	97.42%
Ba	rrier Height	0.0 feet			Me	edium Tru	ucks:	48.9%	2.2%	48.9%	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy Tri	ucks:	47.3%	5.4%	47.3%	0.74%
Centerline Di	st. to Barrier:	76.0 feet			Noise Sr	urce Ele	vation	in f	oot)		
Centerline Dist.	to Observer:	76.0 feet		Ľ.	10/30 00	Autos	· 0.0	00			
Barrier Distance	to Observer:	0.0 feet			Modiu	n Trucko	. 22	00			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks	· 2.2	06	Grade Adi	ustmen	t: 0.0
P	ad Elevation:	0.0 feet			neav	y muons	. 0.0	00	,		
Ro	ad Elevation:	0.0 feet		1	Lane Eq	uivalent	Distand	e (in	feet)		
	Road Grade:	0.0%				Autos	: 65.4	22			
	Left View:	-90.0 degre	es		Mediur	n Trucks	: 65.2	286			
	Right View:	90.0 degre	es		Heav	y Trucks	: 65.3	800			
FHWA Noise Mod	el Calculation	15									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresn	el	Barrier Atte	en Be	rm Atten
Autos:	71.78	-0.92		-1.8	5	-1.20		4.73	0.0	00	0.000
Medium Trucks:	82.40	-18.16		-1.84	4	-1.20		4.88	0.0	00	0.000
Heavy Trucks:	86.40	-22.11		-1.84	4	-1.20		-5.25	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	atten	uation)						
VehicleType	Leq Peak Ho	ur Leq Day	' L	eq Ei	vening	Leq I	light		Ldn	С	NEL
Autos:	67	7.8	65.8		64.5		58.5		66.9		67.5
Medium Trucks:	61	1.2	57.3		49.8		58.6		64.7		64.8
Heavy Trucks:	61	1.2	57.2		53.8		58.4		64.6		64.7
Vehicle Noise:	69	9.4	66.9		65.0		63.3		70.3		70.7
Centerline Distan	ce to Noise C	ontour (in feet)								
				70 c	dBA	65 a	IBA	e	60 dBA	55	5 dBA
			Ldn:	8	0	17	2		371		799
		C	VEL:	8	4	18	1		390	1	840

Tuesday, March 06, 2018

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	FH	WA-RD-77-108	HIGHW	AY NO	DISE PI	REDICTIC	N MODE	iL.			
Scenar Road Nan Road Segme	rio: E+P 2025 ne: Scott Rd. nt: w/o Leon F	Rd.				Project N Job Nui	lame: Ca mber: 11	nterwood 304			
SITE	SPECIFIC I	VPUT DATA				NC	DISE MC	DEL INP	UTS		
Highway Data				S	ite Cor	nditions (I	Hard = 10), Soft = 15	5)		
Average Daily	Traffic (Adt):	15,000 vehicle	s				Au	tos: 15			
Peak Hour	Percentage:	10%			Me	edium Truc	sks (2 Axl	es): 15			
Peak H	lour Volume:	1,500 vehicle	s		He	eavy Truck	s (3+ Axl	es): 15			
Ve	ehicle Speed:	55 mph		v	ehicle	Mix					
Near/Far La	ne Distance:	78 feet		Ē	Veh	icleType	Da	ay Eveni	ing Ni	ght Da	ily
Site Data						AL	itos: 75	.5% 14.0	0% 10	0.5% 97.4	42%
Ba	rrier Height:	0.0 feet			М	edium Tru	cks: 48	.9% 2.2	2% 48	8.9% 1.8	84%
Barrier Type (0-W	Vall, 1-Berm):	0.0			1	Heavy Tru	cks: 47	.3% 5.4	4% 47	7.3% 0.3	74%
Centerline Di	ist. to Barrier:	76.0 feet		N	loise Se	ource Ele	vations (in feet)			
Centerline Dist.	to Observer:	76.0 feet				Autos:	0.00))			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.29	7			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks:	8.00	6 Grade	Adjusti	nent: 0.0	
P	ad Elevation:	0.0 feet							,		
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distance	(in feet)			
	Road Grade:	0.0%				Autos:	65.42	2			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	65.28	6			
	Right View:	90.0 degre	es		Heav	vy Trucks:	65.30	0			
FHWA Noise Mod	lel Calculation	15									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresnel	Barrier	r Atten	Berm At	ten
Autos:	71.78	-1.06		-1.85		-1.20	-4	.73	0.000	0	.000
Medium Trucks:	82.40	-18.30		-1.84		-1.20	-4	.88	0.000	0	.000
Heavy Trucks:	86.40	-22.26		-1.84		-1.20	-5	.25	0.000	0	.000
Unmitigated Nois	e Levels (with	nout Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	V L	eq Ev	ening	Leq N	ight	Ldn		CNEL	
Autos:	67	7.7	65.7		64.3		58.3		66.7		67.4
Medium Trucks:	61	1.1	57.2		49.7		58.4		64.6		64.6
Heavy Trucks:	61	1.1	57.1		53.7		58.3		64.5		64.6
Vehicle Noise:	69	9.2	66.7		64.8		63.1		70.2		70.5
Centerline Distan	ce to Noise C	ontour (in fee	t)			r					
				70 di	BA	65 dl	BA	60 dBA		55 dBA	
			Ldn:	78		168	3	363		781	
		С	NEL:	82		177	,	382		822	

FHWA	-RD-77-108 F	IIGHWA	NO YY	ISE PR	EDICTI		DEL			
Scenario: E+P 2025					Project	Name: 0	Cante	rwood		
Road Name: Scott Rd.					Job N	umber: 1	1304			
Road Segment: e/o Leon Rd.										
SITE SPECIFIC INP	JT DATA				N	OISE N	IODE	L INPUT	s	
Highway Data			Si	e Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily Traffic (Adt): 5,	500 vehicles					A	Autos:	15		
Peak Hour Percentage:	10%			Med	lium Tru	icks (2 A	xles):	15		
Peak Hour Volume:	550 vehicles			Hea	avy Truc	ks (3+ A	xles):	15		
Vehicle Speed:	55 mph		Ve	hicle N	lix					
Near/Far Lane Distance:	78 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data					A	utos:	77.5%	14.0%	10.5%	92.00%
Barrier Height	0.0 feet			Me	dium Tr	ucks:	48.0%	2.0%	50.0%	3.00%
Barrier Type (0-Wall, 1-Berm):	0.0			н	leavy Tr	ucks:	48.0%	2.0%	50.0%	5.00%
Centerline Dist. to Barrier:	76.0 feet		A/-					41		
Centerline Dist. to Observer:	76.0 feet		NC	ise so	urce El	evations		eet)		
Barrier Distance to Observer:	0.0 feet			Madium	AUtos	. 0.0	00			
Observer Height (Above Pad):	5.0 feet			Hoove	Trucks	. 2.2	.97	Grada Ad	iustmont	. 0.0
Pad Elevation:	0.0 feet			Tieavj	/ ITUGKS	. 0.0	00	Grade Adj	usuncin	. 0.0
Road Elevation:	0.0 feet		La	ne Equ	iivalent	Distanc	e (in	feet)		
Road Grade:	0.0%				Autos	65.4	22			
Left View:	90.0 degrees			Mediun	n Trucks	65.2	286			
Right View:	90.0 degrees			Heavy	/ Trucks	: 65.3	300			
FHWA Noise Model Calculations										
VehicleType REMEL T	raffic Flow	Distant	ce	Finite I	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos: 71.78	-5.67	-	1.85		-1.20		4.73	0.0	000	0.00
Medium Trucks: 82.40	-20.53	-	1.84		-1.20		4.88	0.0	000	0.00
Heavy Trucks: 86.40	-18.32	-	1.84		-1.20		-5.25	0.0	000	0.00
Unmitigated Noise Levels (without	t Topo and b	arrier a	ttenua	ation)						
VehicleType Leq Peak Hour	Leq Day	Le	q Eve	ning	Leq	Vight		Ldn	C	NEL
Autos: 63.1	6	1.2		59.7		53.7		62.2	2	62.
Medium Trucks: 58.8	54	4.8		47.1		56.3		62.4	1	62.
Heavy Trucks: 65.0	6	1.1		53.3		62.5		68.6	6	68.
Vehicle Noise: 67.8	64	4.6		60.8		63.9		70.3	3	70.
Centerline Distance to Noise Con	our (in feet)									
			70 dB	A	65 (1BA		60 dBA	55	dBA
	L	dn:	80		17	1		369	7	'96
	CNI	-1 -	01		47	Ph.		377		(1.2

	FHV	VA-RD-77-108	HIGHWA	Y N	DISE PI	REDICT	ION MC	DEL				
Scenar Road Nar Road Segme	io: EA 2021 ne: Haun Rd. nt: n/o Scott R	d.				Project Job N	Name: lumber:	Cante 11304	rwood			
SITE	SPECIFIC IN	IPUT DATA				N	IOISE	MODE	L INP	JTS		
Highway Data				S	ite Con	ditions	(Hard =	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	7,100 vehicles						Autos.	: 15			
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2	Axles)	: 15			
Peak H	lour Volume:	710 vehicles			He	avy Tru	cks (3+	Axles)	: 15			
Ve	hicle Speed:	50 mph		v	ehicle l	Mix						
Near/Far La	ne Distance:	48 feet			Veh	icleType		Day	Eveni	ng N	ight	Daily
Site Data							Autos:	75.5%	6 14.0	% 1	0.5%	97.42%
Ba	rrier Heiaht:	0.0 feet			M	edium T	rucks:	48.9%	6 2.2	% 4	8.9%	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy T	rucks:	47.3%	6 5.4	% 4	7.3%	0.74%
Centerline Di	st. to Barrier:	59.0 feet		^	loise So	ource E	levatio	ns (in f	eet)			
Centerline Dist.	to Observer:	59.0 feet		-		Auto	s: 0	000				
Barrier Distance	to Observer:	0.0 feet			Mediu	n Truck	s: 2	.297				
Observer Height	(Above Pad):	5.0 feet			Heav	v Truck	s: 8	.006	Grade	Adjus	tment	0.0
Pa	ad Elevation:	0.0 feet		-						-		
Roi	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distar	ice (in	teet)			
	Road Grade:	0.0%			Marthur	Auto	s: 54	.129				
	Left View:	-90.0 degree	5		Mediu	TI Truck	S: 53	.966				
	Right view.	90.0 degree	5		neav	y much	3. 00	.902				
FHWA Noise Mod	el Calculation	s										
VehicleType	REMEL	Traffic Flow	Distanc	e	Finite	Road	Fres	nel	Barrier	Atten	Ber	m Atten
Autos:	70.20	-3.90	-1	0.62		-1.20		-4.69		0.000		0.000
Medium Trucks:	81.00	-21.13	-1	0.60		-1.20		-4.88		0.000		0.000
Heavy Trucks:	85.38	-25.09	-	0.60		-1.20		-5.35		0.000		0.000
Unmitigated Nois	e Levels (with	out Topo and I	arrier at	tenu	ation)							
Vehicle I ype	Leq Peak Hou	r Leq Day	Leo	q Ev	ening	Leq	Night		Ldn		Cl	VEL
Autos:	64	.5 6	2.5		61.2		55.	2		53.6		64.2
Medium Trucks:	58	.1 3	4.2		40.7		55. EE	4		01.0		61.0
Vehicle Neises	50	.5 5	4.4		51.0		55.	<i>i</i>		31.9		02.0
venicie noise.	66	.2 0	3.0		61.7		60.	2		57.2		67.3
Centerlíne Distan	ce to Noise Co	ontour (in feet)		70 d	DA.	65	dBA		60 dBA		55	dBA
		,	dn:	28	Dri	00	12	-	179		00	0DA 85
		CN	FI:	40		, F	37		187		4	.04
		0/1		40								

	FHV	VA-RD-77-108	HIGHWA		JISE PF	EDICII		DEL				
Scenar	io: EA 2021					Project	Name: (Cante	wood			
Road Nam	e: Zeiders Rd.					Job N	umber:	11304				
Road Segme	nt: s/o Scott Ro	d.										
SITE	SPECIFIC IN	IPUT DATA				N	OISE N	IODE	L INPUT	s		
Highway Data				S	ite Con	ditions	(Hard =	10, S	oft = 15)			
Average Daily	Traffic (Adt):	1,300 vehicles					,	Autos:	15			
Peak Hour	Percentage:	10%			Me	dium Tru	icks (2 A	(xles):	15			
Peak H	lour Volume:	130 vehicles	5		He	avy Truc	:ks (3+ A	(xles):	15			
Ve	hicle Speed:	50 mph		V	ehicle l	Mix						
Near/Far La	ne Distance:	48 feet		-	Veh	icleType		Day	Evening	Nigh	nt L	Daily
Site Data						A	lutos:	75.5%	14.0%	10.5	5% 9	7.42%
Ba	rrier Height	0.0 feet			Me	edium Tr	ucks:	48.9%	2.2%	48.9	9% ·	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy Tr	ucks:	47.3%	5.4%	47.3	3% (0.74%
Centerline Di	st. to Barrier:	59.0 feet		N	laisa Sr	urce El	ovation	s (in f	oof)			
Centerline Dist.	to Observer:	59.0 feet			0/30 00	Autos	2 0 (000				
Barrier Distance	to Observer:	0.0 feet			Modiu	n Trucki	. 21	207				
Observer Height (Above Pad):	5.0 feet			Hoov	v Trucks	5. <u>2.2</u> 5. 8(106	Grade Ad	iustm	ent: 0	0
Pa	ad Elevation:	0.0 feet			neav	y maone	5. 0.0	000	,			
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distant	ce (in	feet)			
	Road Grade:	0.0%				Autos	s: 54.º	129				
	Left View:	-90.0 degree	IS .		Mediur	n Trucks	s: 53.9	966				
	Right View:	90.0 degree	s		Heav	y Trucks	53.9	982				
FHWA Noise Mod	el Calculation:	s										
VehicleType	REMEL	Traffic Flow	Distan	ce	Finite	Road	Fresn	el	Barrier Att	en l	Berm /	Atten
Autos:	70.20	-11.27	-	0.62		-1.20		-4.69	0.0	000		0.000
Medium Trucks:	81.00	-28.51	-	0.60		-1.20		-4.88	0.0	000		0.000
Heavy Trucks:	85.38	-32.46	-	0.60		-1.20		-5.35	0.0	00		0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier a	ttenu	uation)							
VehicleType	Leq Peak Hou	r Leq Day	Le	q Eve	ening	Leq	Night		Ldn		CNE	L
Autos:	57.	.1 ಕ	55.1		53.8		47.8		56.2	2		56.8
Medium Trucks:	50.	.7 4	46.8		39.3		48.0		54.2	!		54.3
Heavy Trucks:	51.	.1 4	17.1		43.7		48.3		54.5	i		54.6
Vehicle Noise:	58	.8 5	56.3		54.3		52.8		59.8	\$		60.2
Centerline Distant	ce to Noise Co	ontour (in feet)										
				70 dl	BA	65 (dBA	(60 dBA		55 dB	A
		I	dn:	12		2	7		58		124	
		CN	IEL:	13		2	8		60		130	

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	FH	WA-RD-77-108	HIGHW	AY NO	OISE PI	REDICTIO	N MODE	iL		
Scenai Road Nan Road Segme	rio: EA 2021 ne: Antelope R nt: s/o Scott R	td. td.				Project N Job Nur	lame: Ca nber: 113	nterwood 304		
SITE	SPECIFIC IN	NPUT DATA				NC	ISE MO	DEL INPUT	S	
Highway Data				S	lite Cor	ditions (H	lard = 10), Soft = 15)		
Average Daily	Traffic (Adt):	11,300 vehicle	s				Au	tos: 15		
Peak Hour	Percentage:	10%			Ме	dium Truc	ks (2 Axle	es): 15		
Peak H	lour Volume:	1,130 vehicle	s		He	avy Truck	s (3+ Axle	es): 15		
Ve	hicle Speed:	50 mph		V	ohiclo	Mix				
Near/Far La	ne Distance:	48 feet		-	Veh	icleType	De	v Evenina	Niał	ht Dailv
Site Data						Au	tos: 75	.5% 14.0%	10.	5% 97.42%
Ba	rrier Height	0.0 feet			М	edium Tru	cks: 48	.9% 2.2%	48.	9% 1.84%
Barrier Type (0-V	Vall. 1-Berm):	0.0			1	Heavy Tru	cks: 47	.3% 5.4%	47.3	3% 0.74%
Centerline Di	ist. to Barrier:	59.0 feet			laisa Si	ource Elev	vations (in foot)		
Centerline Dist.	to Observer:	59.0 feet		~	10/30 0	Autor:	0.000			
Barrier Distance	to Observer:	0.0 feet			Modiu	m Trucks:	2 207	7		
Observer Height	(Above Pad):	5.0 feet			Hoo	a Trucks:	2.237	Grade Ar	liustm	ont: 0.0
P	ad Elevation:	0.0 feet			mean	ly mucho.	0.000	, 0,000,10	juoun	0.00
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent L	Distance	(in feet)		
	Road Grade:	0.0%				Autos:	54.129	9		
	Left View:	-90.0 degre	es		Mediu	m Trucks:	53.966	6		
	Right View:	90.0 degre	es		Heav	/y Trucks:	53.982	2		
FHWA Noise Mod	el Calculation	IS								
VehicleType	REMEL	Traffic Flow	Distar	се	Finite	Road	Fresnel	Barrier At	ten	Berm Atten
Autos:	70.20	-1.88		-0.62		-1.20	-4.	69 0.	000	0.000
Medium Trucks:	81.00	-19.12		-0.60		-1.20	-4.	88 0.	000	0.000
Heavy Trucks:	85.38	-23.07		-0.60		-1.20	-5.	35 0.	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenu	uation)					
VehicleType	Leq Peak Ho	ur Leq Day	/ L	eq Ev	ening	Leq N	ight	Ldn		CNEL
Autos:	66	6.5	64.5		63.2		57.2	65.	6	66.2
Medium Trucks:	60).1	56.2		48.7		57.4	63.	6	63.6
Heavy Trucks:	60).5	56.5		53.1		57.7	63.	9	64.0
Vehicle Noise:	68	3.2	65.7		63.7		62.2	69.	2	69.5
Centerline Distan	ce to Noise C	ontour (in feet)							
-				70 dl	BA	65 dE	BA	60 dBA		55 dBA
			Ldn:	52	2	113		243	-	524
		C	NEL:	55	5	119)	256		551

									_
Scenario: E	A 2021				Project Na	me: Ca	nterwood		
Road Name: N	lenifee Rd.				Job Num	ber: 113	304		
Road Segment: n	/o Holland Rd.								
SITE SPE	CIFIC INPU	T DATA			NO	SE MO	DEL INPUT	S	
Highway Data				Site Con	ditions (Ha	ard = 10	, Soft = 15)		
Average Daily Trafi	fic (Adt): 6,4	00 vehicles				Aut	os: 15		
Peak Hour Perc	entage:	10%		Me	dium Truck	s (2 Axle	es): 15		
Peak Hour	Volume: 6	40 vehicles		Hea	avy Trucks	(3+ Axle	es): 15		
Vehicle	Speed:	45 mph		Vehicle I	Nix				
Near/Far Lane D	istance:	54 feet		Vehi	cleType	Da	y Evening	Night	Daily
Site Data					Auto	os: 75	.5% 14.0%	10.5%	97.429
Barrier	Height:	0.0 feet		Me	dium Truc	ks: 48	.9% 2.2%	48.9%	1.84%
Barrier Type (0-Wall, 1	I-Berm):	0.0		H	leavy Truc	ks: 47	.3% 5.4%	47.3%	0.749
Centerline Dist. to	Barrier: 6	4.0 feet	H	Noice Co	uree Eleve	ationa (i	in fact)		
Centerline Dist. to O	bserver: 6	4.0 feet	-	NOISe 30	Autoou		n leel)		
Barrier Distance to O	bserver:	0.0 feet		Modiur	n Trucke:	2 207	,		
Observer Height (Abo	ve Pad):	5.0 feet		Hoov	v Trucks:	8.006	Grade An	liustment	.00
Pad E	levation:	0.0 feet		neav	y mucho.	0.000	, 0,000,10	Juounone	0.0
Road E	levation:	0.0 feet	_	Lane Equ	uivalent Di	stance	(in feet)		
Road	l Grade:	0.0%			Autos:	58.241			
Le	eft View: -9	0.0 degrees		Mediur	n Trucks:	58.089	9		
Rig	ht View: 9	0.0 degrees		Heav	y Trucks:	58.104	1		
FHWA Noise Model Ca	alculations								
VehicleType R	EMEL Tra	affic Flow Dis	stance	Finite	Road	Fresnel	Barrier At	ten Ber	m Atten
Autos:	68.46	-3.89	-1.1	0	-1.20	-4.	70 0.0	000	0.00
Medium Trucks:	79.45	-21.13	-1.0	8	-1.20	-4.	88 0.0	000	0.00
Heavy Trucks:	84.25	-25.08	-1.0	8	-1.20	-5.	31 0.0	000	0.00
Unmitigated Noise Le	vels (without	Topo and barri	er atter	nuation)					
VehicleType Leq	Peak Hour	Leq Day	Leq E	vening	Leq Nig	t	Ldn	C	VEL
Autos:	62.3	60.3		59.0		52.9	61.4	4	62.
Medium Trucks:	56.0	52.1		44.6		53.4	59.	6	59.
Heavy Trucks:	56.9	52.8		49.4		54.1	60.3	3	60.
Vehicle Noise:	64.1	61.5		59.6		58.3	65.	2	65.
Centerline Distance to	Noise Conto	ur (in feet)	70	dD A	ee dD	4	60 dBA	55	dD A
		l day	10	UDA	oo dBi	4	00 0BA	25	UBA
		Lan:	3		00		143	3	00
					70		36/1		

	FH	WA-RD-77-108	HIGHW	AY N	DISE PF	REDICTIC	ON MOD	EL			
Scenar Road Nam Road Segmei	io: EA 2021 le: Menifee R nt: s/o Holland	d. d Rd.				Project N Job Nu	lame: Ci mber: 11	anterwoo 1304	d		
SITE	SPECIFIC II	NPUT DATA				NC	DISE M	ODEL IN	IPUTS		
Highway Data				S	ite Con	ditions (l	Hard = 1	0, Soft =	15)		
Average Daily Peak Hour Peak H	Traffic (Adt): Percentage: lour Volume:	5,700 vehicle 10% 570 vehicle	s		Me He	dium Truc avy Truck	Au cks (2 Ax is (3+ Ax	utos: 1 :(les): 1 :(les): 1	5 5		
Near/Far I a	ne Distance:	54 feet		ν	'ehicle l	Mix					
Site Date	Diotanico.	54 1000			Veh	icleType	D	ay Ev	ening N	ight	Daily
Site Data						AL Alium Tru	Itos: 1	0.0% 1	4.0% 1	0.5%	97.42%
Bai	rrier Height:	0.0 feet			IVIE A	Hoovy Tru	icks: 4	0.9%	2.2% 4 5.4% A	0.9%	0.74%
Barrier Type (0-W	all, 1-Berm):	0.0			'	icavy ina	UN3. 4	7.570	0.470 4	1.570	0.7470
Contorlino Dist	to Observor:	64.0 feet		۸	loise So	ource Ele	vations	(in feet)			
Parrier Distance	to Observer.	04.0 feet				Autos:	0.00	00			
Obsonior Hoight	Abovo Pod):	5.0 foot			Mediur	n Trucks:	2.29	97			
Observer Height (ADOVE Pau).	5.0 feet			Heav	y Trucks:	8.00	06 Gra	ide Adjus	tment:	0.0
Ro	ad Elevation:	0.0 feet		L	ane Ea	uivalent l	Distance	e (in feet)		
	Road Grade:	0.0%				Autos:	58.24	41			-
	Left View:	-90.0 deare	es		Mediur	n Trucks:	58.08	39			
	Right View:	90.0 degre	es		Heav	y Trucks:	58.10	04			
FHWA Noise Mod	el Calculatior	15									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresne	I Bar	rier Atten	Bern	n Atten
Autos:	68.46	-4.39		-1.10		-1.20	-4	4.70	0.000		0.000
Medium Trucks:	79.45	-21.63		-1.08		-1.20	-4	4.88	0.000		0.000
Heavy Trucks:	84.25	-25.59		-1.08		-1.20	-8	5.31	0.000		0.000
Unmitigated Noise	e Levels (with	nout Topo and	barrier	attenı	uation)						
VehicleType	Leq Peak Ho	ur Leq Day	′ L	.eq Ev	ening	Leq N	light	Ldı	า	CN	IEL
Autos:	61	1.8	59.8		58.4		52.4		60.9		61.5
Medium Trucks:	55	5.5	51.6		44.1		52.9		59.1		59.1
Heavy Trucks:	56	6.4	52.3		48.9		53.6		59.8		59.9
Vehicle Noise:	63	3.6	61.0		59.1		57.8		64.7		65.0
Centerline Distant	ce to Noise C	ontour (in feet)								
				70 d	BA	65 d	BA	60 di	BA	55 0	:IBA
			Ldn:	29		61		132	2	28	35
		C	NEL:	30		64		139	9	29	39

	FAN	WA-RD-77-100	піспі	VATING				DEL			
Scenar	io: EA 2021					Project	Name:	Cante	rwood		
Road Nan	ne: Leon Rd.					Job Ni	umber:	11304			
Road Segme	nt: s/o Craig A	ν.									
SITE	SPECIFIC IN	IPUT DATA				N	OISE	MODE	L INPUT	s	
Highway Data				S	ite Con	ditions	(Hard =	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	400 vehicles	6					Autos.	15		
Peak Hour	Percentage:	10%			Me	dium Tru	icks (2	Axles).	15		
Peak H	lour Volume:	40 vehicles	6		He	avy Truc	:ks (3+	Axles).	15		
Ve	hicle Speed:	35 mph		V	ehicle l	Nix					
Near/Far La	ne Distance:	48 feet		-	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	lutos:	77.5%	6 14.0%	10.5%	92.00%
Ba	rrier Height:	0.0 feet			Me	edium Tr	ucks:	48.0%	6 2.0%	50.0%	3.00%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	łeavy Tr	ucks:	48.0%	6 2.0%	50.0%	5.00%
Centerline Di	st. to Barrier:	59.0 feet		N	loise Sc	ource El	evatior	ns (in f	eet)		
Centerline Dist.	to Observer:	59.0 feet		-		Autos	2 [.] 0	000			
Barrier Distance	to Observer:	0.0 feet			Modiur	n Trucks	. 0.	297			
Observer Height	(Above Pad):	5.0 feet			Hoov	v Trucks	, <u> </u>	006	Grade Ad	iustmen	t: 0.0
P	ad Elevation:	0.0 feet			neav	y mucho	, U	.000		,	
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%				Autos	s: 54	.129			
	Left View:	-90.0 degree	es		Mediur	n Trucks	53	.966			
	Right View:	90.0 degree	es		Heav	y Trucks	53	.982			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	64.30	-15.09		-0.62		-1.20		-4.69	0.0	000	0.000
Medium Trucks:	75.75	-29.95		-0.60		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	81.57	-27.74		-0.60		-1.20		-5.35	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	· 1	Leq Eve	ening	Leq I	Night		Ldn	0	NEL
Autos:	47	.4	45.5		44.1		38.	1	46.5	5	47.1
Medium Trucks:	44	.0	40.0		32.2		41.	4	47.6	6	47.6
Heavy Trucks:	52	.0	48.0		40.3		49.	5	55.6	6	55.7
Vehicle Noise:	53	.8	50.4		45.8		50.	4	56.	7	56.8
Centerline Distan	ce to Noise C	ontour (in feet)								
				70 dl	BA	65 0	dBA		60 dBA	55	5 dBA
			Ldn:	8		1	7		36		77
		CI	IEL:	8		1	7		36		78

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	FH	WA-RD-77-108	B HIGHV	VAY NO	DISE PI	REDICTIO		DEL			
Scenar Road Nan Road Segme	rio: EA 2021 ne: Leon Rd. nt: s/o Garbar	ni Rd.				Project I Job Nu	Vame: (mber: '	Cante 11304	rwood		
SITE	SPECIFIC I	VPUT DATA				N	DISE N	IODE	L INPUTS	5	
Highway Data				S	ite Cor	ditions (Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	800 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium True	cks (2 A	xles).	15		
Peak H	lour Volume:	80 vehicle	s		He	avy Truck	ks (3+ A	xles):	15		
Ve	hicle Speed:	55 mph		V	ohiclo	Mix					
Near/Far La	ne Distance:	48 feet		-	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	5 14.0%	10.5%	92.00%
Ba	rrier Heiaht:	0.0 feet			М	edium Tru	icks:	48.0%	2.0%	50.0%	3.00%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tru	icks:	48.0%	2.0%	50.0%	5.00%
Centerline Di	ist. to Barrier:	59.0 feet		N	oise S	ource Ele	vation	s (in f	eet)		
Centerline Dist.	to Observer:	59.0 feet				Autos	0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.2	97			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks	8.0	006	Grade Adi	ustmen	t: 0.0
P	ad Elevation:	0.0 feet				,					
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distand	ce (in	feet)		
	Road Grade:	0.0%				Autos:	54.1	129			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	53.9	966			
	Right View:	90.0 degre	es		Heav	/y Trucks:	53.9	982			
FHWA Noise Mod	lel Calculation	15									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	en Be	rm Atten
Autos:	71.78	-14.04		-0.62		-1.20		-4.69	0.0	00	0.000
Medium Trucks:	82.40	-28.91		-0.60		-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	86.40	-26.69		-0.60		-1.20		-5.35	0.0	00	0.000
Unmitigated Nois	e Levels (with	nout Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	V 1	Leq Ev	ening	Leq N	light		Ldn	C	NEL
Autos:	55	5.9	54.0		52.6		46.6		55.1		55.7
Medium Trucks:	51	1.7	47.7		39.9		49.1		55.3		55.3
Heavy Trucks:	57	7.9	53.9		46.1		55.4		61.5		61.5
Vehicle Noise:	60	0.6	57.5		53.7		56.7		63.2		63.3
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 di	BA	65 d	BA	- 1	60 dBA	- 55	5 dBA
			Ldn:	21		45	5		96		207
		С	NEL:	21		45	5		98		211

	FH\	NA-RD-77-108	HIGHW	AY NC	DISE PREDICT	ION MODI	EL		
Scenario	o: EA 2021				Projec	Name: Ca	anterwood		
Road Name Road Segmen	e: Leon Rd. ht: s/o Scott R	d.			JOD P	lumber: 11	304		
SITE S	SPECIFIC IN	IPUT DATA			I	IOISE MO	DEL INPUT	s	
Highway Data				Si	ite Conditions	(Hard = 1), Soft = 15)		-
Average Daily	Traffic (Adt):	2,900 vehicle	s			AL	tos: 15		
Peak Hour I	Percentage:	10%			Medium Tr	ucks (2 Ax	les): 15		
Peak He	our Volume:	290 vehicle	S		Heavy Tru	cks (3+ Ax	les): 15		
Vel	hicle Speed:	55 mph		Ve	ehicle Mix				
Near/Far Lar	ne Distance:	48 feet			VehicleType	e D	ay Evening	Night	Daily
Site Data						Autos: 71	.5% 14.0%	10.5%	92.00%
Bar	rier Heiaht:	0.0 feet			Medium T	rucks: 48	3.0% 2.0%	50.0%	3.00%
Barrier Type (0-Wa	all. 1-Berm):	0.0			Heavy T	rucks: 48	3.0% 2.0%	50.0%	5.00%
Centerline Dis	t. to Barrier:	59.0 feet		A/.	aiaa Sauraa E	lovationa	(in foot)		
Centerline Dist. t	to Observer:	59.0 feet		///	Dise Source E				
Barrier Distance t	to Observer:	0.0 feet			Modium Truck	S. 0.00	7		
Observer Height (/	Above Pad):	5.0 feet			Hoovy Truck	S. 2.29	r 6 Grada An	liustmont	. 0.0
Pa	d Elevation:	0.0 feet			Tieavy Truck	3. 0.00	o olade Ad	justinent	0.0
Roa	d Elevation:	0.0 feet		Lá	ane Equivalen	t Distance	(in feet)		
F	Road Grade:	0.0%			Auto	s: 54.12	9		
	Left View:	-90.0 degre	es		Medium Truck	s: 53.96	6		
	Right View:	90.0 degre	es		Heavy Truck	s: 53.98	2		
FHWA Noise Mode	el Calculation	s							
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite Road	Fresnel	Barrier At	ten Ber	m Atten
Autos:	71.78	-8.45		-0.62	-1.20	-4	.69 0.	000	0.000
Medium Trucks:	82.40	-23.31		-0.60	-1.20	-4	.88 0.	000	0.000
Heavy Trucks:	86.40	-21.10		-0.60	-1.20	-5	.35 0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier	attenu	ation)				-
VehicleType	Leq Peak Hou	ur Leq Day	/ L	eq Eve	ening Leq	Night	Ldn	CI	VEL
Autos:	61	.5	59.6		58.2	52.2	60.	6	61.3
Medium Trucks:	57	.3	53.3		45.5	54.7	60.9	9	60.9
Heavy Trucks:	63	.5	59.5		51.7	60.9	67.	1	67.1
Vehicle Noise:	66	i.2	63.1		59.3	62.3	68.	8	68.9
Contorlino Distanc	e to Noise C	ontour (in feel)						
Centennie Distanc				70 dE	3A 65	dBA	60 dBA	55	dBA
Centenine Distanc			–						
Centenine Distanc			Ldn:	49	1	05	226	4	88

	FHV	VA-RD-77-108 H	IIGHWA	Y N	OISE PF	REDICT	ION MO	DEL			
Scenar Road Narr Road Segme	io: EA 2021 ne: Holland Rd. nt: w/o Menifee	e Rd.				Project Job N	Name: lumber:	Cante 11304	rwood		
SITE	SPECIFIC IN	PUT DATA				N	IOISE I	MODE	L INPUT	s	
Highway Data				S	lite Con	ditions	(Hard =	: 10, S	oft = 15)		
Average Daily	Traffic (Adt):	3,300 vehicles						Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2)	Axles):	15		
Peak H	lour Volume:	330 vehicles			He	avy Tru	cks (3+)	Axles):	15		
Ve	hicle Speed:	45 mph		v	ehicle l	Mix					
Near/Far La	ne Distance:	48 feet		F	Veh	icleType	,	Day	Evening	Night	Daily
Site Data							Autos:	75.5%	5 14.0%	10.5%	6 97.42%
Ba	rrier Height:	0.0 feet			Me	edium T	rucks:	48.9%	5 2.2%	48.9%	6 1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	Heavy T	rucks:	47.3%	5.4%	47.3%	6 0.74%
Centerline Di	st. to Barrier:	59.0 feet		^	loise So	ource E	levation	s (in f	eet)		
Centerline Dist.	to Observer:	59.0 feet		-		Auto	s: 0	000			-
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s: 2.	297			
Observer Height (Above Pad):	5.0 feet			Heav	v Truck	s: 8.	006	Grade Ad	justmer	nt: 0.0
Pa	ad Elevation:	0.0 feet		-	-						
Roi	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distan	ce (in	teet)		
	Road Grade:	0.0%				Auto	s: 54.	129			
	Left View:	-90.0 degrees	5		Mediui	m Truck	s: 53.	966			
	Right View:	90.0 degrees	5		Heav	у тиск	s: 53.	982			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distanc	e	Finite	Road	Fresi	nel	Barrier Att	en Be	ərm Atten
Autos:	68.46	-6.77	-	0.62		-1.20		-4.69	0.0	000	0.000
Medium Trucks:	79.45	-24.00	-	0.60		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-27.96	-	0.60		-1.20		-5.35	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and b	arrier at	tenı	uation)						
VehicleType	Leq Peak Hou	r Leq Day	Le	q Ev	ening	Leq	Night		Ldn	(CNEL
Autos:	59	.9 5	7.9		56.6		50.	5	59.0	0	59.6
Medium Trucks:	53	.6 4	9.7		42.2		51.0)	57.2	2	57.2
Heavy Trucks:	54	.5 5	0.4		47.1		51.	7	57.9	9	58.0
Vehicle Noise:	61	.7 5	9.1		57.2		55.9	9	62.6	В	63.1
Centerline Distan	ce to Noise Co	ontour (in feet)					10.4	1		-	
			. 📖	70 d	BA	65	dBA	1	50 dBA	5	5 dBA
		L	an:	20)	4	12		91		197
		CN	EL:	21		4	4		96		206

	FH	WA-RD-77-108	B HIGH	WAY NO	DISE P	REDICTI		DEL			
Scenar	rio: EA 2021					Project I	Name: (Canter	wood		
Road Nan	ne: Holland Ro	I.				Job NL	mber:	11304			
Road Segme	nt: e/o Menife	e Rd.									
SITE	SPECIFIC I	IPUT DATA				N	OISE N	/IODE	L INPUT	s	
Highway Data				S	ite Cor	nditions (Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	3,100 vehicle	s				,	Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Tru	cks (2 A	(xles):	15		
Peak H	lour Volume:	310 vehicle	s		He	eavy Truc	ks (3+ A	(xles):	15		
Ve	ehicle Speed:	45 mph		V	ehicle	Mix					
Near/Far La	ane Distance:	48 feet		-	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	75.5%	14.0%	10.5%	6 97.42%
Ba	rrier Heiaht:	0.0 feet			М	ledium Tri	ucks:	48.9%	2.2%	48.9%	5 1.84%
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy Tru	ucks:	47.3%	5.4%	47.3%	6 0.74%
Centerline Di	ist. to Barrier:	59.0 feet		N	loise S	ource Ele	vation	s (in fe	et)		
Centerline Dist.	to Observer:	59.0 feet				Autos	: 00	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	· 2.2	97			
Observer Height	(Above Pad):	5.0 feet			Hoa	W Trucks		106	Grade Ad	iustmen	t: 0.0
P	ad Elevation:	0.0 feet			nou	vy muons	. 0.0	000			
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distand	ce (in i	feet)		
	Road Grade:	0.0%				Autos	: 54.	129			
	Left View:	-90.0 degre	es		Mediu	m Trucks	: 53.9	966			
	Right View:	90.0 degre	es		Hear	vy Trucks	: 53.9	982			
FHWA Noise Mod	lel Calculatior	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresn	el	Barrier Att	en Be	rm Atten
Autos:	68.46	-7.04		-0.62		-1.20		-4.69	0.0	000	0.000
Medium Trucks:	79.45	-24.28		-0.60		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-28.23		-0.60		-1.20		-5.35	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	r attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	V	Leq Eve	ening	Leq I	light		Ldn	0	NEL
Autos:	59	0.6	57.6		56.3		50.3		58.7	7	59.3
Medium Trucks:	53	3.4	49.5		42.0		50.7		56.9	9	56.9
Heavy Trucks:	54	.2	50.2		46.8		51.4		57.6	6	57.7
Vehicle Noise:	61	.4	58.8		56.9		55.6		62.6	6	62.9
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 dl	BA	65 a	IBA	6	60 dBA	55	5 dBA
			Ldn:	19		41	1		88		189
		С	NEL:	20		43	3		92		198

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	FH\	NA-RD-77-108	HIGHW	VAY NO	DISE P	REDICTIC		EL _	_		
Scenar Road Narr Road Segme	io: EA 2021 ne: Holland Ro nt: w/o Briggs	l. Rd.				Project N Job Nu	lame: Ca mber: 11	anterwo 1304	bod		
SITE	SPECIFIC IN	IPUT DATA				NC	DISE MO	ODEL	INPUTS	5	
Highway Data				S	ite Cor	nditions (H	Hard = 1	0, Soft	= 15)		
Average Daily	Traffic (Adt):	316 vehicle	s				AL	utos:	15		
Peak Hour	Percentage:	10%			Me	edium Truc	ks (2 Ax	des):	15		
Peak H	lour Volume:	32 vehicle	s		He	avy Truck	's (3+ Ax	des):	15		
Ve	hicle Speed:	45 mph		V	ehicle	Mix					
Near/Far La	ne Distance:	48 feet			Veh	nicleType	D	ay E	vening	Night	Daily
Site Data						AL	itos: 7	5.5%	14.0%	10.5%	97.42%
Ba	rrier Heiaht:	0.0 feet			Μ	edium Tru	cks: 48	8.9%	2.2%	48.9%	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0			1	Heavy Tru	cks: 4	7.3%	5.4%	47.3%	0.74%
Centerline Di	st. to Barrier:	59.0 feet		N	oise S	ource Ele	vations	(in feet	F)		
Centerline Dist.	to Observer:	59.0 feet				Autos:	0.00	0	/		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.29	97			
Observer Height (Above Pad):	5.0 feet			Hea	v Trucks:	8.00)6 G	rade Adj	ustment	: 0.0
Pi	ad Elevation:	0.0 feet									
Roi	ad Elevation:	0.0 feet		La	ane Eq	uivalent l	Distance	e (in fee	et)		
	Road Grade:	0.0%				Autos:	54.12	29			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	53.96	66			
	Right View:	90.0 degre	es		Hear	vy Trucks:	53.98	32			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresne	I Ba	arrier Atte	en Ber	rm Atten
Autos:	68.46	-16.95		-0.62		-1.20	-4	4.69	0.0	00	0.000
Medium Trucks:	79.45	-34.19		-0.60		-1.20	-4	4.88	0.0	00	0.000
Heavy Trucks:	84.25	-38.15		-0.60		-1.20	-5	5.35	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Hou	ur Leq Da	V L	Leq Eve	ening	Leq N	ight	L	dn	C	NEL
Autos:	49	.7	47.7		46.4		40.4		48.8		49.4
Medium Trucks:	43	1.5	39.6		32.1		40.8		47.0		47.0
Heavy Trucks:	44	.3	40.3		36.9		41.5		47.7		47.8
Vehicle Noise:	51	.5	48.9		47.0		45.7		52.7		53.0
Centerline Distant	ce to Noise C	ontour (in fee	t)								
			L	70 dE	BA	65 dl	BA	60	dBA	55	dBA
			Ldn:	4		9		1	9		41
		С	NEL:	4		9		2	20		43

	FHV	VA-RD-77-108 F	IIGHW/	AY NO	ISE PR	EDICTIO	N MOI	DEL			
Scenari Road Nam Road Segmer	o: EA 2021 e: Holland Rd nt: w/o Leon R	d.				Project N Job Nur	ame: (nber: 1	Canter 11304	wood		
SITE	SPECIFIC IN	PUT DATA				NC	ISE N	IODE	L INPUT	s	
Highway Data	FHWA-RD-77-108 H Scenario: EA 2021 Road Name: Holland Rd. Road Segment: wio Leon Rd. SITE SPECIFIC INPUT DATA hway Data Average Daily Traffic (Adl): 216 vehicles Peak Hour Percentage: 10% Peak Hour Percentage: 10% Vehicles Speed: 45 mph Near/Far Lane Distance: 48 feet O feet Centerline Dist. to Barrier: 59.0 feet O feet Park Hour Volume: 59.0 feet Park Height: 0.0 feet Centerline Dist. to Barrier: 59.0 feet Park 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 VA Noise Model Calculations FelicleType REMEL Traffic Flow Autos: 68.46 -18.86 Heavy Trucks: 84.25 Neary Colspan="2">Santer South Colspan="2">South Colspan= 2" Interfice Type				te Cond	ditions (H	lard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	216 vehicles			Max	dium Truc	1	Autos:	15		
Peak Hour	ercentage.	10% 22 vohiclos			Hos	ann muc an Truck	no (2 /4 c (2± 0	vloe).	15		
Vol	hicle Sneed	45 mph			1100	ivy much	3 (0+7	1003).	10		
Near/Far I ar	nelle opeca. ne Distance:	48 feet		Ve	hicle N	lix			,,		
noun a La	io Diotanoo.	10 1001			Vehi	cleType		Day	Evening	Night	Daily
Site Data				_		, Au	tos:	77.5%	14.0%	10.5%	92.00
Bar	rier Height:	0.0 feet			ме	aium Tru	CKS:	48.0%	2.0%	50.0%	3.00
Barrier Type (0-W	all, 1-Berm):	0.0			н	leavy Tru	CKS:	48.0%	2.0%	50.0%	5.00
Centerline Dis	t. to Barrier:	59.0 feet		No	oise So	urce Elev	ations	s (in fe	et)		
Centerline Dist.	to Observer:	59.0 feet				Autos:	0.0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediun	n Trucks:	2.2	297			
Observer Height (J	Above Pad):	5.0 feet			Heav	v Trucks:	8.0	006	Grade Ad	justment	0.0
Pa	d Elevation:	0.0 feet									
Roa	d Elevation:	0.0 feet		La	ne Equ	livalent L	vistanc	e (in i	reet)		
ŀ	Road Grade:	0.0%				Autos:	54.1	129			
	Left View:	-90.0 degrees			Mediun	n Trucks:	53.9	966			
	Right View:	90.0 degrees			Heavy	y Trucks:	53.5	982			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distan	се	Finite I	Road	Fresn	el	Barrier Att	en Ber	m Atter
Autos:	68.46	-18.86		-0.62		-1.20		-4.69	0.0	000	0.00
Medium Trucks:	79.45	-33.72		-0.60		-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	84.25	-31.50		-0.60		-1.20		-5.35	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and b	arrier a	ttenua	ation)						
VehicleType	Leq Peak Hou	r Leq Day	Le	eq Eve	ning	Leq N	ight		Ldn	C	NEL
Autos:	47	.8 4	5.9		44.5		38.5		46.9	9	47
Medium Trucks:	43	.9 39	9.9		32.2		41.4		47.5	5	47
Heavy Trucks:	50	.9 4	7.0		39.2		48.4		54.5	5	54
Vehicle Noise:	53	.2 49	9.9		45.8		49.5		55.9	9	56
Centerline Distance	e to Noise Co	ontour (in feet)		70 20		CE -1	54		O dBA		dD A
		1	dn.	70 aB	А	05 GE	2/4	C	22	55	udA so
		L		/		15			32		00
		CN/1	-1 -	7		45					~O

	E 10	NA DD 77 400						DEL				
	FH	WA-RD-77-108	HIGHWA	AT N	DISE PI	REDICI		DEL				
Scenar	o: EA 2021					Project	Name:	Cante	rwood			
Road Nam	e: Scott Rd.					Job N	umber:	11304				
Road Segme	nt: w/o Haun F	₹d.										
SITE	SPECIFIC IN	NPUT DATA				Ν	IOISE I	NODE	EL INPU	TS		
Highway Data				S	ite Con	ditions	(Hard =	10, S	oft = 15)			
Average Daily	Traffic (Adt):	11,200 vehicle	6					Autos.	15			
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2 /	Axles)	: 15			
Peak H	our Volume:	1,120 vehicle	3		He	avy Tru	cks (3+ /	Axles)	: 15			
Ve	hicle Speed:	50 mph		V	ohiclo	Mix						
Near/Far La	ne Distance:	78 feet		-	Veh	icleType		Dav	Evenin	N N	iaht	Daily
Site Data				-			Autos:	75.5%	6 14.09	6 1	0.5%	97.42%
Bai	rier Height	0.0 feet			M	edium T	rucks:	48.9%	6 2.29	6 4	8.9%	1.84%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	Heavy T	rucks:	47.3%	6 5.4%	6 4	7.3%	0.74%
Centerline Dis	st. to Barrier:	76.0 feet			loise So	ource E	evation	s (in f	eet)			
Centerline Dist.	to Observer:	76.0 feet				Auto	s: 0.	000	,			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s: 2.	297				
Observer Height (Above Pad):	5.0 feet			Heav	v Truck	s: 8.	006	Grade A	djust	ment:	0.0
Pa	ad Elevation:	0.0 feet								-		
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalen	Distan	ce (in	feet)			
	Road Grade:	0.0%				Auto	s: 65.	422				
	Left View:	-90.0 degre	es		Mediui	m Truck	s: 65.	286				
	Right View:	90.0 degre	es		Heav	y Truck	s: 65.	300				
FHWA Noise Mode	el Calculation	IS										
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresr	nel	Barrier A	Atten	Ben	m Atten
Autos:	70.20	-1.92		1.85		-1.20		-4.73	(0.000		0.000
Medium Trucks:	81.00	-19.15		1.84		-1.20		-4.88	(0.000		0.000
Heavy Trucks:	85.38	-23.11		-1.84		-1.20		-5.25	(0.000		0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier a	ttenı	ation)							
VehicleType	Leq Peak Hou	ur Leq Day	Le	q Ev	ening	Leq	Night		Ldn		CI	VEL
Autos:	65	5.2	63.2		61.9		55.9	9	64	1.3		64.9
Medium Trucks:	58	3.8	54.9		47.4		56.2	2	62	2.3		62.4
Heavy Trucks:	59	9.2	55.2		51.8		56.4	1	62	2.6		62.7
Vehicle Noise:	66	6.9	64.4		62.5		60.9	9	6	3.0		68.3
Centerline Distant	e to Noise C	ontour (in feet)	70.				1		-		10.4
			ட	70 d	ВA	65	аВА		бU dBA		55	aBA
		-	Lán:	56		1	20		258		5	55
		Ci	VEL:	58		1	26		271		5	83

	FH\	WA-RD-77-108	HIGHW	AY NO	DISE PI	REDICTI		DEL				
Scenario.	: EA 2021					Project I	Name: (Cante	rwood			
Road Name.	Scott Rd.					Job NL	mber:	11304				
Road Segment	: e/o Haun R	td.										
SITE S	PECIFIC IN	IPUT DATA				N	OISE N	NODE	EL INPUT	s		
Highway Data				S	ite Con	nditions (Hard =	10, S	oft = 15)			
Average Daily Ti	raffic (Adt):	16,500 vehicle	s					Autos	: 15			
Peak Hour P	ercentage:	10%			Me	dium Tru	cks (2 A	(xles)	: 15			
Peak Ho	ur Volume:	1,650 vehicle	s		He	avy Truc	ks (3+ A	(xles)	: 15			
Vehi	icle Speed:	50 mph		V	ehicle	Mix						
Near/Far Lane	e Distance:	78 feet		-	Veh	icleType		Dav	Evenina	Nio	ht	Daily
Site Data					1011	A	utos:	75.5%	6 14.0%	10	5%	97 42%
Data Data	an Haladat	0.0 ()		_	М	edium Tri	ucks:	48.99	6 2.2%	48	.9%	1.84%
Barrior Tupo (0.W/a	IL 1 Porm):	0.0 1001				Heavy Tru	ucks:	47.3%	6 5.4%	47	.3%	0.74%
Centerline Dist	to Barriar	76.0 feet										
Centerline Dist. to	Ohserver:	76.0 feet		N	oise So	ource Ele	evation	s (in f	eet)			
Barrier Distance to	Observer:	0.0 feet				Autos	: 0.0	000				
Observer Height (A	bove Pad):	5.0 feet			Mediu	m Trucks	: 2.2	297				
Pag	Flevation:	0.0 feet			Heav	/y Trucks	: 8.0	006	Grade Ad	justr	ient:	0.0
Road	Elevation:	0.0 feet		L	ane Eq	uivalent	Distand	ce (in	feet)			
Re	oad Grade:	0.0%				Autos	: 65.4	422		-	-	
	Left View:	-90.0 deare	es		Mediu	m Trucks	65.2	286				
1	Right View:	90.0 degre	es		Heav	/y Trucks	65.3	300				
		-										
FHWA Noise Model	Calculation	S	Distan		Civita	Deed	C	-1	Demise Att		0	
Venicie i ype	REIVIEL ZO 20	Traffic Flow	Distan	1 05	Finite	1 20	Fresh	4 72	Barrier Att	en	Bern	n Atten
Autos. Modium Trucks:	91.00	-0.23		1 94		-1.20		-4.73	0.0	000		0.000
Hoow Trucks:	95.20	-17.47		1 9/		1.20		5 25	0.0	000		0.000
Tieavy Trucks.	00.00	-21.43		-1.04		-1.20		-0.20	0.0	500		0.000
Unmitigated Noise	Levels (with	out Topo and	barrier a	ttenu	ation)							
VehicleType L	eq Peak Hou	Ir Leq Day	/ Le	eq Eve	ening	Leq N	Vight		Ldn		CN	EL
Autos:	66	.9	64.9		63.6		57.6		66.0)		66.6
Medium Trucks:	60	.5	56.6		49.1		57.8		64.0)		64.0
Heavy Trucks:	60	.9	56.9		53.5		58.1		64.3	3		64.4
Vehicle Noise:	68	.6	66.1		64.1		62.6		69.6	5		70.0
Centerline Distance	to Noise C	ontour (in feet)					_				
				70 dl	BA	65 a	1BA		60 dBA		55 0	:JBA
			Ldn:	72		15	5		334		71	9
		C	NEL:	75		16	i3		350		75	5

Tuesday, March 06, 2018

Tuesday, March 06, 2018

	FH	WA-RD-77-108	HIGHW	AY NO	DISE PI	REDICTIC	N MOD	EL			
Scenar Road Nan Road Segme	rio: EA 2021 ne: Scott Rd. nt: w/o Menife	e Rd.				Project N Job Nu	lame: Ca mber: 11	anterwoo 1304	bd		
SITE	SPECIFIC IN	IPUT DATA				NC	DISE MO	DDEL I	NPUTS		
Highway Data				S	ite Cor	ditions (F	Hard = 10	0, Soft =	= 15)		
Average Daily	Traffic (Adt):	14,800 vehicle	s				AL	itos:	15		
Peak Hour	Percentage:	10%			Me	aium Truc	KS (2 AX	les):	15		
Peak F	four volume:	1,480 venicle	S		He	avy Truck	S (3+ AX	ies):	15		
Ve	enicle Speed:	55 mpn		V	ehicle	Mix					
Near/Far La	ine Distance:	78 feet			Veh	icleType	D	ay Ev	ening N	light	Daily
Site Data						AL	itos: 75	5.5% 1	14.0%	0.5%	97.42%
Ba	rrier Height:	0.0 feet			М	edium Tru	cks: 48	8.9%	2.2%	18.9%	1.84%
Barrier Type (0-W	Vall, 1-Berm):	0.0			1	Heavy Tru	cks: 47	7.3%	5.4%	17.3%	0.74%
Centerline Di	ist. to Barrier:	76.0 feet		N	oise Se	ource Ele	vations	(in feet)			
Centerline Dist.	to Observer:	76.0 feet				Autos:	0.00	0			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.29	7			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks:	8.00	6 Gra	ade Adjus	tment:	0.0
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distance	e (in feet)		
	Road Grade:	0.0%				Autos:	65.42	22			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	65.28	36			
	Right View:	90.0 degre	es		Heav	/y Trucks:	65.30	00			
FHWA Noise Mod	lel Calculation	IS									
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresnel	l Bar	rier Atten	Berr	n Atten
Autos:	71.78	-1.12		-1.85		-1.20	-4	1.73	0.000)	0.000
Medium Trucks:	82.40	-18.36		-1.84		-1.20	-4	1.88	0.000)	0.000
Heavy Trucks:	86.40	-22.31		-1.84		-1.20	-5	5.25	0.000)	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	ttenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Day	ν Le	eq Eve	ening	Leq N	ight	Ldi	n	CN	JEL
Autos:	67	⁷ .6	65.6		64.3		58.3		66.7		67.3
Medium Trucks:	61	.0	57.1		49.6		58.4		64.5		64.6
Heavy Trucks:	61	.0	57.0		53.6		58.2		64.4		64.5
Vehicle Noise:	69	9.2	66.7		64.8		63.1		70.1		70.5
Centerline Distan	ce to Noise C	ontour (in feet)								
				70 dł	BA	65 dl	BA	60 d	BA	55	dBA
			Ldn:	77		167	,	359	9	7	75
		C	NEL:	81		176	6	378	В	8	15

				-			
Scenario: EA 2021			Project Na	me: Ca	nterwood		
Road Name: Scott Rd.			JOD NUM	ber: 11.	304		
Road Segment. W/o Briggs Rd.		-					
SITE SPECIFIC INPUT DATA			NOI	SE MO	DEL INPU	TS	
Highway Data		Site Cor	ditions (Ha	ard = 10	, Soft = 15)		
Average Daily Traffic (Adt): 12,400 vehicles				Au	tos: 15		
Peak Hour Percentage: 10%		Me	dium Truck	s (2 Axle	es): 15		
Peak Hour Volume: 1,240 vehicles		He	avy Trucks	(3+ Axle	es): 15		
Vehicle Speed: 55 mph		Vehicle	Mix				
Near/Far Lane Distance: 78 feet		Veh	icleType	Da	y Evening	Night	Daily
Site Data			Auto	os: 75	.5% 14.0%	5 10.5%	97.429
Barrier Height: 0.0 feet		М	edium Truci	ks: 48	.9% 2.2%	48.9%	1.849
Barrier Type (0-Wall, 1-Berm): 0.0		1	Heavy Truci	ks: 47	.3% 5.4%	47.3%	0.749
Centerline Dist. to Barrier: 76.0 feet		Noise S	ource Eleva	tions (in foot)		
Centerline Dist. to Observer: 76.0 feet			Autos:	0.000)		
Barrier Distance to Observer: 0.0 feet		Mediu	m Trucks:	2 297	,		
Observer Height (Above Pad): 5.0 feet		Heav	v Trucks:	8.006	Grade A	diustmen	t: 0.0
Pad Elevation: 0.0 feet			y maono.	0.000	,	-)	
Road Elevation: 0.0 feet		Lane Eq	uivalent Di	stance	(in feet)		
Road Grade: 0.0%			Autos:	65.422	2		
Left View: -90.0 degrees	;	Mediu	m Trucks:	65.286	6		
Right View: 90.0 degrees	;	Heav	ry Trucks:	65.300)		
FHWA Noise Model Calculations		1					
VehicleType REMEL Traffic Flow	Distand	e Finite	Road I	resnel	Barrier A	tten Be	rm Atter
Autos: 71.78 -1.89	-	1.85	-1.20	-4.	73 (.000	0.00
Medium Trucks: 82.40 -19.13	-	1.84	-1.20	-4.	88 0	.000	0.00
Heavy Trucks: 86.40 -23.08	-	1.84	-1.20	-5.	25 0	0.000	0.00
Unmitigated Noise Levels (without Topo and b	arrier at	tenuation)					
VehicleType Leq Peak Hour Leq Day	Le	q Evening	Leq Nig	ht	Ldn	C	NEL
Autos: 66.8 6	4.8	63.5		57.5	65	.9	66
Medium Trucks: 60.2 5	5.3	48.8		57.6	63	.8	63
Heavy Trucks: 60.3 5	6.2	52.8		57.5	63	1.7	63.
Vehicle Noise: 68.4 6	5.9	64.0		62.3	69	9.4	69
Centerline Distance to Noise Contour (in feet)							
		70 dBA	65 dB/	1	60 dBA	55	i dBA
L	dn:	69	148		319	(588

	FH	WA-RD-77-108	HIGHV	VAY NC	ISE PI	REDICTIO		EL		
Scenari	o: EA 2021					Project I	Vame: Ca	anterwood		
Road Nam	e: Scott Rd.					Job Nu	mber: 11	304		
Road Segmer	nt: w/o Leon F	Rd.								
SITE	SPECIFIC I	NPUT DATA				N	DISE MO	DDEL INPUT	S	
Highway Data				Si	te Con	ditions (Hard = 1	0, Soft = 15)		
Average Daily	Traffic (Adt):	12,000 vehicle	s				AL	<i>itos:</i> 15		
Peak Hour	Percentage:	10%			Me	dium Tru	cks (2 Ax	<i>les):</i> 15		
Peak H	our Volume:	1,200 vehicle	s		He	avy Truci	ks (3+ Ax	<i>les):</i> 15		
Ve	hicle Speed:	55 mph		Ve	ehicle	Mix				
Near/Far La	ne Distance:	78 feet			Veh	icleType	D	ay Evening	Night Da	aily
Site Data						A	utos: 7	5.5% 14.0%	10.5% 97.	42%
Bar	rier Heiaht:	0.0 feet			M	edium Tru	icks: 48	3.9% 2.2%	48.9% 1.	84%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	Heavy Tru	icks: 4	7.3% 5.4%	47.3% 0.	74%
Centerline Dis	st. to Barrier:	76.0 feet		N	oise So	ource Ele	vations	(in feet)		
Centerline Dist.	to Observer:	76.0 feet				Autos.	0.00	0		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.29	7		
Observer Height (Above Pad):	5.0 feet			Heav	v Trucks	8.00	6 Grade Ad	justment: 0.0	
Pa	ad Elevation:	0.0 feet								
Roa	ad Elevation:	0.0 feet		Lá	ane Eq	uivalent	Distance	(in feet)		
1	Road Grade:	0.0%				Autos.	65.42	2		
	Left View:	-90.0 degre	es		Mediu	m Trucks.	65.28	6		
	Right View:	90.0 degre	es		Heav	y Trucks.	65.30	0		
FHWA Noise Mode	el Calculation	15								
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresnel	Barrier At	en Berm At	tten
Autos:	71.78	-2.03		-1.85		-1.20	-4	.73 0.	0 000	0.000
Medium Trucks:	82.40	-19.27		-1.84		-1.20	-4	.88 0.	000 000	0.000
Heavy Trucks:	86.40	-23.22		-1.84		-1.20	-5	5.25 0.	000 000	0.000
Unmitigated Noise	e Levels (with	nout Topo and	barrier	attenu	ation)					
VehicleType	Leq Peak Ho	ur Leq Daj	/	Leq Eve	ening	Leq N	light	Ldn	CNEL	
Autos:	66	6.7	64.7		63.4		57.4	65.	8	66.4
Medium Trucks:	60	0.1	56.2		48.7		57.4	63.	6	63.7
Heavy Trucks:	60	0.1	56.1		52.7		57.3	63.	5	63.6
Vehicle Noise:	68	8.3	65.8		63.9		62.2	69.	2	69.5
Centerline Distant	e to Noise C	ontour (in fee)							
			L	70 dE	BA	65 d	BA	60 dBA	55 dBA	
		-	Ldn:	67		14	5	313	673	
		С	NEL:	71		15	3	329	708	

	FHV	VA-RD-77-108 HI	GHWAY	NOISE P	REDICTION	MODEL			
Scenar	rio: EA 2021				Project Na	ne: Cante	erwood		
Road Nan	ne: Scott Rd.				Job Numi	ber: 11304	4		
Road Segme	nt: e/o Leon R	d.							
SITE	SPECIFIC IN	IPUT DATA			NOI	SE MOD	EL INPUT	s	
Highway Data				Site Col	nditions (Ha	rd = 10, S	Goft = 15)		
Average Daily	Traffic (Adt):	5,400 vehicles				Autos	: 15		
Peak Hour	Percentage:	10%		Me	edium Trucks	(2 Axles)	: 15		
Peak H	lour Volume:	540 vehicles		He	eavy Trucks	(3+ Axles)	: 15		
Ve	ehicle Speed:	55 mph		Vehicle	Mix			-	
Near/Far La	ane Distance:	78 feet		Veł	nicleType	Day	Evening	Night	Daily
Site Data					Auto	s: 77.5%	% 14.0%	10.5%	92.00%
Ba	rrier Height	0.0 feet		M	ledium Truck	s: 48.09	% 2.0%	50.0%	3.00%
Barrier Type (0-V	Vall, 1-Berm):	0.0			Heavy Truck	s: 48.09	% 2.0%	50.0%	5.00%
Centerline D	ist. to Barrier:	76.0 feet		Noise S	ource Eleva	tions (in	feet)		
Centerline Dist.	to Observer:	76.0 feet			Autos:	0.000		-	
Barrier Distance	to Observer:	0.0 feet		Mediu	m Trucks:	2.297			
Observer Height	(Above Pad):	5.0 feet		Hea	vv Trucks:	8.006	Grade Ad	iustment	: 0.0
P	ad Elevation:	0.0 feet		7100	ry maono.	0.000			
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent Di	stance (in	feet)		
	Road Grade:	0.0%			Autos:	65.422			
	Left View:	-90.0 degrees		Mediu	m Trucks:	65.286			
	Right View:	90.0 degrees		Hea	vy Trucks:	65.300			
FHWA Noise Mod	lel Calculation	s							
VehicleType	REMEL	Traffic Flow	Distance	e Finite	Road F	resnel	Barrier Att	en Ber	m Atten
Autos:	71.78	-5.75	-1	.85	-1.20	-4.73	0.0	000	0.000
Medium Trucks:	82.40	-20.61	-1	.84	-1.20	-4.88	0.0	000	0.000
Heavy Trucks:	86.40	-18.40	-1	.84	-1.20	-5.25	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and bai	rrier att	enuation)					
VehicleType	Leq Peak Hou	r Leq Day	Leq	Evening	Leq Nig	ht	Ldn	C	NEL
Autos:	63	.0 61.	1	59.7		53.6	62.1	í.	62.7
Medium Trucks:	58	.7 54.8	8	47.0		56.2	62.4	ł	62.4
Heavy Trucks:	65	.0 61.0	0	53.2		62.4	68.6	;	68.6
Vehicle Noise:	67	.7 64.	5	60.7		63.8	70.2	2	70.4
Centerline Distan	ce to Noise Co	ontour (in feet)	1					1	
			7	0 dBA	65 dBA		60 dBA	55	dBA
		Ldr	n:	79	169		365	7	86
		CNEL	.:	80	173		372	5	302

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	FH	WA-RD-77-108	B HIGHW	AY NO	DISE PI	REDICTIC	N MOD	EL			
Scenar Road Nan Road Segme	io: EAP 2021 ne: Haun Rd. nt: n/o Scott R	td.				Project N Job Nui	lame: Ca mber: 11	anterwood 304	i		
SITE	SPECIFIC IN	IPUT DATA				NC	DISE MO	DDEL IN	PUTS		
Highway Data				S	ite Cor	ditions (F	Hard = 10	0, Soft =	15)		
Average Daily	Traffic (Adt):	7,300 vehicle	s				AL	itos: 1	5		
Peak Hour	Percentage:	10%			Me	dium Truc	cks (2 Ax	les): 1	5		
Peak H	lour Volume:	730 vehicle	s		He	avy Truck	is (3+ Ax	les): 1	5		
Ve	hicle Speed:	50 mph		v	ehicle	Mix					
Near/Far La	ne Distance:	48 feet		ŀ	Veh	icleType	D	ay Eve	ning N	ght Dai	ily
Site Data						AL	itos: 75	5.5% 14	4.0% 1	0.5% 97.4	2%
Ba	rrier Height:	0.0 feet			М	edium Tru	cks: 48	3.9% 2	2.2% 4	8.9% 1.8	4%
Barrier Type (0-W	Vall, 1-Berm):	0.0			1	Heavy Tru	cks: 47	7.3% 5	5.4% 4	7.3% 0.7	4%
Centerline Di	ist. to Barrier:	59.0 feet		N	loise Se	ource Ele	vations	(in feet)			
Centerline Dist.	to Observer:	59.0 feet				Autos:	0.00	0			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.29	7			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks:	8.00	6 Grad	de Adiust	ment: 0.0	
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distance	(in feet)			
	Road Grade:	0.0%				Autos:	54.12	9			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	53.96	6			
	Right View:	90.0 degre	es		Heav	/y Trucks:	53.98	12			
FHWA Noise Mod	lel Calculation	IS									
VehicleType	REMEL	Traffic Flow	Distar	псе	Finite	Road	Fresnel	Barri	er Atten	Berm Atte	en
Autos:	70.20	-3.78		-0.62		-1.20	-4	1.69	0.000	0.0	000
Medium Trucks:	81.00	-21.01		-0.60		-1.20	-4	1.88	0.000	0.0	000
Heavy Trucks:	85.38	-24.97		-0.60		-1.20	-5	5.35	0.000	0.0	000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	V L	eq Ev	ening	Leq N	light	Ldn		CNEL	
Autos:	64	1.6	62.6		61.3		55.3		63.7	6	64.3
Medium Trucks:	58	3.2	54.3		46.8		55.5		61.7	6	i1.7
Heavy Trucks:	58	3.6	54.6		51.2		55.8		62.0	6	62.1
Vehicle Noise:	66	6.3	63.8		61.8		60.3		67.3	6	57.7
Centerline Distan	ce to Noise C	ontour (in fee	t)								-
				70 di	BA	65 dl	BA	60 dB	A	55 dBA	
			Ldn:	39		84		182		392	
		C	NEL:	41		89		191		411	

	FHW	/A-RD-77-108	HIGH	WAY NO	ISE PREDIC	TION MO	DDEL			
Scenario	: EAP 2021				Proje	ct Name.	Cante	rwood		
Road Name	: Zeiders Rd.				Job	Number:	11304			
Road Segmen	t: s/o Scott Ro	l.								
SITE S	PECIFIC IN	PUT DATA				NOISE	MODE	L INPUT	S	
Highway Data				Si	te Condition	s (Hard	= 10, S	oft = 15)		
Average Daily 7	raffic (Adt):	1,400 vehicle	s				Autos.	15		
Peak Hour F	Percentage:	10%			Medium	rucks (2	Axles).	15		
Peak Ho	our Volume:	140 vehicle	s		Heavy Ti	ucks (3+	Axles).	15		
Veh	icle Speed:	50 mph		Ve	hicle Mix					
Near/Far Lan	e Distance:	48 feet			VehicleTy	be	Day	Evening	Night	Daily
Site Data						Autos:	75.5%	6 14.0%	10.5%	97.429
Barı	ier Heiaht:	0.0 feet			Medium	Trucks:	48.9%	6 2.2%	48.9%	1.84%
Barrier Type (0-Wa	all, 1-Berm):	0.0			Heavy	Trucks:	47.3%	5.4%	47.3%	0.749
Centerline Dis	t. to Barrier:	59.0 feet		N	nico Sourco	Elovatio	ne (in f	(oot)		
Centerline Dist. to	o Observer:	59.0 feet		790	nse source	Elevalio		eel)		
Barrier Distance to	o Observer:	0.0 feet			Au Modium Tru	us. u	207			
Observer Height (A	Above Pad):	5.0 feet			Heavy True	-no. 2 -ke: 8	1.006	Grade An	liustment	· 0.0
Pa	d Elevation:	0.0 feet			nouvy nuc	.no. c		0/000 / 10	Juounone	0.0
Roa	d Elevation:	0.0 feet		La	ne Equivale	nt Dista	nce (in	feet)		
R	load Grade:	0.0%			Au	os: 54	1.129			
	Left View:	-90.0 degre	es		Medium Truc	sks: 53	3.966			
	Right View:	90.0 degre	es		Heavy True	ks: 53	3.982			
FHWA Noise Mode	I Calculations	;								
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite Road	Free	snel	Barrier At	ten Ber	m Atten
Autos:	70.20	-10.95		-0.62	-1.2)	-4.69	0.0	000	0.00
Medium Trucks:	81.00	-28.19		-0.60	-1.2)	-4.88	0.0	000	0.00
Heavy Trucks:	85.38	-32.14		-0.60	-1.2)	-5.35	0.0	000	0.00
Unmitigated Noise	Levels (witho	out Topo and	barrie	er attenua	ation)					
VehicleType	Leq Peak Hou	r Leq Day	/	Leq Eve	ning Le	q Night		Ldn	C	NEL
Autos:	57.	4	55.4		54.1	48	.1	56.	5	57.
Medium Trucks:	51.	0	47.1		39.6	48	.4	54.	5	54.
Heavy Trucks:	51.	4	47.4		44.0	48	.6	54.	В	54.
Vehicle Noise:	59.	1	56.6		54.7	53	.1	60.:	2	60.
Centerline Distanc	e to Noise Co	ntour (in feet)							
			L	70 dB	A 6	5 dBA		60 dBA	55	dBA
			Ldn:	13		28		60	1	30
						~~~		( ) A		F3-F

	FHW	A-RD-77-108 H	IGHWAY	NOISE PI	REDICTION	MODEL			
Scenar Road Nam Road Segmei	io: EAP 2021 ne: Antelope Rd nt: s/o Scott Rd				Project Na Job Num	ame: Cante ber: 11304	rwood I		
SITE	SPECIFIC INI	PUT DATA			NO	SE MOD	EL INPUTS	S	
Highway Data				Site Con	ditions (H	ard = 10, S	oft = 15)		
Average Daily	Traffic (Adt): 1	1,500 vehicles				Autos	: 15		
Peak Hour	Percentage:	10%		Me	dium Truck	s (2 Axles)	: 15		
Peak H	lour Volume:	1,150 vehicles		He	avy Trucks	(3+ Axles)	: 15		
Ve	hicle Speed:	50 mph		Vehicle	Mix				
Near/Far La	ne Distance:	48 feet		Veh	icleType	Day	Evening	Night	Daily
Site Data					Aut	os: 75.5%	6 14.0%	10.5%	97.42%
Bai	rrier Height:	0.0 feet		М	edium Truc	ks: 48.9%	6 2.2%	48.9%	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0		1	Heavy Truc	ks: 47.3%	6 5.4%	47.3%	0.74%
Centerline Dis	st. to Barrier:	59.0 feet		Noise S	ource Elev	ations (in	feet)		
Centerline Dist.	to Observer:	59.0 feet			Autos:	0.000	001)		-
Barrier Distance	to Observer:	0.0 feet		Mediu	m Trucks:	2.297			
Observer Height (	Above Pad):	5.0 feet		Heav	v Trucks:	8.006	Grade Adj	ustment:	0.0
Pa	ad Elevation:	0.0 feet							
Roa	ad Elevation:	0.0 feet		Lane Eq	uivalent Di	stance (in	feet)		
	Road Grade:	0.0%		A de alla	Autos:	54.129			
	Left View:	-90.0 degrees		Wealu	m Trucks:	53.966			
	Right view.	90.0 degrees		near	y mucks.	55.962			
FHWA Noise Mod	el Calculations			-					
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	en Ber	m Atten
Autos:	70.20	-1.80	-0.	62	-1.20	-4.69	0.0	00	0.000
Medium Trucks:	81.00	-19.04	-0.	60 60	-1.20	-4.88	0.0	00	0.000
Heavy Hucks.	00.00	-23.00	-0.	60	-1.20	-5.55	0.0	00	0.000
Unmitigated Noise	e Levels (witho	ut Topo and ba	arrier atte	enuation)	1	-	l da		
Venicie i ype	Leq Peak Hour	Leq Day	Leq	Evening	Leq IVIg	57 2	Lan 65.7	, CI	VEL
Modium Trucks:	60.0	0 04	.0	10 0		57.5	62.7		62 5
Heavy Trucks:	60.6	<u> </u>	.5	40.0 53.1		57.8	64.0	,	64 1
Vehicle Noise:	68.3	3 65	.7	63.8		62.3	69.3	3	69.6
Centerline Distant	ce to Noise Co	ntour (in feet)							
		, ,	70	) dBA	65 dB	4	60 dBA	55	dBA
		La	In:	53	114		246	5	30
		CNE	L:	56	120		259	5	57

	FH\	NA-RD-77-108	HIGHW	AY NO	DISE PE	REDICTI		DEL			
Scenar	io: EAP 2021					Project	Name: 0	Cante	rwood		
Road Nan	ne: Menifee Ro	ł.				Job Ni	umber: 1	1304			
Road Segme	nt: n/o Holland	IRd.									
SITE	SPECIFIC IN	IPUT DATA				N	OISE N	IODE	L INPUTS	;	
Highway Data				S	ite Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	6,600 vehicle	s				/	Autos.	15		
Peak Hour	Percentage:	10%			Me	dium Tru	icks (2 A	xles).	15		
Peak H	lour Volume:	660 vehicle	s		He	avy Truc	ks (3+ A	xles).	15		
Ve	ehicle Speed:	45 mph		V	ehicle I	Mix					
Near/Far La	ane Distance:	54 feet		Ē	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	, 75.5%	6 14.0%	10.5%	6 97.42%
Ba	rrier Height	0.0 feet			Me	edium Tr	ucks:	48.9%	6 2.2%	48.9%	6 1.84%
Barrier Type (0-V	Vall, 1-Berm):	0.0			ŀ	leavy Tr	ucks:	47.3%	5.4%	47.3%	6 0.74%
Centerline D	ist. to Barrier:	64.0 feet		N	oise Sc	ource Fl	evation	: (in f	eet)		
Centerline Dist.	to Observer:	64.0 feet			0/30 00	Autos	. 00	00	001/		
Barrier Distance	to Observer:	0.0 feet			Modiu	n Trucks	. 0.0	97			
Observer Height	(Above Pad):	5.0 feet			Hoo	n Trucks	. 2.2	106	Grade Adii	ıstmen	t: 0.0
P	ad Elevation:	0.0 feet			mour	<i>y maone</i>					
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distanc	e (in	feet)		
	Road Grade:	0.0%				Autos	: 58.2	241			
	Left View:	-90.0 degre	es		Mediui	m Trucks	58.0	89			
	Right View:	90.0 degre	es		Heav	y Trucks	58.1	04			
FHWA Noise Mod	lel Calculation	s									-
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresn	e/	Barrier Atte	n Be	erm Atten
Autos:	68.46	-3.76		-1.10		-1.20		4.70	0.00	00	0.000
Medium Trucks:	79.45	-20.99		-1.08		-1.20		4.88	0.00	00	0.000
Heavy Trucks:	84.25	-24.95		-1.08		-1.20		-5.31	0.00	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenu	ation)						
VehicleType	Leq Peak Hou	Ir Leq Day	′ L	eq Eve	ening	Leq I	Vight		Ldn	C	NEL
Autos:	62	.4	60.4		59.1		53.1		61.5		62.1
Medium Trucks:	56	.2	52.3		44.8		53.5		59.7		59.7
Heavy Trucks:	57	.0	53.0		49.6		54.2		60.4		60.5
Vehicle Noise:	64	.2	61.7		59.7		58.4		65.4		65.7
Centerline Distan	ce to Noise C	ontour (in feet	)								
				70 dl	BA	65 0	1BA		60 dBA	5	5 dBA
			Ldn:	31		6	8		146		315
		C	VEL:	33		7	1		153		330

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	FH	WA-RD-77-108	HIGHW	AY NO	DISE P	REDICTIC	N MOD	EL _	_	_	
Scenar Road Nan Road Segme	io: EAP 2021 ne: Menifee Ro nt: s/o Holland	d. I Rd.				Project N Job Nu	lame: C mber: 1	anterw 1304	rood		
SITE	SPECIFIC IN	IPUT DATA				NC	DISE M	ODEL	INPUTS	S	
Highway Data				S	ite Cor	nditions (I	Hard = 1	0, Sof	t = 15)		
Average Daily	Traffic (Adt):	5,800 vehicle	s				A	utos:	15		
Peak Hour	Percentage:	10%			Me	edium Truc	ks (2 Ax	des):	15		
Peak H	lour Volume:	580 vehicle	s		He	avy Truck	's (3+ Ax	des):	15		
Ve	hicle Speed:	45 mph		V	ehicle	Mix					
Near/Far La	ne Distance:	54 feet		-	Veh	icleType	D	Day I	Evening	Night	Daily
Site Data						AL	itos: 7	5.5%	14.0%	10.5%	6 97.42%
Ba	rrier Heiaht:	0.0 feet			Μ	edium Tru	cks: 4	8.9%	2.2%	48.9%	6 1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0			1	Heavy Tru	cks: 4	7.3%	5.4%	47.3%	6 0.74%
Centerline Di	st. to Barrier:	64.0 feet		N	oise S	ource Ele	vations	(in fee	et)		
Centerline Dist.	to Observer:	64.0 feet				Autos:	0.00	0	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.29	97			
Observer Height	(Above Pad):	5.0 feet			Hear	vy Trucks:	8.00	06 0	Grade Adj	ustmen	t: 0.0
P	ad Elevation:	0.0 feet		-							
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distance	e (in fe	et)		
	Road Grade:	0.0%				Autos:	58.24	41			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	58.08	39			
	Right View:	90.0 degre	es		Hear	vy Trucks:	58.10	)4			
FHWA Noise Mod	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresne	l B	arrier Atte	en Be	erm Atten
Autos:	68.46	-4.32		-1.10		-1.20	-4	4.70	0.0	00	0.000
Medium Trucks:	79.45	-21.56		-1.08		-1.20	-4	4.88	0.0	00	0.000
Heavy Trucks:	84.25	-25.51		-1.08		-1.20	-{	5.31	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Daj	V L	eq Eve	ening	Leq N	ight	L	dn	0	ONEL
Autos:	61	.8	59.8		58.5		52.5		60.9	)	61.6
Medium Trucks:	55	5.6	51.7		44.2		53.0		59.1		59.2
Heavy Trucks:	56	6.5	52.4		49.0		53.7		59.9	)	60.0
Vehicle Noise:	63	3.7	61.1		59.1		57.8		64.8	5	65.1
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 dł	BA	65 dl	BA	60	dBA	5	5 dBA
		-	Ldn:	29		62		1	134		289
		С	NEL:	30		65		1	140		303

F	HWA-RD-77	-108 HIGI	HWAY I	NOISE PR	EDICTION	IMODEL			
Scenario: EAP 202 Road Name: Loop Pd	:1				Project Na	me: Can	erwood		
Road Segment: s/o Craig	Av.				500 MUII		-		
SITE SPECIFIC	INPUT DA	ГА			NOI	SE MOD	EL INPUT	'S	
Highway Data				Site Con	ditions (Ha	ard = 10,	Soft = 15)		
Average Daily Traffic (Adt)	2,900 veł	nicles				Auto	s: 15		
Peak Hour Percentage	: 10%			Med	dium Truck	s (2 Axles	<i>:):</i> 15		
Peak Hour Volume	: 290 veł	nicles		Hea	avy Trucks	(3+ Axles	s): 15		
Vehicle Speed	: 35 mp	h	ŀ	Vehicle N	lix				
Near/Far Lane Distance	: 48 fee	t	Ī	Vehi	cleType	Day	Evening	Night	Daily
Site Data					Auto	os: 77.5	% 14.0%	10.5%	92.009
Barrier Height	: 0.0 fe	et		Ме	dium Truci	ks: 48.0	% 2.0%	50.0%	3.00%
Barrier Type (0-Wall, 1-Berm)	: 0.0			H	leavy Truci	ks: 48.0	% 2.0%	50.0%	5.009
Centerline Dist. to Barrier	: 59.0 fe	et	ŀ	Noise So	urce Eleva	tions (in	feet)		
Centerline Dist. to Observer	: 59.0 fe	et	ŀ		Autos:	0.000			
Barrier Distance to Observer	: 0.0 fe	et		Mediun	n Trucks:	2.297			
Observer Height (Above Pad)	: 5.0 fe	et		Heav	v Trucks:	8.006	Grade Ad	ljustment	: 0.0
Pad Elevation	: 0.0 fe	et	-					-	
Road Elevation	: 0.0 fe	et	-	Lane Equ	livalent Di	stance (I	n teet)		
Road Grade	: 0.0%				Autos:	54.129			
Left View	: -90.0 de	egrees		Mediun	n Trucks:	53.966			
Right view	: 90.0 de	egrees		neav	y TTUCKS.	55.902			
FHWA Noise Model Calculati	ons								
VehicleType REMEL	Traffic Fl	ow Di	stance	Finite	Road I	Fresnel	Barrier At	ten Ber	m Atter
Autos: 64.3	30 -6	6.48	-0.6	62	-1.20	-4.6	9 0.	000	0.00
Medium Trucks: 75.	75 -21	.35	-0.6	60	-1.20	-4.8	8 0.	000	0.00
Heavy Trucks: 81.	57 -19	9.13	-0.6	60	-1.20	-5.3	5 0.	000	0.00
Unmitigated Noise Levels (w	ithout Topo	and barri	ier atter	nuation)					
VehicleType Leq Peak H	lour Leq	Day	Leq E	vening	Leq Nig	ht	Ldn	C	NEL
Autos:	56.0	54.1		52.7		46.7	55.	1	55.
Medium Trucks:	52.6	48.6		40.8		50.0	56.	2	56.
Heavy Trucks:	60.6	56.7		48.9		58.1	64.	2	64.
Vehicle Noise:	62.4	59.0		54.4		59.0	65.	3	65.
Centerline Distance to Noise	Contour (in	feet)	70	10.4	05 -10		00 - 10 4		-10.4
			70	aBA	65 dB/	4	oU dBA	55	аВА
		1.4		20	60		100	~	07
		Ldn:	2	29	62		133	2	287

	FHV	VA-RD-77-10	B HIGH	WAY N	IOISE P	REDICT		DEL			
Scenar Road Nar Road Segme	io: EAP 2021 ne: Leon Rd. nt: s/o Garbani	i Rd.				Projec Job I	t Name: Number:	Cante 11304	rwood		
SITE	SPECIFIC IN	IPUT DATA					NOISE	MODE	L INPUT	s	
Highway Data				5	Site Cor	nditions	; (Hard =	: 10, S	oft = 15)		
Average Daily	Traffic (Adt):	3,300 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Ti	rucks (2	Axles):	15		
Peak H	lour Volume:	330 vehicle	es		He	eavy Tru	icks (3+ .	Axles):	15		
Ve	hicle Speed:	55 mph		1	Vehicle	Mix					
Near/Far La	ne Distance:	48 feet			Veł	icleTyp	е	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	14.0%	10.5%	92.00%
Ba	rrier Heiaht:	0.0 feet			M	edium 1	rucks:	48.0%	2.0%	50.0%	3.00%
Barrier Type (0-W	/all, 1-Berm):	0.0				Heavy T	rucks:	48.0%	2.0%	50.0%	5.00%
Centerline Di	st. to Barrier:	59.0 feet		^	Voise S	ource E	levation	is (in f	eet)		
Centerline Dist.	to Observer:	59.0 feet				Auto	os: 0.	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucl	ks: 2.	297			
Observer Height	(Above Pad):	5.0 feet			Hea	v Truck	ks: 8.	006	Grade Ad	justmen	t: 0.0
Pa	ad Elevation:	0.0 feet		-	_						
Roi	ad Elevation:	0.0 feet		1	ane Eq	uivaler	it Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	os: 54	.129			
	Left View:	-90.0 degre	es		Mediu	m Truci	KS: 53	.966			
	Right View:	90.0 degre	es		Hea	vy Truci	(s: 53	.982			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	71.78	-7.89	)	-0.62	2	-1.20		-4.69	0.0	000	0.000
Medium Trucks:	82.40	-22.75		-0.60	)	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	86.40	-20.53	5	-0.60	)	-1.20		-5.35	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	l barrie	r atten	uation)						
VehicleType	Leq Peak Hou	Ir Leq Da	y	Leq Ev	/ening	Leq	Night		Ldn	C	NEL
Autos:	62	.1	60.2		58.8		52.	7	61.3	2	61.8
Medium Trucks:	57	.9	53.9		46.1		55.	3	61.	5	61.5
Heavy Trucks:	64	.1	60.1		52.3		61.	5	67.	7	67.7
Vehicle Noise:	66	.8	63.6		59.8		62.	9	69.3	3	69.5
Centerline Distan	ce to Noise Co	ontour (in fee	t)	70 -	10.4	05		<b>—</b>	0.404		
			L day	70 0	1BA 2	65	aBA		DU GBA	55	D aBA
		~	Lan:	53	5 4	1	115		247		032 E40
		Ĺ	IVEL:	54	+	1			202		04∠

	FH	WA-RD-77-108	B HIGHW	VAY NO	OISE P	REDICT	ION MO	DEL			
Scenar Road Nam Road Segme	io: EAP 2021 ne: Leon Rd.	d				Project Job N	Name: umber:	Cante 11304	rwood		
noud degine.	n. 3/0 0000 N	.u.									
SITE	SPECIFIC IN	IPUT DATA				N	IOISE N	NODE	L INPUTS	5	
Highway Data				S	ite Cor	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	3,200 vehicle	es				,	Autos	15		
Peak Hour	Percentage:	10%			Me	dium Tri	ucks (2 A	(xles	15		
Peak H	lour Volume:	320 vehicle	es		He	avy Tru	cks (3+ A	(xles	15		
Ve	hicle Speed:	55 mph		v	ehicle	Mix					
Near/Far La	ne Distance:	48 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%	6 14.0%	10.5%	92.00%
Ba	rrier Heiaht:	0.0 feet			М	edium T	rucks:	48.0%	6 2.0%	50.0%	3.00%
Barrier Type (0-W	/all, 1-Berm):	0.0			1	Heavy Ti	rucks:	48.0%	6 2.0%	50.0%	5.00%
Centerline Di	st. to Barrier:	59.0 feet		A	loise S	ource Fl	evation	s (in f	eet)		
Centerline Dist.	to Observer:	59.0 feet				Auto	e. 01	200	000		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck	s. 0.0	297			
Observer Height	(Above Pad):	5.0 feet			Hoo	n Truck	o: 81	106	Grade Adi	ustmen	t: 0.0
P	ad Elevation:	0.0 feet			noun	ly mach	3. 0.1	000	,		
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 54.	129			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 53.	966			
	Right View:	90.0 degre	es		Heav	/y Truck	s: 53.	982			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresh	el	Barrier Atte	en Be	rm Atten
Autos:	71.78	-8.02		-0.62		-1.20		-4.69	0.0	00	0.000
Medium Trucks:	82.40	-22.89		-0.60		-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	86.40	-20.67		-0.60		-1.20		-5.35	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	l barrier	attenu	uation)						
VehicleType	Leq Peak Ho	ur Leq Da	y L	Leg Ev	ening	Leq	Night		Ldn	0	NEL
Autos:	61	.9	60.0		58.6		52.6	;	61.1		61.7
Medium Trucks:	57	.7	53.7		46.0		55.2	2	61.3		61.4
Heavy Trucks:	63	1.9	59.9		52.2		61.4	ļ.	67.5		67.6
Vehicle Noise:	66	6.7	63.5		59.7		62.7	,	69.2		69.3
Centerline Distan	ce to Noise C	ontour (in fee	t)								
-				70 di	BA	65	dBA		60 dBA	5	5 dBA
			Ldn:	52	2	1	12		242		521
		С	NEL:	53	3	1	14		247		531

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	FH	WA-RD-77-108	HIGHW	AY NO	DISE PI	REDICTIO	ON MOI	DEL			
Scenar Road Nam Road Segme	io: EAP 2021 ne: Holland Ro nt: w/o Menife	l. e Rd.				Project N Job Nu	lame: ( mber: 1	Cante 1304	rwood		
SITE	SPECIFIC IN	IPUT DATA				N	DISE N	IODE	L INPUTS	5	
Highway Data				S	ite Cor	ditions (	Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	3,300 vehicle	s				1	Autos:	15		
Peak Hour	Percentage:	10%			Me	dium True	cks (2 A	xles):	15		
Peak H	our Volume:	330 vehicle	s		He	avy Truck	(3+ A	xles):	15		
Ve	hicle Speed:	45 mph		V	ohiolo	Miy					
Near/Far La	ne Distance:	48 feet		v	Veh	icleType		Dav	Evenina	Niaht	Daily
Site Data					1011	A	itos:	75.5%	14.0%	10.5%	6 97.42%
Ba	rrier Height	0.0 feet			М	edium Tru	icks:	48.9%	2.2%	48.9%	6 1.84%
Barrier Type (0-M	/all_1_Borm):	0.0 1001			1	Heavy Tru	icks:	47.3%	5.4%	47.3%	6 0.74%
Centerline Di	st. to Barrier:	59.0 feet				-					
Centerline Dist.	to Observer:	59.0 feet		N	loise S	ource Ele	vations	s (in f	eet)		
Barrier Distance	to Observer:	0.0 feet				Autos:	0.0	000			
Observer Height	(Above Pad):	5.0 feet			Meaiu	m Trucks:	2.2	97	Crada Adi	underso a	4 0 0
Pi	ad Elevation:	0.0 feet			Heat	y Trucks:	8.0	006	Grade Auj	usumen	1. 0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distand	e (in	feet)		
	Road Grade:	0.0%				Autos:	54.1	29			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	53.9	966			
	Right View:	90.0 degre	es		Heav	y Trucks:	53.9	982			
FHWA Noise Mod	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresn	el	Barrier Atte	en Be	erm Atten
Autos:	68.46	-6.77		-0.62		-1.20		4.69	0.0	00	0.000
Medium Trucks:	79.45	-24.00		-0.60		-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	84.25	-27.96		-0.60		-1.20		-5.35	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Daj	/ L	eq Ev	ening	Leq N	light		Ldn	0	ONEL
Autos:	59	9.9	57.9		56.6		50.5		59.0		59.6
Medium Trucks:	53	3.6	49.7		42.2		51.0		57.2		57.2
Heavy Trucks:	54	1.5	50.4		47.1		51.7		57.9		58.0
Vehicle Noise:	61	.7	59.1		57.2		55.9		62.8		63.1
Centerline Distant	ce to Noise C	ontour (in fee	)								
				70 di	BA	65 d	BA	6	60 dBA	5	5 dBA
			Ldn:	20		42			91		197
		С	NEL:	21		44			96		206

Seconaria: EAB 2021				Draigat Na	mai Ca	ntonuo	ad		
Bood Name: Holland Rd				Project Na	hor: 11	204	Ju		
Road Segment: e/o Menifee Rd.				300 14411		304			
	ΤΟΔΤΑ			NO	SE MO			\$	
Highway Data	DATA		Site Con	ditions (Ha	ard = $10$	), Soft =	= 15)	5	
Average Daily Traffic (Adt): 3.50	0 vehicles				Au	tos:	15		
Peak Hour Percentage: 1	10%		Med	dium Truck	s (2 Axl	es):	15		
Peak Hour Volume: 35	50 vehicles		Hea	avy Trucks	(3+ Axl	es):	15		
Vehicle Speed:	15 mph	H	Vohiolo	Alu					
Near/Far Lane Distance:	18 feet	-	Venicie N Vohi		D	av Ei	onina	Niaht	Daily
Site Data			veni	Auto	28' 75	19 LV	14.0%	10.5%	97 42
Demise Usinta	0.0.4		Me	dium Truci	ks: 48	9%	2.2%	48.9%	1 849
Barrier Height:	o.o reet			leavy Truci	ks: 47	.3%	5.4%	47.3%	0.749
Centerline Dist to Barrier: 5	0.0 0.0 feet	-		,					
Centerline Dist. to Observer: 5	9.0 feet	4	Noise So	urce Eleva	ations (	in feet)			
Barrier Distance to Observer:	0.0 feet			Autos:	0.00	0			
Observer Height (Above Pad):	5.0 feet		Mediun	n Trucks:	2.29	7			
Pad Elevation:	0.0 feet		Heav	y Trucks:	8.00	6 GA	ade Ad	ustment	0.0
Road Elevation:	0.0 feet		Lane Equ	ıivalent Di	stance	(in feet	Barrier Atten         Berrier Atten         Berrier           0.000         59.2         63.1           60 dBA         55.2         29		
Road Grade:	0.0%			Autos:	54.12	9			
Left View: -9	0.0 degrees		Mediun	n Trucks:	53.96	6			
Right View: 9	0.0 degrees		Heav	y Trucks:	53.98	2			
FHWA Noise Model Calculations									
VehicleType REMEL Tra	ffic Flow Dis	stance	Finite	Road I	Fresnel	Bai	rrier Att	en Ber	m Atter
Autos: 68.46	-6.51	-0.6	2	-1.20	-4	.69	0.0	000	0.00
Medium Trucks: 79.45	-23.75	-0.6	0	-1.20	-4	.88	0.0	000	0.00
Heavy Trucks: 84.25	-27.70	-0.6	0	-1.20	-5	.35	0.0	000	0.00
Unmitigated Noise Levels (without	Topo and barrie	er atter	uation)						
VehicleType Leq Peak Hour	Leq Day	Leq E	vening	Leq Nig	ht	Ld	'n	C	NEL
Autos: 60.1	58.1		56.8		50.8		59.2	2	59
Medium Trucks: 53.9	50.0		42.5		51.3		57.4	1	57
Heavy Trucks: 54.7	50.7		47.3		52.0		58.2	2	58.
Vehicle Noise: 62.0	59.4		57.4		56.1		63.		63
Centerline Distance to Noise Conto	ur (in feet)	70	10.4	05 -10		00 -	04		-10.4
	l dai	70 0	OBA	05 dB/	4	60 a	BA	55	aBA 04
	Lan:	2	4	44		95	2	2	.04
	CNEL:		1	40		95	9	2	14

	FHW	/A-RD-77-108 H	IIGHWAY	NOISE P	REDICT		EL			
Scenari	o: EAP 2021				Proiect	Name: Ca	anterwoo	d		
Road Nam	e: Holland Rd.				Job N	umber: 11	304			
Road Segmer	nt: w/o Briggs F	٦d.								
SITE	SPECIFIC IN	PUT DATA			I	IOISE MO		IPUTS		
Highway Data				Site Col	nditions	(Hard = 1	0, Soft =	15)		
Average Daily	Traffic (Adt):	800 vehicles				AL	itos: 1	5		
Peak Hour	Percentage:	10%		Me	edium Tr	ucks (2 Ax	<i>les):</i> 1	5		
Peak H	our Volume:	80 vehicles		He	avy Tru	cks (3+ Ax	les): 1	5		
Ve	hicle Speed:	45 mph		Mahlala			-			
Near/Far La	ne Distance:	48 feet		Venicie	NIX		0V EV	oning A	light	Daily
Site Data				Ver	licierype	lutos: 7	55% 1	4.0% 1	10.5% (	07 A2%
ono butu Dev		0.0 ()		N	, Iedium T	rucks: 4	3.9%	2.2%	18.9%	1.84%
Bai	rier Height:	0.0 feet			Heavy T	rucks: 4	7.3%	5.4% 4	17.3%	0.74%
Contorlino Die	all, 1-Berm):	0.0 50.0 foot			noary n	40/10.		0.170		0.1 170
Contorlino Dist	to Obsonvor:	59.0 feet		Noise S	ource E	evations	(in feet)			
Barriar Distance	to Observer.	0.0 feet			Auto	s: 0.00	0			
Observer Height /	Abous Dodu	0.0 feet		Mediu	ım Truck	s: 2.29	7			
Observer Height (	Above Pad):	5.0 feet		Hea	vy Truck	s: 8.00	6 Gra	ide Adjus	tment:	0.0
Pa	ad Elevation:	0.0 feet		Lano Er	wivalon	Distance	(in foot	1		
ROE	ad Elevation:	0.0 feet		Lane Lu	Auto			/		
,	Road Grade:	0.0%		Mark	AUIO	5. 04.12	.9			
	Left View:	-90.0 degrees	5	IviediL	Im Truck	5: 53.96	6			
	Right View:	90.0 degrees	6	Hea	<i>vy</i> т <i>ис</i> к	53.98	2			
FHWA Noise Mode	el Calculations	5								
VehicleType	REMEL	Traffic Flow	Distance	e Finite	e Road	Fresnel	Bari	rier Atten	Berm	Atten
Autos:	68.46	-12.92	-0	.62	-1.20	-4	.69	0.000	)	0.000
Medium Trucks:	79.45	-30.16	-0	.60	-1.20	-4	.88	0.000	)	0.000
Heavy Trucks:	84.25	-34.11	-0	.60	-1.20	-5	5.35	0.000	)	0.000
Unmitigated Noise	e Levels (with	out Topo and b	arrier att	enuation)						
VehicleType	Leq Peak Hou	r Leq Day	Leq	Evening	Leq	Night	Ldr	n	CN	EL
Autos:	53.	7 5	1.7	50.4	ļ.	44.4		52.8		53.4
Medium Trucks:	47.	5 43	3.6	36.1		44.8		51.0		51.1
Heavy Trucks:	48.	3 4	4.3	40.9	)	45.5		51.7		51.8
Vehicle Noise:	55.	6 5	3.0	51.0	)	49.7		56.7		57.0
Centerline Distance	e to Noise Co	ntour (in feet)								
			7	0 dBA	65	dBA	60 dE	BA	55 d	BA
		L	dn:	8	1	6	35		76	6
		CN	EL:	8	1	7	37		80	)

	FH\	NA-RD-77-108	HIGHW	AY N	OISE PI	REDICTIC	N MOD	EL			
Scenar	io: EAP 2021					Project N	lame: C	anterv	wood		
Road Nam	e: Holland Rd	L				Job Nu	mber: 1	1304			
Road Segme	nt: w/o Leon R	ld.									
SITE	SPECIFIC IN	IPUT DATA				NC	DISE M	ODEI	LINPUTS	ŝ	
Highway Data				s	ite Con	ditions (I	Hard = 1	0, So	ft = 15)		
Average Daily	Traffic (Adt):	700 vehicle	6				A	utos:	15		
Peak Hour	Percentage:	10%			Me	dium Truc	:ks (2 A)	des):	15		
Peak H	lour Volume:	70 vehicle	5		He	avy Truck	s (3+ A)	des):	15		
Ve	hicle Speed:	45 mph		V	ohiclo I	Mix					
Near/Far La	ne Distance:	48 feet		-	Veh	icleTvne	L	)av	Evenina	Niaht	Daily
Site Data						AL	itos: 7	7.5%	14.0%	10.5%	6 92.00%
Ba	rrier Heiaht	0.0 feet			Me	edium Tru	cks: 4	8.0%	2.0%	50.0%	6 3.00%
Barrier Type (0-W	all. 1-Berm):	0.0			ŀ	leavy Tru	cks: 4	8.0%	2.0%	50.0%	5.00%
Centerline Di	st. to Barrier:	59.0 feet			laisa Sr	urce Ele	vations	(in fo	of)		
Centerline Dist.	to Observer:	59.0 feet		~	0130 00	Autor	0.00	20	01/		
Barrier Distance	to Observer:	0.0 feet			Madiu	Autos.	2.20	JU 70			
Observer Height (	Above Pad):	5.0 feet			Viediui	II TIUCKS.	2.23	20	Grada Adii	ustmon	t 00
Pa	ad Elevation:	0.0 feet			neav	y mucks.	0.00	90	Orade Haji	usumen	. 0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distance	e (in f	eet)		
	Road Grade:	0.0%				Autos:	54.1	29			
	Left View:	-90.0 degre	es		Mediur	m Trucks:	53.9	66			
	Right View:	90.0 degre	es		Heav	y Trucks:	53.9	82			
FHWA Noise Mod	el Calculation	s									-
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresne	1	Barrier Atte	en Be	erm Atten
Autos:	68.46	-13.75		-0.62		-1.20		4.69	0.0	00	0.000
Medium Trucks:	79.45	-28.62		-0.60		-1.20		4.88	0.0	00	0.000
Heavy Trucks:	84.25	-26.40		-0.60		-1.20	-	5.35	0.0	00	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier a	attenu	uation)						
VehicleType	Leq Peak Hou	Ir Leq Day	' L	eq Ev	ening	Leq N	light		Ldn	C	NEL
Autos:	52	.9	51.0		49.6		43.6		52.0		52.6
Medium Trucks:	49	.0	45.1		37.3		46.5		52.6	,	52.7
Heavy Trucks:	56	.1	52.1		44.3		53.5		59.7		59.7
Vehicle Noise:	58	.3	55.0		50.9		54.6		61.0	,	61.1
Centerline Distant	ce to Noise C	ontour (in feet	)								
				70 d	BA	65 di	BA	6	0 dBA	55	5 dBA
			Ldn:	15		32			69		149
		Ci	VEL:	15		33			70		151

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	FH	WA-RD-77-108	HIGHW	AY N	DISE PI	REDICTIC	ON MO	DEL			
Scenai Road Nan Road Segme	rio: EAP 2021 ne: Scott Rd. nt: w/o Haun I	Rd.				Project N Job Nu	lame: ( mber: `	Cante 11304	rwood		
SITE	SPECIFIC II	VPUT DATA				NO	DISE N	IODE	L INPUTS	5	
Highway Data				S	ite Cor	ditions (l	Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	11,400 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Truc	cks (2 A	(xles):	15		
Peak F	lour Volume:	1,140 vehicle	s		He	avy Truck	ks (3+ A	(xles):	15		
Ve	ehicle Speed:	50 mph		v	ehicle	Mix					
Near/Far La	ne Distance:	78 feet		-	Veh	icleType		Day	Evening	Night	Daily
Site Data						AL	itos:	75.5%	5 14.0%	10.5%	6 97.42%
Ba	rrier Height:	0.0 feet			М	edium Tru	icks:	48.9%	5 2.2%	48.9%	6 1.84%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tru	icks:	47.3%	5.4%	47.3%	6 0.74%
Centerline Di	ist. to Barrier:	76.0 feet			loise Se	ource Ele	vation	s (in f	eet)		
Centerline Dist.	to Observer:	76.0 feet				Autos	0.0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.2	97			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks:	8.0	006	Grade Adi	ustmen	t: 0.0
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distand	ce (in	feet)		
	Road Grade:	0.0%				Autos:	65.4	422			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	65.2	286			
	Right View:	90.0 degre	es		Heav	/y Trucks:	65.3	300			
FHWA Noise Mod	lel Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Distar	ice	Finite	Road	Fresn	el	Barrier Atte	en Be	erm Atten
Autos:	70.20	-1.84		-1.85		-1.20		-4.73	0.0	00	0.000
Medium Trucks:	81.00	-19.08		-1.84		-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	85.38	-23.03		-1.84		-1.20		-5.25	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Daj	V L	eq Ev	ening	Leq N	light		Ldn	C	ONEL
Autos:	65	5.3	63.3		62.0		56.0		64.4		65.0
Medium Trucks:	58	3.9	55.0		47.5		56.2		62.4		62.4
Heavy Trucks:	59	9.3	55.3		51.9		56.5		62.7		62.8
Vehicle Noise:	67	7.0	64.5		62.5		61.0		68.0		68.4
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 d	BA	65 d	BA	0	60 dBA	5	5 dBA
			Ldn:	56		12	1		261		562
		С	NEL:	59		127	7		274		590

	FHW	/A-RD-77-108	HIGH	WAY NO	DISE PF	REDICT		DEL			
Scenario	: EAP 2021					Project	Name: (	Canter	wood		
Road Name	e: Scott Rd.					Job N	umber:	11304			
Road Segmen	t: e/o Haun Ro	d.									
SITE S	PECIFIC IN	PUT DATA				Ν	IOISE N	/IODE	L INPUT	s	
Highway Data				S	ite Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily 7	raffic (Adt): 1	7,000 vehicle	s					Autos:	15		
Peak Hour F	Percentage:	10%			Me	dium Tri	ucks (2 A	(xles):	15		
Peak Ho	our Volume:	1,700 vehicle	s		He	avy Truc	cks (3+ A	(xles):	15		
Veh	icle Speed:	50 mph		v	ehicle l	Nix					
Near/Far Lan	e Distance:	78 feet			Veh	icleType	•	Day	Evening	Night	Daily
Site Data						/	Autos:	75.5%	14.0%	10.5%	97.42%
Bari	rier Heiaht:	0.0 feet			Me	edium Ti	rucks:	48.9%	2.2%	48.9%	1.84%
Barrier Type (0-Wa	all. 1-Berm):	0.0			F	leavy Ti	rucks:	47.3%	5.4%	47.3%	0.74%
Centerline Dis	t. to Barrier:	76.0 feet			laiaa Ca	uree E	ovetion	o (in fi	a		
Centerline Dist. to	o Observer:	76.0 feet		~	0136 30			200			
Barrier Distance to	o Observer:	0.0 feet			Madiuu	AUIO Truck	s. 0.0	007			
Observer Height (A	Above Pad):	5.0 feet			Hoov	n nuck	5. Z.4 o· 9(	297	Grada Ad	iustmont	0.0
Pa	d Elevation:	0.0 feet			neav	y much	5. 0.0	000	Orade Au	usunone	0.0
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalen	t Distand	ce (in i	feet)		
R	oad Grade:	0.0%				Auto	s: 65.4	422			
	Left View:	-90.0 degre	es		Mediur	n Truck	s: 65.2	286			
	Right View:	90.0 degre	es		Heav	y Truck	s: 65.3	300			
FHWA Noise Mode	I Calculations	5									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	70.20	-0.10		-1.85		-1.20		-4.73	0.0	000	0.000
Medium Trucks:	81.00	-17.34		-1.84		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-21.30		-1.84		-1.20		-5.25	0.0	000	0.000
Unmitigated Noise	Levels (witho	out Topo and	barri	er attenu	uation)						
VehicleType	Leq Peak Hou	r Leq Day	/	Leq Ev	ening	Leq	Night		Ldn	CI	VEL
Autos:	67.	0	65.0		63.7		57.7		66.1		66.8
Medium Trucks:	60.	6	56.7		49.2		58.0		64.1		64.2
Heavy Trucks:	61.	0	57.0		53.6		58.2		64.4	1	64.5
Vehicle Noise:	68.	7	66.2		64.3		62.8		69.8	3	70.1
Centerline Distance	e to Noise Co	ntour (in feet	)								
			L	70 di	BA	65	dBA	6	60 dBA	55	dBA
			Ldn:	73		1	58		340	7	33

	FHW	VA-RD-77-108 H	IGHWA	Y N	OISE PF	REDICT	ION MC	DEL				
Scenar Road Nan Road Segme	rio: EAP 2021 ne: Scott Rd. nt: w/o Menifee	e Rd.				Project Job N	Name: umber:	Cante 11304	rwood			
SITE	SPECIFIC IN	PUT DATA				N	IOISE	MODE	L INF	PUTS		
Highway Data				S	lite Con	ditions	(Hard =	: 10, S	oft = 1	5)		
Average Daily Peak Hour Peak H	Traffic (Adt): 1 Percentage: Iour Volume:	6,900 vehicles 10% 1,690 vehicles			Me He	dium Tri avy Truc	ucks (2 . cks (3+ .	Autos: Axles): Axles):	15 15 15			
Ve	ehicle Speed:	55 mph		v	ehicle l	Mix						
Near/Far La	ne Distance:	78 feet		F	Veh	icleTvpe		Dav	Even	ina N	liaht	Dailv
Site Data						- /	Autos:	75.5%	5 14.	0% 1	0.5%	97.42%
Ba	rrier Height:	0.0 feet			Me	edium Ti	rucks:	48.9%	5 2.	2% 4	8.9%	1.84%
Barrier Type (0-W	Vall, 1-Berm):	0.0			ŀ	leavy Ti	rucks:	47.3%	5.	4% 4	7.3%	0.74%
Centerline Di	ist. to Barrier:	76.0 feet		^	loise So	ource El	evation	ns (in f	eet)			
Centerline Dist.	to Observer:	76.0 feet		F		Auto	s [.] 0	000	,			
Barrier Distance	to Observer:	0.0 feet			Mediuu	n Truck	s [.] 2.	297				
Observer Height	(Above Pad):	5.0 feet			Heav	v Truck	s: 8.	006	Grade	e Adjus	tment:	0.0
P	ad Elevation:	0.0 feet		-	_							
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen	Distan	ce (in	teet)			
	Road Grade:	0.0%				Auto	s: 65	.422				
	Left View: Right View:	-90.0 degrees			Mediui Heav	n Truck v Truck	s: 65. s: 65	.286 300				
	rught thom.	50.0 degrees				,		.000				
FHWA Noise Mod	el Calculations	5	<b>B</b> ¹ · ·									
Venicie I ype	REMEL	I raffic Flow	Distant	e	Finite	Road	Fresi	nel	Barrie	r Atten	Ber	m Atten
Autos: Madium Truaka	71.78	-0.54	-	1.85		-1.20		-4.73		0.000		0.000
Heavy Trucks	86.40	-17.76		1.04		-1.20		-4.00		0.000		0.000
Manufacture of Maria	- 1 1- (141					1.20		0.20		0.000		0.000
VehicleType	e Levels (with	r Lea Day	arrier a	a Ev	iation) ening	100	Niaht		l dn		CI	IFI
Autos	Ley Feak 1100	2 6f	12	4	64 9	Ley	58 i	R	Lun	67.3	CI	67 9
Medium Trucks:	61.	6 57	.7		50.2		58.	9		65.1		65.1
Heavy Trucks:	61.	.6 57	.6		54.2		58.	- 8		65.0		65.1
Vehicle Noise:	69.	.8 67	′.2		65.4		63.	6		70.7		71.0
Centerline Distan	ce to Noise Co	ntour (in feet)										
		,,		70 d	BA	65	dBA		60 dBA	1	55	dBA
		Lo	in:	85	;	18	82		393		8	46
		CNE	L:	89	)	1	92		413		8	90

	FH	WA-RD-77-108	3 HIGH	WAY NO	OISE P	REDICTI		DEL			
Scena	rio: EAP 2021					Project	Name: (	Cante	rwood		
Road Nar	ne: Scott Rd.					Job Ni	umber: `	11304			
Road Segme	ent: w/o Briggs	Rd.									
SITE	SPECIFIC IN	NPUT DATA				N	OISE N	/ODE		s	
Highway Data				S	Site Cor	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	14,500 vehicle	es				,	Autos.	15		
Peak Hou	Percentage:	10%			Me	dium Tru	icks (2 A	xles).	15		
Peak I	Hour Volume:	1,450 vehicle	s		He	avy Truc	:ks (3+ A	(xles)	15		
Ve	ehicle Speed:	55 mph		v	ehicle/	Mix					
Near/Far La	ane Distance:	78 feet		-	Veh	icleTvpe		Dav	Evenina	Niaht	Dailv
Site Data						A	lutos:	75.5%	6 14.0%	10.5%	6 97.42%
Ba	rrier Height	0.0 feet			М	edium Tr	ucks:	48.9%	6 2.2%	48.9%	6 1.84%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tr	ucks:	47.3%	6 5.4%	47.3%	6 0.74%
Centerline D	ist. to Barrier:	76.0 feet		A	loise S	ource El	evation	s (in f	eet)		
Centerline Dist.	to Observer:	76.0 feet				Autos	· 0(	000	000)		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.2	97			
Observer Height	(Above Pad):	5.0 feet			Heav	n Trucks	. 80	006	Grade Ad	iustmer	nt: 0.0
F	Pad Elevation:	0.0 feet				,					
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distant	ce (in	feet)		
	Road Grade:	0.0%				Autos	s: 65.4	422			
	Left View:	-90.0 degre	es		Mediu	m Trucks	65.2	286			
	Right View:	90.0 degre	es		Heav	/y Trucks	65.3	300			
FHWA Noise Mod	lel Calculatior	IS									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresn	el	Barrier Att	en Be	erm Atten
Autos:	71.78	-1.21		-1.85		-1.20		-4.73	0.0	000	0.000
Medium Trucks:	82.40	-18.45		-1.84		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	86.40	-22.40	1	-1.84		-1.20		-5.25	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	l barrie	r attenı	uation)						
VehicleType	Leq Peak Ho	ur Leq Da	у	Leq Ev	ening	Leq I	Night		Ldn	(	CNEL
Autos:	67	7.5	65.5		64.2		58.2		66.6	;	67.2
Medium Trucks:	60	).9	57.0		49.5		58.3		64.4	ŧ	64.5
Heavy Trucks:	61	1.0	56.9		53.5		58.2		64.4	ł	64.5
Vehicle Noise:	69	9.1	66.6		64.7		63.0		70.0	)	70.4
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 di	BA	65 0	dBA		60 dBA	5	5 dBA
			Ldn:	76	6	16	65		355		764
		C	NEL:	80	)	17	73		373		804

Tuesday, March 06, 2018

Tuesday, March 06, 2018

	FH	WA-RD-77-108	HIGHW	AY NO	DISE PI	REDICTIC	N MODE	L			
Scenai Road Nan Road Segme	rio: EAP 2021 ne: Scott Rd. nt: w/o Leon F	₹d.				Project N Job Nur	lame: Ca mber: 113	nterwood 304			
SITE	SPECIFIC IN	NPUT DATA				NC	DISE MO	DEL INPU	TS		
Highway Data				S	ite Cor	ditions (H	Hard = 10	, Soft = 15)			
Average Daily	Traffic (Adt):	14,000 vehicle	s				Au	tos: 15			
Peak Hour	Percentage:	10%			Me	dium Truc	ks (2 Axle	es <i>):</i> 15			
Peak H	lour Volume:	1,400 vehicle	s		He	avy Truck	s (3+ Axle	es <i>):</i> 15			
Ve	hicle Speed:	55 mph		v	ehicle	Mix					
Near/Far La	ne Distance:	78 feet		F	Veh	icleType	Da	y Evening	a Ni	ght	Daily
Site Data						Au	itos: 75	.5% 14.0%	6 10	0.5%	97.42%
Ba	rrier Height:	0.0 feet			М	edium Tru	cks: 48	.9% 2.2%	6 4	8.9%	1.84%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tru	cks: 47	.3% 5.4%	6 4	7.3%	0.74%
Centerline Di	ist. to Barrier:	76.0 feet		N	loise Se	ource Elev	vations (	in feet)			
Centerline Dist.	to Observer:	76.0 feet				Autos:	0.000	)			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.297	,			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks:	8.006	Grade A	djust	ment:	0.0
P	ad Elevation:	0.0 feet		-							
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent L	Distance	(in feet)			
	Road Grade:	0.0%				Autos:	65.422	2			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	65.286	6			
	Right View:	90.0 degre	es		Heav	y Trucks:	65.300	)			
FHWA Noise Mod	lel Calculation	IS									
VehicleType	REMEL	Traffic Flow	Distar	се	Finite	Road	Fresnel	Barrier A	Atten	Bern	n Atten
Autos:	71.78	-1.36		-1.85		-1.20	-4.	73 (	0.000		0.000
Medium Trucks:	82.40	-18.60		-1.84		-1.20	-4.	88 (	0.000		0.000
Heavy Trucks:	86.40	-22.56		-1.84		-1.20	-5.	25 (	0.000		0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	ttenu	uation)						
VehicleType	Leq Peak Ho	ur Leq Day	/ Le	eq Ev	ening	Leq N	ight	Ldn		CN	EL
Autos:	67	'.4	65.4		64.0		58.0	66	6.5		67.1
Medium Trucks:	60	).8	56.9		49.4		58.1	64	1.3		64.3
Heavy Trucks:	60	).8	56.8		53.4		58.0	64	1.2		64.3
Vehicle Noise:	68	3.9	66.4		64.5		62.8	69	9.9		70.2
Centerline Distan	ce to Noise C	ontour (in feet	)								
				70 di	BA	65 dE	BA	60 dBA		55 c	IBA
		_	Ldn:	75		161		346		74	6
		C	NEL:	79		169	)	364		78	5

					010211	Ebionio	11102				
Scenario	p: EAP 2021					Project Na	ame: C	anter	wood		
Road Name	e: Scott Rd.					Job Nurr	nber: 1	1304			
Road Segmen	t: e/o Leon R	d.									
SITE S	PECIFIC IN	IPUT DATA				NO	ISE M	ODE	L INPUT	s	
Highway Data				5	Site Cond	ditions (H	ard = 1	10, So	oft = 15)		
Average Daily 1	raffic (Adt):	5,700 vehicles					A	utos:	15		
Peak Hour I	Percentage:	10%			Med	lium Truck	(2 A)	kles):	15		
Peak Ho	our Volume:	570 vehicles			Hea	avy Trucks	: (3+ A)	kles):	15		
Veh	icle Speed:	55 mph		١	/ehicle N	lix					
Near/Far Lan	e Distance:	78 feet			Vehi	cleType	Ĺ	Day	Evening	Night	Daily
Site Data						Aut	os: 7	7.5%	14.0%	10.5%	92.00%
Bar	rier Heiaht:	0.0 feet			Me	dium Truc	ks: 4	8.0%	2.0%	50.0%	3.00%
Barrier Type (0-Wa	all, 1-Berm):	0.0			Н	leavy Truc	ks: 4	8.0%	2.0%	50.0%	5.00%
Centerline Dis	t. to Barrier:	76.0 feet			laise Sa	urce Elev	ations	(in fe	of)		
Centerline Dist. t	o Observer:	76.0 feet		-		Autos:	0.0	00			
Barrier Distance t	o Observer:	0.0 feet			Mediun	n Trucks:	2.2	97			
Observer Height (A	Above Pad):	5.0 feet			Heav	/ Trucks:	8.0	06	Grade Ad	justment	0.0
Pa	d Elevation:	0.0 feet				MRUDEL           Project Name: Canterwood Job Number: 11304           NOISE MODEL INPUTS nditions (Hard = 10, Soft = 15)           Autos: 15           edium Trucks (2 Axles): 15           eavy Trucks (3+ Axles): 15           Mix           hicle Type         Day           Evening         Night           Autos: 77.5%         14.0%           edium Trucks: 48.0%         2.0%           conce         2.0%           Gaire Elevations (in feet)           Autos:         0.000           um Trucks:         48.0%           2.297         0.000           um Trucks:         65.286           vy Trucks:         65.286           vy Trucks:         65.286           vy Trucks:         65.300           = Road         Fresnel         Barrier Atten           -1.20         -4.73         0.000           -1.20         -5.25         0.000           -1.20         -5.25         0.000           -1.20         -5.25         0.000           -1.20         -5.25         0.000           -1.20         -5.25         0.000           -1.20         -5.25         0.000					
Roa	d Elevation:	PP 2021         Project Name: Canterwood Job Number: 11304           coll en Rd.         Job Number: 11304           CIFIC INPUT DATA         NOISE MODEL INPUTS           Site Conditions (Hard = 10, Soft = 15)         Site Conditions (Hard = 10, Soft = 15)           c (Adt):         5,700 vehicles         Autos:         15           finitege:         10%         Medium Trucks (2 Akles):         15           Speed:         55 mph         Vehicle Mix         Day         Evening         Night           4teight:         0.0 feet         Medium Trucks:         48.0%         2.0%         50.0%           Barrier:         76.0 feet         Medium Trucks:         2.0%         50.0%           Barrier:         76.0 feet         Medium Trucks:         2.0%         50.0%           Barrier:         76.0 feet         Medium Trucks:         8.006         Grade Adjustment.           server:         0.0 feet         Medium Trucks:         65.286         Heavy Trucks:         65.300           tivew:         90.0 degrees         Medium Trucks:         65.300         Evening         Even									
F	load Grade:	0.0%				Autos:	65.4	22			
	Left View:	-90.0 degree	S		Mediun	1 Trucks:	65.2	86			
	Right View:	90.0 degree	s		Heavy	/ Trucks:	65.3	00			
FHWA Noise Mode	I Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite I	Road	Fresne	e/ .	Barrier Att	en Ber	m Atten
Autos:	71.78	-5.51		-1.85	5	-1.20	-	4.73	0.0	000	0.00
Medium Trucks:	82.40	-20.38		-1.84	Ļ	-1.20	-	4.88	0.0	000	0.00
Heavy Trucks:	86.40	-18.16		-1.84	ŀ	-1.20	-	5.25	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and I	barrier	atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day	L	Leq Ev	rening	Leq Nig	ght		Ldn	C	VEL
Autos:	63	.2 6	61.3		59.9		53.9		62.3	3	63.
Medium Trucks:	59	.0 4	5.0		47.2		56.4		62.6	6	62.
Heavy Trucks:	65	.2 6	61.2		53.4		62.6		68.8	3	68.
Vehicle Noise:	67	.9 6	64.8		61.0		64.0		70.	5	70.
Centerline Distanc	e to Noise Co	ontour (in feet)					- 1				
				70 a	BA	65 dB	A	6	0 dBA	55	dBA
			dn:	82	2	176			378	8	15
				~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~							

	FH\	VA-RD-77-108	HIGHW	AY NO	DISE PI	REDICT	ION MO	DEL				
Scenari	o: EA 2025					Project	Name:	Cante	rwood			
Road Nam	e: Haun Rd.					Job N	lumber:	11304				
Road Segmer	nt: n/o Scott R	d.										
SITE	SPECIFIC IN	IPUT DATA				P	IOISE I	MODE	EL INPU	TS		
Highway Data				S	ite Cor	ditions	(Hard =	: 10, S	oft = 15)			
Average Daily	Traffic (Adt):	7,700 vehicles	3					Autos.	: 15			
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2 /	Axles)	: 15			
Peak H	our Volume:	770 vehicles	6		He	avy Tru	cks (3+ )	Axles)	: 15			
Ve	hicle Speed:	50 mph		v	ehicle	Mix						
Near/Far La	ne Distance:	48 feet		-	Veh	icleType	)	Day	Evenin	g N	ight	Daily
Site Data							Autos:	75.5%	6 14.09	% 1	0.5%	97.42%
Bai	rier Height:	0.0 feet			М	edium T	rucks:	48.9%	6 2.29	6 4	8.9%	1.84%
Barrier Type (0-W	all, 1-Berm):	0.0			I	Heavy T	rucks:	47.3%	6 5.49	6 4	7.3%	0.74%
Centerline Dis	st. to Barrier:	59.0 feet		N	oise Se	ource E	levation	s (in f	eet)			
Centerline Dist.	to Observer:	59.0 feet				Auto	s; 0.	000	,			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s; 2.	297				
Observer Height (	Above Pad):	5.0 feet			Heav	v Truck	s: 8.	006	Grade /	Adjust	ment:	0.0
Pa	ad Elevation:	0.0 feet		-								
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distan	ce (in	feet)			
	Road Grade:	0.0%				Auto	s: 54.	129				
	Left View:	-90.0 degree	es		Mediu	m Iruck	s: 53.	966				
	Right View:	90.0 degree	es		Heav	y Truck	s: 53.	982				
FHWA Noise Mode	el Calculation	s										
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresr	nel	Barrier /	Atten	Ber	m Atten
Autos:	70.20	-3.54		-0.62		-1.20		-4.69	1	0.000		0.000
Medium Trucks:	81.00	-20.78		-0.60		-1.20		-4.88		0.000		0.000
Heavy Trucks:	85.38	-24.74		-0.60		-1.20		-5.35		0.000		0.00
Unmitigated Noise	e Levels (with	out Topo and	barrier a	attenu	ation)							
VehicleType	Leq Peak Hou	ır Leq Day	· L	eq Ev	ening	Leq	Night		Ldn		Cl	VEL
Autos:	64	.8	62.8		61.5		55.5	5	6	3.9		64.6
Medium Trucks:	58	.4	54.5		47.0		55.8	3	6	1.9		62.0
Heavy Trucks:	58	.8	54.8		51.4		56.0	)	6	2.2		62.3
Vehicle Noise:	66	.5	64.0		62.1		60.5	5	6	7.6		67.9
Centerline Distance	ce to Noise Co	ontour (in feet	)									
				70 di	BA	65	dBA		60 dBA		55	dBA
			Ldn:	41		8	37		188		4	06
		CI	VEL:	43		ç	92		198		4	26

	FH	WA-RD-77-108	HIGHWA	NOISE F	REDICT	ION MC	DEL			
Scena	rio: EA 2025				Project	Name:	Cante	wood		
Road Na	me: Zeiders Ro	i.			Job N	umber:	11304			
Road Segm	ent: s/o Scott R	td.								
SITE	SPECIFIC I	NPUT DATA			Ν	IOISE	MODE		s	
Highway Data				Site Co.	nditions	(Hard =	= 10, S	oft = 15)		
Average Dail	/ Traffic (Adt):	1,400 vehicles	5				Autos:	15		
Peak Hou	r Percentage:	10%		M	edium Tri	ucks (2	Axles):	15		
Peak	Hour Volume:	140 vehicles	5	H	eavy Tru	cks (3+	Axles):	15		
ν	ehicle Speed:	50 mph		Vehicle	Mix					
Near/Far L	ane Distance:	48 feet		Vei	hicleType		Day	Evening	Night	Daily
Site Data						Autos:	75.5%	14.0%	10.5%	97.42%
B	arrior Hoight	0.0 feet		٨	ledium T	rucks:	48.9%	2.2%	48.9%	1.84%
Barrier Type (0-	Nall, 1-Berm):	0.0			Heavy T	rucks:	47.3%	5.4%	47.3%	0.74%
Centerline L	oist. to Barrier:	59.0 feet		Noise S	ource Fl	evation	ns (in f	eet)		
Centerline Dis	to Observer:	59.0 feet		110/30 0	Auto	e. 0	000			
Barrier Distance	e to Observer:	0.0 feet		Modiu	im Truck	5. U	207			
Observer Height	(Above Pad):	5.0 feet		Hoa	an Truck	5. <u>2</u> o 9	006	Grade Ad	iustment	.00
1	Pad Elevation:	0.0 feet		nou	vy much	3. 0	.000	,		
R	oad Elevation:	0.0 feet		Lane E	quivalen	t Distar	nce (in	feet)		
	Road Grade:	0.0%			Auto	s: 54	.129			
	Left View:	-90.0 degree	s	Mediu	Im Truck	s: 53	.966			
	Right View:	90.0 degree	S	Hea	vy Truck	s: 53	.982			
FHWA Noise Mo	del Calculation	IS								
VehicleType	REMEL	Traffic Flow	Distanc	e Finite	e Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos	: 70.20	-10.95	-(	.62	-1.20		-4.69	0.0	000	0.000
Medium Trucks	: 81.00	-28.19	-0	.60	-1.20		-4.88	0.0	000	0.000
Heavy Trucks	85.38	-32.14	-0	.60	-1.20		-5.35	0.0	000	0.000
Unmitigated Noi	se Levels (with	out Topo and	barrier att	enuation)						
VehicleType	Leq Peak Ho	ur Leq Day	Leq	Evening	Leq	Night		Ldn	C	NEL
Autos	: 57	7.4 5	55.4	54.1	i i	48.	1	56.5	5	57.1
Medium Trucks	: 51	.0 4	47.1	39.6	6	48.	4	54.5	5	54.6
Heavy Trucks	51	.4 4	47.4	44.(	)	48.	6	54.8	3	54.9
Vehicle Noise	59	9.1 క	56.6	54.7	7	53.	1	60.2	2	60.5
Centerline Dista	nce to Noise C	ontour (in feet)								
			7	0 dBA	65	dBA		60 dBA	55	dBA
		1	dn:	13	2	8		60	. 1	30
		CN	IEL:	14	2	9		64	1	37

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	FH	WA-RD-77-108	HIGHW	AY NO	OISE PI	REDICTIC	N MOD	EL			
Scenai Road Nan Road Segme	rio: EA 2025 ne: Antelope R nt: s/o Scott R	td. td.				Project N Job Nu	lame: Ci mber: 11	anterw 1304	ood		
SITE	SPECIFIC IN	NPUT DATA				NC	DISE M	ODEL	INPUTS	5	
Highway Data				S	lite Cor	ditions (F	Hard = 1	0, Sofi	t = 15)		
Average Daily	Traffic (Adt):	12,100 vehicle	s				Au	utos:	15		
Peak Hour	Percentage:	10%			Me	dium Truc	sks (2 Ax	des):	15		
Peak H	lour Volume:	1,210 vehicle	s		He	avy Truck	's (3+ Ax	des):	15		
Ve	ehicle Speed:	50 mph		v	ehicle/	Mix					
Near/Far La	ne Distance:	48 feet		F	Veh	icleType	D	Day E	vening	Night	Daily
Site Data						AL	itos: 7	5.5%	14.0%	10.5%	97.42%
Ba	rrier Height:	0.0 feet			М	edium Tru	cks: 4	8.9%	2.2%	48.9%	1.84%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tru	cks: 4	7.3%	5.4%	47.3%	0.74%
Centerline Di	ist. to Barrier:	59.0 feet		N	loise Se	ource Ele	vations	(in fee	t)		
Centerline Dist.	to Observer:	59.0 feet				Autos:	0.00	00	/		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.29	97			
Observer Height	(Above Pad):	5.0 feet			Heav	y Trucks:	8.00	06 G	ade Adji	ustment	: 0.0
P	ad Elevation:	0.0 feet		-		,					
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distance	e (in fe	et)		
	Road Grade:	0.0%				Autos:	54.12	29			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	53.96	56			
	Right View:	90.0 degre	es		Heav	/y Trucks:	53.98	32			
FHWA Noise Mod	lel Calculation	IS									
VehicleType	REMEL	Traffic Flow	Distar	се	Finite	Road	Fresne	l B	arrier Atte	en Bei	rm Atten
Autos:	70.20	-1.58		-0.62		-1.20	-4	4.69	0.0	00	0.000
Medium Trucks:	81.00	-18.82		-0.60		-1.20	-4	4.88	0.0	00	0.000
Heavy Trucks:	85.38	-22.77		-0.60		-1.20	-5	5.35	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	ttenu	lation)						
VehicleType	Leq Peak Ho	ur Leq Daj	/ Le	eq Ev	ening	Leq N	ight	L	.dn	С	NEL
Autos:	66	5.8	64.8		63.5		57.5		65.9		66.5
Medium Trucks:	60	).4	56.5		49.0		57.7		63.9		63.9
Heavy Trucks:	60	).8	56.8		53.4		58.0		64.2		64.3
Vehicle Noise:	68	3.5	65.9		64.0		62.5		69.5		69.8
Centerline Distan	ce to Noise C	ontour (in fee	)								
				70 dl	BA	65 dl	BA	60	dBA	55	dBA
		-	Ldn:	55	5	118	3	2	55	5	549
		С	NEL:	58	3	124	Ļ	2	67	Ę	576

	FHV	/A-RD-77-108	HIGH	IWAY NC	ISE PRED	CTION	MODEL			
Scenario	p: EA 2025				Pro	ect Nar	ne: Cante	rwood		
Road Name	e: Menifee Rd				Jo	b Numb	er: 11304			
Road Segmen	t: n/o Holland	Rd.								
SITE S	SPECIFIC IN	PUT DATA				NOIS	E MODE	L INPUT	s	
Highway Data				Si	te Conditio	ns (Ha	rd = 10, S	oft = 15)		
Average Daily	Traffic (Adt):	6,900 vehicle	s				Autos	15		
Peak Hour I	Percentage:	10%			Medium	Trucks	(2 Axles)	15		
Peak He	our Volume:	690 vehicle	s		Heavy	Frucks (	'3+ Axles)	15		
Vel	nicle Speed:	45 mph		Ve	ehicle Mix					
Near/Far Lar	e Distance:	54 feet			VehicleT	ype	Day	Evening	Night	Daily
Site Data						Auto	s: 75.5%	6 14.0%	10.5%	97.429
Bar	rier Heiaht:	0.0 feet			Mediur	n Truck	s: 48.9%	6 2.2%	48.9%	1.84%
Barrier Type (0-Wa	all, 1-Berm):	0.0			Heav	/ Truck	s: 47.3%	5.4%	47.3%	0.74%
Centerline Dis	t. to Barrier:	64.0 feet		AL.	nico Souro	Elova	tions (in t	(oot)		
Centerline Dist. t	o Observer:	64.0 feet		744		too:	0.000	eel)		
Barrier Distance t	o Observer:	0.0 feet			Medium Tr	icke:	2 297			
Observer Height (/	Above Pad):	5.0 feet			Heavy Tr	icks:	8.006	Grade Ao	liustment	0.0
Pa	d Elevation:	0.0 feet			moury m	10/10.	0.000		,	
Roa	d Elevation:	0.0 feet		Lá	ane Equiva	ent Dis	tance (in	feet)		
F	Road Grade:	0.0%			A	utos:	58.241			
	Left View:	-90.0 degre	es		Medium Tr	icks:	58.089			
	Right View:	90.0 degre	es		Heavy Ir	icks:	58.104			
FHWA Noise Mode	Calculation	5		I						
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite Roa	d F	resnel	Barrier At	ten Ber	m Atten
Autos:	68.46	-3.56		-1.10	-1.	20	-4.70	0.0	000	0.00
Medium Trucks:	79.45	-20.80		-1.08	-1.	20	-4.88	0.0	000	0.00
Heavy Trucks:	84.25	-24.76		-1.08	-1.	20	-5.31	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrie	er attenu	ation)					
VehicleType	Leq Peak Hou	r Leq Day	/	Leq Eve	ning L	eq Nigł	nt	Ldn	C	NEL
Autos:	62.	6	60.6		59.3		53.3	61.	7	62.
Medium Trucks:	56.	4	52.5		45.0		53.7	59.9	9	59.
Heavy Trucks:	57.	2	53.2		49.8		54.4	60.	6	60.
Vehicle Noise:	64.	4	61.8		59.9		58.6	65.	6	65.
Centerline Distanc	e to Noise Co	ntour (in feet	)							
			L	70 dE	BA	65 dBA		60 dBA	55	dBA
			Ldn:	32		70		150	3	24
				~ ~ ~		-70		450		

	FHV	VA-RD-77-108 I	HIGH\	NAY N	OISE PF	REDICTIO	ON MC	DEL				
Scenar Road Nan Road Segme	io: EA 2025 ne: Menifee Rd nt: s/o Holland	Rd.				Project I Job Nu	Vame: mber:	Canter 11304	wood			
SITE	SPECIFIC IN	PUT DATA				N	DISE	MODE	L INPU	rs		
Highway Data				S	Site Con	ditions (	Hard =	: 10, So	oft = 15)			
Average Daily	Traffic (Adt):	6,100 vehicles						Autos:	15			
Peak Hour	Percentage:	10%			Me	dium Tru	cks (2 .	Axles):	15			
Peak H	lour Volume:	610 vehicles			He	avy Truci	ks (3+ .	Axles):	15			
Ve	hicle Speed:	45 mph		N	/ehicle	Mix						
Near/Far La	ne Distance:	54 feet		F	Veh	icleTvpe		Dav	Evenina	Nic	tht	Dailv
Site Data						A	utos:	75.5%	14.0%	10	.5%	97.42%
Ba	rrier Height:	0.0 feet			Me	edium Tru	icks:	48.9%	2.2%	48	.9%	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy Tru	icks:	47.3%	5.4%	47	.3%	0.74%
Centerline Di	st. to Barrier:	64.0 feet			Voise Sr	ource Ele	vatior	ns (in fø	pet)			-
Centerline Dist.	to Observer:	64.0 feet				Autos	0	000				
Barrier Distance	Barrier Distance to Observer: 0.0 feet				Mediu	n Trucks	. 2	297				
Observer Height	Observer Height (Above Pad): 5.0 feet				Heav	v Trucks	. 8	006	Grade A	djustri	nent:	0.0
P	ad Elevation:	0.0 feet										
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in	teet)			
	Road Grade:	0.0%				Autos.	58	.241				
	Left View:	-90.0 degree	S		Mediui	n Trucks.	58	.089				
	Right View:	90.0 degree	5		Heav	y Trucks.	58	.104				
FHWA Noise Mod	el Calculation	s										-
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fres	nel	Barrier A	tten	Berr	n Atten
Autos:	68.46	-4.10		-1.10	)	-1.20		-4.70	0	.000		0.00
Medium Trucks:	79.45	-21.34		-1.08	3	-1.20		-4.88	0	.000		0.00
Heavy Trucks:	84.25	-25.29		-1.08	3	-1.20		-5.31	0	.000		0.00
Unmitigated Nois	e Levels (with	out Topo and L	oarriei	r atteni	uation)							
VehicleType	Leq Peak Hou	r Leq Day		Leq Ev	rening	Leq N	light		Ldn		CN	JEL
Autos:	62	.1 6	0.1		58.7		52.	7	61	.2		61.
Medium Trucks:	55	.8 5	1.9		44.4		53.	2	59	.4		59.4
Heavy Trucks:	56	.7 5	2.6		49.2		53.	9	60	.1		60.2
Vehicle Noise:	63	.9 6	1.3		59.3		58.	1	65	.0		65.3
Centerline Distan	ce to Noise Co	ontour (in feet)										-
				70 d	IBA	65 d	BA	6	60 dBA		55	dBA
		L	dn:	30	)	64	ŀ		139		2	98
		CN	EL:	31	1	67	,		145		3	13

	FH\	NA-RD-77-108	HIGHW	AY N	OISE PI	REDICTIC	ON MOD	EL			
Scenar	io: EA 2025					Project N	lame: C	anterwood	ł		
Road Nam	ne: Leon Rd.					Job Nu	mber: 11	1304			
Road Segme	nt: s/o Craig A	ν.									
SITE	SPECIFIC IN	IPUT DATA				N	DISE M	ODEL IN	PUTS		
Highway Data				S	Site Con	ditions (l	Hard = 1	0, Soft =	15)		
Average Daily	Traffic (Adt):	400 vehicle	S				A	utos: 15	ō		
Peak Hour	Percentage:	10%			Me	dium Truc	cks (2 Ax	les): 15	5		
Peak H	lour Volume:	40 vehicle	5		He	avy Truck	(3+ Ax	les): 15	5		
Ve	hicle Speed:	35 mph		L.	/ohiclo I	Mix					
Near/Far La	ne Distance:	48 feet		-	Veh	icleTvne	D	av Eve	nina Ni	aht	Dailv
Site Data						AL	itos: 7	7.5% 14	4.0% 10	).5%	92.00%
Ba	rrier Height:	0.0 feet			Me	edium Tru	icks: 4	8.0% 2	2.0% 50	0.0%	3.00%
Barrier Type (0-W	/all. 1-Berm):	0.0			ŀ	leavy Tru	cks: 4	8.0% 2	2.0% 50	0.0%	5.00%
Centerline Di	st. to Barrier:	59.0 feet			laina Cr	uree Ele	votiono	(in fact)			
Centerline Dist.	to Observer:	59.0 feet		-	voise sc		vauons	(III leel)			
Barrier Distance	to Observer:	0.0 feet				Autos.	0.00	)U			
Observer Height	(Above Pad):	5.0 feet			Nealui	TI TTUCKS:	2.28	n Grad	do Adiust	mont i	0.0
P	ad Elevation:	0.0 feet			neav	y mucks.	0.00	0.00	ic Aujust	none.	0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distance	e (in feet)			
	Road Grade:	0.0%				Autos:	54.12	29			
	Left View:	-90.0 degree	es		Mediur	m Trucks:	53.96	66			
	Right View:	90.0 degree	es		Heav	y Trucks:	53.98	32			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresne	l Barri	er Atten	Berm	Atten
Autos:	64.30	-15.09		-0.62		-1.20	-4	1.69	0.000		0.000
Medium Trucks:	75.75	-29.95		-0.60	)	-1.20	-4	1.88	0.000		0.000
Heavy Trucks:	81.57	-27.74		-0.60	)	-1.20	-8	5.35	0.000		0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	atteni	uation)						
VehicleType	Leg Peak Hou	Ir Leq Day	L	eg Ev	ening	Leq N	light	Ldn		CN	EL
Autos:	47	.4	45.5		44.1		38.1		46.5		47.1
Medium Trucks:	44	.0	40.0		32.2		41.4		47.6		47.6
Heavy Trucks:	52	.0	48.0		40.3		49.5		55.6		55.7
Vehicle Noise:	53	.8	50.4		45.8		50.4		56.7		56.8
Centerline Distan	ce to Noise Co	ontour (in feet	)								
				70 d	BА	65 d	BA	60 dB	A	55 d	BA
			Ldn:	8		17		36	· · · ·	77	7
		CI	VEL:	8		17		36		78	3

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	FH	WA-RD-77-108	HIGHW	AY NO	DISE PI	REDICTIO	ON MO	DEL			
Scenar Road Nan Road Segme	rio: EA 2025 ne: Leon Rd. nt: s/o Garbar	ni Rd.				Project I Job Nu	Vame: mber:	Cante 11304	rwood		
SITE	SPECIFIC IN	IPUT DATA				N	DISE N	NODE		5	
Highway Data				S	ite Cor	ditions (	Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	800 vehicle	s					Autos	15		
Peak Hour	Percentage:	10%			Me	dium Tru	cks (2 A	Axles).	15		
Peak H	lour Volume:	80 vehicle	s		He	avy Truck	ks (3+ A	Axles).	15		
Ve	hicle Speed:	55 mph		V	ohiclo	Mix					
Near/Far La	ne Distance:	48 feet		÷	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	5 14.0%	10.5%	92.00%
Ba	rrier Heiaht:	0.0 feet			М	edium Tru	icks:	48.0%	2.0%	50.0%	3.00%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tru	icks:	48.0%	2.0%	50.0%	5.00%
Centerline Di	ist. to Barrier:	59.0 feet		N	loise Se	ource Ele	vation	s (in f	eet)		
Centerline Dist.	to Observer:	59.0 feet				Autos	0.0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks.	2.2	297			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks	8.0	006	Grade Adj	ustmen	t: 0.0
P	ad Elevation:	0.0 feet		-							
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%				Autos.	54.	129			
	Left View:	-90.0 degre	es		Mediu	m Trucks.	53.	966			
	Right View:	90.0 degre	es		Heav	/y Trucks.	53.9	982			
FHWA Noise Mod	lel Calculation	IS									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresn	nel	Barrier Atte	en Be	rm Atten
Autos:	71.78	-14.04		-0.62		-1.20		-4.69	0.0	00	0.000
Medium Trucks:	82.40	-28.91		-0.60		-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	86.40	-26.69		-0.60		-1.20		-5.35	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenu	uation)						
VehicleType	Leq Peak Ho	ur Leq Daj	/ L	eq Ev	ening	Leq N	light		Ldn	C	NEL
Autos:	55	5.9	54.0		52.6		46.6	6	55.1		55.7
Medium Trucks:	51	.7	47.7		39.9		49.1		55.3		55.3
Heavy Trucks:	57	⁷ .9	53.9		46.1		55.4	ļ	61.5		61.5
Vehicle Noise:	60	).6	57.5		53.7		56.7	7	63.2		63.3
Centerline Distan	ce to Noise C	ontour (in fee	)			0		r			
				70 dl	BA	65 d	BA		60 dBA	- 55	5 dBA
		-	Ldn:	21		45	5		96		207
		С	NEL:	21		45	ō		98		211

				INAL NO		LDIOII					
Scenario: Road Name: Road Segment:	EA 2025 Leon Rd. s/o Scott Rd	i.				Project Job N	Name: ( umber: 1	Canter 1304	wood		
SITE SF	PECIFIC IN	PUT DATA				N	OISE N	IODE	L INPUT	s	
Highway Data				S	ite Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily Tr	affic (Adt):	3,100 vehicle	s				/	Autos:	15		
Peak Hour Pe	ercentage:	10%			Me	dium Tru	icks (2 A	xles):	15		
Peak Hou	ır Volume:	310 vehicle	s		Hea	avy Truc	ks (3+ A	xles):	15		
Vehic	cle Speed:	55 mph		V	ehicle I	Лix					
Near/Far Lane	Distance:	48 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	14.0%	10.5%	92.00%
Barri	er Height:	0.0 feet			Me	edium Tr	ucks:	48.0%	2.0%	50.0%	3.00%
Barrier Type (0-Wal	l, 1-Berm):	0.0			F	leavy Tr	ucks:	48.0%	2.0%	50.0%	5.00%
Centerline Dist.	to Barrier:	59.0 feet		N	oise So	urce Fl	evation	s (in fi	pet)		
Centerline Dist. to	Observer:	59.0 feet			0.00 00	Autos	. 00	000			
Barrier Distance to	Observer:	0.0 feet			Mediur	n Trucks	: 2.2	97			
Observer Height (Al	oove Pad):	5.0 feet			Heav	v Trucks	: 8.0	006	Grade Ad	justment.	0.0
Pad	Elevation:	0.0 feet		_							
Road	Elevation:	0.0 feet		Li	ane Equ	uvalent	Distanc	e (in	feet)		
Ro	ad Grade:	0.0%				Autos	54.1	129			
-	Left View:	-90.0 degre	es		Mealur	n Trucks	53.8	000			
r	agni view.	90.0 degre	35		1 icav	y mucha	. 33.3	02			
FHWA Noise Model	Calculations	5									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	71.78	-8.16		-0.62		-1.20		-4.69	0.0	000	0.000
Medium Trucks:	82.40	-23.02		-0.60		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	86.40	-20.81		-0.60		-1.20		-5.35	0.0	000	0.000
Unmitigated Noise L	evels (witho	out Topo and	barrie	er attenu	ation)						
VehicleType Le	eq Peak Hou	r Leq Day	1	Leq Eve	ening	Leq	Vight		Ldn	CI	VEL
Autos:	61.	8	59.9		58.5		52.5		60.9	9	61.6
Medium Trucks:	57.	6	53.6		45.8		55.0		61.2	2	61.2
Heavy Trucks:	63.	8	59.8		52.0		61.2		67.4	1	67.4
Vehicle Noise:	66.	5	63.4		59.6		62.6		69.0	)	69.2
Centerline Distance	to Noise Co	ntour (in feet	)					_			
			L	70 dE	BA	65 (	1BA	6	60 dBA	55	dBA
									007	_	4.13
		-	Ldn:	51		11	0		237	- -	10

	FHV	VA-RD-77-108 H	IIGHWA	Y N	DISE PF	REDICTI	ON MC	DEL				
Scenar	io: EA 2025					Project	Name:	Cante	rwood			
Road Nam	e: Holland Rd					Job N	umber:	11304				
Road Segme	nt: w/o Menifee	e Rd.										
SITE	SPECIFIC IN	PUT DATA				N	OISE	MODE	LINP	JTS		
Highway Data				S	ite Con	ditions	(Hard =	= 10, S	oft = 15	)		
Average Daily	Traffic (Adt):	3,500 vehicles						Autos:	15			
Peak Hour	Percentage:	10%			Me	dium Tru	icks (2	Axles):	15			
Peak H	lour Volume:	350 vehicles			He	avy Truc	cks (3+	Axles):	15			
Ve	hicle Speed:	45 mph		v	ehicle I	Mix						
Near/Far La	ne Distance:	48 feet		-	Vehi	cleType		Day	Eveni	ng N	ight	Daily
Site Data						A	Autos:	75.5%	5 14.0	% 1	0.5%	97.42%
Ba	rrier Height	0.0 feet			Me	edium Tr	ucks:	48.9%	2.2	% 4	8.9%	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	łeavy Tr	ucks:	47.3%	5.4	% 4	7.3%	0.74%
Centerline Di	st. to Barrier:	59.0 feet			loise Sc	urce El	evatior	ıs (in f	eet)			
Centerline Dist.	to Observer:	59.0 feet				Autos	s: 0	000				
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks	. 2	297				
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks	·· - 8	006	Grade	Adiust	ment:	0.0
Pi	ad Elevation:	0.0 feet				,						
Roi	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distar	ice (in	feet)			
	Road Grade:	0.0%				Autos	s: 54	.129				
	Left View:	-90.0 degrees	5		Mediur	n Trucks	s: 53	.966				
	Right View:	90.0 degrees	5		Heav	y Trucks	s: 53	.982				
FHWA Noise Mod	el Calculation	s										
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fres	nel	Barrier	Atten	Ber	m Atten
Autos:	68.46	-6.51	-	0.62		-1.20		-4.69		0.000		0.000
Medium Trucks:	79.45	-23.75	-	0.60		-1.20		-4.88		0.000		0.000
Heavy Trucks:	84.25	-27.70	-	0.60		-1.20		-5.35		0.000		0.000
Unmitigated Nois	e Levels (with	out Topo and b	arrier a	ttenı	uation)							
VehicleType	Leq Peak Hou	r Leq Day	Le	q Ev	ening	Leq	Night		Ldn		CI	VEL
Autos:	60	.1 5	8.1		56.8		50.	8	!	59.2		59.8
Medium Trucks:	53	.9 5	0.0		42.5		51.	3	1	57.4		57.5
Heavy Trucks:	54	.7 5	0.7		47.3		52.	0		58.2		58.2
Vehicle Noise:	62	.0 5	9.4		57.4		56.	1	(	53.1		63.4
Centerline Distan	ce to Noise Co	ontour (in feet)										
				70 d	BA	65 0	dBA	(	60 dBA		55	dBA
		L	dn:	20		4	4		95		2	04
		CN	EL:	21		4	6		99		2	14

	FH	WA-RD-77-108	B HIGHV	VAY NO	DISE PF	REDICTIO	N MOE	DEL			
Scenar Road Nan Road Segme	io: EA 2025 ne: Holland Ro nt: e/o Menife	l. e Rd.				Project N Job Nur	ame: C nber: 1	anterw 1304	lood		
SITE	SPECIFIC II	NPUT DATA				NC	ISE M	ODEL	INPUTS	5	
Highway Data				S	ite Con	ditions (H	lard =	10, Sof	t = 15)		
Average Daily	Traffic (Adt):	3,300 vehicle	s				A	utos:	15		
Peak Hour	Percentage:	10%			Me	dium Truc	ks (2 A.	xles):	15		
Peak H	lour Volume:	330 vehicle	s		He	avy Truck	s (3+ A	xles):	15		
Ve	hicle Speed:	45 mph		V	ehicle I	Mix					
Near/Far La	ne Distance:	48 feet			Veh	icleType	1	Day I	Evening	Night	Daily
Site Data						Au	tos: 7	5.5%	14.0%	10.5%	97.42%
Ba	rrier Heiaht:	0.0 feet			Me	edium Tru	cks: 4	18.9%	2.2%	48.9%	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy Tru	cks: 4	17.3%	5.4%	47.3%	0.74%
Centerline Di	st. to Barrier:	59.0 feet		N	oise So	ource Elev	/ations	(in fee	et)		
Centerline Dist.	to Observer:	59.0 feet				Autos:	0.0	00			
Barrier Distance	to Observer:	0.0 feet			Mediui	n Trucks:	2.2	97			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks:	8.0	06 0	Grade Adj	ustment	: 0.0
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		Li	ane Eq	uivalent L	vistanc	e (in te	et)		
	Road Grade:	0.0%				Autos:	54.1	29			
	Left View:	-90.0 degre	es		Mediui	m Trucks:	53.9	66			
	Right View:	90.0 degre	es		Heav	y Trucks:	53.9	82			
FHWA Noise Mod	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresne	el B	Barrier Atte	en Ber	m Atten
Autos:	68.46	-6.77		-0.62		-1.20	-	4.69	0.0	00	0.000
Medium Trucks:	79.45	-24.00		-0.60		-1.20	-	4.88	0.0	00	0.000
Heavy Trucks:	84.25	-27.96		-0.60		-1.20	-	5.35	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Daj	y L	Leq Eve	ening	Leq N	ight	l	dn	C	NEL
Autos:	59	9.9	57.9		56.6		50.5		59.0		59.6
Medium Trucks:	53	3.6	49.7		42.2		51.0		57.2		57.2
Heavy Trucks:	54	4.5	50.4		47.1		51.7		57.9		58.0
Vehicle Noise:	6	1.7	59.1		57.2		55.9		62.8		63.1
Centerline Distan	ce to Noise C	ontour (in fee	t)	-				_			
				70 dE	BA	65 dE	BA	60	) dBA	55	dBA
		-	Ldn:	20		42			91	1	97
		С	NEL:	21		44			96	2	206

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	FH	WA-RD-77-108	HIGHW	VAY NO	DISE P	REDICTIC		EL _			
Scenar Road Narr Road Segme	io: EA 2025 ne: Holland Ro nt: w/o Briggs	l. Rd.				Project N Job Nu	lame: Ca mber: 11	anterwo 1304	od		
SITE	SPECIFIC IN	IPUT DATA				NC	DISE MO	DDEL I	NPUTS	5	
Highway Data				S	ite Cor	nditions (F	Hard = 10	0, Soft :	= 15)		
Average Daily	Traffic (Adt):	432 vehicle	s				AL	utos:	15		
Peak Hour	Percentage:	10%			Me	edium Truc	sks (2 Ax	les):	15		
Peak H	lour Volume:	43 vehicle	s		He	avy Truck	s (3+ Ax	les):	15		
Ve	hicle Speed:	45 mph		V	ehicle	Mix					
Near/Far La	ne Distance:	48 feet		-	Veh	nicleType	D	ay E	vening	Night	Daily
Site Data						AL	itos: 75	5.5%	14.0%	10.5%	97.42%
Ba	rrier Height:	0.0 feet			М	edium Tru	cks: 48	8.9%	2.2%	48.9%	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0				Heavy Tru	cks: 47	7.3%	5.4%	47.3%	0.74%
Centerline Di	st. to Barrier:	59.0 feet		N	oise S	ource Ele	vations	(in feet	)		
Centerline Dist.	to Observer:	59.0 feet				Autos:	0.00	0			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.29	7			
Observer Height (	(Above Pad):	5.0 feet			Hea	v Trucks:	8.00	6 Gr	ade Adji	ustment.	: 0.0
Pi	ad Elevation:	0.0 feet		-							
Roi	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distance	e (in fee	t)		
	Road Grade:	0.0%				Autos:	54.12	29			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	53.96	56			
	Right View:	90.0 degre	es		Hear	vy Trucks:	53.98	32			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresnel	l Ba	rrier Atte	en Ber	m Atten
Autos:	68.46	-15.60		-0.62		-1.20	-4	1.69	0.0	00	0.000
Medium Trucks:	79.45	-32.83		-0.60		-1.20	-4	1.88	0.0	00	0.000
Heavy Trucks:	84.25	-36.79		-0.60		-1.20	-5	5.35	0.0	00	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Daj	V L	Leq Eve	ening	Leq N	ight	Lo	In	CI	NEL
Autos:	51	.0	49.0		47.7		41.7		50.1		50.8
Medium Trucks:	44	.8	40.9		33.4		42.2		48.3		48.4
Heavy Trucks:	45	.7	41.6		38.2		42.9		49.1		49.2
Vehicle Noise:	52	2.9	50.3		48.3		47.0		54.0		54.3
Centerline Distan	ce to Noise C	ontour (in fee	t)								
			L	70 dł	ЗA	65 dl	BA	60 0	1BA	55	dBA
			Ldn:	5		11		24	4	-	51 50
		С	NEL:	5		11		2	5	1	53

	FHV	VA-RD-77-108	HIGH	HWAY NO	DISE PREDIO	CTION M	ODEL			
Scenario	: EA 2025				Proje	ect Name	: Cante	rwood		
Road Name	: Holland Rd				Job	Number	: 11304			
Road Segment	: w/o Leon R	d.								
SITE S	PECIFIC IN	IPUT DATA				NOISE	MODE	L INPUT	s	
Highway Data				S	ite Conditio	ns (Hard	= 10, S	oft = 15)		
Average Daily T	raffic (Adt):	232 vehicle	s				Autos.	15		
Peak Hour F	Percentage:	10%			Medium	Trucks (2	Axles).	15		
Peak Ho	ur Volume:	23 vehicle	s		Heavy T	rucks (3+	Axles).	15		
Veh	icle Speed:	45 mph		V	ehicle Mix					
Near/Far Lan	e Distance:	48 feet			VehicleTy	pe	Day	Evening	Night	Daily
Site Data						Autos:	77.5%	5 14.0%	10.5%	92.00%
Barr	ier Height:	0.0 feet			Medium	Trucks:	48.0%	2.0%	50.0%	3.00%
Barrier Type (0-Wa	ll, 1-Berm):	0.0			Heavy	Trucks:	48.0%	2.0%	50.0%	5.00%
Centerline Dist	to Barrier:	59.0 feet		N	oise Source	Elevatio	ns (in f	eet)		
Centerline Dist. to	Observer:	59.0 feet			A	itos:	0.000			
Barrier Distance to	Observer:	0.0 feet			Medium Tru	cks:	2.297			
Observer Height (A	bove Pad):	5.0 feet			Heavy Tru	cks:	3.006	Grade Ad	justment.	0.0
Pad	d Elevation:	0.0 feet						6		
Road	d Elevation:	0.0 feet		L	ane Equivale	ent Dista	nce (in	reet)		
R	oad Grade:	0.0%	~~		AL Modium Tru	itos: 5 oko: 5	4.129			
	Dight View.	-90.0 degre	es oc		Heavy Tru	cke: 5	3.900			
	Ngni view.	90.0 degre	63		neavy na	UN3. 0	0.002			
FHWA Noise Model	Calculation	s								
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite Road	Fre	snel	Barrier Att	en Ber	m Atten
Autos:	68.46	-18.54		-0.62	-1.2	0	-4.69	0.0	000	0.00
Medium Trucks:	79.45	-33.41		-0.60	-1.2	0	-4.88	0.0	000	0.00
Heavy Trucks:	84.25	-31.19		-0.60	-1.2	0	-5.35	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er attenu	uation)					
VehicleType L	eq Peak Hou	r Leq Day	/	Leq Ev	ening Le	eq Night		Ldn	CI	VEL
Autos:	48	.1	46.2		44.8	38	.8	47.2	2	47.
Medium Trucks:	44	.2	40.3		32.5	41	.7	47.8	3	47.9
Heavy Irucks:	51	.3	47.3		39.5	48	.7	54.9	9	54.9
Vehicle Noise:	53	.5	50.2		46.1	49	1.8	56.2	2	56.
Centerline Distance	e to Noise Co	ontour (in feet	)						Т	
			. L	70 di	BA 6	65 dBA		50 dBA	55	dBA
		-	Ldn:	7		15		33	7	/1
		C	NEL:	7		16		34	- 7	12

	FHV	VA-RD-77-108	HIGHW	AY NO	DISE PI	REDICT	ION MC	DEL					
Scenar Road Nan Road Segme	io: EA 2025 ne: Scott Rd. nt: w/o Haun R	d.				Project Job N	Name: lumber:	Cante 11304	rwood				
SITE	SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS								
Highway Data				S	ite Con	ditions	(Hard =	= 10, S	oft = 15	5)			
Average Daily Peak Hour Peak H	Traffic (Adt): 1 Percentage: lour Volume:	12,200 vehicles 10% 1,220 vehicles			Me He	dium Tri avy Tru	ucks (2 cks (3+	Autos Axles) Axles)	: 15 : 15 : 15				
Ve	hicle Speed:	50 mph		V	ehicle l	Mix							
Near/Far La	ne Distance:	78 feet			Veh	icleType	)	Day	Even	ing N	light	Daily	
Site Data							Autos:	75.5%	6 14.0	0% 1	0.5%	97.42%	
Ba	rrier Heiaht:	0.0 feet			M	edium T	rucks:	48.9%	6 2.3	2% 4	18.9%	1.84%	
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy T	rucks:	47.3%	6 5.4	4% 4	17.3%	0.74%	
Centerline Di	st. to Barrier:	76.0 feet		N	oise So	ource E	levatior	ıs (in f	eet)				
Centerline Dist.	to Observer:	76.0 feet				Auto	s: 0	.000	,				
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s: 2	.297					
Observer Height (Above Pad):		5.0 feet			Heav	v Truck	s: 8	006	Grade	Adjus	tment	0.0	
P	ad Elevation:	0.0 feet				,				· ·			
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distar	ice (in	feet)				
	Road Grade:	0.0%				Auto	s: 65	.422					
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 65	.286					
	Right View:	90.0 degre	es		Heav	y Truck	s: 65	.300					
FHWA Noise Mod	el Calculation:	s											
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fres	nel	Barrie	r Atten	Ber	m Atten	
Autos:	70.20	-1.54		-1.85		-1.20		-4.73		0.000	)	0.000	
Medium Trucks:	81.00	-18.78		-1.84		-1.20		-4.88		0.000	)	0.000	
Heavy Trucks:	85.38	-22.74		-1.84		-1.20		-5.25		0.000	)	0.000	
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)								
VehicleType	Leq Peak Hou	r Leq Daj	/ L	.eq Ev	ening	Leq	Night		Ldn		CI	VEL	
Autos:	65.	5.6 63.6			62.3	56.3		3	64.7			65.3	
Medium Trucks:	59.	.2	55.3		47.8		56.	5		62.7		62.7	
Heavy Trucks:	59.	.6	55.6		52.2		56.	8		63.0		63.1	
Vehicle Noise:	67.	.3	64.7		62.8		61.	3		68.3		68.6	
Centerline Distan	ce to Noise Co	ontour (in fee	)										
		70			BA	65 dBA			60 dBA		55 dBA		
		Ldn:	59		127			273		5	588		
		С	NEL:	62		1	33		287		6	17	

	FH/	WA-RD-77-108	HIGHWA	NY NO	JISE PRE	DICTION	MODEL						
Scenario: EA 2025					Project Name: Canterwood								
Road Name: Scott Rd.					Job Number: 11304								
Road Segme	nt: e/o Haun R	۲d.											
SITE	SPECIFIC IN	IPUT DATA			NOISE MODEL INPUTS								
Highway Data					Site Conditions (Hard = 10, Soft = 15)								
Average Daily	Traffic (Adt):	17,800 vehicle	s				Autos.	15					
Peak Hour Percentage: 10%					Medium Trucks (2 Axles): 15								
Peak Hour Volume: 1,780 vehicles					Heavy Trucks (3+ Axles): 15								
Vehicle Speed: 50 mph				V	Vehicle Mix								
Near/Far La	ne Distance:	78 feet		F	Vehicl	leType	Day	Evening	Night	Daily			
Site Data						Auto	s: 75.5%	6 14.0%	10.5%	97.42%			
Ba	rrier Height	0.0 feet			Med	lium Truck	s: 48.9%	6 2.2%	48.9%	1.84%			
Barrier Type (0-W	/all, 1-Berm):	0.0			He	avy Truck	s: 47.3%	5.4%	47.3%	0.74%			
Centerline Di	Centerline Dist. to Barrier: 76.0 feet					Noise Source Elevations (in feet)							
Centerline Dist. to Observer: 76.0 feet					Autos: 0.000								
Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297								
Observer Height	Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.006 Grade Adjustment: 0.0							
P	ad Elevation:	0.0 feet		-									
Ro	ad Elevation:	0.0 feet		L	Lane Equivalent Distance (in feet)								
	Road Grade: 0.0%					Autos: 65.422							
Left View: -90.0 degrees					Medium Trucks: 65.286								
	Right View:	90.0 degre	es		Heavy	Trucks:	65.300						
FHWA Noise Mod	el Calculation	IS		-						-			
VehicleType	REMEL	Traffic Flow	Distan	ce	Finite R	oad F	resnel	Barrier Att	en Ber	m Atten			
Autos:	70.20	0.10	-	1.85		-1.20	-4.73	0.0	000	0.000			
Medium Trucks:	81.00	-17.14		1.84		-1.20	-4.88	0.0	000	0.000			
Heavy Trucks:	85.38	-21.10	-	1.84		-1.20	-5.25	0.0	000	0.000			
Unmitigated Nois	e Levels (with	out Topo and	barrier a	ttenu	lation)								
VehicleType	Leq Peak Hou	ur Leq Day	/ Le	q Eve	ening	Leq Nigl	nt	Ldn	C	VEL			
Autos:	67.2 65.2		65.2	63.9			57.9	66.3		67.0			
Medium Trucks:	60.8 56.9		56.9	49.4			58.2	64.3		64.4			
Heavy Trucks:	rucks: 61.2 57.2		57.2	53.8		58.4		64.6		64.7			
Vehicle Noise:	68	3.9	66.4		64.5		63.0	70.0	)	70.3			
Centerline Distan	ce to Noise C	ontour (in feet	)										
	70			70 dl	dBA 65 dBA			60 dBA		55 dBA			
		-	Ldn:	76		163		351	7	56			
		Ci	VEL:	79		171		369	7	94			

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	FH	WA-RD-77-108	HIGHW	AY N	OISE P	REDICTI	ON MO	DEL			
Scenar Road Nan Road Segme	io: EA 2025 ne: Scott Rd. nt: w/o Menife				Project I Job Ni	Name: Imber:	Cante 11304	rwood I			
SITE	SPECIFIC I	VPUT DATA				N	OISE N	NOD	EL INPUTS	;	
Highway Data				S	lite Cor	nditions (	Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	16,100 vehicle	s					Autos	: 15		
Peak Hour	Percentage:	10%			Me	eaium Tru	CKS (2 A	(xies	: 15		
Peak F	lour Volume:	1,610 vehicle	s		He	eavy Truc	ks (3+ A	(xles	: 15		
Ve	hicle Speed:	55 mph		ν	ehicle	Mix					
Near/Far La	ne Distance:	78 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	75.5%	6 14.0%	10.5%	97.42%
Ba	rrier Height:	0.0 feet			М	edium Tr	ucks:	48.9%	6 2.2%	48.9%	1.84%
Barrier Type (0-V	/all, 1-Berm):	0.0				Heavy Tr	ucks:	47.3%	6 5.4%	47.3%	0.74%
Centerline Di	st. to Barrier:	76.0 feet		٨	loise S	ource Ele	evation	s (in i	feet)		
Centerline Dist.	to Observer:	76.0 feet				Autos	: 0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	: 2.2	297			
Observer Height	(Above Pad):	5.0 feet			Hear	vy Trucks	: 8.0	006	Grade Adjı	ıstment	: 0.0
P	ad Elevation:	0.0 feet		-							
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%				Autos	: 65.4	422			
	Left View:	-90.0 degre	es		Mediu	m Trucks	: 65.	286			
	Right View:	90.0 degre	es		Hear	vy Trucks	: 65.	300			
FHWA Noise Mod	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	nel	Barrier Atte	n Bei	rm Atten
Autos:	71.78	-0.75		-1.85		-1.20		-4.73	0.00	00	0.000
Medium Trucks:	82.40	-17.99		-1.84		-1.20		-4.88	0.00	00	0.000
Heavy Trucks:	86.40	-21.95		-1.84		-1.20		-5.25	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenı	uation)						
VehicleType	Leq Peak Ho	ur Leq Daj	/ L	eq Ev	ening	Leq I	Vight		Ldn	С	NEL
Autos:	68	3.0	66.0		64.6		58.6	6	67.1		67.7
Medium Trucks:	61	1.4	57.5		50.0		58.7	,	64.9		64.9
Heavy Trucks:	61	1.4	57.4		54.0		58.6	6	64.8		64.9
Vehicle Noise:	69	9.6	67.0		65.1		63.4	ļ	70.5		70.8
Centerline Distan	ce to Noise C	ontour (in fee	)								
				70 d	BA	65 0	IBA 🗌		60 dBA	55	dBA
			Ldn:	82	-	17	6		380	8	319
		С	NEL:	86	6	18	6		400	8	362

FHWA	-RD-77-108 HIG	HWAT	NUISE PR	EDICTION		JEL			
Scenario: EA 2025				Project Na	me: C	Canter	wood		
Road Name: Scott Rd.				Job Num	ber: 1	1304			
Road Segment: w/o Briggs Ro	l.								
SITE SPECIFIC INP	UT DATA			NO	SE N	IODE	L INPUT	S	
Highway Data			Site Con	ditions (Ha	ard =	10, So	oft = 15)		
Average Daily Traffic (Adt): 13,	400 vehicles				A	utos:	15		
Peak Hour Percentage:	10%		Med	dium Truck	s (2 A	xles):	15		
Peak Hour Volume: 1,	340 vehicles		Hea	avy Trucks	(3+ A	xles):	15		
Vehicle Speed:	55 mph	Ī	Vehicle N	lix					
Near/Far Lane Distance:	78 feet	Ē	Vehi	cleType	1	Day	Evening	Night	Daily
Site Data				Auto	os: T	75.5%	14.0%	10.5%	97.42%
Barrier Height:	0.0 feet		Me	dium Truc	ks: 4	18.9%	2.2%	48.9%	1.84%
Barrier Type (0-Wall, 1-Berm):	0.0		H	leavy Truc	ks: 4	17.3%	5.4%	47.3%	0.74%
Centerline Dist. to Barrier:	76.0 feet	ł	Noise So	urce Eleva	ations	(in f	et)		
Centerline Dist. to Observer:	76.0 feet			Autos:	0.0	00	,01)		
Barrier Distance to Observer:	0.0 feet		Mediun	n Trucks:	2.2	97			
Observer Height (Above Pad):	5.0 feet		Heav	v Trucks:	8.0	06	Grade Ad	iustment	: 0.0
Pad Elevation:	0.0 feet	_							
Road Elevation:	0.0 feet		Lane Equ	ivalent Di	stanc	e (in	feet)		
Road Grade:	0.0%			Autos:	65.4	22			
Left View:	-90.0 degrees		Mediun	n Trucks:	65.2	86			
Right View:	90.0 degrees		Heav	y Trucks:	65.3	00			
FHWA Noise Model Calculations									
VehicleType REMEL T	raffic Flow Dis	stance	Finite	Road	Fresne	e/	Barrier Att	en Ber	m Atten
Autos: 71.78	-1.55	-1.8	15	-1.20	-	4.73	0.0	000	0.00
Medium Trucks: 82.40	-18.79	-1.8	34	-1.20	-	4.88	0.0	000	0.00
Heavy Trucks: 86.40	-22.75	-1.8	14	-1.20	-	5.25	0.0	000	0.00
Unmitigated Noise Levels (without	t Topo and barri	ier attei	nuation)						
VehicleType Leq Peak Hour	Leq Day	Leq E	vening	Leq Nig	ht		Ldn	C	NEL
Autos: 67.2	65.2		63.9		57.8		66.3	3	66.
Medium Trucks: 60.6	56.7		49.2		57.9		64.1		64.
Heavy Trucks: 60.6	56.6		53.2		57.8		64.0	)	64.
Vehicle Noise: 68.8	66.2		64.3		62.6		69.7	, 	70.
Centerline Distance to Noise Con	tour (in feet)	ar -							10.4
	, . L	70	dBA	65 dB/	4	6	iu aBA	55	авА
	Ldn:	1	2	156			336	7	25
	( ) ( [] )						- A 6- A		B

	FH\	WA-RD-77-108	HIGHW	AY N	DISE PI	REDICT	ION MO	DEL				
Scenari	io: EA 2025					Proiect	Name:	Cante	rwood			
Road Nam	e: Scott Rd.					Job N	lumber:	11304	Ļ			
Road Segmer	nt: w/o Leon R	۲d.										
SITE	SPECIFIC IN	NPUT DATA				P	IOISE	MOD	EL INPU	ITS		
Highway Data				S	ite Cor	ditions	(Hard =	= 10, S	oft = 15)			
Average Daily	Traffic (Adt):	13,000 vehicles	3					Autos	: 15			
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2	Axles)	: 15			
Peak H	lour Volume:	1,300 vehicles	6		He	avy Tru	cks (3+	Axles)	: 15			
Ve	hicle Speed:	55 mph		L.	ahiala	Mix						
Near/Far La	ne Distance:	78 feet		-	Veh	icleType		Dav	Evenin	a N	liaht	Daily
Site Data					10/1	1010 T Jpc	Autos:	75.5%	6 14.09	9 ··· % 1	0.5%	97.42%
Ba	wier Height	0.0 feet			М	edium T	rucks:	48.9%	6 2.29	% 4	8.9%	1.84%
Barrier Type (0-W	all 1-Berm)	0.0 1001			1	Heavy T	rucks:	47.39	6 5.49	% 4	7.3%	0.74%
Centerline Dis	st. to Barrier:	76.0 feet										
Centerline Dist.	to Observer:	76.0 feet		^	loise S	ource E	levatio	ns (in i	reet)			
Barrier Distance	to Observer:	0.0 feet				Auto	s: 0	.000				
Observer Height (	Above Pad);	5.0 feet			Mediu	m Truck	s: 2	.297	0	A		
Pa	ad Elevation:	0.0 feet			Heav	y Truck	s: 8	.006	Grade	adjus	iment:	0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distar	ice (in	feet)			
	Road Grade:	0.0%				Auto	s: 65	.422				
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 65	.286				
	Right View:	90.0 degree	es		Heav	/y Truck	s: 65	.300				
FHWA Noise Mode	DEMEI	Traffic Flow	Dictor	000	Einito	Pood	Eros	nol	Parriar	Atton	Por	m Atton
Autos	71 78	-1.68	Distai	-1.85	TIME	-1.20	1163	-4 73	Damer	0.000	Den	0.000
Medium Trucks:	82.40	-18.92		-1.84		-1.20		-4.88		0.000		0.000
Heavy Trucks:	86.40	-72.88		-1.84		-1.20		-5.25		0.000		0.000
Theory Trucks.		-22.00		1.04		-1.20		0.20		0.000		0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier a	itteni	iation)	1	Market	1	l da		0	
Venicle I ype	Leq Peak Hou	ur Leq Day	Le Le	eq Ev	ening	Leq	Night	7	Lan	6.1	CI	VEL
Autos. Modium Trucks:	67	.0	56.5		40.0		57.	/ 0	0	0.1 4.0		64.0
Heavy Trucks:	00	).4	56.4		49.0 53.0		57	7	6	4.0 3.0		64.0
Vehicle Noise:	68	3.6	66 1		64.2		62	, 5	6	9.6		69.0
Orantaulina Distant	N 0				01.2		02.	0	0	0.0		00.
Centerline Distant	e lo Noise C	omour (in feet	,	70 d	RΔ	65	dBA		60 dBA		55	dRΔ
			l dn:	70 0	Lu/1	1	53		330			10
		CI	VFL:	75		1	61		347		7	47
		0							5		'	

	FHW	/A-RD-77-108	HIGHW	AY N	NOISE PF	REDICT	ION MC	DEL			
Scenario: Road Name: Road Segment:	EA 2025 Scott Rd. e/o Leon Ro	I.				Project Job N	Name: umber:	Canter 11304	rwood		
SITE SP	ECIFIC IN	PUT DATA				Ν	IOISE	MODE	L INPUT	s	
Highway Data					Site Con	ditions	(Hard =	= 10, So	oft = 15)		
Average Daily Tra	affic (Adt):	5,900 vehicles						Autos:	15		
Peak Hour Pe	rcentage:	10%			Me	dium Tr	ucks (2	Axles):	15		
Peak Hou	r Volume:	590 vehicles			He	avy Tru	cks (3+	Axles):	15		
Vehic	le Speed:	55 mph		-	Vehicle I	Mix					
Near/Far Lane	Distance:	78 feet		-	Veh	icleTvne		Dav	Evenina	Niaht	Daily
Site Data							Autos:	77.5%	14.0%	10.5%	92.00%
Barrie	r Hoiaht	0.0 feet			Me	edium T	rucks:	48.0%	2.0%	50.0%	3.00%
Barrier Type (0-Wall	, 1-Berm):	0.0			ŀ	leavy T	rucks:	48.0%	2.0%	50.0%	5.00%
Centerline Dist.	to Barrier:	76.0 feet			Noise Sc	ource E	levatior	ns (in f	eet)		
Centerline Dist. to	Observer:	76.0 feet				Auto	s: 0	.000			
Barrier Distance to	Observer:	0.0 feet			Mediur	n Truck	s: 2	297			
Observer Height (Ab	ove Pad):	5.0 feet			Heav	y Truck	s: 8	.006	Grade Ad	justmen	t: 0.0
Pad	Elevation:	0.0 feet		-	1 F		Distan	//	64)		
Road	Elevation:	0.0 feet		-	Lane Eq	uivaien	Distan	ce (In	reet)		
Ro	ad Grade:	0.0%			1 4 m all 1 m	Auto	5: 65	.422			
	Left View:	-90.0 degree	S		Heave	II TIUCK	5. 65	.286			
ĸ	ight view:	90.0 degree	S		neav	у писк	5. 65	.300			
FHWA Noise Model	Calculations	; 									-
Vehicle I ype	REMEL	I rattic Flow	Dista	nce	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	71.78	-5.36		-1.8	5	-1.20		-4.73	0.0	000	0.000
Medium Trucks:	82.40	-20.23		-1.8	4	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	86.40	-18.01	orrior	-1.8	4	-1.20		-9.29	0.0	000	0.000
VehicleType I a	a Peak Hou	r Lea Dav		ea F	venina	l ori	Niaht		l dn	6	NEI
Autos	63 F	4 F	15	.cy L	60 1	Loy	54	0	62.5	5	63.1
Medium Trucks:	59.	. 5	5.2		47.4		56.	6	62.7	,	62.8
Heavy Trucks:	65.	3 6	1.4		53.6		62.	8	68.9	9	69.0
Vehicle Noise:	68.	1 6	4.9		61.1		64.	2	70.6	6	70.7
Centerline Distance	to Noise Co	ntour (in feet)									
L		. ,		70 (	dBA	65	dBA	6	60 dBA	55	5 dBA
		L	.dn:	8	33	1	80		387		834
		CN	EL:	8	35	1	83		395		851

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	FH	WA-RD-77-1	08 HIGH	HWAY N	NOISE P	REDICTIC	N MODE	L		
Scenar Road Nan Road Segme	Scenario: Existing Without Project Road Name: Haun Rd. Road Segment: n/o Scott Rd.					Project N Job Nu	lame: Car mber: 113	nterwood 04		
SITE	SPECIFIC II	VPUT DAT	4			NC	DISE MO	DEL INPUT	s	
Highway Data					Site Cor	nditions (H	Hard = 10,	Soft = 15)		-
Average Daily	Traffic (Adt):	8,100 vehic	les				Aut	os: 15		
Peak Hour	Percentage:	10%			Me	edium Truc	cks (2 Axle	s): 15		
Peak H	lour Volume:	810 vehic	les		He	eavy Truck	is (3+ Axle	s): 15		
Ve	hicle Speed:	50 mph		-	Vehicle	Mix				
Near/Far La	ne Distance:	48 feet		F	Veh	nicleType	Da	v Evening	Night	Daily
Site Data						AL	itos: 75.	5% 14.0%	10.5%	97.42%
Ba	rrier Height:	0.0 feet			М	ledium Tru	cks: 48.	9% 2.2%	48.9%	1.84%
Barrier Type (0-W	Vall, 1-Berm):	0.0				Heavy Tru	cks: 47.	3% 5.4%	47.3%	0.74%
Centerline Di	ist. to Barrier:	59.0 feet			Noise S	ource Ele	vations (i	n feet)		
Centerline Dist.	to Observer:	59.0 feet		-		Autos:	0.000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.297			
Observer Height	(Above Pad):	5.0 feet			Hear	vv Trucks:	8.006	Grade Ad	justment:	0.0
P	ad Elevation:	0.0 feet		_						
Ro	ad Elevation:	0.0 feet		1	Lane Eq	uivalent l	Distance (	in feet)		
	Road Grade:	0.0%				Autos:	54.129			
	Left View:	-90.0 deg	rees		Mediu	m Trucks:	53.966			
	Right View:	90.0 deg	rees		Hear	vy Trucks:	53.982			
FHWA Noise Mod	lel Calculation	15								
VehicleType	REMEL	Traffic Flow	/ Dis	stance	Finite	Road	Fresnel	Barrier Att	en Ben	m Atten
Autos:	70.20	-3.3	2	-0.6	2	-1.20	-4.	69 0.0	000	0.000
Medium Trucks:	81.00	-20.5	6	-0.6	0	-1.20	-4.	38 0.0	000	0.000
Heavy Trucks:	85.38	-24.5	2	-0.6	0	-1.20	-5.	35 0.0	000	0.000
Unmitigated Nois	e Levels (with	nout Topo ar	d barri	er atter	nuation)					-
VehicleType	Leq Peak Ho	ur Leq D	ay	Leq E	vening	Leq N	light	Ldn	CI	VEL
Autos:	65	5.1	63.0		61.7		55.7	64.1	1	64.8
Medium Trucks:	58	3.6	54.7		47.2		56.0	62.2	2	62.2
Heavy Trucks:	59	9.1	55.0		51.6		56.3	62.5	5	62.6
Vehicle Noise:	66	5.8	64.2		62.3		60.8	67.8	3	68.1
Centerline Distan	ce to Noise C	ontour (in fe	et)	=0	10.4					
			[	70 0	70 aBA 65 dBA 60 dBA 55 d			aBA		
			Ldn:	4	2	90		195	4	20
	CNEL:					95		205	4	41

	FHV	VA-RD-77-108 HI	GHWAY	NOISE PR	REDICTIC		DEL			
Scenario	: Existing Wi	thout Project			Project N	lame: (	Canter	wood		
Road Name	: Zeiders Rd				Job Nu	mber:	11304			
Road Segmen	t: s/o Scott Re	d.								
SITE S	PECIFIC IN	IPUT DATA			N	DISE N	/IODE	L INPUT	S	
Highway Data				Site Con	ditions (I	Hard =	10, So	oft = 15)		
Average Daily T	raffic (Adt):	1,500 vehicles				/	Autos:	15		
Peak Hour F	Percentage:	10%		Me	dium Truc	cks (2 A	(xles):	15		
Peak Ho	ur Volume:	150 vehicles		He	avy Truck	(3+ A	(xles):	15		
Veh	icle Speed:	50 mph		Vehicle I	Mix					
Near/Far Lan	e Distance:	48 feet		Veh	icleType		Day	Evening	Night	Daily
Site Data					AL	itos:	75.5%	14.0%	10.5%	97.42%
Barr	ier Heiaht:	0.0 feet	-	Me	edium Tru	icks:	48.9%	2.2%	48.9%	1.84%
Barrier Type (0-Wa	II, 1-Berm):	0.0		ŀ	leavy Tru	icks:	47.3%	5.4%	47.3%	0.74%
Centerline Dist	to Barrier:	59.0 feet		Noise Sr	urce Ele	vation	s (in fe	of)		
Centerline Dist. to	o Observer:	59.0 feet			Autos	0.0	000	,01)		
Barrier Distance to	o Observer:	0.0 feet		Mediu	n Trucks:	2:	97			
Observer Height (A	lbove Pad):	5.0 feet		Heav	v Trucks:	8.0	006	Grade Ad	iustment	: 0.0
Pao	d Elevation:	0.0 feet			,					
Road	d Elevation:	0.0 feet		Lane Eq	uivalent l	Distand	ce (in i	feet)		
R	oad Grade:	0.0%			Autos:	54.	129			
	Left View:	-90.0 degrees		Mediur	m Trucks:	53.9	966			
	Right View:	90.0 degrees		Heav	y Trucks:	53.9	982			
FHWA Noise Mode	Calculation	s								
VehicleType	REMEL	Traffic Flow	Distance	e Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	70.20	-10.65	-0	.62	-1.20		-4.69	0.0	000	0.00
Medium Trucks:	81.00	-27.89	-0	.60	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	85.38	-31.84	-0	.60	-1.20		-5.35	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and bai	rrier att	enuation)						
VehicleType I	eq Peak Hou	r Leq Day	Leq	Evening	Leq N	light		Ldn	C	NEL
Autos:	57	.7 55.	7	54.4		48.4		56.8	3	57.4
Medium Trucks:	51	.3 47.	4	39.9		48.7		54.8	3	54.9
Heavy Trucks:	51	.7 47.	7	44.3		48.9		55.1	1	55.2
Vehicle Noise:	59	.4 56.	9	55.0		53.4		60.	5	60.8
Centerline Distance	e to Noise Co	ontour (in feet)								
			7	0 dBA	65 d	BA	6	i0 dBA	55	dBA
		Ldr	1:	14	29			63	1	36

										_	_	
	FHV	VA-RD-77-108 I	HIGHWA	YN	OISE PE	REDICT	ION MC	DEL				
Scenar	io: Existing Wi	thout Project				Project	Name:	Cante	rwood			
Road Nam	e: Antelope R	d.				Job N	lumber:	11304	Ļ			
Road Segme	nt: s/o Scott Re	d.										
SITE	SPECIFIC IN	IPUT DATA				Ν	IOISE	MOD	EL INPU	JTS		
Highway Data				S	lite Con	ditions	(Hard =	: 10, S	oft = 15)			
Average Daily	Traffic (Adt): 1	12,500 vehicles						Autos	: 15			
Peak Hour	Percentage:	10%			Me	dium Tru	ucks (2	Axles)	: 15			
Peak H	lour Volume:	1,250 vehicles			He	avy Truc	cks (3+ .	Axles)	: 15			
Ve	hicle Speed:	50 mph		V	ahicle l	Mix						
Near/Far La	ne Distance:	48 feet		ľ	Veh	icleTvpe		Dav	Evenin	a N	iaht	Dailv
Site Data				+			Autos:	75.5%	6 14.0	% 1	0.5%	97.42%
Pa	rrior Hoight:	0.0 foot		-	Me	edium Ti	rucks:	48.9%	6 2.2	% 4	8.9%	1.84%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Ti	rucks:	47.3%	6 5.4	% 4	7.3%	0.74%
Centerline Di	st. to Barrier:	59.0 feet			loise Sr	ource Fl	levatior	is (in i	feet)			
Centerline Dist.	to Observer:	59.0 feet		-		Auto	s [.] 0	000	001)			
Barrier Distance	to Observer:	0.0 feet			Modiu	n Truck	e. 2	297				
Observer Height (	Above Pad):	5.0 feet			Hoau	v Truck	o e∙ 8	006	Grade	Adiusi	ment	0.0
Pa	ad Elevation:	0.0 feet			near	y mack.	3. 0.	000		,		
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distan	ce (in	feet)			
1	Road Grade:	0.0%				Auto	s: 54	.129				
	Left View:	-90.0 degrees	6		Mediur	n Truck	s: 53	966				
	Right View:	90.0 degrees	6		Heav	y Truck	s: 53	.982				
FHWA Noise Mod	el Calculation	s										
VehicleType	REMEL	Traffic Flow	Distanc	e	Finite	Road	Fres	nel	Barrier	Atten	Ben	m Atten
Autos:	70.20	-1.44	-	0.62		-1.20		-4.69		0.000		0.000
Medium Trucks:	81.00	-18.68	-	0.60		-1.20		-4.88		0.000		0.000
Heavy Trucks:	85.38	-22.63	-	0.60		-1.20		-5.35		0.000		0.000
Unmitigated Noise	e Levels (with	out Topo and b	arrier at	tenı	uation)					-		
VehicleType	Leq Peak Hou	Ir Leq Day	Le	q Ev	ening	Leq	Night		Ldn		CI	VEL
Autos:	66	.9 6	4.9		63.6		57.	6	6	6.0		66.7
Medium Trucks:	60	.5 5	6.6		49.1		57.	9	6	4.0		64.1
Heavy Trucks:	60	.9 5	6.9		53.5		58.	1	6	4.3		64.4
Vehicle Noise:	68	.6 6	6.1		64.2		62.	7	6	9.7		70.0
Centerline Distant	ce to Noise Co	ontour (in feet)		-								
				70 d	BA	65	dBA		60 dBA		55	dBA
		L	dn:	56	5	1:	21		260		5	61
	CNEL:				)	1:	27		273		5	89

	FH	WA-RD-77-10	BHIGHW	AY NO	DISE P	REDICTIC		DEL						
Scenario Road Name Road Segmen	Scenario: Existing Without Project Road Name: Menifee Rd. Road Segment: n/o Holland Rd.						Project Name: Canterwood Job Number: 11304							
SITE S	SPECIFIC I	VPUT DATA				NO	DISE N	NODE	L INPUT	s				
Highway Data				S	ite Cor	nditions (l	Hard =	10, S	oft = 15)					
Average Daily 1	Traffic (Adt):	7,300 vehicle	s				,	Autos	15					
Peak Hour I	Percentage:	10%			Me	edium Truc	cks (2 A	(xles)	15					
Peak Ho	our Volume:	730 vehicle	'S		He	eavy Truck	(3+ A	(xles	: 15					
Veh	nicle Speed:	45 mph		V	ehicle	Mix								
Near/Far Lan	e Distance:	54 feet			Veh	nicleType		Day	Evening	Night	Daily			
Site Data						AL	itos:	75.5%	6 14.0%	10.5	% 97.42%			
Bar	rier Height:	0.0 feet			Μ	ledium Tru	icks:	48.9%	6 2.2%	48.9	% 1.84%			
Barrier Type (0-Wa	all, 1-Berm):	0.0				Heavy Tru	icks:	47.3%	5.4%	47.3	% 0.74%			
Centerline Dis	t. to Barrier:	64.0 feet		N	oise S	ource Ele	vation	s (in f	eet)					
Centerline Dist. t	o Observer:	64.0 feet				Autos:	0.0	000						
Barrier Distance t	Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2,297								
Observer Height (A	Observer Height (Above Pad): 5.0 feet				Hea	vv Trucks:	8.0	006	Grade Ad	justme	nt: 0.0			
Pa	d Elevation:	0.0 feet												
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalent l	Distand	ce (in	teet)					
F	Road Grade:	0.0%				Autos:	58.2	241						
	Left View:	-90.0 degre	es		Mediu	m Trucks:	58.0	089						
	Right View:	90.0 degre	es		Hea	vy Trucks:	58.	104						
FHWA Noise Mode	Calculation	15												
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Att	en B	erm Atten			
Autos:	68.46	-3.32		-1.10		-1.20		-4.70	0.0	000	0.000			
Medium Trucks:	79.45	-20.56		-1.08		-1.20		-4.88	0.0	000	0.000			
Heavy Trucks:	84.25	-24.51		-1.08		-1.20		-5.31	0.0	000	0.000			
Unmitigated Noise	Levels (with	nout Topo and	barrier	attenu	ation)									
VehicleType	Leq Peak Ho	ur Leq Da	y L	eq Eve	ening	Leq N	light		Ldn		CNEL			
Autos:	62	2.8	60.8		59.5		53.5		61.9	)	62.6			
Medium Trucks:	56	6.6	52.7		45.2		54.0	)	60.1		60.2			
Heavy Trucks:	57	7.5	53.4		50.0		54.7	'	60.9	)	61.0			
Vehicle Noise:	64	4.7	62.1		60.1		58.8	3	65.8	3	66.1			
Centerline Distanc	e to Noise C	ontour (in fee	t)				_		-		-			
						65 d	BA		60 dBA	5	i5 dBA			
			Ldn:	34 72 156 33				336						
		C	NEL:	35		76			164		353			

Tuesday, March 06, 2018

Tuesday, March 06, 2018

	FH	WA-RD-77-10	B HIGHV	VAY NO	DISE P	REDICTIO	N MODE	ïL						
Scenar Road Narr Road Segme	Scenario: Existing Without Project Road Name: Menifee Rd. Road Segment: s/o Holland Rd.					Project N Job Nur	lame: Ca nber: 113	nterwood 304						
SITE	SPECIFIC I	VPUT DATA				NC	ISE MO	DEL INPUT	S					
Highway Data				S	ite Cor	nditions (H	lard = 10	), Soft = 15)						
Average Daily	Traffic (Adt):	6,300 vehicle	s				Au	tos: 15						
Peak Hour	Percentage:	10%			Me	edium Truc	ks (2 Axle	es): 15						
Peak H	lour Volume:	630 vehicle	s		He	avy Truck	s (3+ Axle	es): 15						
Ve	hicle Speed:	45 mph		V	ehicle	Mix								
Near/Far La	ne Distance:	54 feet			Veh	icleType	Da	ay Evening	Night	Daily				
Site Data						Au	tos: 75	.5% 14.0%	10.5	% 97.42%				
Ba	rrier Heiaht:	0.0 feet			Medium Trucks: 48.9% 2.2% 48.9% 1.84									
Barrier Type (0-W	/all, 1-Berm):	0.0				Heavy Tru	cks: 47	.3% 5.4%	47.39	% 0.74%				
Centerline Di	st. to Barrier:	64.0 feet		N	oise S	ource Elev	vations (	in feet)						
Centerline Dist.	to Observer:	64.0 feet				Autos	0.000	)						
Barrier Distance	Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2 297								
Observer Height	Observer Height (Above Pad): 5.0 feet				Hear	v Trucks:	8.006	Grade Ad	liustme	nt: 0.0				
P	ad Elevation:	0.0 feet				,								
Ro	ad Elevation:	0.0 feet		La	ane Eq	uivalent L	Distance	(in feet)						
	Road Grade:	0.0%				Autos:	58.241	1						
	Left View:	-90.0 degre	es		Mediu	m Trucks:	58.089	9						
	Right View:	90.0 degre	es		Hear	vy Trucks:	58.104	4						
FHWA Noise Mod	el Calculatior	ıs												
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresnel	Barrier Att	en B	erm Atten				
Autos:	68.46	-3.96		-1.10		-1.20	-4.	70 0.0	000	0.000				
Medium Trucks:	79.45	-21.20		-1.08		-1.20	-4.	88 0.0	000	0.000				
Heavy Trucks:	84.25	-25.15		-1.08		-1.20	-5.	31 0.0	000	0.000				
Unmitigated Nois	e Levels (with	nout Topo and	l barrier	attenu	ation)									
VehicleType	Leq Peak Ho	ur Leq Da	y I	Leq Eve	ening	Leq Ni	ight	Ldn		CNEL				
Autos:	62	2.2	60.2		58.9		52.9	61.3	3	61.9				
Medium Trucks:	56	5.0	52.1		44.6		53.3	59.5	5	59.5				
Heavy Trucks:	56	5.8	52.8		49.4		54.0	60.2	2	60.3				
Vehicle Noise:	64	4.0	61.5		59.5		58.2	65.:	2	65.5				
Centerline Distant	ce to Noise C	ontour (in fee	t)											
			L	70 dE	BA	65 dE	BA	60 dBA	5	i5 dBA				
		-	Ldn:	30 66 142				305						
	CNEL:					69		148		320				

	FH	WA-RD-77-108	HIGHV	VAY N	OISE PR	EDICTIO	N MOI	DEL			
Scenari Road Nam Road Segmer	o: Existing W e: Leon Rd. nt: s/o Craig A	ithout Project			1	Project N Job Nur	ame: ( nber: 1	Canter 11304	wood		
SITE S	SPECIFIC IN	NPUT DATA				NC	ISE N	IODE	L INPUT	s	
Highway Data				S	ite Cona	litions (H	lard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	5,000 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10%			Med	lium Truc	ks (2 A	xles):	15		
Peak H	our Volume:	500 vehicle	s		Hea	vy Truck	s (3+ A	xles):	15		
Vel	hicle Speed:	35 mph		v	ehicle M	lix					
Near/Far Lar	ne Distance:	48 feet			Vehic	leType		Day	Evening	Night	Daily
Site Data						Au	tos:	77.5%	14.0%	10.5%	92.00%
Bar	rier Height:	0.0 feet			Mee	dium Tru	cks:	48.0%	2.0%	50.0%	3.00%
Barrier Type (0-W	all, 1-Berm):	0.0			He	eavy Tru	cks:	48.0%	2.0%	50.0%	5.00%
Centerline Dis	at. to Barrier:	59.0 feet			loise Soi	urce Elev	ation	s (in fe	oot)		
Centerline Dist.	to Observer:	59.0 feet		Ê	0.00 000	Autos	0.0	000	,01)		
Barrier Distance	to Observer:	0.0 feet			Medium	Trucks:	2.2	97			
Observer Height (J	Above Pad):	5.0 feet			Heavy	Trucks:	8.0	006	Grade Ad	justment	0.0
Pa	d Elevation:	0.0 feet								·	
Roa	d Elevation:	0.0 feet		L	ane Equ	ivalent L	vistanc	e (in i	reet)		
ŀ	Road Grade:	0.0%				Autos:	54.1	129			
	Left View:	-90.0 degre	es		Nealum	Trucks:	53.5	000			
	Right view:	90.0 degre	es		neavy	TTUCKS.	55.8	902			
FHWA Noise Mode	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite F	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	64.30	-4.12		-0.62		-1.20		-4.69	0.0	000	0.00
Medium Trucks:	75.75	-18.99		-0.60		-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	81.57	-16.77		-0.60		-1.20		-5.35	0.0	000	0.00
Unmitigated Noise	e Levels (with	out Topo and	barrier	attenu	uation)						
VehicleType	Leq Peak Ho	ur Leq Day	/ 1	Leq Ev	ening	Leq N	ight		Ldn	C	NEL
Autos:	58	3.4	56.5		55.1		49.0		57.5	5	58.
Medium Trucks:	55	5.0	51.0		43.2		52.4		58.6	6	58.0
Heavy Trucks:	63	3.0	59.0		51.2		60.4		66.6	5 -	66.0
Vehicle Noise:	64	1.8	61.4		56.8		61.3		67.	7	67.8
Centerline Distance	e to Noise C	ontour (in feel	)								
			L	70 d	BA	65 dE	3A	6	IU dBA	55	aBA
	Ldn:					41 89 192 413					13
	CNEL:								1 3 4 / 1		

	=	VA DD 77 489		AV N				DEL	_			
	FHV	VA-RD-77-108	HIGHW	AY N	OISE PI	REDICT	ION MC	DEL				
Scenar	io: Existing Wi	thout Project				Project	Name:	Cante	rwood			
Road Nam	e: Leon Rd.					Job N	lumber:	11304				
Road Segme	nt: s/o Garbani	i Rd.										
SITE	SPECIFIC IN	IPUT DATA				P	IOISE	MODE	L INPUT	S		
Highway Data				S	Site Con	ditions	(Hard =	= 10, S	oft = 15)			
Average Daily	Traffic (Adt):	5,400 vehicles						Autos:	15			
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2	Axles):	15			
Peak H	lour Volume:	540 vehicles			He	avy Tru	cks (3+	Axles):	15			
Ve	hicle Speed:	55 mph		v	ehicle (	Mix						
Near/Far La	ne Distance:	48 feet		F	Veh	icleTvpe	9	Dav	Evenina	Niaht	Dailv	
Site Data						,	Autos:	77.5%	5 14.0%	10.5%	6 92.00%	
Rai	rrier Height:	0.0 feet			M	edium T	rucks:	48.0%	2.0%	50.0%	6 3.00%	
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	Heavy T	rucks:	48.0%	2.0%	50.0%	6 5.00%	
Centerline Dis	st. to Barrier:	59.0 feet		۸	loise So	ource E	levatior	ns (in f	eet)			
Centerline Dist.	to Observer:	59.0 feet				Auto	s: 0	.000	,			
Barrier Distance	Barrier Distance to Observer: 0.0 feet				Medium Trucks: 2.297							
Observer Height (	Observer Height (Above Pad): 5.0 feet				Heav	v Truck	s: 8	006	Grade Ad	ljustmen	nt: 0.0	
Pa	ad Elevation:	0.0 feet				,				, 		
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distar	ice (in	feet)			
1	Road Grade:	0.0%				Auto	s: 54	.129				
	Left View:	-90.0 degree	s		Mediu	m Truck	s: 53	.966				
	Right View:	90.0 degree	s		Heav	ry Truck	s: 53	.982				
FHWA Noise Mod	el Calculation	s										
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fres	nel	Barrier At	ten Be	erm Atten	
Autos:	71.78	-5.75		-0.62		-1.20		-4.69	0.	000	0.000	
Medium Trucks:	82.40	-20.61		-0.60		-1.20		-4.88	0.	000	0.000	
Heavy Trucks:	86.40	-18.40		-0.60		-1.20		-5.35	0.	000	0.000	
Unmitigated Noise	e Levels (with	out Topo and I	barrier a	attenı	uation)							
VehicleType	Leq Peak Hou	Ir Leq Day	L	eq Ev	ening	Leq	Night		Ldn	0	CNEL	
Autos:	64	.2 6	52.3		60.9		54.	9	63.	3	64.0	
Medium Trucks:	60	.0 5	6.0		48.2		57.	4	63.	6	63.6	
Heavy Trucks:	66	.2 6	52.2		54.4		63.	6	69.	8	69.8	
Vehicle Noise:	68	.9 6	65.8		62.0		65.	0	71.	5	71.6	
Centerline Distant	ce to Noise Co	ontour (in feet)		=0.1			10.4					
			. ட	70 d	BA	65	aBA	(	SU aBA	5	5 aBA	
			an:	74		1	59		343		738	
	CNEL:					1	62		350		753	

	FH	WA-RD-77-108	HIGHW	AY N	IOISE PF	REDICTI	ON MO	DEL						
Scenar Road Narr Road Segme	Scenario: Existing Without Project Road Name: Leon Rd. Road Segment: s/o Scott Rd.						Project Name: Canterwood Job Number: 11304							
SITE	SPECIFIC I	NPUT DATA				N	OISE N	/IODE		s				
Highway Data					Site Con	ditions (	Hard =	10, Se	oft = 15)					
Average Daily	Traffic (Adt):	3,600 vehicle	s					Autos:	15					
Peak Hour	Percentage:	10%			Me	dium Tru	cks (2 A	(xles):	15					
Peak H	lour Volume:	360 vehicle	s		He	avy Truc	ks (3+ A	(xles):	15					
Ve	hicle Speed:	55 mph		H	Vohiclo	Niv								
Near/Far La	ne Distance:	48 feet		H	Venicie i	nix cleTvne		Dav	Evening	Nial	ht	Daily		
Site Data					Ven	Δ	utos:	77 5%	14.0%	10	5% C	22 00%		
ono putu		0.0 ()			Me	dium Tr	ucks:	48.0%	2.0%	50.	0%	3.00%		
Barrier Turne (0.14	rrier Height:	0.0 feet			ŀ	leavy Tr	ucks:	48.0%	2.0%	50.	0%	5.00%		
Contorlino Di	all, 1-Dell11).	0.0 50.0 foot				,								
Centerline Dist	to Observer:	59.0 feet		1	Noise Sc	urce Ele	evation	s (in f	eet)					
Barrier Distance	to Observer:	0.0 feet				Autos	: 0.0	000						
Observer Height	(Above Pad):	5.0 feet			Mediur	n Trucks	: 2.2	297						
P	ad Elevation:	0.0 foot			Heav	y Trucks	: 8.0	006	Grade Ad	justm	ent: (	).0		
Ro	ad Elevation:	0.0 feet		1	Lane Eq	uivalent	Distan	ce (in	feet)					
, 10	Road Grade:	0.0%				Autos	54	129						
	Left View	-90.0 degre	<u></u>		Mediur	n Trucks	53	966						
	Right View:	90.0 degre	es		Heav	y Trucks	53.	982						
FHWA Noise Mod	el Calculation	15												
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresr	el	Barrier Att	en	Berm	Atten		
Autos:	71.78	-7.51		-0.62	2	-1.20		-4.69	0.0	000		0.00		
Medium Trucks:	82.40	-22.37		-0.60	D	-1.20		-4.88	0.0	000		0.000		
Heavy Trucks:	86.40	-20.16		-0.60	D	-1.20		-5.35	0.0	000		0.000		
Unmitigated Nois	e Levels (with	out Topo and	barrier	atten	uation)									
VehicleType	Leq Peak Ho	ur Leq Daj	/ L	eq E	vening	Leq I	Vight		Ldn		CNE	EL		
Autos:	62	2.5	60.6		59.1		53.1		61.6	3		62.2		
Medium Trucks:	58	3.2	54.2		46.5		55.7		61.8	3		61.9		
Heavy Trucks:	64	4.4	60.5		52.7		61.9		68.0	)		68.1		
Vehicle Noise:	67	7.2	64.0		60.2		63.3		69.7	7		69.		
Centerline Distan	ce to Noise C	ontour (in feet	t)											
			L	70 d	dBA	65 c	IBA	6	60 dBA		55 dE	3A		
			Ldn:	56 121 261 563					3					
		C	NEL:	5	7	12	4		267		575	د		

Tuesday, March 06, 2018

Tuesday, March 06, 2018

	FH	WA-RD-77-10	B HIGHW	AY NO	DISE P	REDICTIC	N MOE	EL				
Scenar Road Nam Road Segme	Scenario: Existing Without Project Road Name: Holland Rd. Road Segment: w/o Menifee Rd.				Project Name: Canterwood Job Number: 11304							
Noau Segme	one w/o wernie	e Ru.										
SIIE Highway Data	SPECIFIC II	NPUT DATA			ite Cor	NC NC	JISE M	IODEI	L INPUTS ff = 15)	•		
Average Deily	Troffic (Adt)	0.000 vehicle		Ĩ	1000	iunions (i			15			
Average Daily	Dereenteree	3,600 venicie	es		M	dium Truc	A Vo (2 A	utos:	15			
Peak Hour	Percentage.	260 vobick			He	aun muc	ло (2 л. с (2± Д	vlas).	15			
Ve	hicle Sneed	45 mph	55		110	avy much	5 (0+ A	103).	15			
Near/Far La	ne Distance:	48 feet		V	ehicle	Mix			1			
ridani di Ed	no Biotanoo.	10 1000			Veh	icleType		Day	Evening	Night	Daily	
Site Data				_		AU adium Tru	itos: i	5.5%	14.0%	10.5%	6 97.42%	
Ba	rrier Height:	0.0 feet			Heavy Trucks: 47.3% 5.4% 47.3% 0.74							
Barrier Type (0-W	(all, 1-Berm):	0.0				leavy IIu	UN3. 4	1.3%	5.4%	47.37	0.74%	
Centerline Di	st. to Barner:	59.0 feet		N	oise S	ource Ele	vations	(in fe	et)			
Centerline Dist.	to Observer:	59.0 feet				Autos:	0.0	00				
Observer Usight	(About Ded)	0.0 feet			Mediu	m Trucks:	2.2	97				
Diserver neight	ad Elevation:	0.0 feet			Hear	/y Trucks:	8.0	06	Grade Adj	ustmer	nt: 0.0	
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent L	Distanc	e (in f	eet)			
	Road Grade:	0.0%				Autos:	54.1	29	,			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	53.9	66				
	Right View:	90.0 degre	ees		Hear	y Trucks:	53.9	82				
FHWA Noise Mod	el Calculatior	15										
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresne	el I	Barrier Atte	en Be	erm Atten	
Autos:	68.46	-6.39	)	-0.62		-1.20	-	4.69	0.0	00	0.000	
Medium Trucks:	79.45	-23.63	5	-0.60		-1.20	-	4.88	0.0	00	0.000	
Heavy Trucks:	84.25	-27.58	1	-0.60		-1.20	-	5.35	0.0	00	0.000	
Unmitigated Nois	e Levels (with	nout Topo and	barrier	attenu	ation)	_						
VehicleType	Leq Peak Ho	ur Leq Da	y L	eq Eve	ening	Leq N	ight		Ldn	(	CNEL	
Autos:	60	0.3	58.2		56.9		50.9		59.3		60.0	
Medium Trucks:	54	4.0	50.1		42.6		51.4		57.5		57.6	
Heavy Trucks:	54	4.9	50.8		47.4		52.1		58.3		58.4	
Vehicle Noise:	62	2.1	59.5		57.5		56.3		63.2		63.5	
Centerline Distan	ce to Noise C	ontour (in fee	t)	70 "	24	05.			0.404	-	C -/D A	
			Ldn	70 dBA 65 dBA 60 dBA			5	D dBA				
		~	Lari:	21 45 97			208					
	CNEL:					47			101		210	

	FHV	VA-RD-77-108	HIGI	HWAY	NOISE PH	REDICTI		DEL			
Scenario	: Existing Wi			Project	Name: (	Canter	wood				
Road Name	e: Holland Rd					Job N	umber:	11304			
Road Segmen	t: e/o Menifee	e Rd.									
SITE S	PECIFIC IN	IPUT DATA				N	OISE N	/ODE	L INPUT	s	
Highway Data					Site Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily 1	raffic (Adt):	4,100 vehicle	s					Autos:	15		
Peak Hour I	Percentage:	10%			Me	dium Tru	icks (2 A	Axles):	15		
Peak Ho	our Volume:	410 vehicle	s		He	avy Truc	ks (3+ A	(xles)	15		
Veh	icle Speed:	45 mph		F	Vehicle I	<i>lix</i>					
Near/Far Lan	e Distance:	48 feet		Ē	Vehi	cleType		Day	Evening	Night	Daily
Site Data						A	utos:	75.5%	14.0%	10.5%	97.429
Bar	rier Heiaht:	0.0 feet			Me	edium Tr	ucks:	48.9%	2.2%	48.9%	1.849
Barrier Type (0-Wa	all, 1-Berm):	0.0			ŀ	leavy Tr	ucks:	47.3%	5.4%	47.3%	0.74%
Centerline Dis	t. to Barrier:	59.0 feet		-	Noise Sc	urce Fl	evation	s (in fi	pet)		
Centerline Dist. t	o Observer:	59.0 feet		F		Autos	. 00	000			
Barrier Distance t	o Observer:	0.0 feet			Mediur	n Trucks	. 21	297			
Observer Height (A	Above Pad):	5.0 feet			Heav	v Trucks		106	Grade Ad	iustment	0.0
Pa	d Elevation:	0.0 feet		_		,					
Roa	d Elevation:	0.0 feet		_	Lane Eq	uivalent	Distand	ce (in i	feet)		
F	load Grade:	0.0%				Autos	: 54.	129			
	Left View:	-90.0 degre	es		Mediur	n Trucks	:: 53.9	966			
	Right View:	90.0 degre	es		Heav	y Trucks	: 53.9	982			
FHWA Noise Mode	I Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresn	iel	Barrier Att	en Ber	m Atten
Autos:	68.46	-5.82		-0.6	2	-1.20		-4.69	0.0	000	0.00
Medium Trucks:	79.45	-23.06		-0.6	0	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	84.25	-27.02		-0.6	0	-1.20		-5.35	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	ier atter	nuation)						
VehicleType	Leq Peak Hou	r Leq Day	/	Leq E	vening	Leq	Vight		Ldn	C	NEL
Autos:	60	.8	58.8		57.5		51.5		59.9	)	60.
Medium Trucks:	54	.6	50.7		43.2		51.9	)	58.1		58.
Heavy Trucks:	55	.4	51.4		48.0		52.6	i	58.8	3	58.
Vehicle Noise:	62	.7	60.1		58.1		56.8	5	63.8	3	64.
Centerline Distanc	e to Noise Co	ontour (in feet	)	70	-/DA	05	104		0.104		-10.4
				70	aBA	65 0	3BA	6	O aBA	55	aBA
		~	Ldn:	2	23 49 105 2			27			
	CNEL:					6			1111		( 4 M

	FHV	VA-RD-77-108 I	HIGHW/	AY N	OISE PF	REDICTI	ION MO	DEL				
Scenar	io: Existing Wi				Project	Name:	Cante	rwood				
Road Nam	e: Holland Rd					Job N	umber:	11304	Ļ			
Road Segme	nt: w/o Briggs	Rd.										
SITE	SPECIFIC IN	IPUT DATA				N	IOISE I	NODE	L INPUT	s		
Highway Data				S	lite Con	ditions	(Hard =	10, S	oft = 15)			
Average Daily	Traffic (Adt):	1,300 vehicles						Autos.	15			
Peak Hour	Percentage:	10%			Me	dium Tru	ucks (2 /	Axles).	: 15			
Peak H	lour Volume:	130 vehicles			He	avy Truc	cks (3+ /	Axles)	: 15			
Ve	hicle Speed:	45 mph		V	ohicle I	Mix						
Near/Far La	ne Distance:	48 feet		-	Veh	cleTvpe		Dav	Evenina	Nie	aht	Dailv
Site Data						610 T J P O	Autos:	75.5%	6 14.0%	10	).5%	97.42%
Ba	wier Height	0.0 (act			Me	edium Tr	rucks:	48.9%	6 2.2%	48	3.9%	1.84%
Barrier Type (0-W	all, 1-Berm):	0.0 1001			ŀ	leavy Tr	rucks:	47.3%	6 5.4%	47	7.3%	0.74%
Centerline Dis	st. to Barrier:	59.0 feet			loise Sr	urco El	evation	e (in f	(oot)			
Centerline Dist.	to Observer:	59.0 feet		~	10/30 00	Auto	evaluon	000	001/			
Barrier Distance	to Observer:	0.0 feet			Modiuu	n Truck	s. 0.	207				
Observer Height (	Above Pad):	5.0 feet			Hoon	n Truck	5. <u>2</u> .	006	Grade Ad	liusti	nent	0.0
Pa	ad Elevation:	0.0 feet			neav	y mucha	5. 0.	000	0/000/10	ijuou	nom.	0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalent	t Distan	ce (in	feet)			
1	Road Grade:	0.0%				Autos	s: 54.	129				
	Left View:	-90.0 degrees	6		Mediur	n Trucks	s: 53.	966				
	Right View:	90.0 degrees	3		Heav	y Trucks	s: 53.	982				
FHWA Noise Mod	el Calculation	s										
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresr	nel	Barrier At	ten	Ben	m Atten
Autos:	68.46	-10.81		-0.62		-1.20		-4.69	0.	000		0.000
Medium Trucks:	79.45	-28.05		-0.60		-1.20		-4.88	0.	000		0.000
Heavy Trucks:	84.25	-32.01		-0.60		-1.20		-5.35	0.	000		0.000
Unmitigated Noise	e Levels (with	out Topo and k	arrier a	ttenı	uation)							
VehicleType	Leq Peak Hou	Ir Leq Day	Le	eq Ev	ening	Leq	Night		Ldn		CI	VEL
Autos:	55	.8 5	3.8		52.5		46.5	5	54.	9		55.5
Medium Trucks:	49	.6 4	5.7		38.2		47.0	)	53.	1		53.2
Heavy Trucks:	50	.4 4	6.4		43.0		47.7	7	53.	8		53.9
Vehicle Noise:	57	.7 5	5.1		53.1		51.8	3	58.	8		59.1
Centerline Distant	ce to Noise Co	ontour (in feet)		=		0-	/8.4	_		-		
			. ட	70 d	BA	65	dBA		60 dBA		55	dBA
		L	dn:	11 23 49				1	06			
	CNEL:					2	.4		51		1	11

	FH'	WA-RD-77-108	B HIGHW	AY NC	DISE P	REDICTIC	ON MOI	DEL			
Scenai Road Nan Road Segme	Scenario: Existing Without Project Road Name: Holland Rd. Road Segment: w/o Leon Rd.						lame: ( mber: 1	Cante 1304	rwood		
SITE	SPECIFIC I	NPUT DATA				NC	DISE N	IODE	L INPUTS	ŝ	
Highway Data				Si	ite Cor	nditions (I	Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	1,100 vehicle	s				A	lutos.	15		
Peak Hour	Percentage:	10%			Me	edium Truc	:ks (2 A	xles).	15		
Peak H	Hour Volume:	110 vehicle	s		He	avy Truck	is (3+ A	xles).	15		
Ve	ehicle Speed:	45 mph		V	ohiclo	Mix					
Near/Far La	ane Distance:	48 feet			Voł	nicleType		Dav	Evening	Niaht	Daily
Site Data					VCI	AL	itos:	77.5%	6 14.0%	10.5%	6 92.00%
Pa	rrior Hoight:	0.0 foot			М	edium Tru	cks:	48.0%	6 2.0%	50.0%	6 3.00%
Barrier Type (0-V	Vall 1-Rerm)	0.0				Heavy Tru	cks:	48.0%	6 2.0%	50.0%	6 5.00%
Centerline D	ist. to Barrier:	59.0 feet									
Centerline Dist.	to Observer:	59.0 feet		N	oise S	ource Ele	vations	s (IN 1	eet)		
Barrier Distance	to Observer:	0.0 feet				Autos:	0.0	00			
Observer Height	(Above Pad):	5.0 feet			Mediu	m Trucks:	2.2	97	Grado Adi	ustmor	+ 0.0
P	ad Elevation:	0.0 feet			Hea	vy Trucks:	8.0	06	Glade Auj	usunen	1. 0.0
Ro	ad Elevation:	0.0 feet		La	ane Eq	uivalent l	Distanc	e (in	feet)		
	Road Grade:	0.0%				Autos:	54.1	29			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	53.9	966			
	Right View:	90.0 degre	es		Hea	vy Trucks:	53.9	82			
FHWA Noise Mod	lel Calculatior	IS									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresn	el	Barrier Atte	en Be	erm Atten
Autos:	68.46	-11.79		-0.62		-1.20		4.69	0.0	00	0.000
Medium Trucks:	79.45	-26.65		-0.60		-1.20		4.88	0.0	00	0.000
Heavy Trucks:	84.25	-24.43		-0.60		-1.20		-5.35	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	V L	eq Eve	ening	Leq N	light		Ldn	(	ONEL
Autos:	54	1.9	53.0		51.5		45.5		54.0		54.6
Medium Trucks:	51	0.1	47.0		39.2		48.4		54.6		54.6
Heavy Trucks:	58	3.0	54.0		46.3		55.5		61.6		61.7
Vehicle Noise:	60	).3	57.0		52.9		56.6		63.0	1	63.1
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 dE	BA	65 di	BA		60 dBA	5	5 dBA
			Ldn:	20 43 93				201			
		C	NEL:	20		44			95		205

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	FH	WA-RD-77-108	HIGHW	AY NO	DISE PI	REDICTIC	N MODE	L		
Scenai Road Nan Road Segme	Scenario: Existing Without Project Road Name: Scott Rd. Road Segment: w/o Haun Rd.					Project N Job Nu	lame: Car mber: 113	nterwood 04		
SITE	SPECIFIC IN	NPUT DATA				NC	DISE MO	DEL INPUT	'S	
Highway Data				S	ite Cor	ditions (F	Hard = 10,	Soft = 15)		
Average Daily	Traffic (Adt):	12,600 vehicle	s				Aut	os: 15		
Peak Hour	Percentage:	10%			Me	aium Truc	KS (2 AXIE	es): 15		
Peak F	Hour Volume:	1,260 vehicle	S		He	avy Truck	's (3+ Axie	es <i>):</i> 15		
Ve	hicle Speed:	50 mph		V	ehicle	Mix				
Near/Far La	ne Distance:	78 feet			Veh	icleType	Da	y Evening	Nig	ht Daily
Site Data						AL	itos: 75.	5% 14.0%	10	.5% 97.42%
Ba	rrier Height:	0.0 feet			М	edium Tru	cks: 48.	9% 2.2%	48	.9% 1.84%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tru	cks: 47.	3% 5.4%	47	.3% 0.74%
Centerline Di	ist. to Barrier:	76.0 feet		N	loise Se	ource Ele	vations (i	n feet)		
Centerline Dist.	to Observer:	76.0 feet				Autos:	0.000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.297			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks:	8.006	Grade Ad	djustri	nent: 0.0
P	ad Elevation:	0.0 feet							-	
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distance (	(in feet)		
	Road Grade:	0.0%				Autos:	65.422			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	65.286			
	Right View:	90.0 degre	es		Heav	/y Trucks:	65.300	)		
FHWA Noise Mod	lel Calculation	IS								
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresnel	Barrier At	ten	Berm Atten
Autos:	70.20	-1.40		-1.85		-1.20	-4.	73 0.	000	0.00
Medium Trucks:	81.00	-18.64		-1.84		-1.20	-4.	88 0.	000	0.00
Heavy Trucks:	85.38	-22.60		-1.84		-1.20	-5.2	25 0.	000	0.00
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenu	uation)					
VehicleType	Leq Peak Ho	ur Leq Day	/ L	eq Ev	ening	Leq N	ight	Ldn		CNEL
Autos:	65	5.7	63.7		62.4		56.4	64.	8	65.
Medium Trucks:	59	9.3	55.4		47.9		56.7	62.	8	62.
Heavy Trucks:	59	9.7	55.7		52.3		56.9	63.	1	63.
Vehicle Noise:	67	7.4	64.9		63.0		61.5	68.	5	68.
Centerline Distan	ce to Noise C	ontour (in feet	)	_	-					
				70 dBA 65 dBA 60 dBA			55 dBA			
			Ldn:	60 129 279				601		
	CNEL:					136	6	293		631

	FHV	VA-RD-77-108	HIGHW	AY NO	DISE PR	EDICTIO		DEL				
Scenari	o: Existing Wi	thout Project			Project Name: Canterwood							
Road Nam	e: Scott Rd.	al.				Job Nu	mber: 1	1304				
Road Segmen	n. e/o naun k	.u.		1								
SITE S	SPECIFIC IN	IPUT DATA			ite Cone	N		ODE		S		
	T (2 (A 1))			3	ne conc	nuons (	haru =	10, 30	15)			
Average Daily	Traffic (Adt): 1	18,800 vehicle	s				P	utos:	15			
Peak Hour	Percentage:	10%	_		Wea	urn True	CKS (2 A	xies):	15			
Peak H	our volume: hiele Sneed:	1,880 Venicle	s		пеа	ivy muci	is (3+ A	xies).	15			
Noar/Ear La	nicie Speeu.	79 foot		V	ehicle M	lix						
iveai/i ai Lai	le Distance.	70 leel			Vehic	cleType	l	Day	Evening	Night	Daily	
Site Data						A	itos: 1	5.5%	14.0%	10.5%	97.42%	
Bar	rier Height:	0.0 feet			Me	dium Tru	icks: 4	18.9%	2.2%	48.9%	1.84%	
Barrier Type (0-W	all, 1-Berm):	0.0			H	eavy Tru	icks: 4	17.3%	5.4%	47.3%	0.74%	
Centerline Dis	st. to Barrier:	76.0 feet		N	oise So	urce Ele	vations	(in fe	et)			
Centerline Dist.	to Observer:	76.0 feet				Autos	0.0	00	.,			
Barrier Distance	to Observer:	0.0 feet			Medium	Trucks	2.2	97				
Observer Height (J	Above Pad):	5.0 feet			Heavy	Trucks	8.0	06	Grade Ad	justment	: 0.0	
Pa	ad Elevation:	0.0 feet			,							
Roa	ad Elevation:	0.0 feet		Li	ane Equ	ivalent	Distanc	e (in i	leet)			
F	Road Grade:	0.0%				Autos:	65.4	22				
	Left View:	-90.0 degre	es		Medium	Trucks:	65.2	86				
	Right View:	90.0 degre	es		Heavy	/ Trucks:	65.3	00				
FHWA Noise Mode	el Calculation	s										
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite F	Road	Fresne	el	Barrier Att	en Ber	m Atten	
Autos:	70.20	0.33		-1.85		-1.20	-	4.73	0.0	000	0.000	
Medium Trucks:	81.00	-16.91		-1.84		-1.20		4.88	0.0	000	0.00	
Heavy Trucks:	85.38	-20.86		-1.84		-1.20	-	5.25	0.0	000	0.00	
Unmitigated Noise	e Levels (with	out Topo and	barrier	attenu	ation)							
VehicleType	Leq Peak Hou	ir Leq Daj	/ L	eq Eve	ening	Leq N	light		Ldn	C	NEL	
Autos:	67	.5	65.5		64.2		58.1		66.6	6	67.2	
Medium Trucks:	61	.1	57.2		49.7		58.4		64.6	6	64.0	
Heavy Trucks:	61	.5	57.4		54.0		58.7		64.9	)	65.0	
Vehicle Noise:	69	.2	66.6		64.7		63.2		70.2	2	70.5	
	e to Noise Co	ontour (in fee	)	70 /							10.4	
Centerline Distanc			1	70 dE	3A	65 d	BA	6	iU dBA	55	aBA	
Centerline Distanc			🖵	ar -					004	_	0.4	
Centerline Distanc		-	Ldn:	78	1	16	9		364	7	84	

	FHV	VA-RD-77-108 I	IIGHV	VAY NO	DISE PI	REDICT	ION MC	DEL				
Scenar Road Nan Road Segme	rio: Existing With ne: Scott Rd. nt: w/o Menifee	thout Project e Rd.				Project Job N	Name: lumber:	Cante 11304	rwood			
SITE	SPECIFIC IN	PUT DATA				r	OISE	MODE	LINP	UTS		
Highway Data				S	ite Con	ditions	(Hard =	: 10, S	oft = 15	)		
Average Daily Peak Hour Peak F	Traffic (Adt): 1 Percentage: Hour Volume:	19,800 vehicles 10% 1,980 vehicles			Me He	dium Tr avy Tru	ucks (2 cks (3+	Autos: Axles): Axles):	15 15 15			
Near/Far La	ne Distance:	55 mpn 79 feet		V	ehicle l	Mix						
TYCUIT OF ED	ine Distance.	78 1001			Veh	icleType	9	Day	Eveni	ng N	light	Daily
Site Data Ba	rrier Height:	0.0 feet			M	, edium T Heavy T	Autos: rucks: rucks	75.5% 48.9% 47.3%	5 14.0 5 2.2 5 5 4	1% 1 1% 4 1% 4	0.5% 8.9% 7.3%	97.429 1.849 0.749
Contorlino Di	iot to Berrier	0.0 76.0 feet										
Contorlino Dist	to Obsonior:	76.0 feet		N	oise So	ource E	levation	ns (in f	eet)			
Certienine Dist.	to Observer.	76.0 feet				Auto	s: 0.	000				
Obsonvor Hoight	(Abovo Pad):	5.0 foot			Mediu	m Truck	s: 2.	297				
Diserver neight	ad Elevation	5.0 feet			Heav	y Truck	s: 8.	006	Grade	Adjus	tment	0.0
Ro	ad Elevation:	0.0 feet		L	ane Ea	uivalen	t Distan	ce (in	feet)			
10	Road Grade:	0.0%		-		Auto	s: 65	422				
	Left View	-90.0 degree			Mediu	m Truck	s: 65	286				
	Right View:	90.0 degree	5		Heav	y Truck	s: 65	.300				
FHWA Noise Mod	el Calculation	s										
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fres	nel	Barrier	Atten	Ber	m Atten
Autos:	71.78	0.14		-1.85		-1.20		-4.73		0.000	)	0.00
Medium Trucks:	82.40	-17.09		-1.84		-1.20		-4.88		0.000		0.00
Heavy Trucks:	86.40	-21.05		-1.84		-1.20		-5.25		0.000		0.00
Unmitigated Nois	e Levels (with	out Topo and b	arrier	attenu	ation)							
VehicleType	Leq Peak Hou	r Leq Day	1	Leg Eve	ening	Leq	Night		Ldn		CI	VEL
Autos:	68.	.9 6	6.9		65.5		59.	5	(	68.0		68.
Medium Trucks:	62.	.3 5	8.4		50.9		59.	6	(	65.8		65.
Heavy Trucks:	62.	.3 5	8.3		54.9		59.	5		65.7		65.
Vehicle Noise:	70.	.5 6	7.9		66.0		64.	3		71.4		71.
Centerline Distan	ce to Noise Co	ontour (in feet)										
				70 dł	BA	65	dBA	-	60 dBA		55	dBA
		L	dn:	94 203			436		9	40		
	CNEL:					2	13		459		9	89

	FHV	VA-RD-77-108 HI	GHWAY	NOISE PI	REDICTIO	N MODEL			
Scenario:	Existing Wi	thout Project			Project Na	ame: Cante	rwood		
Road Name:	Scott Rd.				Job Nurr	nber: 11304	ł		
Road Segment:	w/o Briggs I	Rd.							
SITE SI	PECIFIC IN	IPUT DATA			NO	ISE MODE	EL INPUT	s	
Highway Data				Site Con	nditions (H	ard = 10, S	oft = 15)		
Average Daily Tr	affic (Adt): 1	7,200 vehicles				Autos	: 15		
Peak Hour Pe	ercentage:	10%		Me	dium Truck	(2 Axles)	: 15		
Peak Hou	ır Volume:	1,720 vehicles		He	avy Trucks	(3+ Axles)	: 15		
Vehi	cle Speed:	55 mph		Vehicle	Mix				
Near/Far Lane	Distance:	78 feet		Veh	icleTvpe	Dav	Evenina	Night	Dailv
Site Data					Aut	os: 75.5%	6 14.0%	10.5%	97.42%
Barri	er Heiaht:	0.0 feet		M	edium Truc	ks: 48.9%	6 2.2%	48.9%	1.84%
Barrier Type (0-Wal	I. 1-Berm):	0.0		1	Heavy Truc	ks: 47.3%	6 5.4%	47.3%	0.74%
Centerline Dist.	to Barrier:	76.0 feet		Noiso S	ourco Elov	ations (in t	(aat)		
Centerline Dist. to	Observer:	76.0 feet		NOISE SU	Autoo:	0.000	eel)		
Barrier Distance to	Observer:	0.0 feet		Modiu	m Trucke:	2 297			
Observer Height (Al	bove Pad):	5.0 feet		Hoo	a Trucks:	2.207	Grade Ad	iustment [.]	0.0
Pad	Elevation:	0.0 feet		Tieav	ly muchs.	8.000	enddo maj	dournom.	0.0
Road	Elevation:	0.0 feet		Lane Eq	uivalent D	istance (in	feet)		
Ro	ad Grade:	0.0%			Autos:	65.422			
	Left View:	-90.0 degrees		Mediu	m Trucks:	65.286			
F	Right View:	90.0 degrees		Heav	/y Trucks:	65.300			
FHWA Noise Model	Calculation	s		1					
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Att	en Berr	m Atten
Autos:	71.78	-0.47	-1	.85	-1.20	-4.73	0.0	000	0.000
Medium Trucks:	82.40	-17.71	-1	.84	-1.20	-4.88	0.0	000	0.000
Heavy Trucks:	86.40	-21.66	-1	.84	-1.20	-5.25	0.0	000	0.000
Unmitigated Noise	evels (with	out Topo and ba	rrier atte	enuation)					
VehicleType L	eq Peak Hou	r Leq Day	Leq	Evening	Leq Nig	ght	Ldn	CI	IEL
Autos:	68	.3 66	.2	64.9		58.9	67.3	3	68.0
Medium Trucks:	61.	.7 57	.8	50.3		59.0	65.2	2	65.2
Heavy Trucks:	61.	.7 57	.6	54.3		58.9	65.1		65.2
Vehicle Noise:	69	.8 67	.3	65.4		63.7	70.8	3	71.1
Centerline Distance	to Noise Co	ontour (in feet)							
			70	) dBA	65 dB	A	60 dBA	55	dBA
		Ld	n:	86 184 397			397	8	56
		CNE	L:	90	194		418	9	01

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	FH	WA-RD-77-108	HIGHW	AY NO	DISE PI	REDICTIC	N MODE	L		
Scenar Road Nan Road Segme	Scenario: Existing Without Project Road Name: Scott Rd. Road Segment: w/o Leon Rd.					Project N Job Nur	lame: Ca mber: 113	nterwood 04		
SITE	SPECIFIC IN	IPUT DATA				NC	DISE MO	DEL INPUT	s	
Highway Data				S	ite Cor	ditions (H	lard = 10	Soft = 15)		
Average Daily	Traffic (Adt):	16,700 vehicle	s				Aut	os: 15		
Peak Hour	Percentage:	10%			Me	dium Truc	ks (2 Axle	es): 15		
Peak F	lour Volume:	1,670 vehicle	S		He	avy Truck	s (3+ Axle	es): 15		
Ve	hicle Speed:	55 mph		V	ehicle	Mix				
Near/Far La	ne Distance:	78 feet			Veh	icleType	Da	y Evening	Night	Daily
Site Data						Au	itos: 75	5% 14.0%	10.5	% 97.42%
Ba	rrier Heiaht:	0.0 feet			М	edium Tru	cks: 48	9% 2.2%	48.9	% 1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0			1	Heavy Tru	cks: 47	3% 5.4%	47.3	% 0.74%
Centerline Di	st. to Barrier:	76.0 feet		N	oise S	ource Ele	vations (i	n feet)		
Centerline Dist.	to Observer:	76.0 feet				Autos:	0.000	ĺ		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.297			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks:	8.006	Grade Ad	iustme	nt: 0.0
P	ad Elevation:	0.0 feet				,				
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent L	Distance	(in feet)		
	Road Grade:	0.0%				Autos:	65.422	2		
	Left View:	-90.0 degre	es		Mediu	m Trucks:	65.286	5		
	Right View:	90.0 degre	es		Heav	/y Trucks:	65.300	)		
FHWA Noise Mod	el Calculation	IS								
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresnel	Barrier Att	en B	erm Atten
Autos:	71.78	-0.60		-1.85		-1.20	-4.	73 0.0	000	0.000
Medium Trucks:	82.40	-17.83		-1.84		-1.20	-4.	88 0.0	000	0.000
Heavy Trucks:	86.40	-21.79		-1.84		-1.20	-5.	25 0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenu	ation)					
VehicleType	Leq Peak Ho	ur Leq Daj	/ L	eq Eve	ening	Leq N	ight	Ldn		CNEL
Autos:	68	3.1	66.1		64.8		58.8	67.3	2	67.8
Medium Trucks:	61	.5	57.6		50.1		58.9	65.	1	65.1
Heavy Trucks:	61	.6	57.5		54.1		58.8	65.0	)	65.1
Vehicle Noise:	69	9.7	67.2		65.3		63.6	70.	6	71.0
Centerline Distan	ce to Noise C	ontour (in fee	)							
				70 dBA 65 dBA 60 dBA		60 dBA	5	i5 dBA		
			Ldn:	84 181 390				839		
	CNEL:				88 190 410 883					883

	FH\	WA-RD-77-108	HIGHV	VAY N	OISE PR	EDICTIC	ON MO	DEL					
Scenario Road Name Road Segmen	o: Existing Wi e: Scott Rd. ht: e/o Leon R	ithout Project d.			Project Name: Canterwood Job Number: 11304								
SITE S	SPECIFIC IN	IPUT DATA				NC	DISE N	IODE	L INPUT	s			
Highway Data				S	Site Cond	litions (H	Hard =	10, So	oft = 15)				
Average Daily	Traffic (Adt):	6,300 vehicle	s					Autos:	15				
Peak Hour I	Percentage:	10%			Med	lium Truc	:ks (2 A	xles):	15				
Peak He	our Volume:	630 vehicle	S		Hea	vy Truck	is (3+ A	xles):	15				
Vel	hicle Speed:	55 mph		V	/ehicle N	lix							
Near/Far Lar	ne Distance:	78 feet			Vehic	leType		Day	Evening	Night	Daily		
Site Data						Au	itos:	77.5%	14.0%	10.5%	92.00%		
Bar	rier Heiaht:	0.0 feet			Me	dium Tru	cks:	48.0%	2.0%	50.0%	3.00%		
Barrier Type (0-Wa	all, 1-Berm):	0.0			Н	eavy Tru	cks:	48.0%	2.0%	50.0%	5.00%		
Centerline Dis	t. to Barrier:	76.0 feet			laise Sa	urce Ele	vation	: (in fe	oot)				
Centerline Dist. t	to Observer:	76.0 feet		-	0.000	Autos:	0.0	000					
Barrier Distance t	to Observer:	0.0 feet			Medium	n Trucks:	2:2	97					
Observer Height (/	Above Pad):	5.0 feet			Heav	/ Trucks:	8.0	006	Grade Ad	iustment	: 0.0		
Pa	d Elevation:	0.0 feet		_									
Roa	d Elevation:	0.0 feet		L	ane Equ	ivalent L	Distand	e (in :	feet)				
F	Road Grade:	0.0%				Autos:	65.4	122					
	Left View:	-90.0 degre	es		Medium	) Trucks:	65.2	286					
	Right View:	90.0 degre	es		Heavy	I TIUCKS:	65.,	300					
FHWA Noise Mode	el Calculation	s											
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite I	Road	Fresn	el	Barrier Att	en Ber	m Atten		
Autos:	71.78	-5.08		-1.85	i -	-1.20		-4.73	0.0	000	0.00		
Medium Trucks:	82.40	-19.94		-1.84	,	-1.20		-4.88	0.0	000	0.000		
Heavy Trucks:	86.40	-17.73		-1.84		-1.20		-5.25	0.0	000	0.00		
Unmitigated Noise	Levels (with	out Topo and	barrier	r atteni	uation)								
VehicleType	Leq Peak Hou	ur Leq Day	1	Leq Ev	ening	Leq N	ïght		Ldn	C	NEL		
Autos:	63	.6	61.7		60.3		54.3		62.8	3	63.4		
Medium Trucks:	59	.4	55.4		47.7		56.9		63.0	)	63.		
Heavy Trucks:	65	.6	61.6		53.9		63.1		69.2	2	69.3		
Vehicle Noise:	68	.4	65.2		61.4		64.5		70.9	9	71.0		
Centerline Distanc	e to Noise C	ontour (in feet	)							Т			
			L	70 d	BA	65 dl	BA	6	0 dBA	55	dBA		
			Ldn:	87	r	188	3		404	8	71		
	CNEL:								0.0.1				

	FH\	WA-RD-77-108	HIGHV	VAY NO	DISE PI	REDICTIO	N MODE	L			
Scenari Road Nam Road Segmen	p: E+P 2021 e: Haun Rd. nt: n/o Scott R	td.				Project Na Job Nun	ame: Car hber: 113	nterwood 04			
SITE S	SPECIFIC IN	NPUT DATA				NO	ISE MO	DEL INP	UTS		
Highway Data				S	ite Con	ditions (H	ard = 10,	Soft = 1	5)		
Average Daily Peak Hour Peak H	Traffic (Adt): Percentage: our Volume:	18,200 vehicle 10% 1,820 vehicle	s		Me He	dium Truck avy Trucks	Aut s (2 Axle (3+ Axle	os: 15 s): 15 s): 15			
Vel	nicle Speed:	50 mph		V	ehicle	Mix					
Near/Far Lar	ne Distance:	48 feet		-	Veh	icleType	Da	v Even	ina Ni	aht	Daily
Site Data						Au	os: 75.	5% 14.	0% 10	).5%	97.42%
Par	rior Hoight:	0.0 foot			M	edium Truc	ks: 48.	9% 2.	2% 48	3.9%	1.84%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	Heavy Truc	:ks: 47.	3% 5.	4% 47	7.3%	0.74%
Centerline Dis	t. to Barrier:	59.0 feet		N	oise So	ource Elev	ations (i	n feet)			
Centerline Dist. I	o Observer:	59.0 feet				Autos:	0.000				
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Trucks:	2.297				
Observer Height ()	Above Pad):	5.0 feet			Heav	v Trucks:	8.006	Grade	e Adjusti	ment:	0.0
Pa	d Elevation:	0.0 feet		-					-		
Roa	d Elevation:	0.0 feet		Li	ane Eq	uivalent D	istance (	in feet)			
F	Road Grade:	0.0%				Autos:	54.129				
	Left View: Right View:	-90.0 degre 90.0 degre	es es		Mediui Heav	m Trucks: /y Trucks:	53.966 53.982				
	-	-									
VohioloTypo		Traffic Flow	Diete	000	Einito	Road	Freenol	Parrio	r Atton	Porn	Atton
Autor	70.20	0.10	Disto	0.62	1 mile	1.20	11631161	Dame	0.000	Dem	0.000
Medium Trucks:	81.00	-17.05		-0.60		-1.20	-4	28	0.000		0.000
Heavy Trucks:	85.38	-21.00		-0.60		-1.20	-5.	35	0.000		0.000
Unmitigated Noise	Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leg Peak Hou	ur Leq Day	/ 1	eq Eve	ening	Leg Ni	ght	Ldn		CN	EL
Autos:	. 68	3.6	66.6		65.3		59.2		67.7		68.3
Medium Trucks:	62	2.2	58.3		50.8		59.5		65.7		65.7
Heavy Trucks:	62	2.6	58.5		55.1		59.8		66.0		66.1
Vehicle Noise:	70	).3	67.7		65.8		64.3		71.3		71.6
Centerline Distance	e to Noise C	ontour (in feet	)								
			T	70 dE	BA	65 dE	A	60 dBA		55 c	IBA
		Ldn:				155 334			72	0	
		C	NEL:	76		163		351		75	7

	FH	WA-RD-77-108	HIGHW	AY N	OISE PF	REDICT	ION MC	DEL				
Scenar Road Narr Road Segme	Scenario: E+P 2021 Road Name: Zeiders Rd. Road Segment: s/o Scott Rd.						t Name: lumber:	Cante 11304	wood			
SITE	SPECIFIC I	NPUT DATA				1	NOISE	NODE		UTS		
Highway Data				5	Site Con	ditions	(Hard =	10, S	oft = 1	5)		
Average Dailv	Traffic (Adt):	5.600 vehicle	s					Autos:	15	-		
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2	Axles):	15			
Peak H	lour Volume:	560 vehicle	s		He	avy Tru	cks (3+ )	Axles):	15			
Ve	hicle Speed:	50 mph			/ohiolo l	Mix						
Near/Far La	ne Distance:	48 feet			Vehi Vehi	icleTvni	-	Dav	Even	ina I	Viaht	Daily
Site Data					1011	0.0130	Autos:	75.5%	14.	0%	10.5%	97.42%
Pa	rrior Hoight:	0.0 foot			Me	edium T	rucks:	48.9%	5 2.3	2%	48.9%	1.84%
Barrier Type (0-W	/all 1-Berm)	0.0 1001			F	leavy T	rucks:	47.3%	5.	4%	47.3%	0.74%
Centerline Di	st. to Barrier:	59.0 feet		-								
Centerline Dist.	to Observer:	59.0 feet		,	voise Sc	ource E	levation	s (in f	eet)			
Barrier Distance	to Observer:	0.0 feet				Auto	is: 0.	000				
Observer Height	Above Pad):	5.0 feet			Mediur	n Truck	(S: 2.	297	Grade	o Adius	tmont	
P	ad Elevation:	0.0 feet			Heav	у ттиск	IS: 8.	006	Graue	; Aujus	suneni	0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distan	ce (in	feet)			
	Road Grade:	0.0%				Auto	s: 54.	129				
	Left View:	-90.0 degre	es		Mediur	n Truck	is: 53.	966				
	Right View:	90.0 degre	es		Heav	y Truck	:s: 53.	982				
FHWA Noise Mod	el Calculation	15										
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresi	nel	Barrie	r Atter	Ber	m Atten
Autos:	70.20	-4.93		-0.62	2	-1.20		-4.69		0.00	0	0.000
Medium Trucks:	81.00	-22.17		-0.60	)	-1.20		-4.88		0.00	0	0.000
Heavy Trucks:	85.38	-26.12		-0.60	)	-1.20		-5.35		0.00	0	0.000
Unmitigated Nois	e Levels (with	nout Topo and	barrier a	atten	uation)					-		
VehicleType	Leq Peak Ho	ur Leq Day	' L	eq Ev	rening	Leq	Night		Ldn		CI	VEL
Autos:	63	3.5	61.4		60.1		54.	1		62.5		63.2
Medium Trucks:	57	7.0	53.1		45.6		54.4	1		60.6		60.6
Heavy Trucks:	57	7.5	53.4		50.0		54.	7		60.9		61.0
Vehicle Noise:	65	5.2	62.6		60.7		59.3	2		66.2		66.5
Centerline Distan	ce to Noise C	ontour (in feet	)									
				70 a	<i>IBA</i>	65	dBA	0	30 dBA		55	dBA
			Ldn:	33	3		71		152		3	28
		C	VFI :	34	4		74		160		3	45

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	FH	WA-RD-77-108	HIGHW	AY NO	DISE PI	REDICTIC	ON MOD	EL			
Scenar Road Nan Road Segme	io: E+P 2021 ne: Antelope F nt: s/o Scott F	Rd. Rd.				Project N Job Nu	lame: C mber: 1	anterv 1304	wood		
SITE	SPECIFIC II	NPUT DATA				NO	DISE M	ODEI	L INPUTS	5	
Highway Data				S	ite Cor	ditions (l	Hard = 1	10, So	ft = 15)		
Average Daily	Traffic (Adt):	15,900 vehicle	s				Α	utos:	15		
Peak Hour	Percentage:	10%			Ме	dium Truc	cks (2 Ax	des):	15		
Peak H	lour Volume:	1,590 vehicle	s		He	avy Truck	(3+ A)	des):	15		
Ve	hicle Speed:	50 mph		V	ehicle	Mix					
Near/Far La	ne Distance:	48 feet			Veh	icleType	L	Dav	Evenina	Niaht	Dailv
Site Data						AL	utos: 7	5.5%	14.0%	10.5%	97.42%
Ba	rrier Height	0.0 feet			М	edium Tru	icks: 4	8.9%	2.2%	48.9%	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0			1	Heavy Tru	icks: 4	7.3%	5.4%	47.3%	0.74%
Centerline Di	st. to Barrier:	59.0 feet		N	oise Si	ource Ele	vations	(in fe	ef)		
Centerline Dist.	to Observer:	59.0 feet			0.00 0	Autos	0.00	00	01)		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.29	97			
Observer Height	(Above Pad):	5.0 feet			Heat	N Trucks	8.00	06	Grade Adii	ustment	0.0
P	ad Elevation:	0.0 feet				,					
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distance	e (in f	eet)		
	Road Grade:	0.0%				Autos:	54.12	29			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	53.9	66			
	Right View:	90.0 degre	es		Heav	/y Trucks:	53.9	82			
FHWA Noise Mod	el Calculatior	15									
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresne	e/ 1	Barrier Atte	en Ber	m Atten
Autos:	70.20	-0.39		-0.62		-1.20	-	4.69	0.0	00	0.000
Medium Trucks:	81.00	-17.63		-0.60		-1.20		4.88	0.0	00	0.000
Heavy Trucks:	85.38	-21.59		-0.60		-1.20	4	5.35	0.0	00	0.000
Unmitigated Nois	e Levels (with	nout Topo and	barrier a	ttenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	v Le	eq Eve	ening	Leq N	light		Ldn	C	NEL
Autos:	68	8.0	66.0		64.7		58.7		67.1		67.7
Medium Trucks:	61	1.6	57.7		50.2		58.9		65.1		65.1
Heavy Trucks:	62	2.0	57.9		54.5		59.2		65.4		65.5
Vehicle Noise:	69	9.7	67.1		65.2		63.7		70.7		71.0
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 dł	BA	65 d	BA	6	0 dBA	55	dBA
			Ldn:	66		142	2		306	e	58
		C	NEL:	69		149	9		321	6	91

	FHW	A-RD-77-108	HIGHW.	AY NOISE	PREDICTIO				
Scenario: E+P	2021				Project N	lame: Car	nterwood		
Road Name: Menif	ee Rd.				Job Nu	mber: 113	04		
Road Segment: n/o H	olland F	Rd.							
SITE SPECIF	IC INF	PUT DATA			N	DISE MO	DEL INPUT	S	-
Highway Data				Site C	conditions (	Hard = 10,	Soft = 15)		
Average Daily Traffic (A	<i>dt):</i> 13	3,700 vehicles				Auto	os: 15		
Peak Hour Percenta	age:	10%			Medium True	ks (2 Axle	s): 15		
Peak Hour Volu	me: 1	,370 vehicles			Heavy Truck	s (3+ Axle	s): 15		
Vehicle Spe	ed:	45 mph		Vehic	le Mix				-
Near/Far Lane Distar	nce:	54 feet		١	/ehicleType	Day	V Evening	Night	Daily
Site Data					A	itos: 75.	5% 14.0%	10.5%	97.42%
Barrier Hei	aht:	0.0 feet			Medium Tru	cks: 48.	9% 2.2%	48.9%	1.84%
Barrier Type (0-Wall, 1-Be	rm):	0.0			Heavy Tru	cks: 47.	3% 5.4%	47.3%	0.74%
Centerline Dist. to Bar	rier:	64.0 feet		Noise	Source Ele	vations (i	n foot)		
Centerline Dist. to Obser	ver:	64.0 feet		110/30	Autos	0.000	Theory		
Barrier Distance to Obser	ver:	0.0 feet		Mo	dium Trucks	2 207			
Observer Height (Above P	ad):	5.0 feet		H	anum mucks.	8.006	Grade Ad	liustment	0.0
Pad Eleva	tion:	0.0 feet			cavy macks.	0.000	0/000/10	juounom.	0.0
Road Eleva	tion:	0.0 feet		Lane	Equivalent	Distance (	in feet)		
Road Gra	ade:	0.0%			Autos:	58.241			
Left V	iew:	-90.0 degree	s	Me	dium Trucks:	58.089			
Right V	iew:	90.0 degree	s	н	eavy Trucks:	58.104			
FHWA Noise Model Calcu	lations			1					
VehicleType REM	EL	Traffic Flow	Distar	ice Fir	nite Road	Fresnel	Barrier Att	ten Ber	m Atten
Autos:	68.46	-0.58		-1.10	-1.20	-4.1	70 0.0	000	0.000
Medium Trucks:	79.45	-17.82		-1.08	-1.20	-4.8	38 0.0	000	0.000
Heavy Trucks:	34.25	-21.78		-1.08	-1.20	-5.3	31 0.0	000	0.000
Unmitigated Noise Levels	(witho	ut Topo and	barrier a	ttenuatio	n)				
VehicleType Leq Pea	ak Hour	Leq Day	Le	eq Evening	g Leq N	light	Ldn	CI	VEL
Autos:	65.6	6 6	63.6	6	2.3	56.2	64.7	7	65.3
Medium Trucks:	59.3	3 5	5.4	4	7.9	56.7	62.9	9	62.9
Heavy Trucks:	60.2	2 (	56.1	5	2.8	57.4	63.6	6	63.
Vehicle Noise:	67.4	ц (	64.8	6	2.9	61.6	68.	5	68.9
Centerline Distance to No.	ise Cor	ntour (in feet)							
Centerline Distance to No.	ise Cor	tour (in feet)		70 dBA	65 d	BA	60 dBA	55	dBA
Centerline Distance to No.	ise Cor	ntour (in feet)	dn:	70 dBA 51	65 d	BA )	60 dBA 238	55 5	dBA 12

FH	WA-RD-77-108 H	IGHWAY	NOISE PI	REDICTIO	N MODEL		
Scenario: E+P 2021 Road Name: Menifee R Road Segment: s/o Hollan	d. d Rd.			Project N Job Nur	ame: Can nber: 1130	terwood )4	
SITE SPECIFIC I	NPUT DATA			NO	ISE MOD	EL INPUT	S
Highway Data			Site Con	nditions (H	lard = 10,	Soft = 15)	
Average Daily Traffic (Adt):	14,100 vehicles				Auto	s: 15	
Peak Hour Percentage:	10%		Me	dium Truc	ks (2 Axles	s): 15	
Peak Hour Volume:	1,410 vehicles		He	avy Truck	s (3+ Axles	s): 15	
Vehicle Speed:	45 mph		Vehicle	Mix			
Near/Far Lane Distance:	54 feet		Veh	icleType	Day	Evening	Night Daily
Site Data				Au	tos: 75.5	% 14.0%	10.5% 97.42%
Barrier Height:	0.0 feet		М	edium Truc	cks: 48.9	1% 2.2%	48.9% 1.84%
Barrier Type (0-Wall, 1-Berm):	0.0		1	Heavy Truc	cks: 47.3	% 5.4%	47.3% 0.74%
Centerline Dist. to Barrier:	64.0 feet		Noise Se	ource Elev	ations (in	feet)	
Centerline Dist. to Observer:	64.0 feet			Autos:	0.000	,	
Barrier Distance to Observer:	0.0 feet		Mediu	m Trucks:	2.297		
Observer Height (Above Pad):	5.0 feet		Heav	v Trucks:	8.006	Grade Adj	ustment: 0.0
Pad Elevation:	0.0 feet						
Road Elevation:	0.0 feet		Lane Eq	uivalent D	Distance (i	n feet)	
Road Grade:	0.0%			Autos:	58.241		
Lett View:	-90.0 degrees		Mediu	m Trucks:	58.089		
Right View:	90.0 degrees		Heat	ly Trucks:	58.104		
FHWA Noise Model Calculation	ns						
VehicleType REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	en Berm Atten
Autos: 68.46	6 -0.46	-1.	.10	-1.20	-4.7	0 0.0	0.000
Medium Trucks: 79.45	5 -17.70	-1.	.08	-1.20	-4.8	8 0.0	0.000
Heavy Trucks: 84.25	5 -21.65	-1.	.08	-1.20	-5.3	1 0.0	0.000
Unmitigated Noise Levels (with	hout Topo and ba	arrier atte	enuation)				
VehicleType Leq Peak Ho	our Leq Day	Leq	Evening	Leq Ni	ight	Ldn	CNEL
Autos: 6	5.7 63	3.7	62.4		56.4	64.8	65.4
Medium Trucks: 5	9.5 55	5.6	48.1		56.8	63.0	63.0
Heavy Trucks: 6	0.3 56	6.3	52.9		57.5	63.7	63.8
Vehicle Noise: 6	7.5 65	5.0	63.0		61.7	68.7	69.0
Centerline Distance to Noise C	Contour (in feet)						
		70	) dBA	65 dE	BA	60 dBA	55 dBA
	Lo	dn:	52	112		242	522
	CNE	EL:	55	118		254	547

	FH	WA-RD-77-108	B HIGH	NAY N	OISE P	REDICTI	ON MO	DEL			
Scenar Road Narr Road Segme	io: E+P 2021 ne: Leon Rd. nt: s/o Craig A	w.				Project I Job Nu	Vame: Imber:	Cante 11304	rwood		
SITE	SPECIFIC I	NPUT DATA				N		NODE		s	
Highway Data				S	Site Cor	ditions (	Hard =	10, S	oft = 15)	-	
Average Daily	Traffic (Adt):	1,800 vehicle	es					Autos.	15		
Peak Hour	Percentage:	10%			Me	dium Tru	cks (2 A	Axles).	15		
Peak H	lour Volume:	180 vehicle	es		He	avy Truc	ks (3+ A	Axles).	: 15		
Ve	hicle Speed:	35 mph		v	ehicle	Mix					
Near/Far La	ne Distance:	48 feet		F	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	6 14.0%	10.5%	6 92.00%
Ba	rrier Heiaht:	0.0 feet			М	edium Tru	ucks:	48.0%	6 2.0%	50.0%	6 3.00%
Barrier Type (0-W	/all, 1-Berm):	0.0			1	Heavy Tri	ucks:	48.0%	2.0%	50.0%	6 5.00%
Centerline Di	st. to Barrier:	59.0 feet		٨	loise S	ource Ele	evation	s (in f	eet)		
Centerline Dist.	to Observer:	59.0 feet				Autos	: 0.0	000	í		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.2	297			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks	: 8.0	006	Grade Adj	ustmen	t: 0.0
Pa	ad Elevation:	0.0 feet		-							
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%				Autos	: 54.	129			
	Left View:	-90.0 degre	es		Mediu	m Trucks	: 53.	966			
	Right View:	90.0 degre	es		Heav	y Trucks	: 53.	982			
FHWA Noise Mod	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresr	nel	Barrier Atte	en Be	erm Atten
Autos:	64.30	-8.56		-0.62		-1.20		-4.69	0.0	00	0.000
Medium Trucks:	75.75	-23.42		-0.60		-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	81.57	-21.20		-0.60		-1.20		-5.35	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	l barriei	r attenu	uation)						
VehicleType	Leq Peak Ho	ur Leq Da	y .	Leq Ev	ening	Leq N	light		Ldn	(	ONEL
Autos:	53	3.9	52.0		50.6		44.6	6	53.1		53.7
Medium Trucks:	50	).5	46.5		38.8		48.0	)	54.1		54.2
Heavy Trucks:	58	3.6	54.6		46.8		56.0	)	62.2		62.2
Vehicle Noise:	60	).3	56.9		52.3		56.9	9	63.2		63.3
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 d	BA	65 0	IBA	1	60 dBA	5	5 dBA
			Ldn:	21		45	5		97		209
		C	NEL:	21		46	6		98		212

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	FH	WA-RD-77-108	B HIGHW	AY NO	DISE PI	REDICTIC	ON MOD	EL			
Scenar	io: E+P 2021					Project N	<i>lame:</i> C	anterv	vood		
Road Nam	e: Leon Rd.					Job Nu	mber: 1	1304			
Road Segme	nt: s/o Garbar	ni Rd.									
SITE	SPECIFIC I	NPUT DATA				NC	DISE M	ODEL	. INPUTS		
Highway Data				S	ite Cor	ditions (l	Hard = 1	10, So	ft = 15)		
Average Daily	Traffic (Adt):	2,600 vehicle	s				Α	utos:	15		
Peak Hour	Percentage:	10%			Me	dium Truc	cks (2 A)	des):	15		
Peak H	lour Volume:	260 vehicle	s		He	avy Truck	is (3+ A)	des):	15		
Ve	hicle Speed:	55 mph		v	ehicle	Mix					
Near/Far La	ne Distance:	48 feet		-	Veh	icleType	Ĺ	Day	Evening	Night	Daily
Site Data						AL	itos: 7	7.5%	14.0%	10.5%	92.00%
Ba	rrier Height:	0.0 feet			М	edium Tru	cks: 4	8.0%	2.0%	50.0%	3.00%
Barrier Type (0-W	/all, 1-Berm):	0.0			1	Heavy Tru	cks: 4	8.0%	2.0%	50.0%	5.00%
Centerline Di	st. to Barrier:	59.0 feet		N	oise S	ource Ele	vations	(in fe	et)		
Centerline Dist.	to Observer:	59.0 feet		-		Autos	0.0	00			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.2	97			
Observer Height (	Above Pad):	5.0 feet			Heav	v Trucks:	8.0	06	Grade Adiu	stment.	0.0
Pi	ad Elevation:	0.0 feet									
Roi	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distance	e (in fe	eet)		
	Road Grade:	0.0%				Autos:	54.1	29			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	53.9	66			
	Right View:	90.0 degre	es		Heav	/y Trucks:	53.9	82			
FHWA Noise Mod	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresne	el E	Barrier Atte	n Ber	m Atten
Autos:	71.78	-8.92		-0.62		-1.20	-	4.69	0.00	00	0.000
Medium Trucks:	82.40	-23.79		-0.60		-1.20	-	4.88	0.00	00	0.000
Heavy Trucks:	86.40	-21.57		-0.60		-1.20	-	5.35	0.00	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Daj	V L	.eq Ev	ening	Leq N	light		Ldn	CI	NEL
Autos:	61	.0	59.1		57.7		51.7		60.2		60.8
Medium Trucks:	56	6.8	52.8		45.1		54.3		60.4		60.5
Heavy Trucks:	63	3.0	59.0		51.3		60.5		66.6		66.7
Vehicle Noise:	65	5.7	62.6		58.8		61.8		68.3		68.4
Centerline Distant	ce to Noise C	ontour (in fee	t)								
				70 di	BA	65 d	BA	60	0 dBA	55	dBA
		-	Ldn:	45		98			210	4	54
		С	NEL:	46		100	)		215	4	63

	FH\	VA-RD-77-108 H	IGHWA	Y NOISE P	REDICTIC	N MOE	DEL			
Scenario Road Name Road Segmen	<ul> <li>D: E+P 2021</li> <li>D: Leon Rd.</li> <li>D: S/O Scott R</li> </ul>	d.			Project N Job Nui	ame: C nber: 1	anter 1304	wood		
SITE S	SPECIFIC IN	IPUT DATA			NC	ISE M	ODE	L INPUT	s	
Highway Data				Site Cor	nditions (H	lard = 1	10, So	ft = 15)		
Average Daily 1	Traffic (Adt):	6,200 vehicles				A	utos:	15		
Peak Hour I	Percentage:	10%		Me	dium Truc	ks (2 A.	xles):	15		
Peak Ho	our Volume:	620 vehicles		He	avy Truck	s (3+ A.	xles):	15		
Veh	nicle Speed:	55 mph		Vehicle	Mix					
Near/Far Lan	ne Distance:	48 feet		Veh	icleType	L	Day	Evening	Night	Daily
Site Data					Au	tos: 7	7.5%	14.0%	10.5%	92.00%
Bar	rier Height:	0.0 feet		М	edium Tru	cks: 4	18.0%	2.0%	50.0%	3.00%
Barrier Type (0-Wa	all, 1-Berm):	0.0			Heavy Tru	cks: 4	18.0%	2.0%	50.0%	5.00%
Centerline Dis	t. to Barrier:	59.0 feet		Noise S	ource Ele	ations	(in fe	of)		
Centerline Dist. t	o Observer:	59.0 feet			Autos:	0.0	00			
Barrier Distance t	o Observer:	0.0 feet		Mediu	m Trucks:	2.2	97			
Observer Height (A	Above Pad):	5.0 feet		Hea	/y Trucks:	8.0	06	Grade Ad	justment	0.0
Pa	d Elevation:	0.0 feet							·	
Roa	d Elevation:	0.0 feet		Lane Eq	uivalent L	vistanc	e (in f	eet)		
F	Road Grade:	0.0%		14-15	Autos:	54.1	29			
	Left View:	-90.0 degrees		Mediu	m Trucks:	53.9	00			
	Right view.	90.0 degrees		i ica	ly muchs.	33.5	02			
FHWA Noise Mode	l Calculation	s								
VehicleType	REMEL	Traffic Flow	Distanc	e Finite	Road	Fresne	el i	Barrier Att	en Ber	m Atten
Autos:	71.78	-5.15	-(	0.62	-1.20	-	4.69	0.0	000	0.00
Medium Trucks:	82.40	-20.01	-(	0.60	-1.20	-	4.88	0.0	000	0.00
Heavy Trucks:	86.40	-17.80	-(	0.60	-1.20	-	5.35	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and ba	arrier at	tenuation)						
VehicleType	Leq Peak Hou	ır Leq Day	Leo	q Evening	Leq N	ight		Ldn	C	NEL
Autos:	64	.8 62	.9	61.5		55.5		63.9	Э	64.0
Medium Trucks:	60	.6 56	.6	48.8		58.0		64.2	2	64.
Heavy Trucks:	66	.8 62	.8	55.0		64.2		70.4	1	70.4
Vehicle Noise:	69	.5 66	.4	62.6		65.6		72.1	1	72.3
Centerline Distanc	e to Noise Co	ontour (in feet)								
				70 dBA	65 di	BA	6	0 dBA	55	dBA
		Lo	ın:	81	174			376	8	109
			· · ·	00	4-1-1			000	~	00

	FH	WA-RD-77-108	HIGHW	AY NO	DISE PI	REDICT	ION MO	DEL				
Scenar	io: E+P 2021					Project	Name:	Cante	rwood			
Road Nam	e: Holland Ro	1.				Job N	lumber:	11304				
Road Segme	nt: w/o Menife	e Rd.										
SITE	SPECIFIC IN	NPUT DATA				I	IOISE N	NODE	L INPUT	s		
Highway Data				S	ite Con	ditions	(Hard =	10, S	oft = 15)			
Average Daily	Traffic (Adt):	8,500 vehicle	s					Autos:	15			
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2 /	Axles):	15			
Peak H	lour Volume:	850 vehicle	s		He	avy Tru	cks (3+ A	Axles):	15			
Ve	hicle Speed:	45 mph		V	obiclo	Mix						
Near/Far La	ne Distance:	48 feet		-	Veh	icleTvpe		Dav	Evenina	Nic	nht	Daily
Site Data						,	Autos:	75.5%	5 14.0%	10	.5%	97.42%
Bai	rrier Height	0.0 feet			M	edium T	rucks:	48.9%	5 2.2%	48	.9%	1.84%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy T	rucks:	47.3%	5.4%	47	.3%	0.74%
Centerline Dis	st. to Barrier:	59.0 feet		N	oise So	ource E	levation	s (in f	eet)			
Centerline Dist.	to Observer:	59.0 feet				Auto	s: 0.	000				
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s 2.	297				
Observer Height (	Above Pad):	5.0 feet			Heat	v Truck	s: 81	006	Grade Ad	diustn	nent:	0.0
Pa	ad Elevation:	0.0 feet			11001	y maon	0. 0.	000				
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distan	ce (in	feet)			
	Road Grade:	0.0%				Auto	s: 54.	129				
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 53.	966				
	Right View:	90.0 degre	es		Heav	ry Truck	s: 53.	982				
FHWA Noise Mod	el Calculation	IS										
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresr	nel	Barrier At	ten	Berr	n Atten
Autos:	68.46	-2.66		-0.62		-1.20		-4.69	0.	000		0.000
Medium Trucks:	79.45	-19.90		-0.60		-1.20		-4.88	0.	000		0.000
Heavy Trucks:	84.25	-23.85		-0.60		-1.20		-5.35	0.	000		0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	attenu	ation)							
VehicleType	Leq Peak Ho	ur Leq Day	′ L	eq Ev	ening	Leq	Night		Ldn		C٨	IEL
Autos:	64	1.0	62.0		60.7		54.6	6	63.	1		63.7
Medium Trucks:	57	⁷ .8	53.9		46.4		55.1		61.	3		61.3
Heavy Trucks:	58	3.6	54.6		51.2		55.8	3	62.	0		62.1
Vehicle Noise:	65	5.8	63.2		61.3		60.0	)	67.	0		67.3
Centerline Distant	ce to Noise C	ontour (in feet	)									
				70 dl	BA	65	dBA	1	60 dBA		55 (	dBA
			Ldn:	37		8	30		171		36	39
		C	NEL:	39		8	33		180		38	37

	FH	WA-RD-77-108	HIGH	WAY N	NOISE PR	REDICTI	ON MC	DEL			
Scenar Road Narr Road Segme	io: E+P 2021 ne: Holland Ro nt: e/o Menife	l. e Rd.				Project Job Ni	Name: umber:	Cante 11304	rwood		
SITE	SPECIFIC I	IPUT DATA				N	OISE	MODE		s	
Highway Data					Site Con	ditions	(Hard =	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	8,500 vehicle	6					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	icks (2	Axles):	15		
Peak H	our Volume:	850 vehicle	S		He	avy Truc	ks (3+	Axles):	15		
Ve	hicle Speed:	45 mph		H	Vohiclo	Mix					
Near/Far La	ne Distance:	48 feet		-	Venicle	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	75.5%	5 14.0%	10.5	% 97.42%
Ba	rrier Height	0.0 feet			Me	edium Tr	ucks:	48.9%	5 2.2%	48.9	% 1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy Tr	ucks:	47.3%	5.4%	47.3	% 0.74%
Centerline Di	st. to Barrier:	59.0 feet		1	Noise So	ource El	evatior	ns (in f	eet)		
Centerline Dist.	to Observer:	59.0 feet		F		Autos	. 0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	n Trucks	. 2	297			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks	. –	006	Grade Ad	iustme	nt: 0.0
P	ad Elevation:	0.0 feet		L		,					
Ro	ad Elevation:	0.0 feet		4	Lane Eq	uivalent	Distar	ice (in	feet)		
	Road Grade:	0.0%				Autos	: 54	.129			
	Left View:	-90.0 degree	es		Mediui	n Trucks	: 53	.966			
	Right View:	90.0 degree	es		Heav	y Trucks	: 53	.982			
FHWA Noise Mod	el Calculation	IS		I							
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fres	nel	Barrier Att	en B	erm Atten
Autos:	68.46	-2.66		-0.6	2	-1.20		-4.69	0.0	000	0.000
Medium Trucks:	79.45	-19.90		-0.6	0	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-23.85		-0.6	0	-1.20		-5.35	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barriei	r atter	nuation)						
VehicleType	Leq Peak Ho	ur Leq Day	· .	Leq E	vening	Leq I	Vight		Ldn		CNEL
Autos:	64	.0	62.0		60.7		54.	6	63.1		63.7
Medium Trucks:	57	.8	53.9		46.4		55.	1	61.3	3	61.3
Heavy Trucks:	58	3.6	54.6		51.2		55.	8	62.0	)	62.1
Vehicle Noise:	65	5.8	63.2		61.3		60.	0	67.0	)	67.3
Centerline Distan	ce to Noise C	ontour (in feet	)	-		-					
				70 (	dBA	65 0	1BA		60 dBA	E	55 dBA
			Ldn:	3	7	8	0		171		369
		CI	VEL:	3	9	8	3		180		387

Tuesday, March 06, 2018

Tuesday, March 06, 2018

	FH	WA-RD-77-10	8 HIGH	WAY N	OISE P	REDICTIC	N MOD	EL			
Scenar Road Nan Road Segme	rio: E+P 2021 ne: Holland Ro nt: w/o Briggs	i. Rd.				Project N Job Nui	lame: Ca mber: 11	anterw 1304	bod		
SITE	SPECIFIC I	VPUT DATA				NC	DISE M	ODEL	INPUTS	5	
Highway Data				S	Site Cor	nditions (H	Hard = 1	0, Soft	= 15)		
Average Daily	Traffic (Adt):	1,316 vehicle	es				A	utos:	15		
Peak Hour	Percentage:	10%			Me	edium Truc	sks (2 Ax	des):	15		
Peak H	lour Volume:	132 vehicle	es		He	avy Truck	's (3+ Ax	des):	15		
Ve	hicle Speed:	45 mph		v	/ehicle	Mix					
Near/Far La	ne Distance:	48 feet		-	Veh	nicleType	D	Day E	vening	Night	Daily
Site Data						AL	itos: 7	5.5%	14.0%	10.5%	97.42%
Ba	rrier Heiaht:	0.0 feet			М	edium Tru	cks: 4	8.9%	2.2%	48.9%	1.84%
Barrier Type (0-W	Vall, 1-Berm):	0.0				Heavy Tru	cks: 4	7.3%	5.4%	47.3%	0.74%
Centerline Di	ist. to Barrier:	59.0 feet			loise S	ource Ele	vations	(in fee	t)		
Centerline Dist.	to Observer:	59.0 feet				Autos:	0.00	0	/		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.29	97			
Observer Height	(Above Pad):	5.0 feet			Hea	v Trucks:	8.00	 )6 G	rade Adii	ustmen	t: 0.0
P	ad Elevation:	0.0 feet				,					
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distance	e (in fe	et)		
	Road Grade:	0.0%				Autos:	54.12	29			
	Left View:	-90.0 degre	ees		Mediu	m Trucks:	53.96	66			
	Right View:	90.0 degre	ees		Hear	vy Trucks:	53.98	32			
FHWA Noise Mod	lel Calculation	15									
VehicleType	REMEL	Traffic Flow	Dist	lance	Finite	Road	Fresne	l Bi	arrier Atte	en Be	rm Atten
Autos:	68.46	-10.76	6	-0.62		-1.20	-4	4.69	0.0	00	0.000
Medium Trucks:	79.45	-28.00	)	-0.60		-1.20	-4	4.88	0.0	00	0.000
Heavy Trucks:	84.25	-31.95	5	-0.60		-1.20	-8	5.35	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	l barrie	r attenı	uation)						
VehicleType	Leq Peak Ho	ur Leq Da	у	Leq Ev	rening	Leq N	ight	L	.dn	С	NEL
Autos:	55	5.9	53.9		52.6		46.5		55.0		55.6
Medium Trucks:	49	9.7	45.8		38.3		47.0		53.2		53.2
Heavy Trucks:	50	).5	46.5		43.1		47.7		53.9		54.0
Vehicle Noise:	57	7.7	55.1		53.2		51.9		58.8		59.2
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 d	BA	65 dl	BA	60	dBA	55	i dBA
			Ldn:	11		23		4	49		107
		0	NEL:	11		24		ę	52		112

	FH	WA-RD-77-108	3 HIGH	WAYN	IOISE PR	EDICTIC	ON MO	DEL			
Scenar Road Narr Road Segme	io: E+P 2021 ne: Holland Ro nt: w/o Leon F	I. Rd.				Project N Job Nui	lame: ( mber: '	Canter 11304	wood		
SITE	SPECIFIC IN	IPUT DATA				NC	DISE N	/ODE	L INPUT	s	
Highway Data					Site Cond	ditions (H	Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	616 vehicle	s				,	Autos:	15		
Peak Hour	Percentage:	10%			Med	dium Truc	:ks (2 A	(xles):	15		
Peak H	lour Volume:	62 vehicle	s		Hea	avy Truck	is (3+ A	(xles):	15		
Ve	hicle Speed:	45 mph			Vehicle N	lix					
Near/Far La	ne Distance:	48 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						Au	itos:	77.5%	14.0%	10.5%	92.00%
Ba	rrier Height:	0.0 feet	_		Me	dium Tru	cks:	48.0%	2.0%	50.0%	3.00%
Barrier Type (0-W	/all, 1-Berm):	0.0			н	leavy Tru	cks:	48.0%	2.0%	50.0%	5.00%
Centerline Di	st. to Barrier:	59.0 feet		5	Noise So	urce Ele	vation	s (in f	et)		
Centerline Dist.	to Observer:	59.0 feet		Ē	10.00 00	Autos:	0.0	000	,,		
Barrier Distance	to Observer:	0.0 feet			Mediun	n Trucks:	2.2	297			
Observer Height	(Above Pad):	5.0 feet			Heav	Trucks:	8.0	006	Grade Ad	justment	0.0
P	ad Elevation:	0.0 feet		H							
Ro	ad Elevation:	0.0 feet		4	Lane Equ	livalent L	Jistand	ce (In i	reet)		
	Road Grade:	0.0%			1 4 m all 1 m	Autos:	54.	129			
	Left View:	-90.0 degre	es		Wealun	n Trucks:	53.5	900			
	Right view:	90.0 degre	es		neav	y mucks.	55.5	902			
FHWA Noise Mod	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite I	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	68.46	-14.30		-0.6	2	-1.20		-4.69	0.0	000	0.000
Medium Trucks:	79.45	-29.17		-0.6	D	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-26.95		-0.6	0	-1.20		-5.35	0.0	000	0.00
Unmitigated Nois	e Levels (with	out Topo and	l barrie	er atten	uation)						
VehicleType	Leq Peak Ho	ur Leq Da	y	Leq E	vening	Leq N	ight		Ldn	C	VEL
Autos:	52	2.3	50.4		49.0		43.0		51.5	5	52.
Medium Trucks:	48	8.5	44.5		36.7		45.9		52.1	1	52.
Heavy Trucks:	55	0.5	51.5		43.7		52.9		59.1	1	59.1
Venicle Noise:	57	.8	54.5		50.3		54.1		60.5	0	60.6
Centerline Distan	ce to Noise C	ontour (in fee	t)	70	JD A	ee di	DA.	6	O dBA	55	dD A
			I dn:	100	IDA A	05 01	DM	6	62	1 55	27
		0	NEL.	1	ч Л	29			65	1	30
		0				00					

FH	WA-RD-77-108	HIGHW	AY NOISE	PREDICTIO	N MODEI	-	
Scenario: E+P 2021 Road Name: Scott Rd. Road Segment: w/o Haun	Rd.			Project N Job Nur	ame: Car nber: 113	iterwood 04	
SITE SPECIFIC II	NPUT DATA			NO	ISE MO	DEL INPUT	s
Highway Data			Site Co	onditions (H	lard = 10,	Soft = 15)	
Average Daily Traffic (Adt):	18,200 vehicle	s			Auto	os: 15	
Peak Hour Percentage:	10%		٨	ledium Truc	ks (2 Axle	s): 15	
Peak Hour Volume:	1,820 vehicle	s	F	leavy Truck	s (3+ Axle	s): 15	
Vehicle Speed:	50 mph		Vehicle	Mix			
Near/Far Lane Distance:	78 feet		Ve	hicleType	Da	/ Evening	Night Daily
Site Data				Au	tos: 75.	5% 14.0%	10.5% 97.42%
Barrier Height:	0.0 feet		1	Medium Truc	cks: 48.	9% 2.2%	48.9% 1.84%
Barrier Type (0-Wall, 1-Berm):	0.0			Heavy True	cks: 47.	3% 5.4%	47.3% 0.74%
Centerline Dist. to Barrier:	76.0 feet		Noise	Source Elev	ations (ii	n feet)	
Centerline Dist. to Observer:	76.0 feet			Autos:	0.000	,	
Barrier Distance to Observer:	0.0 feet		Med	um Trucks:	2.297		
Observer Height (Above Pad):	5.0 feet		He	avv Trucks:	8.006	Grade Ad	justment: 0.0
Pad Elevation:	0.0 feet		-				
Road Elevation:	0.0 feet		Lane E	quivalent L	vistance (	in feet)	
Road Grade:	0.0%			Autos:	65.422		
Left View:	-90.0 degre	es	Med	um Trucks:	65.286		
Right View:	90.0 degre	es	He	avy Trucks:	65.300		
FHWA Noise Model Calculation	ıs						
VehicleType REMEL	Traffic Flow	Distan	ce Fini	e Road	Fresnel	Barrier Att	en Berm Atten
Autos: 70.20	0.19		-1.85	-1.20	-4.7	73 0.0	000 0.000
Medium Trucks: 81.00	-17.05		-1.84	-1.20	-4.8	38 0.0	000.0 000
Heavy Trucks: 85.38	-21.00		-1.84	-1.20	-5.2	25 0.0	0.000
Unmitigated Noise Levels (with	out Topo and	barrier a	ttenuation	)			
VehicleType Leq Peak Ho	ur Leq Day	/ Le	eq Evening	Leq Ni	ght	Ldn	CNEL
Autos: 6	7.3	65.3	64.	0	58.0	66.4	4 67.1
Medium Trucks: 60	).9	57.0	49.	5	58.3	64.4	1 64.5
Heavy Trucks: 6	1.3	57.3	53.	9	58.5	64.7	64.8
venicie ivoise. 6	a.u	00.5	64.	0	03.0	70.2	ı 70.4
Centerline Distance to Noise C	ontour (in feel	9	70 dBA	65 dF	3A	60 dBA	55 dBA
		I dn:	77	165	··	356	767
	C	NEL:	81	174		374	806

	FH\	NA-RD-77-108	HIGHW	AY NO	DISE PREDICT		ODEL			
Scenar	io: E+P 2021				Projec	t Name.	Cante	rwood		
Road Nam	e: Scott Rd.				Job I	lumber.	: 11304			
Road Segme	nt: e/o Haun R	td.								
SITE	SPECIFIC IN	IPUT DATA				NOISE	MODE	L INPUT	s	
Highway Data				S	ite Conditions	; (Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	30,000 vehicle	5				Autos:	15		
Peak Hour	Percentage:	10%			Medium Tr	rucks (2	Axles):	15		
Peak H	lour Volume:	3,000 vehicle	5		Heavy Tru	icks (3+	Axles):	15		
Ve	hicle Speed:	50 mph		v	ehicle Mix					
Near/Far La	ne Distance:	78 feet		Ē	VehicleTyp	e	Day	Evening	Night	Daily
Site Data					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Autos:	75.5%	5 14.0%	10.5%	97.42%
Ba	rrior Hoiaht	0.0 feet			Medium 7	rucks:	48.9%	5 2.2%	48.9%	1.84%
Barrier Type (0-W	/all. 1-Berm):	0.0			Heavy 7	rucks:	47.3%	5.4%	47.3%	0.74%
Centerline Di	st. to Barrier:	76.0 feet			laisa Sauraa E	lovatio	ne (in f	oot)		
Centerline Dist.	to Observer:	76.0 feet		N	OISE SOUICE E	ievauo		eel)		
Barrier Distance	to Observer:	0.0 feet			Madium Trual	/s. (	207			
Observer Height (	(Above Pad):	5.0 feet			Hoow Truck	(5. 4	2.2.37	Grade Ad	liustment	- 00
Pa	ad Elevation:	0.0 feet			neavy nucr	io. (	5.000	0/000/10	Jaoumoni	. 0.0
Roa	ad Elevation:	0.0 feet		L	ane Equivalen	t Dista	nce (in	feet)		
	Road Grade:	0.0%			Auto	os: 65	5.422			
	Left View:	-90.0 degree	es		Medium Truck	(S. 65	5.286			
	Right View:	90.0 degree	es		Heavy Truck	(s: 65	5.300			
FHWA Noise Mod	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Distar	се	Finite Road	Free	snel	Barrier Att	ien Ber	rm Atten
Autos:	70.20	2.36		-1.85	-1.20		-4.73	0.0	000	0.000
Medium Trucks:	81.00	-14.88		-1.84	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-18.83		-1.84	-1.20		-5.25	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier a	attenu	uation)					
VehicleType	Leq Peak Hou	ır Leq Day	' L	eq Ev	ening Leq	Night		Ldn	C	NEL
Autos:	69	.5	67.5		66.2	60	.2	68.6	3	69.2
Medium Trucks:	63	.1	59.2		51.7	60	.4	66.6	3	66.6
Heavy Trucks:	63	.5	59.5		56.1	60	.7	66.9	3	67.0
Vehicle Noise:	71	.2	68.7		66.7	65	.2	72.3	2	72.6
Centerline Distant	ce to Noise C	ontour (in feet	)							
				70 di	BA 65	dBA	(	60 dBA	55	dBA
			Ldn:	107	7 2	231		497	1,	071
		CI	VEL:	112	2 2	242		522	1,	125

Tuesday, March 06, 2018

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	FH	WA-RD-77-108	HIGHW	AY N	OISE PF	REDICTIC	N MOD	EL			
Scenar Road Nam Road Segme	io: E+P 2021 ne: Scott Rd. nt: w/o Menife	e Rd.				Project N Job Nui	lame: C mber: 1	anter 1304	wood		
SITE	SPECIFIC IN	IPUT DATA				NC	DISE M	ODE	L INPUT	S	
Highway Data				S	ite Con	ditions (F	Hard = 1	10, So	ft = 15)		
Average Daily	Traffic (Adt):	26,500 vehicle	s				Α	utos:	15		
Peak Hour	Percentage:	10%			Me	dium Truc	:ks (2 A)	des):	15		
Peak H	lour Volume:	2,650 vehicle	s		He	avy Truck	's (3+ A)	des):	15		
Ve	hicle Speed:	55 mph		ν	ehicle l	Mix					
Near/Far La	ne Distance:	78 feet		-	Veh	icleType	E	Day	Evening	Night	Daily
Site Data						AL	itos: 7	5.5%	14.0%	10.5	% 97.42%
Ba	rrier Height:	0.0 feet			Me	edium Tru	cks: 4	8.9%	2.2%	48.9	% 1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy Tru	cks: 4	7.3%	5.4%	47.3	% 0.74%
Centerline Di	st. to Barrier:	76.0 feet		٨	loise So	ource Ele	vations	(in fe	et)		
Centerline Dist.	to Observer:	76.0 feet				Autos:	0.00	00	í		
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks:	2.29	97			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks:	8.00	06	Grade Adj	ustme	nt: 0.0
Pi	ad Elevation:	0.0 feet		-							
Roi	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distance	e (in f	eet)		
	Road Grade:	0.0%				Autos:	65.4	22			
	Left View:	-90.0 degre	es		Mediui	n Trucks:	65.2	86			
	Right View:	90.0 degre	es		Heav	y Trucks:	65.3	00			
FHWA Noise Mod	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresne	e/ .	Barrier Atte	en B	lerm Atten
Autos:	71.78	1.41		-1.85		-1.20		4.73	0.0	00	0.000
Medium Trucks:	82.40	-15.83		-1.84		-1.20	-4	4.88	0.0	00	0.000
Heavy Trucks:	86.40	-19.78		-1.84		-1.20	4	5.25	0.0	00	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier a	attenı	uation)						
VehicleType	Leq Peak Ho	ur Leq Daj	V L	eq Ev	ening	Leq N	ight		Ldn		CNEL
Autos:	70	).1	68.1		66.8		60.8		69.2		69.8
Medium Trucks:	63	3.5	59.6		52.1		60.9		67.1		67.1
Heavy Trucks:	63	3.6	59.5		56.1		60.8		67.0	)	67.1
Vehicle Noise:	71	.7	69.2		67.3		65.6		72.7	,	73.0
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 d	BA	65 dl	BA	6	0 dBA	1	55 dBA
		-	Ldn:	114	4	246	6		530		1,142
		С	NEL:	120	0	259	)		558		1,201

	FHWA	-RD-77-108 HIG	HWAY I	NOISE PR	EDICTIO	N MOL	DEL				
Scenario	): E+P 2021			Project Name: Canterwood							
Road Name	: Scott Rd.				Job Nun	nber: 1	1304				
Road Segmen	t: w/o Briggs Ro	i.									
SITE S	PECIFIC INP	UT DATA			NO	ISE N	IODE	L INPUT	S		
Highway Data				Site Cond	ditions (H	lard =	10, So	oft = 15)			
Average Daily T	raffic (Adt): 23	200 vehicles				A	Autos:	15			
Peak Hour F	Percentage:	10%		Med	dium Truci	ks (2 A	xles):	15			
Peak Ho	our Volume: 2	320 vehicles		Hea	avy Trucks	s (3+ A	xles):	15			
Veh	icle Speed:	55 mph	ŀ	Vehicle N	lix						
Near/Far Lan	e Distance:	78 feet	Ī	Vehi	cleType	1	Day	Evening	Night	Daily	
Site Data					Au	tos:	75.5%	14.0%	10.5%	97.42%	
Barr	ier Height:	0.0 feet		Me	dium Truc	cks: 4	48.9%	2.2%	48.9%	1.849	
Barrier Type (0-Wa	all, 1-Berm):	0.0		н	leavy Truc	cks: 4	47.3%	5.4%	47.3%	0.74%	
Centerline Dist	t. to Barrier:	76.0 feet	ŀ	Noise So	urce Elev	ations	: (in fe	et)			
Centerline Dist. to	o Observer:	76.0 feet	ŀ		Autos:	0.0	100	,			
Barrier Distance to	o Observer:	0.0 feet		Mediun	n Trucks:	2.2	97				
Observer Height (A	Above Pad):	5.0 feet		Heav	V Trucks:	8.0	06	Grade Ad	iustment	: 0.0	
Pao	d Elevation:	0.0 feet	-		-land F		- ()	(			
Road	d Elevation:	0.0 feet	-	Lane Equ	livalent D	istanc	e (In	reet)			
R	oad Grade:	0.0%		Madium	Autos:	65.4	22				
	Left View:	-90.0 degrees		Heave	Trucks	65.2	200				
	Ngni view.	90.0 degrees		neavy	y mucho.	00.0	000				
FHWA Noise Mode	l Calculations										
VehicleType	REMEL 1	raffic Flow Di	istance	Finite I	Road	Fresn	el	Barrier Att	en Ber	m Atten	
Autos:	71.78	0.83	-1.8	15	-1.20		4.73	0.0	000	0.00	
Medium Trucks:	82.40	-16.41	-1.8	34	-1.20		4.88	0.0	000	0.00	
Heavy Trucks:	86.40	-20.36	-1.8	14	-1.20		-5.25	0.0	000	0.00	
Unmitigated Noise	Levels (withou	t Topo and barr	ier atter	nuation)							
VehicleType I	Leq Peak Hour	Leq Day	Leq E	vening	Leq Ni	ght		Ldn	C	NEL	
Autos:	69.6	67.5		66.2		60.2		68.6	5	69.	
Medium Trucks:	63.0	59.1		51.6		60.3		66.5		66.	
Heavy Trucks: 63.0 58.9				55.6 60.2 66.4				66.			
Venicle Noise:	/1.1	68.6		66.7		65.0		72.1		72.	
Centerline Distance	e to Noise Con	tour (in feet)	70	dBA	65 dE		6	OdPA	55	dRA	
		l dos	10	05	225	<b>1</b> 71	Ċ	185	1 35	045	
		/								· · · · · · · · · · · · · · · · · · ·	

	FH	WA-RD-77-108	BHIGH	WAY N	DISE PR	EDICTI	ON MO	DEL			
Scenar	io: E+P 2021					Project I	Name:	Canter	wood		
Road Nam	e: Scott Rd.					Job NL	ımber:	11304			
Road Segme	nt: w/o Leon F	۲d.									
SITE	SPECIFIC IN	VPUT DATA				N	OISE I	MODE		s	
Highway Data				s	ite Con	ditions (	'Hard =	: 10, So	oft = 15)		
Average Daily	Traffic (Adt):	19,900 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10%			Mee	dium Tru	cks (2 )	Axles):	15		
Peak H	lour Volume:	1,990 vehicle	s		Hea	avy Truci	ks (3+ )	Axles):	15		
Ve	hicle Speed:	55 mph		v	ehicle I	<i>lix</i>					
Near/Far La	ne Distance:	78 feet		F	Vehi	cleType		Day	Evening	Night	Daily
Site Data						A	utos:	75.5%	14.0%	10.5%	97.42%
Ba	rrier Height	0.0 feet			Me	dium Tru	ucks:	48.9%	2.2%	48.9%	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0			H	leavy Tru	ucks:	47.3%	5.4%	47.3%	0.74%
Centerline Di	st. to Barrier:	76.0 feet		٨	loise So	urce Ele	evation	s (in fe	et)		
Centerline Dist.	to Observer:	76.0 feet				Autos	: 0.	000	1		
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks	; 2.	297			
Observer Height	Observer Height (Above Pad): 5.0 feet				Heav	y Trucks	: 8.	006	Grade Ad	iustmen	t: 0.0
Pi	ad Elevation:	0.0 feet					Distan	// /			
Roi	ad Elevation:	0.0 feet		L	ane Equ	livalent	Distan	ce (in i	eet)		
	Road Grade:	0.0%				Autos	: 65.	422			
	Left View:	-90.0 degre	es		weatur	n Trucks	65.	286			
	Right View:	90.0 degre	es		Heav	y Trucks	: 65.	300			
FHWA Noise Mod	el Calculation	is									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresi	nel	Barrier Att	en Be	rm Atten
Autos:	71.78	0.17		-1.85		-1.20		-4.73	0.0	000	0.000
Medium Trucks:	82.40	-17.07		-1.84		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	86.40	-21.03		-1.84		-1.20		-5.25	0.0	000	0.000
Unmitigated Nois	e Levels (with	nout Topo and	barrie	r attenu	ation)						
Vehicle I ype	Leq Peak Ho	ur Leq Da	y	Leq Ev	ening	Leq N	Vight		Ldn	C	NEL
Autos:	68	3.9	66.9		65.6		59.6	o n	68.0	)	68.6
Wealum Trucks:	62	2.3	58.4		50.9		59.6	D =	65.8	5	65.9
Heavy Trucks:	62	2.3	58.3		54.9		59.	2	65./		65.8
venicle Noise:	70	1.5	68.0		66.1		64.3	3	71.4	ł	71.7
Centerline Distan	ce to Noise C	ontour (in fee	t)	70 -		65 -	ID A		0 dBA		dD4
			Ldn	70 d	DA	0 00	IDA 12	6	429	55	UBA
			Lan:	94		203 438 944					244
		C	IVEL:	99		21	4		401	\$	332

	FH	WA-RD-77-108	HIGHW	AY N	IOISE P	REDICTI		DEL			
Scenar	io: E+P 2021					Project I	Vame: C	Canter	wood		
Road Narr	ne: Scott Rd.					Job NL	imber: 1	1304			
Road Segme	nt: e/o Leon R	td.									
SITE	SPECIFIC IN	NPUT DATA				N	OISE N	IODE	L INPUTS		-
Highway Data				S	Site Cor	nditions (	Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	10,700 vehicle	s				A	utos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	cks (2 A	xles):	15		
Peak H	lour Volume:	1,070 vehicle	s		He	avy Truc	ks (3+ A	xles):	15		
Ve	hicle Speed:	55 mph		1	Vehicle	Mix					
Near/Far La	ne Distance:	78 feet		F	Veh	icleTvpe		Dav	Evenina	Niaht	Dailv
Site Data						A	utos:	77.5%	14.0%	10.5%	92.00%
Ba	rrier Height	0.0 feet			М	edium Tru	ucks: 4	48.0%	2.0%	50.0%	3.00%
Barrier Type (0-W	/all. 1-Berm):	0.0				Heavy Tru	ucks: 4	18.0%	2.0%	50.0%	5.00%
Centerline Di	st. to Barrier:	76.0 feet			Noiso S	ourco Ek	wations	(in f	not)		
Centerline Dist.	to Observer:	76.0 feet			10/36 3		· 0.0	00			
Barrier Distance	to Observer:	0.0 feet			Madiu	Muios m Trucko	. 0.0	00			
Observer Height	(Above Pad):	5.0 feet			Hoo	n Trucks	. 2.2	06	Grade Adiu	stment	. 00
P	ad Elevation:	0.0 feet			near	ly mucks	. 0.0	00	onddo maja	oumonie	0.0
Ro	ad Elevation:	0.0 feet		L	Lane Eq	uivalent	Distanc	e (in	feet)		
	Road Grade:	0.0%				Autos	: 65.4	22			
	Left View:	-90.0 degre	es		Mediu	m Trucks	: 65.2	86			
	Right View:	90.0 degre	es		Heav	/y Trucks	: 65.3	00			
FHWA Noise Mod	el Calculation	15									-
VehicleType	REMEL	Traffic Flow	Distar	ce	Finite	Road	Fresne	e/	Barrier Atte	n Ber	m Atten
Autos:	71.78	-2.78		-1.85	5	-1.20	-	4.73	0.00	10	0.000
Medium Trucks:	82.40	-17.64		-1.84	1	-1.20	-	4.88	0.00	0	0.000
Heavy Trucks:	86.40	-15.43		-1.84	4	-1.20	-	5.25	0.00	0	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	tten	uation)						
VehicleType	Leq Peak Ho	ur Leq Day	/ Le	eq Ev	/ening	Leq N	light		Ldn	C	NEL
Autos:	65	5.9	64.1		62.6		56.6		65.1		65.7
Medium Trucks:	61	.7	57.7		50.0		59.2		65.3		65.4
Heavy Trucks:	67	7.9	63.9		56.2		65.4		71.5		71.6
Vehicle Noise:	70	).7	67.5		63.7		66.8		73.2		73.3
Centerline Distan	ce to Noise C	ontour (in feet	)								
				70 a	1BA	65 0	IBA	e	60 dBA	55	dBA
			Ldn:	12	4	26	7		576	1,	240
		C	NEL:	12	7	27	3		587	1,	265

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	FH	WA-RD-77-108	HIGHW	AY NO	DISE PI	REDICTIC	N MODE	ïL			
Scenai Road Nan Road Segme	Scenario: E+P 2025 Road Name: Haun Rd. Road Segment: n/o Scott Rd.					Project N Job Nui	lame: Ca mber: 11:	nterwood 304			
SITE	SPECIFIC IN	IPUT DATA				NC	DISE MO	DEL INPU	TS		
Highway Data				S	ite Cor	ditions (F	Hard = 10	, Soft = 15)			
Average Daily	Traffic (Adt):	18,400 vehicle	s				Au	tos: 15			
Peak Hour	Percentage:	10%			Me	dium Truc	ks (2 Axl	es): 15			
Peak H	lour Volume:	1,840 vehicle	s		He	avy Truck	s (3+ Axl	es): 15			
Ve	hicle Speed:	50 mph		V	ehicle	Mix					
Near/Far La	ne Distance:	48 feet			Veh	icleType	Da	ay Evening	g Ni	ght	Daily
Site Data						AL	itos: 75	.5% 14.0%	6 10	0.5%	97.42%
Ba	rrier Height:	0.0 feet			М	edium Tru	cks: 48	.9% 2.2%	6 4	8.9%	1.84%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tru	cks: 47	.3% 5.4%	6 4	7.3%	0.74%
Centerline Di	ist. to Barrier:	59.0 feet		N	loise S	ource Ele	vations (	in feet)			-
Centerline Dist.	to Observer:	59.0 feet				Autos:	0.000	)			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.29	7			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks:	8.006	Grade A	Adjust	ment:	0.0
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distance	(in feet)			
	Road Grade:	0.0%				Autos:	54.12	9			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	53.96	6			
	Right View:	90.0 degre	es		Heav	/y Trucks:	53.98	2			
FHWA Noise Mod	lel Calculation	IS									
VehicleType	REMEL	Traffic Flow	Distar	се	Finite	Road	Fresnel	Barrier A	Atten	Berr	n Atten
Autos:	70.20	0.24		-0.62		-1.20	-4.	69 (	0.000		0.000
Medium Trucks:	81.00	-17.00		-0.60		-1.20	-4.	88 (	0.000		0.000
Heavy Trucks:	85.38	-20.95		-0.60		-1.20	-5.	35 (	0.000		0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenu	ation)						-
VehicleType	Leq Peak Ho	ur Leq Daj	V L	eq Ev	ening	Leq N	ight	Ldn		CN	IEL
Autos:	68	3.6	66.6		65.3		59.3	6	7.7		68.3
Medium Trucks:	62	2.2	58.3		50.8		59.6	6	5.7		65.8
Heavy Trucks:	62	2.6	58.6		55.2		59.8	60	6.0		66.1
Vehicle Noise:	70	).3	67.8		65.8		64.3	7	1.3		71.7
Centerline Distan	ce to Noise C	ontour (in fee	t)	_	-			-			
				70 di	BA	65 dl	BA	60 dBA		55 0	зВА
			Ldn:	73		156	6	337		72	26
		С	NEL:	76		164	ļ.	354		76	52

Scenario: E	+P 2025				Project Na	me: Car	nterwood						
Road Name: Z	elders Rd.				JOD INUM	ber: 113	04						
Noud Ocyment. S													
SITE SPE Highway Data	CIFIC INPU	IDATA		Site Con	NOI ditions (Ha	SE MO	Soft = $15$	5					
Avorago Daily Traff	ic (Adt): E 7	0 vohiclos		Autor 15									
Rock Hour Pore	ontogo: 5,7	10%		Mo	dium Truck	~ (2 Avic	ol: 15						
Peak Hour \	lolume: 5	70 vehicles		He	aw Trucks	(3+ Ayle	s): 15						
Vehicle	Sneed:	50 mph	_	110	ing maono	1017040	0). 10						
Near/Far Lane D	istance:	48 feet	-	Vehicle I	/lix	-							
0				Vehi	cle I ype	Da	V Evening	Night	Daily				
Site Data					AUte	0S: 75. kai 40	5% 14.0%	10.5%	97.42%				
Barrier	Height:	0.0 feet		IVIE	alum Truc.	KS: 48.	9% 2.2%	48.9%	1.84%				
Barrier Type (0-Wall, 1	-Berm):	0.0		r	eavy muc	KS. 47.	3% 5.4%	47.3%	0.74%				
Centerline Dist. to	Barrier: 5	9.0 feet	Γ	Noise Sc	urce Eleva	ations (i	n feet)						
Centerline Dist. to OI	bserver: 5	9.0 feet			Autos:	0.000							
Barrier Distance to Ol	oserver:	0.0 feet		Mediur	n Trucks:	2.297							
Observer Height (Abov	/e Pad):	5.0 feet		Heav	y Trucks:	8.006	Grade Ac	ljustment	0.0				
Pad El	evation:	0.0 feet	-	l ano Fra	uvalent Di	stanco	in foot)						
Rodu El	Evalion. Grada:	0.0 1661	-	Lune Ly	Autos	54 120	milecty						
noau Le	off View _0	0.0 /0		Mediur	n Trucks:	53 966							
Ria	ht View: 9	0.0 degrees		Heav	v Trucks:	53.982							
		0.0											
FHWA Noise Model Ca	lculations			1									
VehicleType R	EMEL Tra	affic Flow Dis	stance	Finite	Road	Fresnel	Barrier At	ten Ber	m Atten				
Autos:	70.20	-4.85	-0.6	2	-1.20	-4.0	69 O.	000	0.00				
Medium Trucks:	81.00	-22.09	-0.6	0	-1.20	-4.8	38 0.	000	0.00				
Heavy Trucks:	85.38	-26.04	-0.6	0	-1.20	-5.5	35 0.	000	0.00				
Unmitigated Noise Lev	els (without	Topo and barri	ier atter	nuation)				-					
VehicleType Leq	Peak Hour	Leq Day	Leq E	vening	Leq Nig	tht	Ldn	Ci	VEL				
Autos:	63.5	61.5		60.2		54.2	62.	6	63.				
Medium Trucks:	57.1	53.2		45.7		54.5	60.	6	60.				
Heavy Trucks:		50.1		54.7	60.	9	61.						
Vehicle Noise:	65.2	62.7		60.8		59.2	66.	3	66.				
Centerline Distance to	Noise Conto	ur (in feet)											
		[	70	dBA	65 dB/	4	60 dBA	55	dBA				
		Ldn:	3	3	72		154	3	32				

	FH\	VA-RD-77-108	HIGHW	VAY NO	DISE PI	REDICT	ION MC	DEL				
Scenar	io: E+P 2025					Proiect	Name:	Cante	rwood			
Road Nam	e: Antelope R	d.				Job N	lumber:	11304	1			
Road Segme	nt: s/o Scott R	d.										
SITE	SPECIFIC IN	IPUT DATA				P	OISE	MODE	EL INPU	ITS		
Highway Data				S	ite Cor	ditions	(Hard =	: 10, S	oft = 15)			
Average Daily	Traffic (Adt):	16,100 vehicle	S					Autos	: 15			
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2	Axles)	: 15			
Peak H	lour Volume:	1,610 vehicle	s		He	avy Tru	cks (3+ .	Axles)	: 15			
Ve	hicle Speed:	50 mph			chiele	Mix						
Near/Far La	ne Distance:	48 feet		ľ	Veh	icleType		Dav	Evenin	a N	liaht	Daily
Site Data					1011		Autos:	75.5%	6 14.0	9 /1 % 1	0.5%	97.42%
Ba	wier Height	0.0 feet			М	edium T	rucks:	48.9%	6 2.2	% 4	8.9%	1.84%
Barrier Type (0-W	all 1-Berm)	0.0 1001			1	Heavy T	rucks:	47.39	6 5.4	% 4	7.3%	0.74%
Centerline Di	st. to Barrier:	59.0 feet				· _						
Centerline Dist.	to Observer:	59.0 feet		N	oise S	burce E	levation	is (in i	reet)			
Barrier Distance	to Observer:	0.0 feet				Auto	s: 0.	000				
Observer Height (	Observer Height (Above Pad): 5.0 feet				Mediu	m Truck	s: 2.	297	O	A		
Pa	ad Elevation:	0.0 feet			Heav	y Truck	s: 8.	006	Grade	aajusi	ment	0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distan	ce (in	feet)			
	Road Grade:	0.0%				Auto	s: 54	.129				
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 53	966				
	Right View:	90.0 degre	es		Heav	y Truck	s: 53	982				
	-1.0-11											
VehicleType	REMEI	s Traffic Flow	Dista	nco	Finito	Road	Free	nol	Barriar	Atton	Bor	m Atton
Autos	70.20	-0.34	Dista	-0.62	1 millo	-1 20	1103	-4 69	Damer	0.000	Den	0.000
Medium Trucks:	81.00	-17 58		-0.60		-1 20		-4.88		0.000		0.000
Heavy Trucks:	85.38	-21.53		-0.60		-1.20		-5.35		0.000		0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	attenu	ation)	100	Might	-	l de		0	
Venicie rype	Ley Feak Hou	Leq Day	66.0	Ley Ev	64 7	Leq	INIGIII EQ.	7	LUII	7 1	U	VEL 67 1
Medium Trucks:	61	6	57.7		50.2		59	'n	6	5.1		65 3
Heavy Trucks:	62	.0	58.0		54.6		59	2	6	5.4		65.
Vehicle Noise:	69	.7	67.2		65.3		63.	8	7	0.8		71.
Contorlino Distan	n to Noiso C	ontour (in foot	1									
Sentenine Distant	10 100138 01	un leel	/	70 di	BA	65	dBA		60 dBA		55	dBA
			Ldn:	66		1	43		308		6	64
		Ci	VEL:	70		1	50		324		6	97

	FUM	A-RD-11-100 F	IGHWA	TN		LEDICI		DEL				
Scenari	io: E+P 2025					Project	Name:	Canter	wood			
Road Nam	e: Menifee Rd.					Job N	lumber:	11304				
Road Segmer	nt: n/o Holland I	Rd.										
SITE	SPECIFIC INF	PUT DATA				r	NOISE	/ODE	L INPUT	s		
Highway Data				S	Site Con	ditions	(Hard =	10, So	oft = 15)			
Average Daily	Traffic (Adt): 13	3,900 vehicles						Autos:	15			
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2 A	Axles):	15			
Peak H	lour Volume:	1,390 vehicles			He	avy Tru	cks (3+ A	(xles)	15			
Ve	hicle Speed:	45 mph			ohicle	Mix						
Near/Far La	ne Distance:	54 feet		F	Veh	icleTvpe		Dav	Evenina	Niaht	Daily	
Site Data				Autos: 75.5% 14.0% 10.5% 97.								
Ba	wier Height	0.0 feet		Medium Trucks: 48.9% 2.2% 48.9% 1.8								
Barrior Type (0.14	rner Height:	0.0 reet				Heavv T	rucks:	47.3%	5.4%	47.3%	0.74%	
Centerline Di	all, 1-Defini).	64.0 feet										
Centerline Dist	to Observer:	64.0 feet		۸	loise So	ource E	levation	s (in fe	et)			
Barrier Distance	to Observer:	0.0 feet				Auto	s: 0.0	000				
Observer Height (	Above Pad):	5.0 feet			Mediu	m Truck	's: 2.1	297				
Pa	ad Elevation:	0.0 feet			Heav	ry Truck	's: 8.0	006	Grade Ad	justment	2 0.0	
Ros	ad Elevation:	0.0 feet		L	ane Ea	uivalen	t Distan	ce (in f	eet)			
	Road Grade:	0.0%				Auto	s: 58.	241	,			
	Left View:	-90.0 degrees			Mediu	m Truck	s: 58.	089				
	Right View:	90.0 degrees			Heav	ry Truck	s: 58.	104				
FHWA Noise Mode	el Calculations											
VehicleType	REMEL	Traffic Flow	Distanc	e	Finite	Road	Fresr	el .	Barrier Att	en Be	rm Atten	
Autos:	68.46	-0.52	-	1.10		-1.20		-4.70	0.0	000	0.000	
Medium Trucks:	79.45	-17.76	-	1.08		-1.20		-4.88	0.0	000	0.000	
Heavy Trucks:	84.25	-21.72	-	1.08		-1.20		-5.31	0.0	000	0.000	
Unmitigated Noise	e Levels (witho	ut Topo and b	arrier at	ten	uation)							
VehicleType	Leq Peak Hour	Leq Day	Lee	q Ev	ening	Leq	Night		Ldn	С	NEL	
Autos:	65.6	6 63	3.6		62.3		56.3	5	64.7	7	65.4	
Medium Trucks:	59.4	4 55	5.5		48.0		56.8		62.9	3	63.0	
Heavy Trucks:	60.3	3 56	6.2		52.8		57.5	i	63.7	7	63.8	
Vehicle Noise:	67.5	5 64	1.9		62.9		61.6	6	68.6	ŝ	68.9	
Centerline Distant	ce to Noise Co	ntour (in feet)										
				70 d	BA	65	dBA	6	0 dBA	55	i dBA	
		L	dn:	52 111 240 51					517			
	CNEL:						17		251	5	542	

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	FH	WA-RD-77-108	HIGHW	AY NO	OISE PI	REDICTIC	ON MOD	EL			
Scenar Road Nan Road Segme	Scenario: E+P 2025 Road Name: Menifee Rd. Road Segment: s/o Holland Rd. SITE SPECIFIC INPUT DATA					Project N Job Nui	lame: C mber: 1	anterw 1304	boo		
SITE	SPECIFIC IN	IPUT DATA				NC	DISE M	ODEL	INPUTS	5	
Highway Data				S	lite Cor	ditions (I	Hard = 1	IO, Sofi	t = 15)		
Average Daily	Traffic (Adt):	14,200 vehicle	s				A	utos:	15		
Peak Hour	Percentage:	10%			Me	dium Truc	cks (2 Ax	des):	15		
Peak H	lour Volume:	1,420 vehicle	s		He	avy Truck	(3+ Ax	des):	15		
Ve	hicle Speed:	45 mph		v	ehicle	Mix					
Near/Far La	ne Distance:	54 feet		Ē	Veh	icleType	Ľ	Day E	Evening	Night	Daily
Site Data						AL	itos: 7	5.5%	14.0%	10.5%	97.42%
Ba	rrier Height:	0.0 feet			М	edium Tru	cks: 4	8.9%	2.2%	48.9%	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0			1	Heavy Tru	cks: 4	7.3%	5.4%	47.3%	0.74%
Centerline Di	st. to Barrier:	64.0 feet		N	loise S	ource Ele	vations	(in fee	t)		
Centerline Dist.	to Observer:	64.0 feet				Autos:	0.00	00	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.29	97			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks:	8.00	06 G	Grade Adj	ustmen	t: 0.0
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distance	e (in fe	et)		
	Road Grade:	0.0%				Autos:	58.24	41			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	58.08	89			
	Right View:	90.0 degre	es		Heav	y Trucks:	58.10	04			
FHWA Noise Mod	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresne	el B	arrier Atte	en Be	rm Atten
Autos:	68.46	-0.43		-1.10		-1.20	-4	4.70	0.0	00	0.000
Medium Trucks:	79.45	-17.67		-1.08		-1.20	-4	4.88	0.0	00	0.000
Heavy Trucks:	84.25	-21.62		-1.08		-1.20	-{	5.31	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenu	lation)						
VehicleType	Leq Peak Ho	ur Leq Daj	/ L	eq Ev	ening	Leq N	light	L	dn	C	NEL
Autos:	65	5.7	63.7		62.4		56.4		64.8		65.4
Medium Trucks:	59	9.5	55.6		48.1		56.9		63.0		63.1
Heavy Trucks:	60	).3	56.3		52.9		57.6		63.8		63.8
Vehicle Noise:	67	7.6	65.0		63.0		61.7		68.7		69.0
Centerline Distan	ce to Noise C	ontour (in fee	)								
				70 dl	BA	65 dl	BA	60	dBA	55	o dBA
		-	Ldn:	52		113	3	2	243	1	524
	CNEL:				5	118	3	2	255	1	550

	FHV	/A-RD-77-108	HIGH	WAY NO	DISE PR	EDICT					
Scenario:	E+P 2025			Project	Name: (	Canter	wood				
Road Name: Road Segment:	s/o Craig Av	<i>.</i>				JOD N	umber: 1	11304			
SITE SI	PECIFIC IN	PUT DATA				N	OISE N	IODE		s	
Highway Data				S	ite Cond	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily Tr	affic (Adt):	4,300 vehicle	s					Autos:	15		
Peak Hour Pe	ercentage:	10%			Med	dium Tru	icks (2 A	xles):	15		
Peak Hou	ır Volume:	430 vehicle	s		Hea	avy Truc	:ks (3+ A	xles):	15		
Vehi	cle Speed:	35 mph		V	ehicle N	lix					
Near/Far Lane	Distance:	48 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						A	lutos:	77.5%	14.0%	10.5%	92.00%
Barri	er Heiaht:	0.0 feet			Me	dium Ti	ucks:	48.0%	2.0%	50.0%	3.00%
Barrier Type (0-Wal	l. 1-Berm):	0.0			н	leavy Tr	ucks:	48.0%	2.0%	50.0%	5.00%
Centerline Dist.	to Barrier:	59.0 feet			laiaa Ca	uree El	ovetion	lin fe	a.4)		
Centerline Dist. to	Observer:	59.0 feet			0136 30	Autor			el)		
Barrier Distance to	Observer:	0.0 feet			Modium	AUIO: n Trucki	s. 0.0	00			
Observer Height (Al	bove Pad):	5.0 feet			Hoove	Truck	5. <u>2.</u> 2	06	Grade Ad	iustmont	0.0
Pad	Elevation:	0.0 feet			neavy	y much	5. 0.0	000	enddo maj	dourioni	0.0
Road	Elevation:	0.0 feet		L	ane Equ	iivalent	Distanc	e (in t	feet)		
Ro	ad Grade:	0.0%				Autos	s: 54.1	129			
	Left View:	-90.0 degre	es		Mediun	n Trucks	s: 53.9	966			
F	Right View:	90.0 degre	es		Heavy	y Trucks	s: 53.9	982			
FHWA Noise Model	Calculations	5									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite I	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	64.30	-4.77		-0.62		-1.20		-4.69	0.0	000	0.000
Medium Trucks:	75.75	-19.64		-0.60		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	81.57	-17.42		-0.60		-1.20		-5.35	0.0	000	0.000
Unmitigated Noise I	evels (with	out Topo and	barrie	er attenu	ation)						
VehicleType L	eq Peak Hou	r Leq Day	/	Leq Eve	ening	Leq	Night		Ldn	CI	VEL
Autos:	57.	7	55.8		54.4		48.4		56.8	3	57.5
Medium Trucks:	54.	3	50.3		42.5		51.8		57.9	9	57.9
Heavy Trucks:	62.	3	58.4		50.6		59.8		65.9	)	66.0
Vehicle Noise:	64.	1	60.7		56.1		60.7		67.0	)	67.1
Centerline Distance	to Noise Co	ntour (in feet	)	70 //							
			Ldn	70 dl	5A	65	0 0	6	172	55	aBA 72
	Ldn:					8	U		1/3	3	13
		~		20		0	2		176	2	70

	FHV	VA-RD-77-108 H	IIGHWA	AY NO	DISE PR	EDICTI	ON MO	DDEL				
Scenar	io: E+P 2025					Project	Name:	Cante	rwood			
Road Nan	ne: Leon Rd.					Job N	umber:	11304				
Road Segme	nt: s/o Garban	i Rd.										
SITE	SPECIFIC IN	IPUT DATA				N	OISE	MODE	L INPUT	s		
Highway Data				S	ite Con	ditions	(Hard =	= 10, S	oft = 15)			
Average Daily	Traffic (Adt):	5,100 vehicles						Autos:	15			
Peak Hour	Percentage:	10%			Med	dium Tru	ıcks (2	Axles):	15			
Peak H	lour Volume:	510 vehicles			Hea	avy Truc	:ks (3+	Axles):	15			
Ve	ehicle Speed:	55 mph		v	ehicle I	<i>lix</i>						
Near/Far La	ne Distance:	48 feet		F	Vehi	cleType		Day	Evening	Nigi	ht	Daily
Site Data						A	Autos:	77.5%	14.0%	10.	5% 9	2.00%
Ba	rrier Height:	0.0 feet			Me	edium Tr	ucks:	48.0%	2.0%	50.	0%	3.00%
Barrier Type (0-V	Vall, 1-Berm):	0.0			H	leavy Tr	ucks:	48.0%	2.0%	50.	ე%	5.00%
Centerline Di	ist. to Barrier:	59.0 feet			loise So	urce El	evatio	ns (in f	eet)			
Centerline Dist.	to Observer:	59.0 feet		F		Autos	s: 0	000				
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks	. 2	.297				
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks	. – s: 8	.006	Grade A	djustm	ent: (	0.0
P	ad Elevation:	0.0 feet		L		,						
Ro	ad Elevation:	0.0 feet		L	ane Equ	ivalent	Distar	nce (in	feet)			
	Road Grade:	0.0%				Autos	s: 54	.129				
	Left View:	-90.0 degrees	5		Mediur	n Trucks	s: 53	.966				
	Right View:	90.0 degrees	5		Heav	y Trucks	s: 53	.982				
FHWA Noise Mod	lel Calculation	s										
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fres	nel	Barrier A	ten	Berm	Atten
Autos:	71.78	-6.00		0.62		-1.20		-4.69	0.	.000		0.000
Medium Trucks:	82.40	-20.86		-0.60		-1.20		-4.88	0.	.000		0.000
Heavy Trucks:	86.40	-18.64		0.60		-1.20		-5.35	0.	000		0.000
Unmitigated Nois	e Levels (with	out Topo and b	arrier a	ttenı	uation)							
VehicleType	Leq Peak Hou	Ir Leq Day	Le	q Ev	ening	Leq	Night		Ldn		CNE	EL.
Autos:	64	.0 6	2.1		60.7		54.	6	63	.1		63.7
Medium Trucks:	59	.7 5	5.8		48.0		57.	2	63	3		63.4
Heavy Trucks:	66	.0 6	2.0		54.2		63.	4	69	6		69.6
Vehicle Noise:	68	.7 6	5.5		61.7		64.	8	71	.2		71.3
Centerline Distan	ce to Noise Co	ontour (in feet)	-					-		-		
			. ட	70 d	BA	65 0	dBA	1	50 dBA		55 dE	3A
		L	an:	71		15	53		330		711	-
		CN	EL:	72		18	סכ		331		725	)

	FH\	NA-RD-77-108 H	IGHWA	NOISE P	REDICTIC		EL			
Scenar	rio: E+P 2025				Project N	<i>lame:</i> C	anter	wood		
Road Nan	ne: Leon Rd.				Job Nu	mber: 1	1304			
Road Segme	nt: s/o Scott R	d.								
SITE	SPECIFIC IN	IPUT DATA			N	DISE M	ODEI		5	
Highway Data				Site Cor	nditions (l	Hard = 1	10, So	ft = 15)		
Average Daily	Traffic (Adt):	6,500 vehicles				A	utos:	15		
Peak Hour	Percentage:	10%		Me	edium Truc	cks (2 A	kles):	15		
Peak H	lour Volume:	650 vehicles		He	avy Truck	ks (3+ A)	kles):	15		
Ve	ehicle Speed:	55 mph		Vehicle	Mix					
Near/Far La	ane Distance:	48 feet		Vel	nicleType	Ĺ	Day	Evening	Night	Daily
Site Data					AL	utos: 7	7.5%	14.0%	10.5%	92.00%
Ba	rrier Height:	0.0 feet		M	edium Tru	icks: 4	8.0%	2.0%	50.0%	3.00%
Barrier Type (0-V	Vall. 1-Berm):	0.0			Heavy Tru	icks: 4	8.0%	2.0%	50.0%	5.00%
Centerline D	ist. to Barrier:	59.0 feet		Noiso S	ourco Elo	vations	(in fo	of)		
Centerline Dist.	to Observer:	59.0 feet		NUISE 3	Autor:		00	ei)		-
Barrier Distance	to Observer:	0.0 feet		Modiu	m Trucke	2.2	00 97			
Observer Height	Observer Height (Above Pad): 5.0 feet					0.0	06	Grade Adii	istment	. 0.0
P	ad Elevation:	0.0 feet		Tica	ly muchs.	0.0	00	orado maja	Journoine	. 0.0
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent l	Distanc	e (in f	eet)		
	Road Grade:	0.0%			Autos:	54.1	29			
	Left View:	-90.0 degrees		Mediu	m Trucks:	53.9	66			
	Right View:	90.0 degrees		Hea	vy Trucks:	53.9	82			
FHWA Noise Mod	lel Calculation	s								
VehicleType	REMEL	Traffic Flow	Distance	e Finite	Road	Fresne	e/ 1	Barrier Atte	en Ber	m Atten
Autos:	71.78	-4.94	-C	.62	-1.20	-	4.69	0.0	00	0.000
Medium Trucks:	82.40	-19.81	-0	.60	-1.20	-	4.88	0.0	00	0.000
Heavy Trucks:	86.40	-17.59	-C	.60	-1.20	-	5.35	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and b	arrier att	enuation)						
VehicleType	Leq Peak Hou	ır Leq Day	Leq	Evening	Leq N	light		Ldn	C	NEL
Autos:	65	.0 63	3.1	61.7		55.7		64.2		64.8
Medium Trucks:	60	.8 56	6.8	49.0		58.2		64.4		64.4
Heavy Trucks:	67	.0 63	3.0	55.2		64.5		70.6		70.6
Vehicle Noise:	69	.7 66	6.6	62.8		65.8		72.3		72.4
Centerline Distan	ce to Noise Co	ontour (in feet)								
			7	0 dBA	65 d	BA	6	0 dBA	55	dBA
		Lo	dn:	84	180	0		388	8	35
		CNE	EL:	85	184	4		396	8	52

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	FH	WA-RD-77-108	HIGHW	AY NO	DISE P	REDICTIC		EL _		_	_
Scenar Road Nan Road Segme	Scenario: E+P 2025 Road Name: Holland Rd. Road Segment: w/o Menifee Rd. SITE SPECIFIC INPUT DATA						lame: Ca mber: 11	anterwo 304	od		
SITE	SPECIFIC IN	NPUT DATA				NC	DISE MO	DDEL I	NPUTS	5	
Highway Data				S	ite Cor	nditions (H	Hard = 10	), Soft =	= 15)		
Average Daily	Traffic (Adt):	8,500 vehicle	s				Au	itos:	15		
Peak Hour	Percentage:	10%			Me	edium Truc	ks (2 Axi	les):	15		
Peak H	lour Volume:	850 vehicle	s		He	avy Truck	s (3+ Axi	les):	15		
Ve	hicle Speed:	45 mph		V	ehicle	Mix					
Near/Far La	ne Distance:	48 feet		-	Veh	nicleType	Di	av Ev	/enina	Niaht	Dailv
Site Data						AL	itos: 75	5.5%	14.0%	10.5%	97.42%
Ba	rrier Heiaht:	0.0 feet			Μ	edium Tru	cks: 48	3.9%	2.2%	48.9%	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0			1	Heavy Tru	cks: 47	7.3%	5.4%	47.3%	0.74%
Centerline Di	st. to Barrier:	59.0 feet		N	oise S	ource Ele	vations	(in feet)	)		
Centerline Dist.	to Observer:	59.0 feet				Autos:	0.00	0			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.29	7			
Observer Height	(Above Pad):	5.0 feet			Hear	v Trucks:	8.00	6 Gr	ade Adju	ustment.	: 0.0
P	ad Elevation:	0.0 feet		-							
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent I	Distance	(in fee	t)		
	Road Grade:	0.0%				Autos:	54.12	9			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	53.96	6			
	Right View:	90.0 degre	es		Hear	vy Trucks:	53.98	2			
FHWA Noise Mod	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresnel	Ba	rrier Atte	en Ber	m Atten
Autos:	68.46	-2.66		-0.62		-1.20	-4	.69	0.0	00	0.000
Medium Trucks:	79.45	-19.90		-0.60		-1.20	-4	.88	0.00	00	0.000
Heavy Trucks:	84.25	-23.85		-0.60		-1.20	-5	.35	0.00	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Daj	V L	eq Eve	ening	Leq N	ight	La	In	CI	NEL
Autos:	64	1.0	62.0		60.7		54.6		63.1		63.7
Medium Trucks:	57	7.8	53.9		46.4		55.1		61.3		61.3
Heavy Trucks:	58	3.6	54.6		51.2		55.8		62.0		62.1
Vehicle Noise:	65	5.8	63.2		61.3		60.0		67.0		67.3
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 dł	BA	65 dl	BA	60 a	IBA	55	dBA
		-	Ldn:	37		80		17	1	3	69
		С	NEL:	39		83		18	0	3	187

	FHV	/A-RD-77-108 HIG	SHWAY I	NOISE PF	EDICTIO	N MOD	DEL			
Scenario	p: E+P 2025				Project Na	ame: C	anter	wood		
Road Name	e: Holland Rd.				Job Nun	nber: 1	1304			
Road Segmen	t: e/o Menifee	Rd.								
SITES	SPECIFIC IN	PUT DATA			NO	ISE M	ODE	L INPUT	s	
Highway Data				Site Con	ditions (H	ard = 1	10, So	oft = 15)		
Average Daily	Traffic (Adt):	8,900 vehicles				A	utos:	15		
Peak Hour I	Percentage:	10%		Me	dium Truck	ks (2 A)	xles):	15		
Peak He	our Volume:	890 vehicles		Hea	avy Trucks	s (3+ A)	xles):	15		
Vel	nicle Speed:	45 mph	ľ	Vehicle I	/ix					
Near/Far Lar	e Distance:	48 feet	ŀ	Vehi	cleType	Ľ	Day	Evening	Night	Daily
Site Data					Aut	los: 7	75.5%	14.0%	10.5%	97.429
Bar	rier Height:	0.0 feet		Me	edium Truc	:ks: 4	18.9%	2.2%	48.9%	1.84%
Barrier Type (0-Wa	all, 1-Berm):	0.0		F	leavy Truc	:ks: 4	17.3%	5.4%	47.3%	0.74%
Centerline Dis	t. to Barrier:	59.0 feet	ŀ	Noise So	urce Elev	ations	(in fe	et)		
Centerline Dist. t	o Observer:	59.0 feet	ŀ		Autos:	0.0	00			
Barrier Distance t	o Observer:	0.0 feet		Mediur	n Trucks:	2.2	97			
Observer Height (/	Above Pad):	5.0 feet		Heav	y Trucks:	8.0	06	Grade Ad	justment	0.0
Pa	d Elevation:	0.0 feet	-	1 F	where the set D		- // /	(		
Roa	d Elevation:	0.0 feet	-	Lane Equ	Ilvalent D	Istanc	e (IN 1	reet)		
F	coad Grade:	0.0%		Modium	Autos:	54.1	29 66			
	Left View: Dight View:	-90.0 degrees		Hoov	v Trucks:	53.9	82 82			
	Right view.	90.0 degrees		neav	y muchs.	55.5	02			
FHWA Noise Mode	l Calculation	5								
VehicleType	REMEL	Traffic Flow D	Distance	Finite	Road	Fresne	el .	Barrier Att	en Ber	m Atten
Autos:	68.46	-2.46	-0.6	62	-1.20	-	4.69	0.0	000	0.00
Medium Trucks:	79.45	-19.70	-0.6	60	-1.20	-	4.88	0.0	000	0.00
Heavy Trucks:	84.25	-23.65	-0.6	60	-1.20	-	5.35	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and bar	rier attei	nuation)						
VehicleType	Leq Peak Hou	r Leq Day	Leq E	vening	Leq Ni	ght		Ldn	Ci	VEL
Autos:	64.	2 62.2	2	60.9		54.8		63.3	3	63.
Medium Trucks:	58.	0 54.1		46.6		55.3		61.5	5	61.
Heavy Trucks:	58.	8 54.8	3	51.4		56.0		62.4	2	67
venicie Noise:	66.	0 63.4	+	61.5		60.2		67	2	67.
Centerline Distanc	e to Noise Co	ntour (in feet)	70	dDA	ee de	4	6	O dBA	55	dD A
		I da			05 08	м	0	177	55	01
		Lan.		10	82			195	3	01
					~ ~ ~ ~			1.000		

	FH	WA-RD-77-108	HIGHV	VAY NO	DISE PI	REDICTI	ON MO	DEL				
Scenari Dood Nom	o: E+P 2025					Project	Name:	Cante	rwood			
Road Nam Road Segmen	e: Holland Ro	Rd				JOD IN	umber:	11304	ł			
ridda obginor												
SITE S	SPECIFIC II	IPUT DATA		\$	ite Con	N	OISE N	10 S	EL INPL			
Average Daily	Traffic (Adt):	1,800 vehicle	s	Ĭ	110 001	unions	(11a1 a =	Autos.	: 15	, 		
Peak Hour	Percentage:	10%			Me	dium Tru	icks (2 /	Axles).	: 15			
Peak H	our Volume:	180 vehicle	s		He	avy Truc	:ks (3+ A	Axles).	: 15			
Vei	hicle Speed:	45 mph		V	ohiclo	Mix						
Near/Far Lar	ne Distance:	48 feet		-	Veh	icleType		Day	Evenir	g N	ight	Daily
Site Data						A	utos:	75.5%	6 14.0	% 1	0.5%	97.42%
Bar	rier Heiaht:	0.0 feet			M	edium Tr	ucks:	48.9%	6 2.2	% 4	8.9%	1.84%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Tr	ucks:	47.3%	6 5.4	% 4	7.3%	0.74%
Centerline Dis	st. to Barrier:	59.0 feet		N	loise So	ource Ele	evation	s (in f	feet)			
Centerline Dist.	to Observer:	59.0 feet				Autos	. 0.0	000	,			
Barrier Distance	to Observer:	0.0 feet			Mediu	n Trucks	2.3	297				
Observer Height (.	Above Pad):	5.0 feet			Heav	v Trucks	s: 8.0	006	Grade	Adjus	tment:	0.0
Pa	ad Elevation:	0.0 feet		-	_	· · · ·						
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in	teet)			
ŀ	Road Grade:	0.0%				Autos	54.	129				
	Left View:	-90.0 degre	es		Mediui	n Trucks	53.	966				
	Right view:	90.0 degre	es		neav	y mucks	6. 53.	982				
FHWA Noise Mode	el Calculation	s										
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresr	nel	Barrier	Atten	Ber	m Atten
Autos:	68.46	-9.40		-0.62		-1.20		-4.69		0.000		0.000
Medium Trucks:	79.45	-26.64		-0.60		-1.20		-4.88		0.000		0.000
Heavy Trucks:	84.25	-30.59		-0.60		-1.20		-5.35		0.000		0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	attenu	iation)							
VehicleType	Leq Peak Ho	ur Leq Day	′ I	Leq Ev	ening	Leq I	Night		Ldn		CI	VEL
Autos:	57	.2	55.2		53.9		47.9	9	5	6.3		57.0
Medium Trucks:	51	.0	47.1		39.6		48.4	ŀ	5	4.5		54.6
Heavy Trucks:	51	.9	47.8		44.4		49.1		5	5.3		55.4
Venicle Noise:	59	0.1	56.5		54.5		53.2	2	6	0.2		60.5
Centerline Distance	e to Noise C	ontour (in feet	)	70 -	04	05	10.4	r	00 -10 4			-10.4
			I day	10 di	ва	65 0	0 0		61 CI		55	aBA 24
		~	Lan:	13		2	0		64		1	20
		Ci	VEL:	14		3	U		04		1	30

	FH	WA-RD-77-10	B HIGHW	AY NC	DISE PI	REDICTIC	N MOE	DEL			
Scenar Road Nan Road Segme	io: E+P 2025 ne: Holland Ro nt: w/o Leon F	d. Rd.				Project N Job Nur	lame: C nber: 1	Canter 1304	wood		
SITE	SPECIFIC II	NPUT DATA				NC	DISE N	IODE	L INPUTS	6	
Highway Data				S	ite Con	ditions (H	lard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	1,100 vehicle	es				A	lutos:	15		
Peak Hour	Percentage:	10%			Me	dium Truc	ks (2 A	xles):	15		
Peak H	lour Volume:	110 vehicle	es		He	avy Truck	s (3+ A	xles):	15		
Ve	hicle Speed:	45 mph		V	ehicle	Mix					
Near/Far La	ne Distance:	48 feet		-	Veh	icleType	1	Day	Evening	Night	Daily
Site Data						Au	tos: 1	77.5%	14.0%	10.5%	92.00%
Ba	rrier Heiaht:	0.0 feet			M	edium Tru	cks: 4	18.0%	2.0%	50.0%	3.00%
Barrier Type (0-V	/all, 1-Berm):	0.0			I	Heavy Tru	cks: 4	48.0%	2.0%	50.0%	5.00%
Centerline Di	st. to Barrier:	59.0 feet		N	oise So	ource Ele	vations	in fe	et)		
Centerline Dist.	to Observer:	59.0 feet				Autos:	0.0	00			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.2	97			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks:	8.0	06	Grade Adj	ustment	: 0.0
P	ad Elevation:	0.0 feet		-							
Ro	ad Elevation:	0.0 feet		Li	ane Eq	uivalent L	Distanc	e (in f	'eet)		
	Road Grade:	0.0%				Autos:	54.1	29			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	53.9	66			
	Right View:	90.0 degre	es		Heav	ry Trucks:	53.9	82			
FHWA Noise Mod	el Calculation	15									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresne	e/ I	Barrier Atte	en Bei	rm Atten
Autos:	68.46	6 -11.79		-0.62		-1.20		4.69	0.0	00	0.000
Medium Trucks:	79.45	-26.65		-0.60		-1.20	-	4.88	0.0	00	0.000
Heavy Trucks:	84.25	-24.43		-0.60		-1.20	-	5.35	0.0	00	0.000
Unmitigated Nois	e Levels (with	hout Topo and	l barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	y L	.eq Eve	ening	Leq N	ight		Ldn	С	NEL
Autos:	54	4.9	53.0		51.5		45.5		54.0		54.6
Medium Trucks:	51	1.0	47.0		39.2		48.4		54.6		54.6
Heavy Trucks:	58	8.0	54.0		46.3		55.5		61.6		61.7
Vehicle Noise:	60	0.3	57.0		52.9		56.6		63.0		63.1
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 dE	BA	65 dl	BA	6	0 dBA	55	dBA
			Ldn:	20		43			93	2	201
		C	NEL:	20		44			95	2	205

Tuesday, March 06, 2018

Tuesday, March 06, 2018

	FH	WA-RD-77-1	08 HIG	HWAY N	NOISE PR	REDICTIO	N MODEI			
Scenar Road Nan Road Segme	io: E+P 2025 ne: Scott Rd. nt: w/o Haun	Rd.				Project N Job Nur	lame: Car nber: 113	terwood 04		
SITE	SPECIFIC II	NPUT DAT	A			NC	ISE MO	DEL INPUT	s	
Highway Data				4	Site Con	ditions (H	lard = 10,	Soft = 15)		
Average Daily	Traffic (Adt):	18,400 vehi	cles				Auto	os: 15		
Peak Hour	Percentage:	10%			Me	dium Truc	ks (2 Axle	s): 15		
Peak F	lour Volume:	1,840 vehi	cles		He	avy Truck	s (3+ Axle	s): 15		
Ve	hicle Speed:	50 mph			Vehicle I	Mix				-
Near/Far La	ne Distance:	78 feet			Veh	icleType	Daj	/ Evening	Night	Daily
Site Data						Au	tos: 75.	5% 14.0%	10.5%	97.42%
Ba	rrier Height:	0.0 fee	t		Me	edium Tru	cks: 48.	9% 2.2%	48.9%	1.84%
Barrier Type (0-V	/all, 1-Berm):	0.0			ŀ	Heavy Tru	cks: 47.	3% 5.4%	47.3%	0.74%
Centerline Di	st. to Barrier:	76.0 fee	t	7	Noise So	ource Elev	vations (ii	1 feet)		
Centerline Dist.	to Observer:	76.0 fee	t			Autos:	0.000	-		-
Barrier Distance	to Observer:	0.0 fee	t		Mediur	m Trucks:	2.297			
Observer Height	(Above Pad):	5.0 fee	t		Heav	v Trucks:	8.006	Grade Ad	iustmen	t: 0.0
P	ad Elevation:	0.0 fee	t	-						
Ro	ad Elevation:	0.0 fee	t	4	Lane Eq	uivalent L	Distance (	in feet)		
	Road Grade:	0.0%				Autos:	65.422			
	Left View:	-90.0 deg	rees		Mediui	m Trucks:	65.286			
	Right View:	90.0 deg	rees		Heav	y Trucks:	65.300			
FHWA Noise Mod	el Calculation	ns								
VehicleType	REMEL	Traffic Flor	N Di	stance	Finite	Road	Fresnel	Barrier Att	en Be	rm Atten
Autos:	70.20	0.0.	24	-1.8	5	-1.20	-4.7	73 0.0	000	0.000
Medium Trucks:	81.00	) -17.	00	-1.84	4	-1.20	-4.8	88 0.0	000	0.000
Heavy Trucks:	85.38	-20.	95	-1.84	4	-1.20	-5.2	25 0.0	000	0.000
Unmitigated Nois	e Levels (with	hout Topo a	nd barr	ier atten	nuation)					
VehicleType	Leq Peak Ho	our Leq E	Day	Leq E	vening	Leq Ni	ight	Ldn	С	NEL
Autos:	6	7.4	65.4		64.1		58.1	66.5	5	67.1
Medium Trucks:	6	1.0	57.1		49.6		58.3	64.5	5	64.5
Heavy Trucks:	6	1.4	57.3		53.9		58.6	64.8	3	64.9
Vehicle Noise:	6	9.1	66.5		64.6		63.1	70.1		70.4
Centerline Distan	ce to Noise C	Contour (in fe	eet)							
				70 0	dBA	65 dE	BA .	60 dBA	55	dBA
			Ldn:	7	1	167		359	3	173
			CNEL:	8	1	175		377	8	312

	FHV	VA-RD-77-108	HIGH	WAY NO	DISE PREDIC	TION MC	DDEL			
Scenario:	E+P 2025				Proje	ct Name:	Cante	wood		
Road Name:	Scott Rd.				Job	Number:	11304			
Road Segment:	e/o Haun R	d.								
SITE SF	PECIFIC IN	PUT DATA				NOISE	MODE		s	
Highway Data				S	ite Condition	s (Hard :	= 10, Se	oft = 15)		
Average Daily Tr	affic (Adt): 3	0,500 vehicle	s				Autos:	15		
Peak Hour Pe	ercentage:	10%			Medium	Frucks (2	Axles):	15		
Peak Hou	ır Volume:	3,050 vehicle	s		Heavy Ti	ucks (3+	Axles):	15		
Vehic	cle Speed:	50 mph		V	ehicle Mix					
Near/Far Lane	Distance:	78 feet		-	VehicleTy	pe	Day	Evening	Night	Daily
Site Data						Autos:	75.5%	14.0%	10.5%	97.42%
Barrie	or Hoight	0.0 feet			Medium	Trucks:	48.9%	2.2%	48.9%	1.84%
Barrier Type (0-Wall	. 1-Berm):	0.0			Heavy	Trucks:	47.3%	5.4%	47.3%	0.74%
Centerline Dist.	to Barrier:	76.0 feet								
Centerline Dist. to	Observer:	76.0 feet		N	oise Source	Elevatio	ns (in f	eet)		
Barrier Distance to	Observer:	0.0 feet			AU	tos: 0	000			
Observer Height (Ab	ove Pad):	5.0 feet			Medium Truc	:KS: 2		Our de Ad		
Pad	Elevation:	0.0 feet			Heavy Truc	:KS: 8	.006	Grade Adj	usunen.	0.0
Road	Elevation:	0.0 feet		Li	ane Equivale	nt Distar	nce (in	feet)		
Ro	ad Grade:	0.0%			Au	tos: 65	i.422			
	Left View:	-90.0 degre	es		Medium True	cks: 65	5.286			
R	Right View:	90.0 degre	es		Heavy True	cks: 65	5.300			
FHWA Noise Model	Calculation	5								
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite Road	Fres	snel	Barrier Att	en Ber	m Atten
Autos:	70.20	2.43		-1.85	-1.2	)	-4.73	0.0	000	0.000
Medium Trucks:	81.00	-14.80		-1.84	-1.2	C	-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-18.76		-1.84	-1.2	C	-5.25	0.0	000	0.000
Unmitigated Noise L	evels (with	out Topo and	barrie	er attenu	ation)					
VehicleType Le	eq Peak Hou	r Leq Day	/	Leq Eve	ening Le	q Night		Ldn	CI	VEL
Autos:	69.	.6	67.6		66.3	60.	.2	68.7	7	69.3
Medium Trucks:	63.	.2	59.3		51.8	60.	.5	66.7	7	66.7
Heavy Trucks:	63.	.6	59.5		56.1	60.	.8	67.0	)	67.1
Vehicle Noise:	71.	.3	68.7		66.8	65.	.3	72.3	3	72.6
Centerline Distance	to Noise Co	ontour (in feet	)							
				70 dE	3A 6	5 dBA	6	60 dBA	55	dBA
			Ldn:	108	\$	233		503	1,	083

	FH	WA-RD-77-108	BHIGH	WAY NO	DISE PI	REDICTIO	N MODEL		
Scenar	io: E+P 2025					Project N	ame: Cante	erwood	
Road Name	e: Scott Rd.	e Rd				JOD INUN	nber: 11304	+	
SITE Highway Data	SPECIFIC II	NPUT DATA			ito Con	NO ditions /h	ISE MOD	EL INPUTS	j
Ingilway Dala	T (2 (A (4)			3	ne con	unions (n	aru = 10, c	011 = 13)	
Average Daily	Traffic (Adt):	28,600 vehicle	S		Mo	dium Truc	Autos	15	
Peak Hour	Percentage. Iour Volumo:	2 960 vobiele			Ho	awy Truck	no (2 MAICO) n (2± Avlac	· 15	
reak n	biolo Spood	2,000 Verlicie	:5		110	avy much	S (37 MAICS)	. 15	
Near/Far I a	ne Distance	55 mpn		v	ehicle l	Mix			
INCAL/I AI LA	ne Distance.	76 leet			Veh	icleType	Day	Evening	Night Daily
Site Data						Au	tos: 75.5	% 14.0%	10.5% 97.42
Bai	rrier Height:	0.0 feet			M	edium Truc	cks: 48.9	% 2.2%	48.9% 1.84
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	Heavy Truc	cks: 47.39	% 5.4%	47.3% 0.74
Centerline Dis	st. to Barrier:	76.0 feet		N	oise So	ource Elev	ations (in	feet)	
Centerline Dist.	to Observer:	76.0 feet				Autos:	0.000	,	
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.297		
Observer Height (	Above Pad):	5.0 feet			Heav	v Trucks:	8.006	Grade Adj	ustment: 0.0
Pa	ad Elevation:	0.0 feet		_		,			
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalent D	istance (in	feet)	
	Road Grade:	0.0%				Autos:	65.422		
	Left View:	-90.0 degre	es		Mediu	m Trucks:	65.286		
	Right View:	90.0 degre	es		Heav	y Trucks:	65.300		
FHWA Noise Mode	el Calculation	15							
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresnel	Barrier Atte	en Berm Atte
Autos:	71.78	1.74		-1.85		-1.20	-4.73	0.0	0.0 0.0
Medium Trucks:	82.40	-15.50		-1.84		-1.20	-4.88	0.0	0.0
Heavy Trucks:	86.40	-19.45		-1.84		-1.20	-5.25	0.0	0.0 0.0
Unmitigated Noise	e Levels (with	nout Topo and	barrie	er attenu	ation)				
VehicleType	Leq Peak Ho	ur Leq Da	/	Leq Ev	ening	Leq Ni	ght	Ldn	CNEL
Autos:	70	0.5	68.5		67.1		61.1	69.6	70
Medium Trucks:	63	3.9	60.0		52.5		61.2	67.4	67
Heavy Trucks:	63	3.9	59.9		56.5		61.1	67.3	67
Vehicle Noise:	72	2.0	69.5		67.6		65.9	73.0	73
Centerline Distant	ce to Noise C	ontour (in fee	t)	70 .		05.5		60 -/D4	FF -18 1
			Lata	70 di	5A	65 dE	54	OU dBA	55 aBA
		~	Lan:	120	)	259		558	1,202
		C	IVEL:	126	0	272		180	1,264

	FH	WA-RD-77-108	HIGH	WAY N	OISE P	REDICTI		DEL			
Scenari	io: E+P 2025					Project	Name: (	Cante	rwood		
Road Nam	e: Scott Rd.					Job N	umber:	11304	L.		
Road Segmen	nt: w/o Briggs	Rd.									
SITE	SPECIFIC II	NPUT DATA				N	IOISE N	NODE	L INPUT	s	
Highway Data				S	ite Cor	nditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	25,300 vehicle	s				,	Autos	: 15		
Peak Hour	Percentage:	10%			Me	dium Tru	ıcks (2 A	(xles)	: 15		
Peak H	lour Volume:	2,530 vehicle	s		He	avy Truc	cks (3+ A	(xles)	: 15		
Ve	hicle Speed:	55 mph		v	ehicle	Mix					
Near/Far La	ne Distance:	78 feet		F	Veh	icleTvpe		Dav	Evenina	Niaht	Dailv
Site Data						A	Autos:	75.5%	6 14.0%	10.59	% 97.42%
Bai	rrier Height	0.0 feet			М	edium Tr	ucks:	48.9%	6 2.2%	48.99	% 1.84%
Barrier Type (0-W	all, 1-Berm):	0.0			1	Heavy Tr	ucks:	47.3%	6 5.4%	47.39	% 0.74%
Centerline Dis	st. to Barrier:	76.0 feet		•	loise S	ource El	evation	s (in f	eet)		
Centerline Dist.	to Observer:	76.0 feet		~	0130 0	Autos	evaluon.	000	001/		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Trucks	. 21	97			
Observer Height (	Above Pad):	5.0 feet			Heav	n Trucks	s: 80	006	Grade Adi	ustmei	nt: 0.0
Pa	ad Elevation:	0.0 feet			moun	.,	. 0.0				
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distant	ce (in	feet)		
1	Road Grade:	0.0%				Autos	s: 65.4	422			
	Left View:	-90.0 degre	es		Mediu	m Trucks	s: 65.2	286			
	Right View:	90.0 degre	es		Heav	/y Trucks	s: 65.3	300			
FHWA Noise Mode	el Calculation	15									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresn	el	Barrier Atte	en B	erm Atten
Autos:	71.78	1.21		-1.85		-1.20		-4.73	0.0	00	0.000
Medium Trucks:	82.40	-16.03		-1.84		-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	86.40	-19.99		-1.84		-1.20		-5.25	0.0	00	0.000
Unmitigated Noise	e Levels (with	hout Topo and	barrie	r attenu	lation)					-	
VehicleType	Leq Peak Ho	ur Leq Da	/	Leq Ev	ening	Leq	Night		Ldn		CNEL
Autos:	69	9.9	67.9		66.6		60.6		69.0		69.6
Medium Trucks:	63	3.3	59.4		51.9		60.7		66.9	1	66.9
Heavy Trucks:	63	3.4	59.3		55.9		60.6		66.8		66.9
Vehicle Noise:	7	1.5	69.0		67.1		65.4		72.5		72.8
Centerline Distance	ce to Noise C	ontour (in fee	t)								
				70 d	BA	65 0	dBA		60 dBA	5	i5 dBA
			Ldn:	11	1	23	39		514		1,107
		С	NEL:	110	6	25	51		541		1,165

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	FH	WA-RD-77-108	HIGHW	AY NO	OISE P	REDICTI	ON MO	DEL			
Scenar Road Nan Road Segme	io: E+P 2025 ne: Scott Rd. nt: w/o Leon F	Rd.				Project I Job Ni	Name: Imber:	Cante 11304	rwood I		
SITE	SPECIFIC IN	VPUT DATA				N	OISE N	NODE	EL INPUTS	5	
Highway Data				S	lite Cor	nditions (	Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	21,900 vehicle	s					Autos	: 15		
Peak Hour	Percentage:	10%			Me	edium Tru	cks (2 A	(xles	: 15		
Peak F	lour Volume:	2,190 vehicle	s		He	eavy Truc	ks (3+ A	(xles	: 15		
Ve	hicle Speed:	55 mph		V	ehicle	Mix					
Near/Far La	ne Distance:	78 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	75.5%	6 14.0%	10.5%	97.42%
Ba	rrier Height:	0.0 feet			М	edium Tri	ucks:	48.9%	6 2.2%	48.9%	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0				Heavy Tr	ucks:	47.3%	6 5.4%	47.3%	0.74%
Centerline Di	st. to Barrier:	76.0 feet		N	loise S	ource Ele	evation	s (in i	feet)		
Centerline Dist.	to Observer:	76.0 feet				Autos	: 0.0	000	1		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	: 2.2	297			
Observer Height	(Above Pad):	5.0 feet			Hear	v Trucks	: 8.0	006	Grade Adji	ustment	: 0.0
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%				Autos	: 65.4	422			
	Left View:	-90.0 degre	es		Mediu	m Trucks	: 65.	286			
	Right View:	90.0 degre	es		Hear	vy Trucks	: 65.	300			
FHWA Noise Mod	el Calculation	15									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	nel	Barrier Atte	en Bei	rm Atten
Autos:	71.78	0.58		-1.85		-1.20		-4.73	0.0	00	0.000
Medium Trucks:	82.40	-16.66		-1.84		-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	86.40	-20.61		-1.84		-1.20		-5.25	0.0	00	0.000
Unmitigated Nois	e Levels (with	nout Topo and	barrier	attenu	uation)						
VehicleType	Leq Peak Ho	ur Leq Daj	V L	eq Ev	ening	Leq I	Vight		Ldn	С	NEL
Autos:	69	9.3	67.3		66.0		60.0	)	68.4		69.0
Medium Trucks:	62	2.7	58.8		51.3		60.1		66.2		66.3
Heavy Trucks:	62	2.7	58.7		55.3		59.9	)	66.1		66.2
Vehicle Noise:	70	).9	68.4		66.5		64.8	3	71.8		72.2
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 di	BA	65 c	IBA		60 dBA	55	dBA
			Ldn:	101	1	21	7		467	1,	006
		С	NEL:	106	6	22	8		491	1,	058

	FHW	A-KD-77-106 H	GIIW			EDICTIO		JEL			
Scenario:	E+P 2025					Project N	ame: (	Canter	wood		
Road Name:	Scott Rd.					Job Nur	nber: 1	1304			
Road Segment:	e/o Leon Ro	l.									
SITE SI	PECIFIC IN	PUT DATA				NO	ISE N	10DE	L INPUT	s	
Highway Data				Si	ite Cond	ditions (H	lard =	10, So	oft = 15)		
Average Daily Tr	affic (Adt): 1	1,000 vehicles						Autos:	15		
Peak Hour Pe	ercentage:	10%			Med	lium Truc	ks (2 A	xles):	15		
Peak Hou	ur Volume:	1,100 vehicles			Hea	avy Truck	s (3+ A	xles):	15		
Vehi	cle Speed:	55 mph		Ve	ehicle N	lix					
Near/Far Lane	e Distance:	78 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						Au	tos:	77.5%	14.0%	10.5%	92.00%
Barri	er Height:	0.0 feet			Me	dium Truc	cks:	48.0%	2.0%	50.0%	3.00%
Barrier Type (0-Wal	l, 1-Berm):	0.0			Н	leavy Truc	cks:	48.0%	2.0%	50.0%	5.00%
Centerline Dist.	to Barrier:	76.0 feet		M	nise So	urce Flev	ation	s (in f	oet)		
Centerline Dist. to	Observer:	76.0 feet			0130 00	Autos:	0.0	000			
Barrier Distance to	Observer:	0.0 feet			Mediun	1 Trucks:	2.2	97			
Observer Height (Al	bove Pad):	5.0 feet			Heav	/ Trucks:	8.0	006	Grade Ad	iustment	: 0.0
Pad	Elevation:	0.0 feet			,						
Road	Elevation:	0.0 feet		La	ane Equ	ivalent D	Distand	e (in :	feet)		
Ro	oad Grade:	0.0%				Autos:	65.4	122			
	Left View:	-90.0 degrees			Mediun	1 Irucks:	65.2	286			
F	Right View:	90.0 degrees			Heavy	/ Trucks:	65.3	300			
FHWA Noise Model	Calculations	5									
VehicleType	REMEL	Traffic Flow	Distan	се	Finite I	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	71.78	-2.66		-1.85		-1.20		-4.73	0.0	000	0.00
Medium Trucks:	82.40	-17.52		-1.84		-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	86.40	-15.31		-1.84		-1.20		-5.25	0.0	000	0.00
Unmitigated Noise I	Levels (witho	out Topo and ba	nrrier a	ttenu	ation)						
VehicleType L	eq Peak Hou	r Leq Day	Le	eq Eve	ening	Leq Ni	ight		Ldn	C	NEL
Autos:	66.	1 64	.2		62.8		56.7		65.2	2	65.8
Medium Trucks:	61.	8 57	.9		50.1		59.3		65.4	1	65.
Heavy Trucks:	68.	0 64	.1		56.3		65.5		71.3	7	71.
Vehicle Noise:	70.	8 67	.6		63.8		66.9		73.3	3	73.4
Centerline Distance	to Noise Co	ntour (in feet)									
				70 dE	ЗA	65 dE	ЗA	6	i0 dBA	55	dBA
		La	n:	126		272			586	1,	263

	FH	WA-RD-77-10	B HIGH	WAY N	DISE PI	REDICTIO	N MODEL			
Scenari Road Nam Road Segmen	o: EA 2021 e: Haun Rd. nt: n/o Scott F	Rd.				Project N Job Nur	ame: Can nber: 113	terwood )4		
SITE S	SPECIFIC II	NPUT DATA				NC	ISE MOI	DEL INPUT	s	
Highway Data				S	ite Con	ditions (H	lard = 10,	Soft = 15)		
Average Daily Peak Hour Peak H	Traffic (Adt): Percentage: our Volume:	22,400 vehicle 10% 2,240 vehicle	es		Me He	dium Truc avy Truck	Auto ks (2 Axle s (3+ Axle	os: 15 s): 15 s): 15		
Vel	nicle Speed:	50 mph		v	ehicle	Mix				
Near/Far Lar	ne Distance:	48 feet		_	Veh	icleType	Day	Evening	Night	Daily
Site Data						Au	tos: 75.	5% 14.0%	10.5%	97.42%
Bar	rier Heiaht:	0.0 feet			M	edium Tru	cks: 48.9	9% 2.2%	48.9%	1.84%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	Heavy Tru	cks: 47.3	3% 5.4%	47.3%	0.74%
Centerline Dis	t. to Barrier:	59.0 feet		^	loise So	ource Elev	ations (in	i feet)		
Centerline Dist. t	o Observer:	59.0 feet		_		Autos:	0.000			
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Trucks	2.297			
Observer Height (	Above Pad):	5.0 feet			Heav	v Trucks:	8.006	Grade Ad	justment:	0.0
Pa	d Elevation:	0.0 feet		_		,				
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalent L	Distance (	in feet)		
F	Road Grade:	0.0%				Autos:	54.129			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	53.966			
	Right View:	90.0 degre	es		Heav	ly Trucks:	53.982			
FHWA Noise Mode	el Calculation	1S								
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresnel	Barrier Att	en Berr	n Atten
Autos:	70.20	1.09		-0.62		-1.20	-4.6	9 0.0	000	0.000
Medium Trucks:	81.00	-16.14		-0.60		-1.20	-4.8	8 0.0	000	0.000
Heavy Trucks:	85.38	-20.10		-0.60		-1.20	-5.3	15 0.0	000	0.000
Unmitigated Noise	Levels (with	nout Topo and	barrie	r attenı	ation)					
VehicleType	Leq Peak Ho	ur Leq Da	y	Leq Ev	ening	Leq Ni	ight	Ldn	CN	IEL
Autos:	69	9.5	67.5		66.2		60.1	68.6	6	69.2
Medium Trucks:	63	3.1	59.2		51.7		60.4	66.6	6	66.6
Heavy Trucks:	63	3.5	59.4		56.0		60.7	66.9	9	67.0
Vehicle Noise:	71	1.2	68.6		66.7		65.2	72.2	2	72.5
Centerline Distance	e to Noise C	ontour (in fee	t)						-	
			L	70 d	ВA	65 dE	BA	60 dBA	55 (	dBA
		_	Ldn:	83		178		384	82	27
		C	NEL:	87		187		403	86	59

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	FHV	VA-RD-77-108	HIGHV	VAY NO	DISE PF	REDICT	ION MO	DEL			
Scenar	io: EA 2021					Project	Name: (	Canter	wood		
Road Nam	e: Zeiders Rd.					Job N	lumber: `	11304			
Road Segme	nt: s/o Scott R	d.									
SITE	SPECIFIC IN	IPUT DATA				Ν	IOISE N	/IODE	L INPUTS	S	
Highway Data				S	ite Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	7,200 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2 A	(xles):	15		
Peak H	lour Volume:	720 vehicle	S		He	avy Tru	cks (3+ A	(xles):	15		
Ve	hicle Speed:	50 mph		v	ehicle l	Mix					
Near/Far La	ne Distance:	48 feet			Veh	icleType	,	Day	Evening	Night	Daily
Site Data							Autos:	75.5%	14.0%	10.5%	97.42%
Ba	rrier Heiaht:	0.0 feet			Me	edium T	rucks:	48.9%	2.2%	48.9%	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy T	rucks:	47.3%	5.4%	47.3%	0.74%
Centerline Di	st. to Barrier:	59.0 feet		N	loise So	ource E	levation	s (in fe	et)		
Centerline Dist.	to Observer:	59.0 feet				Auto	s: 0.0	000			-
Barrier Distance	to Observer:	0.0 feet			Mediu	n Truck	s: 2.2	297			
Observer Height (	Above Pad):	5.0 feet			Heav	v Truck	s: 8.0	006	Grade Adj	iustmen	t: 0.0
Pa	ad Elevation:	0.0 feet		-							
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distand	ce (in i	leet)		
	Road Grade:	0.0%				Auto	s: 54.	129			
	Left View:	-90.0 degre	es		Mediui	m Iruck	s: 53.9	966			
	Right View:	90.0 degre	es		Heav	у тиск	s: 53.9	982			
FHWA Noise Mod	el Calculation	s									-
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	en Be	rm Atten
Autos:	70.20	-3.84		-0.62		-1.20		-4.69	0.0	000	0.000
Medium Trucks:	81.00	-21.07		-0.60		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-25.03		-0.60		-1.20		-5.35	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	attenu	ation)						-
VehicleType	Leq Peak Hou	r Leq Day	/ L	Leq Ev	ening	Leq	Night		Ldn	C	NEL
Autos:	64	.5	62.5		61.2		55.2		63.6	6	64.3
Medium Trucks:	58	.1	54.2		46.7		55.5		61.6	5	61.7
Heavy Trucks:	58	.5	54.5		51.1		55.8		62.0	)	62.0
Vehicle Noise:	66	.2	63.7		61.8		60.3		67.3	3	67.6
Centerline Distant	ce to Noise Co	ontour (in feet	)								
				70 d	BA	65	dBA	6	0 dBA	55	i dBA
			Ldn:	39		8	34		180	:	388
	CNEL:				41 88 189 40				408		

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	FH	WA-RD-77-108	HIGHW	AY NO	DISE PI	REDICTIO		DEL			
Scenar Road Nan Road Segme	rio: EA 2021 ne: Antelope F nt: s/o Scott F	Rd. Rd.				Project N Job Nu	Vame: C mber: 1	Canter 1304	wood		
SITE	SPECIFIC II	VPUT DATA				N	DISE M	IODE	L INPUTS	5	
Highway Data				S	ite Cor	ditions (	Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	18,300 vehicle	s				A	utos:	15		
Peak Hour	Percentage:	10%			Me	dium Truc	cks (2 A	xles):	15		
Peak H	our Volume:	1,830 vehicle	s		He	avy Truck	ks (3+ A	xles):	15		
Ve	hicle Speed:	50 mph		V	ohiclo	Mix					
Near/Far La	ne Distance:	48 feet		-	Voh	icleType		)av	Evening	Niaht	Daily
Site Data					ven	A	utos: T	75.5%	14.0%	10.5%	97.42%
Ba	rrier Height	0.0 feet			М	edium Tru	icks: 4	18.9%	2.2%	48.9%	1.84%
Barrier Type (0-W	Vall. 1-Berm):	0.0			1	Heavy Tru	icks: 4	17.3%	5.4%	47.3%	0.74%
Centerline Di	ist. to Barrier:	59.0 feet			laisa Si	ource Ele	vations	(in fe	of)		
Centerline Dist.	to Observer:	59.0 feet		~	0/30 0	Autos	. 0.0	00			
Barrier Distance	to Observer:	0.0 feet			Modiu	m Trucke	. 22	07			
Observer Height	(Above Pad):	5.0 feet			Hoo	n Trucks	. 2.2	06	Grade Adii	istment	· 0.0
P	ad Elevation:	0.0 feet			ncar	y muons.	0.0	00	enddo maja	Journorm	. 0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distanc	e (in i	feet)		
	Road Grade:	0.0%				Autos:	54.1	29			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	53.9	66			
	Right View:	90.0 degre	es		Heav	ry Trucks:	53.9	82			
FHWA Noise Mod	lel Calculatior	15									
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresne	el	Barrier Atte	en Ber	rm Atten
Autos:	70.20	0.22		-0.62		-1.20	-	4.69	0.0	00	0.000
Medium Trucks:	81.00	-17.02		-0.60		-1.20	-	4.88	0.0	00	0.000
Heavy Trucks:	85.38	-20.98		-0.60		-1.20	-	5.35	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	ttenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Daj	/ Le	q Ev	ening	Leq N	light		Ldn	C	NEL
Autos:	68	3.6	66.6		65.3		59.3		67.7		68.3
Medium Trucks:	62	2.2	58.3		50.8		59.5		65.7		65.7
Heavy Trucks:	62	2.6	58.6		55.2		59.8		66.0		66.1
Vehicle Noise:	70	).3	67.7		65.8		64.3		71.3		71.6
Centerline Distan	ce to Noise C	ontour (in fee	)								
				70 dl	BA	65 d	BA	6	0 dBA	55	dBA
			Ldn:	72		15	6		336	7	23
		С	NEL:	76		16	4		352	7	759

	FHV	/A-RD-77-108	HIGHW	AY N	OISE PI	REDICTIO		DEL			
Scenari	o: EA 2021					Project N	Vame: (	Canter	wood		
Road Nam	e: Menifee Rd					Job Nu	mber: 1	1304			
Road Segmer	nt: n/o Holland	Rd.									
SITE	SPECIFIC IN	PUT DATA				N	DISE N	IODE	L INPUT	S	
Highway Data				S	Site Con	ditions (	Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 1	6,700 vehicle	5				A	Autos:	15		
Peak Hour	Percentage:	10%			Me	dium True	cks (2 A	xles):	15		
Peak H	our Volume:	1,670 vehicle	S		He	avy Truck	ks (3+ A	xles):	15		
Vei	hicle Speed:	45 mph		v	ehicle	Mix					
Near/Far La	ne Distance:	54 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	75.5%	14.0%	10.5%	97.42%
Bar	rier Heiaht:	0.0 feet			M	edium Tru	icks:	48.9%	2.2%	48.9%	1.84%
Barrier Type (0-W	all, 1-Berm):	0.0			1	Heavy Tru	icks:	47.3%	5.4%	47.3%	0.74%
Centerline Dis	st. to Barrier:	64.0 feet			loise Si	ource Ele	vations	in fa	of)		
Centerline Dist.	to Observer:	64.0 feet		-		Autos	0.0	00	,01)		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	22	97			
Observer Height (	Above Pad):			Heav	v Trucks	8.0	06	Grade Ad	iustment.	0.0	
Pa	d Elevation:	0.0 feet									
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalent	Distanc	e (in i	feet)		
F	Road Grade:	0.0%				Autos:	58.2	241			
	Left View:	-90.0 degree	es		Mediu	m Trucks:	58.0	89			
	Right View:	90.0 degree	es		Heav	y Trucks:	58.1	04			
FHWA Noise Mode	el Calculations	5									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	68.46	0.28		-1.10		-1.20		4.70	0.0	000	0.000
Medium Trucks:	79.45	-16.96		-1.08		-1.20		4.88	0.0	000	0.000
Heavy Trucks:	84.25	-20.92		-1.08		-1.20		-5.31	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	attenı	uation)						
VehicleType	Leq Peak Hou	r Leq Day	L	.eq Ev	ening	Leq N	light		Ldn	CI	VEL
Autos:	66.	4	64.4		63.1		57.1		65.5	5	66.2
Medium Trucks:	60.	2	56.3		48.8		57.6		63.7		63.8
Heavy Trucks:	61.	1	57.0		53.6		58.3		64.5	)	64.6
Vehicle Noise:	68.	3	65.7		63.7		62.4		69.4	ł	69.1
Centerline Distand	e to Noise Co	ntour (in feet	)	70.0							10.4
				70 d	BA	65 d	BA	6	U dBA	55	aBA
			Ldh:	58	5	12	Ø		2/1	5	84
		0	151	~ 4		4.0	0		004	~	40

	FHW	A-RD-77-108 H	IIGHWA	' NOISE	PREDICT		DEL			
Scenari Road Nam Road Segmer	o: EA 2021 e: Menifee Rd. nt: s/o Holland I	Rd.			Projec Job I	t Name: Number:	Cantei 11304	rwood		
SITE S	SPECIFIC IN	PUT DATA			1	NOISE	MODE		s	
Highway Data				Site C	Conditions	; (Hard =	: 10, So	oft = 15)		
Average Daily Peak Hour Peak He	Traffic (Adt): 1 Percentage: our Volume:	7,400 vehicles 10% 1,740 vehicles			Medium Ti Heavy Tru	rucks (2 ) icks (3+ )	Autos: Axles): Axles):	15 15 15		
Vel	hicle Speed:	45 mph								
Near/Far Lar	ne Distance:	54 feet		venic	l <b>e Mix</b> /ehicleTvp	e	Dav	Evenina	Niaht	Dailv
Site Data						Autos:	75.5%	5 14.0%	10.5%	6 97.42%
Bar	rier Height:	0.0 feet			Medium 1	rucks:	48.9%	2.2%	48.9%	6 1.84%
Barrier Type (0-W	all, 1-Berm):	0.0			Heavy T	rucks:	47.3%	5.4%	47.3%	6 0.74%
Centerline Dis	t. to Barrier:	64.0 feet		Noise	Source E	levation	is (in f	eet)		
Centerline Dist. t	to Observer:	64.0 feet			Auto	os: 0.	000	1		
Barrier Distance t	to Observer:	0.0 feet		Me	dium Truck	ks: 2.	297			
Observer Height (	Above Pad):	5.0 feet		Н	eavy Truck	(s [.] 8	006	Grade Ad	iustmer	nt: 0.0
Pa	d Elevation:	0.0 feet								
Roa	d Elevation:	0.0 feet		Lane	Equivaler	nt Distan	ce (in	feet)		
F	Road Grade:	0.0%			Auto	os: 58.	.241			
	Left View:	-90.0 degrees		Me	dium Trucl	ks: 58.	.089			
	Right View:	90.0 degrees		Н	eavy Truck	ks: 58.	.104			
FHWA Noise Mode	el Calculations									
VehicleType	REMEL	Traffic Flow	Distance	e Fir	nite Road	Fresi	nel	Barrier Att	en Be	erm Atten
Autos:	68.46	0.45	-1	.10	-1.20		-4.70	0.0	000	0.000
Medium Trucks:	79.45	-16.78	-1	.08	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-20.74	-1	.08	-1.20		-5.31	0.0	000	0.000
Unmitigated Noise	e Levels (witho	ut Topo and b	arrier att	enuatio	n)					
VehicleType	Leq Peak Hour	· Leq Day	Leq	Evenin	g Leq	Night		Ldn	(	ONEL
Autos:	66.6	6 64	1.6	6	3.3	57.3	3	65.7	7	66.3
Medium Trucks:	60.4	4 50	6.5	4	9.0	57.	7	63.9	9	63.9
Heavy Trucks:	61.2	2 57	7.2	5	3.8	58.4	4	64.6	6	64.
Vehicle Noise:	68.	5 6	5.9	6	3.9	62.0	6	69.6	6	69.9
Centerline Distance	e to Noise Co	ntour (in feet)								
			7	0 dBA	65	dBA	6	60 dBA	5	5 dBA
		L	dn:	60	1	29		279		600
		CNI	L:	63	1	36		292		629

	FH'	WA-RD-77-108	HIGHW	AY N	OISE PF	REDICT	ION MO	DEL				
Scenar	io: EA 2021					Project	Name:	Cante	rwood			
Road Narr	e: Leon Rd.					Job N	lumber:	11304				
Road Segme	nt: s/o Craig A	Av.										
SITE	SPECIFIC I	NPUT DATA				P	IOISE I	NODE	L INPU	гs		
Highway Data				S	Site Con	ditions	(Hard =	10, S	oft = 15)		_	
Average Daily	Traffic (Adt):	3,000 vehicle	s					Autos:	15			
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2 )	Axles):	15			
Peak H	lour Volume:	300 vehicle	s		Hea	avy Tru	cks (3+ )	Axles):	15			
Ve	hicle Speed:	35 mph		L	/ehicle I	Nix						
Near/Far La	ne Distance:	48 feet		F	Vehi	cleTvpe		Dav	Evenina	Nig	iht	Dailv
Site Data							Autos:	77.5%	5 14.0%	10	.5%	92.00%
Ba	rrior Hoight	0.0 feet			Me	edium T	rucks:	48.0%	2.0%	50	.0%	3.00%
Barrier Type (0-W	/all. 1-Berm):	0.0			H	leavy T	rucks:	48.0%	5 2.0%	50	.0%	5.00%
Centerline Di	st. to Barrier:	59.0 feet			Voico Sa	urco E	lovation	e (in f	oot)			
Centerline Dist.	to Observer:	59.0 feet		-	voise 30	Auto	evalion	S (III 1	eel)			
Barrier Distance	to Observer:	0.0 feet			Madium	AUIO	s. 0.	207				
Observer Height	(Above Pad):	5.0 feet			Hoov	II TIUCK	S. 2.	231	Grada A	diusta	nont [.]	0.0
P	ad Elevation:	0.0 feet			neav	у писк	s. o.	006	Grade A	ujusui	ioni.	0.0
Ro	ad Elevation:	0.0 feet		L	ane Equ	uivalen	t Distan	ce (in	feet)			
	Road Grade:	0.0%				Auto	s: 54.	129				
	Left View:	-90.0 degree	es		Mediur	n Truck	s: 53.	966				
	Right View:	90.0 degree	es		Heav	y Truck	s: 53.	982				
FHWA Noise Mod	el Calculatior	ıs										
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresr	nel	Barrier A	tten	Bern	n Atten
Autos:	64.30	-6.34		-0.62	2	-1.20		-4.69	0	.000		0.000
Medium Trucks:	75.75	-21.20		-0.60	)	-1.20		-4.88	0	.000		0.000
Heavy Trucks:	81.57	-18.99		-0.60	)	-1.20		-5.35	0	.000		0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	atten	uation)							
VehicleType	Leq Peak Ho	ur Leq Day	' L	eq Ev	, ening	Leq	Night		Ldn		CN	EL
Autos:	56	5.1	54.2		52.8		46.8	3	55	.3		55.9
Medium Trucks:	Soenario: EA 2021 Road Name: Leon Rd. Road Segment: slo Craig Av. SITE SPECIFIC INPUT I way Data Average Daily Traffic (Adt): 3,000 Peak Hour Percentage: 100 Peak Hour Potreantage: 100 Peak Hour Potreantage: 100 Peak Hour Potentage: 100 Read Data Barrier Height: 0,00 rier Type (0-Wall, 1-Berm): 0,00 Centerline Dist. to Barrier: 59.0 enterline Dist. to Boserver: 50.0 Road Elevation: 0,00 Road Elevation: 0,00 Road Elevation: 0,00 Road Elevation: 0,00 Road Elevation: 0,00 Road Elevation: 0,00 Road Grade: 0,00 Left View: 90,00 Right View: 90,00 Autos: 64.30 edium Trucks: 81.57 Hitgated Noise Levels (without To shicleType Leq Peak Hour Autos: 52.7 teavy Trucks: 60.8 Vehicle Noise: 62.5 terline Distance to Noise Contour		48.8		41.0		50.2	2	56	.3		56.4
Heavy Trucks:	60	0.8	56.8		49.0		58.2	2	64	.4		64.4
Vehicle Noise:	62	2.5	59.1		54.5		59.1	1	65	.5		65.5
Centerline Distan	ce to Noise C	ontour (in feet	)									
				70 d	IBA	65	dBA	(	60 dBA		55 c	1BA
			Ldn:	29	Э	6	63		136		29	4
		CI	VEI ·	30	2	f	34		138		29	18

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	FH	WA-RD-77-108	HIGHW	AY NO	DISE PI	REDICTIC		DEL			
Scenar Road Narr Road Segme	io: EA 2021 ne: Leon Rd. nt: s/o Garbar	ii Rd.				Project N Job Nu	lame: ( mber: 1	Cantei 11304	wood		
SITE	SPECIFIC IN	NPUT DATA				NC	DISE N	IODE	L INPUTS	5	
Highway Data				S	ite Con	ditions (l	Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	3,200 vehicle	s				1	Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Truc	ks (2 A	xles):	15		
Peak H	lour Volume:	320 vehicle	s		He	avy Truck	is (3+ A	xles):	15		
Ve	hicle Speed:	55 mph		v	ohiclo	Mix					
Near/Far La	ne Distance:	48 feet		-	Voh	icleType		Dav	Evening	Niaht	Daily
Site Data					VCII	AL	itos:	77.5%	14.0%	10.5%	6 92.00%
Ba	rrier Height	0.0 feet			M	edium Tru	cks:	48.0%	2.0%	50.0%	3.00%
Barrier Type (0-W	/all. 1-Berm):	0.0			ŀ	Heavy Tru	cks:	48.0%	2.0%	50.0%	5.00%
Centerline Di	st. to Barrier:	59.0 feet			laisa Si	ource Ele	vation	s (in fi	oot)		
Centerline Dist.	to Observer:	59.0 feet		-	0.00 00	Autos	0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.2	97			
Observer Height (	Above Pad):	5.0 feet			Hoa	n Trucks:	8.0	06	Grade Adi	ustmen	t 00
Pi	ad Elevation:	0.0 feet			mean	ly mucho.	0.0	000	Grado / laj	aoumon	. 0.0
Roi	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distand	ce (in	feet)		
	Road Grade:	0.0%				Autos:	54.1	129			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	53.9	966			
	Right View:	90.0 degre	es		Heav	y Trucks:	53.9	982			
FHWA Noise Mod	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Atte	en Be	erm Atten
Autos:	71.78	-8.02		-0.62		-1.20		-4.69	0.0	00	0.000
Medium Trucks:	82.40	-22.89		-0.60		-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	86.40	-20.67		-0.60		-1.20		-5.35	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Daj	V L	eq Ev	ening	Leq N	light		Ldn	0	ONEL
Autos:	61	.9	60.0		58.6		52.6		61.1		61.7
Medium Trucks:	57	7.7	53.7		46.0		55.2		61.3		61.4
Heavy Trucks:	63	3.9	59.9		52.2		61.4		67.5		67.6
Vehicle Noise:	66	6.7	63.5		59.7		62.7		69.2		69.3
Centerline Distant	ce to Noise C	ontour (in fee	t)								
				70 di	BA	65 d	BA	e	60 dBA	5	5 dBA
			Ldn:	52		112	2		242		521
		С	NEL:	53		114	1		247		531

Scenario: Road Name:	EA 2021														
Road Segment:	Leon Rd. s/o Scott Ro	<b>1</b> .			Project Name: Canterwood Job Number: 11304										
SITE SI	PECIFIC IN	PUT DATA				N	OISE N	IODE	L INPUT	s					
Highway Data				S	Site Con	ditions	(Hard =	10, Sc	oft = 15)						
Average Daily Tr	affic (Adt):	7,600 vehicle	s				A	Autos:	15						
Peak Hour Pe	ercentage:	10%			Me	dium Tru	icks (2 A	xles):	15						
Peak Hou	ır Volume:	760 vehicle	s		He	avy Truc	ks (3+ A	xles):	15						
Vehi	cle Speed:	55 mph		1	/ehicle l	Nix									
Near/Far Lane	Distance:	48 feet		_	Veh	icleType		Day	Evening	Night	Daily				
Site Data						A	utos:	77.5%	14.0%	10.5%	92.00%				
Barri	er Heiaht:	0.0 feet			Me	edium Tr	ucks:	48.0%	2.0%	50.0%	3.00%				
Barrier Type (0-Wal	. 1-Berm):	0.0			ŀ	leavy Tr	ucks:	48.0%	2.0%	50.0%	5.00%				
Centerline Dist.	to Barrier:	59.0 feet			Vaina Ca	uree El	ovetions	lin fe	an 41						
Centerline Dist. to	Observer:	59.0 feet		1	10/36 30	Autor			el)						
Barrier Distance to	Observer:	0.0 feet			Modiu	n Trucki	. 0.0	00							
Observer Height (Al	ove Pad):	5.0 feet			Heav	v Trucks	. 2.2	06	Grade Ad	iustment	0.0				
Pad	Elevation:	0.0 feet			mour	y maona	. 0.0								
Road	Elevation:	0.0 feet		L	ane Eq	uivalent	Distanc	e (in i	feet)						
Ro	ad Grade:	0.0%				Autos	:: 54.1	29							
	Left View:	-90.0 degre	es		Mediur	n Trucks	: 53.9	966							
F	Right View:	90.0 degre	es		Heav	y Trucks	: 53.9	982							
FHWA Noise Model	Calculations	s													
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten				
Autos:	71.78	-4.26		-0.62	2	-1.20		4.69	0.0	000	0.000				
Medium Trucks:	82.40	-19.13		-0.60	)	-1.20		4.88	0.0	000	0.000				
Heavy Trucks:	86.40	-16.91		-0.60	)	-1.20		-5.35	0.0	000	0.000				
Unmitigated Noise I	evels (with	out Topo and	barrie	er atten	uation)										
VehicleType L	eq Peak Hou	r Leq Day	/	Leq Ev	rening	Leq	Vight		Ldn	CI	VEL				
Autos:	65.	.7	63.8		62.4		56.4		64.8	3	65.5				
Medium Trucks:	61.	.5	57.5		49.7		58.9		65.1	I	65.1				
Heavy Trucks:	67.	.7	63.7		55.9		65.1		71.3	3	71.3				
Vehicle Noise:	70.	.4	67.2		63.5		66.5		72.9	9	73.1				
Centerline Distance	to Noise Co	ontour (in feet	)												
			L	70 a	<i>IBA</i>	65 (	1BA	6	i0 dBA	55	dBA				
			I dn	02	2	20	10		430	0	27				
		-	Lun.	00	-	20			100	5					

	FHV	VA-RD-77-108 H	IIGHWA	YN	DISE PF	REDICTI	ON MO	DEL				
Scenar	io: EA 2021					Project	Name:	Cante	rwood			
Road Nam	e: Holland Rd.					Job N	umber:	11304				
Road Segme	nt: w/o Menifee	e Rd.										
SITE	SPECIFIC IN	PUT DATA				N	OISE	MODE	L INPU	TS		
Highway Data				S	ite Con	ditions	(Hard =	= 10, S	oft = 15)			
Average Daily	Traffic (Adt): 1	0,400 vehicles						Autos:	15			
Peak Hour	Percentage:	10%			Me	dium Tru	ıcks (2	Axles):	15			
Peak H	lour Volume:	1,040 vehicles			He	avy Truc	:ks (3+	Axles):	15			
Ve	hicle Speed:	45 mph		v	ehicle I	Mix						
Near/Far La	ne Distance:	48 feet		F	Vehi	cleType		Day	Evening	Ni	ght	Daily
Site Data						A	Autos:	75.5%	5 14.09	6 10	).5%	97.42%
Ba	rrier Height:	0.0 feet			Me	edium Tr	ucks:	48.9%	5 2.29	6 4	3.9%	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy Tr	ucks:	47.3%	5.4%	6 4	7.3%	0.74%
Centerline Di	st. to Barrier:	59.0 feet		Λ	loise Sc	ource El	evatio	ns (in f	eet)			
Centerline Dist.	to Observer:	59.0 feet				Autos	s: 0	000				
Barrier Distance	to Observer:	0.0 feet			Mediur	n Truck	. 2	.297				
Observer Height	(Above Pad):	5.0 feet			Heav	v Truck	 S: 8	.006	Grade A	djust	ment:	0.0
Pi	ad Elevation:	0.0 feet										
Roi	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distar	ice (in	feet)			
	Road Grade:	0.0%				Autos	s: 54	.129				
	Left View:	-90.0 degrees	5		Mediur	n Trucks	s: 53	.966				
	Right View:	90.0 degrees	6		Heav	y Trucks	s: 53	.982				
FHWA Noise Mod	el Calculation:	5		-								
VehicleType	REMEL	Traffic Flow	Distanc	е	Finite	Road	Fres	nel	Barrier A	tten	Berr	m Atten
Autos:	68.46	-1.78	-1	0.62		-1.20		-4.69	(	0.000		0.000
Medium Trucks:	79.45	-19.02	-1	0.60		-1.20		-4.88	(	0.000		0.000
Heavy Trucks:	84.25	-22.97	-	0.60		-1.20		-5.35	(	0.000		0.000
Unmitigated Noise	e Levels (with	out Topo and b	arrier at	tenı	uation)							
VehicleType	Leq Peak Hou	r Leq Day	Leo	q Ev	ening	Leq	Night		Ldn		CN	VEL
Autos:	64.	.9 6	2.8		61.5		55.	5	63	8.9		64.6
Medium Trucks:	58.	.6 5	4.7		47.2		56.	0	62	2.2		62.2
Heavy Trucks:	59.	5 5	5.4		52.0		56.	7	62	2.9		63.0
Vehicle Noise:	66.	.7 6	4.1		62.1		60.	9	67	′.8		68.1
Centerline Distan	ce to Noise Co	ntour (in feet)										
				70 d	BA	65 (	dBA	1	60 dBA		55	dBA
		L	dn:	42		9	1		196		4:	23
		CN	EL:	44		9	5		206		4	43

	FH	WA-RD-77-108	BHIGHV	VAY N	OISE PI	REDICTI		DEL			
Scena	rio: EA 2021					Project I	Vame: (	Cante	rwood		
Road Nar	ne: Holland Ro	i.				Job NL	mber:	1304			
Road Segme	ent: e/o Menife	e Rd.									
SITE	SPECIFIC I	NPUT DATA				N	OISE N	IODE	L INPUTS	s	
Highway Data				S	Site Con	ditions (	'Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	10,500 vehicle	s				,	Autos.	15		
Peak Hour	Percentage:	10%			Me	dium Tru	cks (2 A	xles).	15		
Peak I	Hour Volume:	1,050 vehicle	:S		He	avy Truc	ks (3+ A	xles).	15		
Ve	ehicle Speed:	45 mph		v	/ehicle	Mix					
Near/Far La	ane Distance:	48 feet		F	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	75.5%	6 14.0%	10.5%	6 97.42%
Ba	rrier Height	0.0 feet			M	edium Tru	ucks:	48.9%	6 2.2%	48.9%	6 1.84%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tri	ucks:	47.3%	5.4%	47.3%	6 0.74%
Centerline D	ist. to Barrier:	59.0 feet			laise Si	ource Ele	vation	: (in f	oot)		
Centerline Dist.	to Observer:	59.0 feet		~	10/30 00	Autos	· 0(	000	001)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Trucks	. 21	97			
Observer Height	(Above Pad):	5.0 feet			Heav	n Trucks	. 80	006	Grade Adi	ustmen	nt: 0.0
F	Pad Elevation:	0.0 feet			mouri	y maono	. 0.0				
Ro	ad Elevation:	0.0 feet		L	.ane Eq	uivalent	Distand	e (in	feet)		
	Road Grade:	0.0%				Autos	: 54.	129			
	Left View:	-90.0 degre	es		Mediu	m Trucks	: 53.9	966			
	Right View:	90.0 degre	es		Heav	y Trucks	: 53.9	982			
FHWA Noise Mod	lel Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	en Be	erm Atten
Autos:	68.46	-1.74		-0.62	2	-1.20		-4.69	0.0	00	0.000
Medium Trucks:	79.45	-18.98		-0.60	)	-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	84.25	-22.93		-0.60	)	-1.20		-5.35	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	uation)						
VehicleType	Leq Peak Ho	ur Leq Daj	y I	Leq Ev	rening	Leq N	light		Ldn	(	ONEL
Autos:	64	1.9	62.9		61.6		55.6		64.0		64.6
Medium Trucks:	58	3.7	54.8		47.3		56.0		62.2		62.2
Heavy Trucks:	59	9.5	55.5		52.1		56.7		62.9		63.0
Vehicle Noise:	66	6.7	64.1		62.2		60.9		67.9		68.2
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 d	ΒA	65 a	IBA	-	60 dBA	5	5 dBA
			Ldn:	43	3	92	2		197		425
		С	NEL:	45	5	96	6		207		446

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	FH	WA-RD-77-10	B HIGHW	VAY NO	DISE PI	REDICTIC	N MODE	EL			
Scenar Road Nan Road Segme	rio: EA 2021 ne: Holland Ro nt: w/o Briggs	l. Rd.				Project N Job Nu	lame: Ca mber: 11	interwood 304			
SITE	SPECIFIC I	VPUT DATA				NC	DISE MO	DEL INF	PUTS		
Highway Data				S	ite Cor	ditions (F	Hard = 10	), Soft = 1	5)		
Average Daily	Traffic (Adt):	1,632 vehicle	es				Au	tos: 15			
Peak Hour	Percentage:	10%			Me	dium Truc	ks (2 Axi	les): 15			
Peak H	lour Volume:	163 vehicle	es		He	avy Truck	's (3+ Axi	les): 15			
Ve	ehicle Speed:	45 mph		v	ehicle	Mix					
Near/Far La	ne Distance:	48 feet		-	Veh	icleType	Di	ay Even	ing Ni	ght Da	ily
Site Data						AL	itos: 75	5.5% 14.	0% 10	).5% 97.4	12%
Ba	rrier Height:	0.0 feet			М	edium Tru	cks: 48	3.9% 2.	2% 48	8.9% 1.8	34%
Barrier Type (0-W	Vall, 1-Berm):	0.0			1	Heavy Tru	cks: 47	<b>7.3%</b> 5.	4% 47	7.3% 0.7	4%
Centerline Di	ist. to Barrier:	59.0 feet		N	oise Se	ource Ele	vations (	(in feet)			
Centerline Dist.	to Observer:	59.0 feet				Autos:	0.00	0			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.29	7			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks:	8.00	6 Grade	e Adiusti	nent: 0.0	
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distance	(in feet)			
	Road Grade:	0.0%				Autos:	54.12	9			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	53.96	6			
	Right View:	90.0 degre	es		Heav	/y Trucks:	53.98	2			
FHWA Noise Mod	lel Calculation	15									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresnel	Barrie	r Atten	Berm Att	en
Autos:	68.46	-9.82		-0.62		-1.20	-4	.69	0.000	0.	.000
Medium Trucks:	79.45	-27.06		-0.60		-1.20	-4	.88	0.000	0.	.000
Heavy Trucks:	84.25	-31.02		-0.60		-1.20	-5	.35	0.000	0.	.000
Unmitigated Nois	e Levels (with	nout Topo and	l barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	y L	Leq Ev	ening	Leq N	ight	Ldn		CNEL	
Autos:	56	5.8	54.8		53.5		47.5		55.9	5	56.5
Medium Trucks:	50	0.6	46.7		39.2		47.9		54.1	5	54.1
Heavy Trucks:	51	1.4	47.4		44.0		48.6		54.8	ŧ	54.9
Vehicle Noise:	58	3.7	56.1		54.1		52.8		59.8	6	50.1
Centerline Distan	ce to Noise C	ontour (in fee	t)			0					
				70 di	BA	65 dl	BA	60 dBA	1	55 dBA	
			Ldn:	12		26		57		123	
		C	NEL:	13		28		60		129	

	FHV	VA-RD-77-108 H	IGHWA	Y NOISE F	REDICTIC	N MOI	DEL			
Scenario Road Name Road Segment	: EA 2021 : Holland Rd	d			Project N Job Nui	lame: ( nber: 1	Canter 1304	wood		
SITE S				1	NC				s	
Highway Data		I OI DAIA		Site Co	nditions (F	lard =	10, Sc	oft = 15)	5	
Average Daily T	raffic (Adt):	832 vehicles				A	Autos:	15		
Peak Hour F	Percentage:	10%		M	edium Truc	ks (2 A	xles):	15		
Peak Ho	ur Volume:	83 vehicles		н	eavy Truck	s (3+ A	, xles):	15		
Veh	icle Speed:	45 mph		Vohiclo	Mix					
Near/Far Lan	e Distance:	48 feet		Venicle	hicleType		Dav	Evenina	Niaht	Daily
Site Data					Au	tos:	77.5%	14.0%	10.5%	92.00%
Parr	ior Hoight:	0.0 foot		٨	ledium Tru	cks:	48.0%	2.0%	50.0%	3.00%
Barrier Type (0-Wa	ul. 1-Berm):	0.0			Heavy Tru	cks:	48.0%	2.0%	50.0%	5.00%
Centerline Dist	to Barrier:	59.0 feet		Noice C	ouros Ela	votion	lin fe	a4)		
Centerline Dist. to	o Observer:	59.0 feet		NOISe 3	Ource Ele	vauons		el)		
Barrier Distance to	o Observer:	0.0 feet		Modiu	MULOS.	2.0	00			
Observer Height (A	lbove Pad):	5.0 feet		Hoa	W Trucks	8.0	.97	Grade Ad	iustment	. 0.0
Pad	d Elevation:	0.0 feet		1100	<i>i) maana</i> .	0.0				
Road	d Elevation:	0.0 feet		Lane E	quivalent L	Distanc	e (in i	feet)		
R	oad Grade:	0.0%			Autos:	54.1	29			
	Left View:	-90.0 degrees		Mediu	Im Trucks:	53.9	966			
	Right View:	90.0 degrees		Hea	vy Trucks:	53.5	182			
FHWA Noise Model	Calculation	s								
VehicleType	REMEL	Traffic Flow	Distand	ce Finite	e Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	68.46	-13.00	-	0.62	-1.20		4.69	0.0	000	0.00
Medium Trucks:	79.45	-27.87	-	0.60	-1.20		4.88	0.0	000	0.00
Heavy Trucks:	84.25	-25.65	-	0.60	-1.20		-5.35	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and b	arrier at	tenuation)						
VehicleType L	eq Peak Hou	r Leq Day	Le	q Evening	Leq N	ight		Ldn	C	NEL
Autos:	53	.6 51	.7	50.3	3	44.3		52.8	3	53.
Medium Trucks:	49	.8 45	5.8	38.0	)	47.2		53.4	1	53.
Heavy Trucks:	56	.8 52	2.8	45.0	)	54.3		60.4	1	60.
Vehicle Noise:	59	.1 55	5.8	51.7	,	55.4		61.8	3	61.
Centerline Distance	e to Noise Co	ontour (in feet)	_							
				70 dBA	65 dl	ЗA	6	0 dBA	55	dBA
		Lo	an:	17	36			//	1	67
		~~~		17	07			70		70

	FHW	/A-RD-77-108 F	IIGHWA	YN	DISE PI	REDICT	ION MC	DDEL				
Scenar Road Nar Road Segme	io: EA 2021 ne: Scott Rd. nt: w/o Haun R	d.				Project Job N	Name: lumber:	Cante 11304	rwood			
SITE	SPECIFIC IN	PUT DATA				N	IOISE	MODE	L INP	JTS		
Highway Data				S	ite Con	ditions	(Hard =	= 10, S	oft = 15)		
Average Daily	Traffic (Adt): 2	1,400 vehicles						Autos:	15			
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2	Axles):	15			
Peak H	lour Volume:	2,140 vehicles			He	avy Tru	cks (3+	Axles):	15			
Ve	hicle Speed:	50 mph		v	ehicle	Mix						
Near/Far La	ne Distance:	78 feet		-	Veh	icleTvpe	9	Dav	Eveni	na N	iaht	Dailv
Site Data							Autos:	75.5%	5 14.0	% 1	0.5%	97.42%
Ba	rrier Height:	0.0 feet			M	edium T	rucks:	48.9%	5 2.2	% 4	8.9%	1.84%
Barrier Type (0-W	(all, 1-Berm):	0.0			ŀ	Heavy T	rucks:	47.3%	5.4	% 4	7.3%	0.74%
Centerline Di	st. to Barrier:	76.0 feet		N	loise So	ource E	levatio	ns (in f	eet)			
Centerline Dist.	to Observer:	76.0 feet		-		Auto	s: 0	000	,			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s: 2	.297				
Observer Height (Above Pad):	5.0 feet			Heav	v Truck	s: 8	.006	Grade	Adjus	tment:	0.0
Pa	ad Elevation:	0.0 feet								-		
Roi	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distar	ice (in	feet)			
	Road Grade:	0.0%				Auto	s: 65	.422				
	Lett View:	-90.0 degrees			Mediu	m Truck	s: 65	.286				
	Right View:	90.0 degrees			Heav	у тиск	S. 65	.300				
FHWA Noise Mod	el Calculations	5										
VehicleType	REMEL	Traffic Flow	Distanc	е	Finite	Road	Fres	nel	Barrier	Atten	Ber	m Atten
Autos:	70.20	0.90	-1	1.85		-1.20		-4.73		0.000		0.000
Medium Trucks:	81.00	-16.34	-1	1.84		-1.20		-4.88		0.000		0.000
Heavy Trucks:	85.38	-20.30	-1	1.84		-1.20		-5.25		0.000		0.00
Unmitigated Nois	e Levels (witho	out Topo and b	arrier at	tenu	uation)							
VehicleType	Leq Peak Hou	r Leq Day	Leq	Evi	ening	Leq	Night		Ldn		CI	VEL
Autos:	68.	0 66	5.0		64.7		58.	7	(57.1		67.8
Medium Trucks:	61.	6 5	.7		50.2		59.	0		55.1		65.2
Heavy Trucks:	62.	0 58	3.0		54.6		59.	2		55.4		65.
Vehicle Noise:	69.	7 6	7.2		65.3		63.	8		70.8		71.1
Centerline Distan	ce to Noise Co	ntour (in feet)										
		,	7	v di	ВA	65	aBA	1	50 dBA		55	aBA
		L	an: -	85		1	84 02		397		8	00
		CN	=L.:	90		1	93		417		8	98

	FH	WA-RD-77-108	HIGHW	AY I		REDICT		ODEL				
Scenari Road Nam Road Segmei	io: EA 2021 e: Scott Rd. nt: e/o Haun F	łd.				Project Job N	Name. umber	: Cante : 11304	rwood			
SITE	SPECIFIC IN	IPUT DATA				N	IOISE	MODE	L INPUT	S		
Highway Data					Site Con	ditions	(Hard	= 10, S	oft = 15)			
Average Daily	Traffic (Adt):	35,800 vehicles						Autos	15			
Peak Hour	Percentage:	10%			Me	dium Tru	ucks (2	Axles)	15			
Peak H	our Volume:	3,580 vehicles			He	avy Truc	cks (3+	Axles)	15			
Ve	hicle Speed:	50 mph		H	Vehicle I	Mix						
Near/Far La	ne Distance:	78 feet		ŀ	Veh	icleTvpe		Dav	Evening	Niał	nt -	Dailv
Site Data				-			Autos:	75.5%	6 14.0%	10.5	5% 9	7.42%
Pa	rior Hoight:	0.0 foot			Me	edium Ti	rucks:	48.9%	6 2.2%	48.9	9%	1.84%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Ti	rucks:	47.3%	5.4%	47.3	3%	0.74%
Centerline Dis	st. to Barrier:	76.0 feet		ŀ	Noise So	ource El	evatio	ns (in f	eet)			
Centerline Dist.	to Observer:	76.0 feet		ŀ		Auto	s: (000				
Barrier Distance	to Observer:	0.0 feet			Mediu	n Truck	e. 2	297				
Observer Height (Above Pad):	5.0 feet			Heav	v Truck	s: 8	3.006	Grade Ad	ljustme	ent: C	0.0
Pa	ad Elevation:	0.0 feet			mour	<i>y maon</i>	J. (
Roa	ad Elevation:	0.0 feet		-	Lane Eq	uivalent	t Dista	nce (in	feet)			
	Road Grade:	0.0%				Autos	s: 65	5.422				
	Left View:	-90.0 degree	S		Mediui	m Trucks	s: 65	5.286				
	Right View:	90.0 degree	S		Heav	y Trucks	s: 65	5.300				
FHWA Noise Mode	el Calculation	s										
VehicleType	REMEL	Traffic Flow	Distan	ice	Finite	Road	Free	snel	Barrier At	ten l	Berm	Atten
Autos:	70.20	3.13		-1.8	5	-1.20		-4.73	0.0	000		0.000
Medium Trucks:	81.00	-14.11		-1.8	4	-1.20		-4.88	0.0	000		0.000
Heavy Trucks:	85.38	-18.06		-1.8	4	-1.20		-5.25	0.0	000		0.000
Vehicle Turne	e Leveis (with	out ropo and r	barrier a	itter	iuation)	100	Niaht	-	l do	1	CNE	1
Venicie i ype	Ley Peak Hot	Leq Day	0 2 LE	eq ⊏	eriirig 67.0	Leq	nigrit 60	0	LUII	4	CIVE	Z 70.0
Autos. Modium Trucks:	70		0.3		67.0 52.5		61	.9	67	4		67.4
Heavy Trucks:	64	13 F	0.0		56.8		61	5	67.	+ 7		67.9
Vehicle Noise:	72	2.0 6	9.4		67.5		66	.0	73.	0		73.3
Centerline Distant	ce to Noise C	ontour (in feet)										
				70	dBA	65	dBA		60 dBA		55 dE	ЗA
		L	.dn:	12	20	20	60		559		1,20	5
		CN	EL:	13	27	2	73		587		1,26	5

Tuesday, March 06, 2018

Tuesday, March 06, 2018

	FH	WA-RD-77-108	HIGHW	AY NO	DISE PI	REDICTIC	N MOD	EL			
Scenar Road Nan Road Segme	rio: EA 2021 ne: Scott Rd. nt: w/o Menife	e Rd.				Project N Job Nui	lame: Ca mber: 11	anterw 1304	lood		
SITE	SPECIFIC IN	IPUT DATA				NC	DISE M	ODEL	INPUTS	;	
Highway Data				S	ite Cor	nditions (F	Hard = 1	0, Sof	t = 15)		
Average Daily	Traffic (Adt):	31,700 vehicle	s				A	utos:	15		
Peak Hour	Percentage:	10%			Me	aium Truc	KS (2 AX	des):	15		
Peak F	Hour Volume:	3,170 vehicle	S		He	eavy Truck	's (3+ Ax	des):	15		
Ve	hicle Speed:	55 mph		V	ehicle	Mix					
Near/Far La	ne Distance:	78 feet			Veh	icleType	D	Day I	Evening	Night	Daily
Site Data						AL	itos: 7	5.5%	14.0%	10.5%	6 97.42%
Ba	rrier Height:	0.0 feet			М	edium Tru	cks: 4	8.9%	2.2%	48.9%	6 1.84%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tru	cks: 4	7.3%	5.4%	47.3%	6 0.74%
Centerline Di	ist. to Barrier:	76.0 feet		N	loise S	ource Ele	vations	(in fee	et)		
Centerline Dist.	to Observer:	76.0 feet				Autos:	0.00	00			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.29	97			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks:	8.00	06 0	Grade Adj	ustmen	t: 0.0
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distance	e (in fe	et)		
	Road Grade:	0.0%				Autos:	65.42	22			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	65.28	86			
	Right View:	90.0 degre	es		Heav	vy Trucks:	65.30	00			
FHWA Noise Mod	lel Calculation	IS									
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresne	l B	arrier Atte	en Be	erm Atten
Autos:	71.78	2.19		-1.85		-1.20	-4	4.73	0.0	00	0.000
Medium Trucks:	82.40	-15.05		-1.84		-1.20	-4	4.88	0.0	00	0.000
Heavy Trucks:	86.40	-19.01		-1.84		-1.20	-8	5.25	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	ttenu	uation)						
VehicleType	Leq Peak Ho	ur Leq Day	/ Le	eq Ev	ening	Leq N	ight	L	dn	0	NEL
Autos:	70).9	68.9		67.6		61.6		70.0		70.6
Medium Trucks:	64	1.3	60.4		52.9		61.7		67.8		67.9
Heavy Trucks:	64	1.3	60.3		56.9		61.6		67.8		67.8
Vehicle Noise:	72	2.5	70.0		68.1		66.4		73.4		73.8
Centerline Distan	ce to Noise C	ontour (in feet)								
				70 di	BA	65 dl	BA	60	dBA	5	5 dBA
			Ldn:	129	Э	277	7	5	597	1	,287
		C	NEL:	135	5	292	2	e	628	1	,354

	11111/			1010211					
Scenario	: EA 2021				Project Na	me: Ca	nterwood		
Road Name	e: Scott Rd.				Job Num	ber: 113	304		
Road Segmen	t: w/o Briggs Ro	d.							
SITE S	PECIFIC INP	UT DATA			NO	SE MO	DEL INPUT	'S	
Highway Data				Site Con	ditions (Ha	ard = 10	, Soft = 15)		
Average Daily 7	raffic (Adt): 27	,800 vehicles				Aut	os: 15		
Peak Hour F	Percentage:	10%		Me	dium Truck	s (2 Axle	es): 15		
Peak Ho	our Volume: 2	,780 vehicles		Hea	avy Trucks	(3+ Axle	es): 15		
Veh	icle Speed:	55 mph	-	Vehicle I	Nix				
Near/Far Lan	e Distance:	78 feet	-	Vehi	cleType	Da	y Evening	Night	Daily
Site Data					Auto	os: 75	5% 14.0%	10.5%	97.42
Bari	rier Heiaht:	0.0 feet		Me	edium Truc	ks: 48	9% 2.2%	48.9%	1.849
Barrier Type (0-Wa	all, 1-Berm):	0.0		F	leavy Truc	ks: 47	.3% 5.4%	47.3%	0.749
Centerline Dis	t. to Barrier:	76.0 feet	-	Noise So	urce Flev	ations (i	n foot)		
Centerline Dist. to	o Observer:	76.0 feet	-	110/30 00	Autos:	0.000	inteety		
Barrier Distance to	o Observer:	0.0 feet		Mediur	n Trucks:	2 297			
Observer Height (A	Above Pad):	5.0 feet		Heav	v Trucks:	8.006	Grade Ad	liustment	0.0
Pa	d Elevation:	0.0 feet		mour	y maono.	0.000		,	
Roa	d Elevation:	0.0 feet	_	Lane Equ	uivalent Di	stance	(in feet)		
R	load Grade:	0.0%			Autos:	65.422			
	Left View:	-90.0 degrees		Mediur	n Trucks:	65.286	5		
	Right View:	90.0 degrees		Heav	y Trucks:	65.300)		
FHWA Noise Mode	I Calculations								
VehicleType	REMEL 1	Traffic Flow Di	istance	Finite	Road	Fresnel	Barrier At	ten Ber	m Atter
Autos:	71.78	1.62	-1.8	5	-1.20	-4.	73 0.	000	0.00
Medium Trucks:	82.40	-15.62	-1.8	4	-1.20	-4.	88 0.	000	0.00
Heavy Trucks:	86.40	-19.58	-1.8	4	-1.20	-5.	25 0.	000	0.00
Unmitigated Noise	Levels (withou	It Topo and barr	ier atter	nuation)					
VehicleType	Leq Peak Hour	Leq Day	Leq E	vening	Leq Nig	ht	Ldn	C	NEL
Autos:	70.3	68.3		67.0		61.0	69.	4	70
Medium Trucks:	63.7	59.8		52.3		61.1	67.	3	67
Heavy Trucks:	63.8	59.7		56.3		61.0	67.	2	67.
Vehicle Noise:	71.9	69.4		67.5		65.8	72.	9	73.
Centerline Distance	e to Noise Con	tour (in feet)	70	-/D.4	05 -10		00-104		-10.4
		l da	/0	aBA	65 dB/	4	oU dBA	55	aBA
		Lan:	1	18	254		54/	1,	1/9

	FH	WA-RD-77-108	HIGH	WAY NO	DISE PI	REDICTIO	ON MODEL		
Scenari	io: EA 2021					Project N	lame: Cant	erwood	
Road Nam	e: Scott Rd.					Job Nu	mber: 1130	4	
Road Segmer	nt: w/o Leon H	₹d.							
SITE	SPECIFIC I	NPUT DATA				N	DISE MOD	EL INPUTS	5
Highway Data				S	ite Con	ditions (Hard = 10,	Soft = 15)	
Average Daily	Traffic (Adt):	23,500 vehicle	s				Auto	s: 15	
Peak Hour	Percentage:	10%			Me	dium Truo	cks (2 Axles): 15	
Peak H	lour Volume:	2,350 vehicle	s		He	avy Truck	(3+ Axles): 15	
Ve	hicle Speed:	55 mph		V	ehicle l	Mix			
Near/Far La	ne Distance:	78 feet			Veh	icleType	Day	Evening	Night Daily
Site Data						A	utos: 75.5	% 14.0%	10.5% 97.42
Bar	rrier Heiaht:	0.0 feet			M	edium Tru	icks: 48.9	% 2.2%	48.9% 1.84
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	Heavy Tru	icks: 47.3	% 5.4%	47.3% 0.74
Centerline Dis	st. to Barrier:	76.0 feet		N	oise So	ource Ele	vations (in	feet)	
Centerline Dist.	to Observer:	76.0 feet				Autos:	0.000		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.297		
Observer Height (Above Pad):	5.0 feet			Heav	v Trucks:	8.006	Grade Adj	ustment: 0.0
Pa	ad Elevation:	0.0 feet					Distance (l		
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distance (II	1 teet)	
'	Road Grade:	0.0%			1 4 m - 1 m	Autos:	65.422		
	Left View:	-90.0 degre	es		Head	Trucks.	05.280		
	Right view.	90.0 degre	es		neav	y mucks.	65.300		
FHWA Noise Mode	el Calculatior	15							
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresnel	Barrier Atte	en Berm Atter
Autos:	71.78	0.89		-1.85		-1.20	-4.7	3 0.0	00 0.00
Medium Trucks:	82.40	-16.35		-1.84		-1.20	-4.8	3 0.0	00 0.00
Heavy Trucks:	86.40	-20.31		-1.84		-1.20	-5.2	5 0.0	00 0.00
Unmitigated Noise	e Levels (with	nout Topo and	barrie	er attenu	ation)				
VehicleType	Leq Peak Ho	ur Leq Da	/	Leq Ev	ening	Leq N	light	Ldn	CNEL
Autos:	69	9.6	67.6		66.3		60.3	68.7	69
Medium Trucks:	63	3.0	59.1		51.6		60.4	66.5	66
Heavy Trucks:	63	3.0	59.0		55.6		60.3	66.5	66
venicie ivoise:	1	1.2	68.7		66.8		65.1	72.1	72
Centerline Distant	ce to Noise C	ontour (in fee	t)	70 d	DA	ce d	D4	EO dBA	EE dDA
			I dn:	10 0	54	00 0	7	190	1 054
		0	LUN: NEL	105) I	22	, D	409	1,054
		L L	IVEL.			23	5	315	1,109

	FH	WA-RD-77-108	HIGHW	Y NO	OISE PF	REDICTIC	ON MO	DEL			
Scenar	io: EA 2021					Project N	lame:	Cante	rwood		
Road Nan Road Segme	ne: Scott Rd. nt: e/o Leon F	۲d.				Job Nu	mber:	11304			
SITE	SPECIFIC II	NPUT DATA				NC	DISE	/IODE	L INPUT	s	
Highway Data				S	ite Con	ditions (l	Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	13,000 vehicle	s					Autos:	15		
Peak Hour	Percentage:	10%			Mee	dium Truc	cks (2 A	(xles)	15		
Peak H	our Volume:	1,300 vehicle	s		Hea	avy Truck	(3+ A	(xles)	15		
Ve	hicle Speed:	55 mph		v	ehicle I	Nix					
Near/Far La	ne Distance:	78 feet		ŀ	Vehi	icleType		Day	Evening	Nigh	t Daily
Site Data						AL	itos:	77.5%	5 14.0%	10.5	% 92.00%
Ba	rrier Heiaht:	0.0 feet			Me	edium Tru	icks:	48.0%	2.0%	50.0	% 3.00%
Barrier Type (0-W	/all, 1-Berm):	0.0			H	leavy Tru	icks:	48.0%	2.0%	50.0	% 5.00%
Centerline Di	st. to Barrier:	76.0 feet		N	loise So	ource Ele	vation	s (in f	eet)		
Centerline Dist.	to Observer:	76.0 feet				Autos:	0.0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks:	2.2	297			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks:	8.0	006	Grade Ad	ljustme	nt: 0.0
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		L	ane Equ	uivalent l	Distan	ce (in	feet)		
	Road Grade:	0.0%				Autos:	65.	422			
	Left View:	-90.0 degre	es		Mediur	n Trucks:	65.	286			
	Right View:	90.0 degre	es		Heav	y Trucks:	65.	300			
FHWA Noise Mod	el Calculation	าร									
VehicleType	REMEL	Traffic Flow	Distan	ce	Finite	Road	Fresr	iel	Barrier At	ten E	lerm Atten
Autos:	71.78	-1.93		1.85		-1.20		-4.73	0.	000	0.000
Medium Trucks:	82.40	-16.80		1.84		-1.20		-4.88	0.	000	0.000
Heavy Trucks:	86.40	-14.58		1.84		-1.20		-5.25	0.	000	0.000
Unmitigated Nois	e Levels (with	hout Topo and	barrier a	ttenı	uation)						
VehicleType	Leq Peak Ho	ur Leq Day	/ Le	q Ev	ening	Leq N	light		Ldn		CNEL
Autos:	66	6.8	64.9		63.5		57.5		65.	9	66.5
Medium Trucks:	62	2.6	58.6		50.8		60.0)	66.	2	66.2
Heavy Trucks:	68	8.8	64.8		57.0		66.2		72.	4	72.4
Vehicle Noise:	7	1.5	68.3		64.6		67.6	5	74.	0	74.2
Centerline Distan	ce to Noise C	ontour (in feet	9								
				70 di	BA	65 di	BA	0	60 dBA	1	55 dBA
			Ldn:	141 304 656 1,4				1,412			
		C	NEL:	144	144 310 669 1,441						

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	FH	WA-RD-77-108	HIGHW	AY N	OISE PI	REDICTIO	N MODE	EL			
Scenai Road Nan Road Segme	rio: EAP 2021 ne: Haun Rd. nt: n/o Scott R	td.				Project N Job Nur	lame: Ca nber: 11	anterwood 304			
SITE	SPECIFIC IN	NPUT DATA				NC	ISE MO	DDEL INPL	JTS		
Highway Data				S	lite Cor	ditions (H	lard = 10	0, Soft = 15)	1		
Average Daily	Traffic (Adt):	22,800 vehicle	s				Au	itos: 15			
Peak Hour	Percentage:	10%			Me	dium Truc	ks (2 Axi	les): 15			
Peak H	lour Volume:	2,280 vehicle	s		He	avy Truck	s (3+ Axi	les): 15			
Ve	hicle Speed:	50 mph		v	ehicle	Mix					
Near/Far La	ne Distance:	48 feet		F	Veh	icleTvpe	Di	av Evenin	a Ni	aht	Dailv
Site Data						Au	tos: 75	5.5% 14.0	% 10	0.5%	97.42%
Ba	rrier Height:	0.0 feet			М	edium Tru	cks: 48	3.9% 2.2	% 48	8.9%	1.84%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tru	cks: 47	7.3% 5.4	% 47	7.3%	0.74%
Centerline Di	ist. to Barrier:	59.0 feet			loise S	ource Elev	vations	(in feet)			
Centerline Dist.	to Observer:	59.0 feet				Autos:	0.00	0			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.29	7			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks:	8.00	6 Grade	Adiust	ment:	0.0
P	ad Elevation:	0.0 feet							<u> </u>		
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent L	Distance	(in feet)			
	Road Grade:	0.0%				Autos:	54.12	9			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	53.96	6			
	Right View:	90.0 degre	es		Heav	y Trucks:	53.98	2			
FHWA Noise Mod	lel Calculation	IS									
VehicleType	REMEL	Traffic Flow	Distar	псе	Finite	Road	Fresnel	Barrier	Atten	Bern	n Atten
Autos:	70.20	1.17		-0.62		-1.20	-4	.69	0.000		0.000
Medium Trucks:	81.00	-16.07		-0.60		-1.20	-4	.88	0.000		0.000
Heavy Trucks:	85.38	-20.02		-0.60		-1.20	-5	.35	0.000		0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenı	lation)				· · · · ·		
VehicleType	Leq Peak Ho	ur Leq Day	/ L	eq Ev	ening	Leq N	ight	Ldn		CN	IEL
Autos:	69	9.6	67.5		66.2		60.2	6	8.6		69.3
Medium Trucks:	63	3.1	59.2		51.7		60.5	6	6.7		66.7
Heavy Trucks:	63	3.6	59.5		56.1		60.8	6	7.0		67.1
Vehicle Noise:	71	1.3	68.7		66.8		65.3	7	2.3		72.6
Centerline Distan	ce to Noise C	ontour (in feet)								
				70 d	BA	65 dE	BA	60 dBA		55 0	JBA
		-	Ldn:	84	ł	180		389		83	37
		C	NEL:	88	3	189)	408		87	.8

	FHV	VA-RD-77-108 H	IGHWA	Y NOISE PI	REDICTIO	N MOD	EL			
Scenario	o: EAP 2021				Project Na	ame: C	anterwoo	od		
Road Name	e: Zeiders Rd.				Job Nun	nber: 11	1304			
Road Segmen	t: s/o Scott Ro	d.								
SITE S	SPECIFIC IN	PUT DATA			NO	ISE M	ODEL I	NPUT	s	
Highway Data				Site Con	ditions (H	lard = 1	0, Soft =	= 15)		
Average Daily	Traffic (Adt):	7,300 vehicles				A	utos:	15		
Peak Hour I	Percentage:	10%		Me	dium Truck	ks (2 Ax	des):	15		
Peak He	our Volume:	730 vehicles		He	avy Trucks	s (3+ Ax	des):	15		
Vel	hicle Speed:	50 mph		Vehicle	Mix					
Near/Far Lar	ne Distance:	48 feet		Veh	icleType	D	ay Ev	ening	Night	Daily
Site Data					Aut	tos: 7	5.5%	14.0%	10.5%	97.429
Bar	rier Heiaht:	0.0 feet		M	edium Truc	cks: 4	8.9%	2.2%	48.9%	1.84%
Barrier Type (0-Wa	all, 1-Berm):	0.0		1	Heavy Truc	cks: 4	7.3%	5.4%	47.3%	0.74%
Centerline Dis	t. to Barrier:	59.0 feet		Noise Sc	ource Flev	ations	(in feet)			
Centerline Dist. t	to Observer:	59.0 feet			Autos:	0.00	0			
Barrier Distance t	to Observer:	0.0 feet		Mediu	m Trucks:	2.29	97			
Observer Height (/	Above Pad):	5.0 feet		Heav	/y Trucks:	8.00)6 Gra	ade Ad	justment.	0.0
Pa	d Elevation:	0.0 feet								
Roa	d Elevation:	0.0 feet		Lane Eq	uivalent D	istance	e (in feet)		
F	Road Grade:	0.0%			Autos:	54.12	29			
	Left View:	-90.0 degrees		Mediu	m Trucks:	53.96	56			
	Right view:	90.0 degrees		nea	y mucks.	55.90	52			
FHWA Noise Mode	l Calculation	s								
VehicleType	REMEL	Traffic Flow	Distanc	e Finite	Road	Fresne	l Bar	rier Att	en Ber	m Atten
Autos:	70.20	-3.78	-(0.62	-1.20	-4	4.69	0.0	000	0.00
Medium Trucks:	81.00	-21.01	-(0.60	-1.20	-4	4.88	0.0	000	0.00
Heavy Trucks:	85.38	-24.97	-(0.60	-1.20		5.35	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and ba	rrier at	tenuation)					Т	
VehicleType	Leq Peak Hou	r Leq Day	Leo	l Evening	Leq Ni	ght	Ld	n	CI	VEL
Autos:	64.	.6 62	.6	61.3		55.3		63.	7	64.
Meaium Trucks:	58.	.2 54	.3	46.8		55.5		61.7	(61.
Heavy Irucks:	58.	.0 54	0.0	51.2		55.8 60.0		02.0 67.1		02.
venicie Noise:	66.	.3 63	.8	61.8		60.3		67.,	3	67.
Centerline Distanc	e to Noise Co	ontour (in feet)	-	70 dBA	65 dE	24	60 d	DA	55	dBA
		10	/	30 30	00 GB	1	10	ым 2	1 35	uDA 102
		Lu	11.	33	04		10	~	3	32
		CNE	y .	41	90		10	1	4	11

	FH\	WA-RD-77-108	HIGHW.	AY NO	DISE PI	REDICT	ION MO	DEL				
Scenari Road Nam Road Segmer	io: EAP 2021 le: Antelope R nt: s/o Scott R	d.				Project Job N	Name: lumber:	Cante 11304	rwood			
SITE	SPECIFIC IN	IPUT DATA				r	IOISE I	MODE	L INPU	rs		
Highway Data				S	ite Con	ditions	(Hard =	: 10, S	oft = 15)			
Average Daily Peak Hour	Traffic (Adt): Percentage:	18,700 vehicles 10%	3		Me	dium Tr	ucks (2)	Autos: Axles):	15 15			
Peak H	lour Volume:	1,870 vehicles	5		He	avy Tru	cks (3+)	Axles):	15			
Ve	hicle Speed:	50 mph		v	ehicle l	Mix						-
Near/Far La	ne Distance:	48 feet		-	Veh	icleType	9	Day	Evening	Nie	aht	Daily
Site Data							Autos:	75.5%	14.0%	10	.5%	97.429
Bai	rrier Heiaht:	0.0 feet			M	edium T	rucks:	48.9%	2.2%	48	.9%	1.84%
Barrier Type (0-W	'all, 1-Berm):	0.0			ŀ	Heavy T	rucks:	47.3%	5.4%	47	.3%	0.74%
Centerline Dis	st. to Barrier:	59.0 feet		N	loise So	ource E	levation	is (in f	eet)			
Centerline Dist.	to Observer:	59.0 feet				Auto	s: 0.	000	1			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s: 2.	297				
Observer Height (Above Pad):	5.0 feet			Heav	v Truck	s: 8.	006	Grade A	djustr	nent:	0.0
Pa	ad Elevation:	0.0 feet		_								
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distan	ce (in	feet)			
	Road Grade:	0.0%				Auto	s: 54.	.129				
	Left View:	-90.0 degree	s		Mediu	m Iruck	s: 53.	.966				
	Right View:	90.0 degree	s		Heav	y Truck	s: 53.	.982				
FHWA Noise Mode	el Calculation	IS										
VehicleType	REMEL	Traffic Flow	Distar	ice	Finite	Road	Fresi	nel	Barrier A	tten	Ben	m Atten
Autos:	70.20	0.31		-0.62		-1.20		-4.69	0	.000		0.00
Medium Trucks:	81.00	-16.93		-0.60		-1.20		-4.88	0	.000		0.00
Heavy Trucks:	85.38	-20.88		-0.60		-1.20		-5.35	0	.000		0.00
Unmitigated Noise	e Levels (with	out Topo and	barrier a	ttenu	uation)							
VehicleType	Leq Peak Hou	ur Leq Day	Le	eq Ev	ening	Leq	Night		Ldn		CI	VEL
Autos:	68	.7	6.7		65.4		59.4	4	67	.8		68.
Medium Trucks:	62	.3	58.4		50.9		59.0	6	65	.8		65.8
Heavy Trucks:	62	.7	58.6		55.3		59.9	9	66	.1		66.
Vehicle Noise:	70).4	67.8		65.9		64.4	4	71	.4		71.
Centerline Distant	ce to Noise C	ontour (in feet,)									
				70 di	BA	65	dBA	0	60 dBA		55	dBA
		-	Ldn:	73		1	58		340		7	34
		CI	VEL:	77		1	66		358		7	/0

	FH	WA-RD-77-108	HIGI	HWAY N	NOISE PI	REDICT	ION MO	DDEL				
Scenar Road Nan Road Segme	io: EAP 2021 ne: Menifee Ro nt: n/o Holland	d. d Rd.				Project Job N	Name: lumber:	Cante 11304	rwood			
SITE	SPECIFIC I	NPUT DATA			0.1	P.	OISE	MODE		s		
Average Daily	Traffic (Adt):	17,100 vehicle	s		Site Cor	aitions	(Hard :	= 10, S Autos:	oft = 15) 15			
Peak Hour	Percentage:	10% 1 710 vohiclo	c .		Me He	edium Ir	ucks (2 cks (3+	Axles):	15			
Ve	hicle Speed:	45 mph	5	_	Vehiele		013 (01	Axico).	15			
Near/Far La	ne Distance:	54 feet		-	Venicie	icleTvne	<u>,</u>	Dav	Evenina	Niah	t 1	Dailv
Site Data							Autos:	75.5%	5 14.0%	10.5	% 9	7.42%
Ba Barrier Type (0-W	rrier Height: /all, 1-Berm):	0.0 feet 0.0			М	edium T Heavy T	rucks: rucks:	48.9% 47.3%	5 2.2% 5.4%	48.9 47.3	1% 1%	1.84% 0.74%
Centerline Di	st. to Barrier:	64.0 feet		F	Noise S	ource E	levatio	ns (in f	eet)			
Centerline Dist.	to Observer:	64.0 feet				Auto	s: 0	.000	,			
Deserver Height	to Observer: (Abovo Rod):	0.0 feet			Mediu	m Truck	s: 2	.297				
Diserver neight P	ad Flevation:	0.0 feet			Heav	/y Truck	's: 8	.006	Grade Ad	justme	ent: 0	.0
Ro	ad Elevation:	0.0 feet		Ē	Lane Eq	uivalen	t Distaı	nce (in	feet)			
	Road Grade:	0.0%		- T		Auto	s: 58	.241				
	Left View:	-90.0 degre	es		Mediu	m Truck	's: 58	.089				
	Right View:	90.0 degre	es		Heav	/y Truck	's: 58	.104				
FHWA Noise Mod	el Calculation	15										
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	nel	Barrier Att	en E	Berm .	Atten
Autos:	68.46	0.38		-1.1	0	-1.20		-4.70	0.0	000		0.000
Heavy Trucks	79.45 84.25	-10.00		-1.0	о 8	-1.20		-4.00	0.0	000		0.000
Unmitigated Nois	a Lavala (with	LoioL	horr		uction)	1.20		0.07	0.0			0.000
VehicleType	Lea Peak Ho	ur Lea Dav	/ Daili	l ea F	venina	Lea	Niaht		l dn	T	CNE	1
Autos:	66	6.5	64.5		63.2		57	2	65.6	6		66.3
Medium Trucks:	60	0.3	56.4		48.9		57	7	63.8	3		63.9
Heavy Trucks:	61	1.2	57.1		53.7		58	4	64.6	6		64.7
Vehicle Noise:	68	3.4	65.8		63.8		62	5	69.5	5		69.8
Centerline Distan	ce to Noise C	ontour (in feet)									
			. l	70	dBA	65	dBA	(60 dBA	I	55 dE	A
			Ldn:	5	9	1	28		275		593	
		Ci	VEL:	6	2	1	34		289		622	

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	FH	WA-RD-77-108	HIGHW	AY NO	DISE P	REDICTIC	N MOD	EL			
Scenar Road Nan Road Segme	rio: EAP 2021 ne: Menifee R nt: s/o Holland	d. 1 Rd.				Project N Job Nur	lame: C mber: 1	anterv 1304	vood		
SITE	SPECIFIC II	VPUT DATA				NC	DISE M	ODEL	INPUTS	5	
Highway Data				S	ite Cor	nditions (H	Hard = 1	10, Soi	ft = 15)		
Average Daily	Traffic (Adt):	17,600 vehicle	S				Α	utos:	15		
Peak Hour	Percentage:	10%			Me	edium Truc	ks (2 A)	des):	15		
Peak H	lour Volume:	1,760 vehicle	s		He	avy Truck	's (3+ A)	des):	15		
Ve	hicle Speed:	45 mph		V	ehicle	Mix					
Near/Far La	ne Distance:	54 feet		-	Veh	icleType	E	Day	Evening	Night	Daily
Site Data						Au	itos: 7	5.5%	14.0%	10.5%	97.42%
Ba	rrier Heiaht:	0.0 feet			М	edium Tru	cks: 4	8.9%	2.2%	48.9%	1.84%
Barrier Type (0-W	Vall, 1-Berm):	0.0			1	Heavy Tru	cks: 4	7.3%	5.4%	47.3%	0.74%
Centerline Di	ist. to Barrier:	64.0 feet		N	oise S	ource Ele	vations	(in fe	et)		
Centerline Dist.	to Observer:	64.0 feet				Autos:	0.00	00	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.29	97			
Observer Height	(Above Pad):	5.0 feet			Hea	v Trucks:	8.00	06 (Grade Adj	ustment	: 0.0
P	ad Elevation:	0.0 feet		_							
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent L	Distance	e (in fe	eet)		
	Road Grade:	0.0%				Autos:	58.24	41			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	58.0	89			
	Right View:	90.0 degre	es		Hear	vy Trucks:	58.10	04			
FHWA Noise Mod	lel Calculation	15									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresne	el E	Barrier Atte	en Bei	rm Atten
Autos:	68.46	0.50		-1.10		-1.20		4.70	0.0	00	0.000
Medium Trucks:	79.45	-16.73		-1.08		-1.20	-4	4.88	0.0	00	0.000
Heavy Trucks:	84.25	-20.69		-1.08		-1.20	-	5.31	0.0	00	0.000
Unmitigated Nois	e Levels (with	nout Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	V L	.eq Eve	ening	Leq N	ight		Ldn	С	NEL
Autos:	66	6.7	64.7		63.3		57.3		65.8		66.4
Medium Trucks:	60).4	56.5		49.0		57.8		64.0)	64.0
Heavy Trucks:	61	1.3	57.2		53.8		58.5		64.7	'	64.8
Vehicle Noise:	68	3.5	65.9		63.9		62.7		69.6	6	69.9
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 dł	BA	65 dE	BA	60) dBA	55	dBA
		-	Ldn:	60		130)		281	6	605
		C	NEL:	63		137	r	:	294	e	534

	FRW	4-11B-11-100 1110	IIWATI							
Scenario:	EAP 2021				Project Na	me: Ca	anterv	vood		
Road Name:	Leon Rd.				Job Num	ber: 11	304			
Road Segment:	s/o Craig Av.									
SITE SI	PECIFIC INP	UT DATA			NO	SE MO	DDEI		s	
Highway Data				Site Con	ditions (H	ard = 1	0, So	ft = 15)		
Average Daily Tr	affic (Adt): 7	,600 vehicles				AL	itos:	15		
Peak Hour P	ercentage:	10%		Me	dium Truck	s (2 Ax	les):	15		
Peak Ho	ur Volume:	760 vehicles		Hea	avy Trucks	(3+ Ax	les):	15		
Vehi	cle Speed:	35 mph	ŀ	Vehicle I	<i>lix</i>					
Near/Far Lane	e Distance:	48 feet	Ē	Vehi	cleType	D	ay	Evening	Night	Daily
Site Data					Aut	os: 71	7.5%	14.0%	10.5%	92.00%
Barri	er Heiaht:	0.0 feet		Me	edium Truc	ks: 48	3.0%	2.0%	50.0%	3.00%
Barrier Type (0-Wal	I, 1-Berm):	0.0		F	leavy Truc	ks: 48	3.0%	2.0%	50.0%	5.00%
Centerline Dist.	to Barrier:	59.0 feet	ŀ	Noiso Sa	urco Elov	ations	(in fo	of)		
Centerline Dist. to	Observer:	59.0 feet	ŀ	140/36 30	Autor:	0.00	0	ei)		
Barrier Distance to	Observer:	0.0 feet		Modiur	n Trucke	2 20	7			
Observer Height (A	bove Pad):	5.0 feet		Hoov	v Trucke	8.00	6	Grade Ad	iustment	.00
Pad	Elevation:	0.0 feet		mour	y maono.	0.00	•	,		
Road	Elevation:	0.0 feet		Lane Equ	uivalent D	stance	(in f	eet)		
Ro	oad Grade:	0.0%			Autos:	54.12	9			
	Left View:	-90.0 degrees		Mediur	n Trucks:	53.96	6			
F	Right View:	90.0 degrees		Heav	y Trucks:	53.98	2			
FHWA Noise Model	Calculations		1							
VehicleType	REMEL	Traffic Flow D	istance	Finite	Road	Fresnel	1	Barrier Att	en Ber	m Atten
Autos:	64.30	-2.30	-0.6	2	-1.20	-4	.69	0.0	000	0.00
Medium Trucks:	75.75	-17.17	-0.6	0	-1.20	-4	.88	0.0	000	0.00
Heavy Trucks:	81.57	-14.95	-0.6	0	-1.20	-5	.35	0.0	000	0.00
Unmitigated Noise	Levels (withou	ut Topo and barr	ier atter	nuation)						
VehicleType L	eq Peak Hour	Leq Day	Leq E	vening	Leq Nig	tht		Ldn	C	NEL
Autos:	60.2	58.3		56.9		50.9		59.3	3	59.9
Medium Trucks:	56.8	52.8		45.0		54.2		60.4	1	60.4
Heavy Trucks:	64.8	60.8		53.1		62.3		68.4	1	68.5
Vehicle Noise:	66.6	63.2		58.6		63.2		69.5	5	69.0
Centerline Distance	to Noise Con	tour (in feet)								
			70	dBA	65 dB	4	6	0 dBA	55	dBA
		Ldn:	5	55	118			253	5	46

	FHV	VA-RD-77-108	HIGHW	AY N	DISE PI	REDICT	ION MC	DEL				
Scenari Road Nam Road Segmer	io: EAP 2021 le: Leon Rd. nt: s/o Garban	i Rd.				Project Job N	Name: lumber:	Cante 11304	rwood			
SITE	SPECIFIC IN	IPUT DATA				P	OISE	MODE		ITS		
Highway Data				S	ite Con	ditions	(Hard =	: 10, S	oft = 15)			
Average Daily	Traffic (Adt):	7,800 vehicles	5					Autos:	15			
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2	Axles):	15			
Peak H	lour Volume:	780 vehicles	5		He	avy Tru	cks (3+ .	Axles):	15			
Ve	hicle Speed:	55 mph		V	ehicle	Mix						
Near/Far La	ne Distance:	48 feet			Veh	icleType)	Day	Evenin	g N	ight	Daily
Site Data							Autos:	77.5%	5 14.0	% 1	0.5%	92.00%
Bar	rier Height:	0.0 feet			M	edium T	rucks:	48.0%	5 2.0 ⁴	% 5	0.0%	3.00%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	Heavy T	rucks:	48.0%	5 2.0 ⁴	% 5	0.0%	5.00%
Centerline Dis	st. to Barrier:	59.0 feet			loise So	ource E	levatior	ns (in f	eet)			
Centerline Dist.	to Observer:	59.0 feet		-		Auto	s [.] 0	000	,			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s [.] 2.	297				
Observer Height (Above Pad):	5.0 feet			Heav	v Truck	s: 8.	006	Grade	Adjust	ment:	0.0
Pa	ad Elevation:	0.0 feet		-								
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distan	ce (in	feet)			
	Road Grade:	0.0%				Auto	s: 54	.129				
	Left View:	-90.0 degree	s		Mediu	m Iruck	s: 53	.966				
	Right View:	90.0 degree	es		Heav	y Truck	s: 53	.982				
FHWA Noise Mode	el Calculation	s										
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fres	nel	Barrier .	Atten	Ber	m Atten
Autos:	71.78	-4.15		-0.62		-1.20		-4.69		0.000		0.00
Medium Trucks:	82.40	-19.02		-0.60		-1.20		-4.88		0.000		0.00
Heavy Trucks:	86.40	-16.80		-0.60		-1.20		-5.35		0.000		0.00
Unmitigated Noise	e Levels (with	out Topo and	barrier a	attenı	uation)							
VehicleType	Leq Peak Hou	ır Leq Day	L	eq Ev	ening	Leq	Night		Ldn		CI	VEL
Autos:	65	.8 (63.9		62.5		56.	5	6	4.9		65.
Medium Trucks:	61	.6	57.6		49.8		59.	0	6	5.2		65.
Heavy Trucks:	67	.8 (53.8		56.0		65.:	2	7	1.4		71
Vehicle Noise:	70	.5 0	67.4		63.6		66.	6	7	3.1		73.
Centerline Distant	ce to Noise Co	ontour (in feet))					1				
			ட	70 d	BA	65	dBA		50 dBA		55	dBA
			Ldn:	94		2	03		438		9	43
		Ch	VEL:	96		2	07		447		9	62

	FH\	NA-RD-77-108	HIGHW	AY N	IOISE PI	REDICT	ION MO	DEL			
Scenario Road Name Road Segmen	2: EAP 2021 2: Leon Rd. 1: s/o Scott R	d.				Project Job N	Name: umber:	Canter 11304	wood		
SITE S	PECIFIC IN	IPUT DATA				N	IOISE I	NODE	L INPUT	s	
Highway Data				3	Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily 7	raffic (Adt):	8,100 vehicles	5					Autos:	15		
Peak Hour F	Percentage:	10%			Me	dium Tri	ucks (2)	Axles):	15		
Peak Ho	our Volume:	810 vehicles	5		He	avy Truc	cks (3+)	Axles):	15		
Veh	icle Speed:	55 mph			Vohiclo I	Mix					
Near/Far Lan	e Distance:	48 feet		H	Venicie i Veh	icleType		Dav	Evening	Night	Daily
Site Data					VCII	icic i ypc	Autos	77.5%	14.0%	10.5%	92.00%
Bor	vior Hoimht	0.0 feet			M	, edium Ti	rucks:	48.0%	2.0%	50.0%	3.00%
Barrier Type (0-Wa	all 1-Rorm)	0.0 1001			ŀ	leavy T	rucks:	48.0%	2.0%	50.0%	5.00%
Centerline Dis	t. to Barrier:	59.0 feet				-					
Centerline Dist. to	o Observer:	59.0 feet		'	voise So	burce El	evation	s (in fe	eet)		
Barrier Distance to	o Observer:	0.0 feet				Auto	s: 0.	000			
Observer Height (A	Above Pad):	5.0 feet			Mediui	m Truck	s: 2.	297	Grado Ad	iustmon	. 0.0
Pa	d Elevation:	0.0 feet			Heav	y Truck	s: 8.	006	Grade Adj	usunem	. 0.0
Roa	d Elevation:	0.0 feet		L	Lane Eq	uivalen	t Distan	ce (in i	feet)		
R	load Grade:	0.0%				Auto	s: 54.	129			
	Left View:	-90.0 degree	es		Mediur	m Truck	s: 53.	966			
	Right View:	90.0 degree	es		Heav	y Truck	s: 53.	982			
FHWA Noise Mode	I Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresr	nel	Barrier Att	en Bei	m Atten
Autos:	71.78	-3.99		-0.62	2	-1.20		-4.69	0.0	000	0.000
Medium Trucks:	82.40	-18.85		-0.60	0	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	86.40	-16.63		-0.60)	-1.20		-5.35	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier a	atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	L	eq Ev	/ening	Leq	Night		Ldn	С	NEL
Autos:	66	.0	64.1		62.7		56.6	3	65.1	ľ	65.7
Medium Trucks:	61	.8	57.8		50.0		59.2	2	65.4	1	65.4
Heavy Trucks:	68	.0	64.0		56.2		65.4	1	71.6	6	71.6
Vehicle Noise:	70	.7	67.5		63.7		66.8	3	73.2	2	73.4
Centerline Distance	e to Noise C	ontour (in feet,)								
-				70 c	1BA	65	dBA	6	60 dBA	55	dBA
			Ldn:	9	7	2	08		449	ę	967
		CI	VEL:	99	9	2	13		458	9	87

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	FH	WA-RD-77-108	HIGHW	AY NO	DISE P	REDICTIC		EL		_	
Scenar Road Nan Road Segme	io: EAP 2021 ne: Holland Ro nt: w/o Menife	l. e Rd.				Project N Job Nu	lame: C mber: 1	anterv 1304	vood		
SITE	SPECIFIC IN	NPUT DATA				NC	DISE M	ODEL	INPUTS	5	
Highway Data				S	ite Cor	nditions (l	Hard = 1	10, So	ft = 15)		
Average Daily	Traffic (Adt):	10,500 vehicle	s				Α	utos:	15		
Peak Hour	Percentage:	10%			Me	edium Truc	cks (2 A)	des):	15		
Peak F	lour Volume:	1,050 vehicle	s		He	eavy Truck	(3+ A)	des):	15		
Ve	hicle Speed:	45 mph		V	ehicle	Mix					
Near/Far La	ne Distance:	48 feet		-	Veh	nicleType	E	Day	Evening	Night	Daily
Site Data						AL	itos: 7	5.5%	14.0%	10.5%	97.42%
Ba	rrier Height:	0.0 feet			М	ledium Tru	cks: 4	8.9%	2.2%	48.9%	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0				Heavy Tru	cks: 4	7.3%	5.4%	47.3%	0.74%
Centerline Di	st. to Barrier:	59.0 feet		N	oise S	ource Ele	vations	(in fe	et)		
Centerline Dist.	to Observer:	59.0 feet				Autos	0.00	00	. ,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.20	97			
Observer Height	(Above Pad):	5.0 feet			Hea	vv Trucks:	8.00	06	Grade Adi	ustmen	t: 0.0
P	ad Elevation:	0.0 feet				.,					
Ro	ad Elevation:	0.0 feet		Li	ane Eq	uivalent l	Distance	e (in fe	eet)		
	Road Grade:	0.0%				Autos:	54.13	29			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	53.9	66			
	Right View:	90.0 degre	es		Hear	vy Trucks:	53.9	82			
FHWA Noise Mod	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Distar	ice	Finite	Road	Fresne	el E	Barrier Atte	en Be	rm Atten
Autos:	68.46	-1.74		-0.62		-1.20	-1	4.69	0.0	00	0.000
Medium Trucks:	79.45	-18.98		-0.60		-1.20	-4	4.88	0.0	00	0.000
Heavy Trucks:	84.25	-22.93		-0.60		-1.20	4	5.35	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	ttenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Daj	/ Le	eq Eve	ening	Leq N	light		Ldn	C	NEL
Autos:	64	1.9	62.9		61.6		55.6		64.0		64.6
Medium Trucks:	58	3.7	54.8		47.3		56.0		62.2		62.2
Heavy Trucks:	59	9.5	55.5		52.1		56.7		62.9		63.0
Vehicle Noise:	66	6.7	64.1		62.2		60.9		67.9		68.2
Centerline Distan	ce to Noise C	ontour (in fee)					-			
				70 dE	BA	65 d	BA	60) dBA	55	5 dBA
		-	Ldn:	43		92			197		425
		С	NEL:	45		96			207		446

			WAT		LEIGHO					
Scenario	p: EAP 2021				Project Na	me: C	anter	wood		
Road Name	e: Holland Rd.				Job Num	ber: 1	1304			
Road Segmen	t: e/o Menifee R	d.								
SITE S	SPECIFIC INPL	IT DATA			NO	SE M	ODE	L INPUT	S	
Highway Data				Site Cond	ditions (Ha	ard = 1	10, So	ft = 15)		
Average Daily	Traffic (Adt): 11,3	300 vehicles				A	utos:	15		
Peak Hour I	Percentage:	10%		Med	lium Truck	s (2 A	xles):	15		
Peak He	our Volume: 1,*	30 vehicles		Hea	avy Trucks	(3+ A.	xles):	15		
Vel	nicle Speed:	45 mph	-	Vehicle N	lix					
Near/Far Lar	ne Distance:	48 feet	Ē	Vehi	cleType	L	Day	Evening	Night	Daily
Site Data					Auto	os: 7	75.5%	14.0%	10.5%	97.42%
Bar	rier Heiaht:	0.0 feet		Me	dium Truc	ks: 4	18.9%	2.2%	48.9%	1.84%
Barrier Type (0-Wa	all, 1-Berm):	0.0		н	leavy Truc	ks: 4	17.3%	5.4%	47.3%	0.74%
Centerline Dis	t. to Barrier:	59.0 feet	-	Noise So	urce Elevi	ations	(in fe	et)		
Centerline Dist. t	o Observer:	59.0 feet	F		Autos:	0.0	00	/		
Barrier Distance t	o Observer:	0.0 feet		Mediun	1 Trucks:	2.2	97			
Observer Height (/	Above Pad):	5.0 feet		Heav	/ Trucks:	8.0	06	Grade Ad	iustment.	0.0
Pa	d Elevation:	0.0 feet	-					,		
Roa	d Elevation:	0.0 feet	_	Lane Equ	iivalent Di	stanc	e (in f	eet)		
F	Road Grade:	0.0%			Autos:	54.1	29			
	Left View: -	90.0 degrees		Mediun	1 Irucks:	53.9	66			
	Right View:	90.0 degrees		Heavy	/ Trucks:	53.9	82			
FHWA Noise Mode	l Calculations									
VehicleType	REMEL TI	affic Flow Dis	stance	Finite I	Road	Fresne	el i	Barrier Att	en Ber	m Atten
Autos:	68.46	-1.42	-0.6	2	-1.20	-	4.69	0.0	000	0.00
Medium Trucks:	79.45	-18.66	-0.6	0	-1.20	-	4.88	0.0	000	0.00
Heavy Trucks:	84.25	-22.61	-0.6	0	-1.20	-	5.35	0.0	000	0.00
Unmitigated Noise	Levels (without	Topo and barri	ier atter	nuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq E	vening	Leq Nig	ht		Ldn	CI	NEL
Autos:	65.2	63.2		61.9		55.9		64.3	3	64.
Meaium Trucks:	59.0	55.1		47.6		56.3		62.5		62.
Heavy Trucks:	59.8	55.8		52.4		57.0		63.2		63.
venicie Noise:	67.1	64.5		62.5		61.2		68.2	<u>.</u>	68.
Centerline Distanc	e to Noise Cont	our (in feet)	70	dBA	65 dB	4	6	0 dBA	55	dBA
			,0		00 000	•	0	o abn		
		1 dn	Λ	5	96			207	A 1	47

	FH	WA-RD-77-108	HIGH	WAY N	OISE PF	REDICTIO		DEL			
Scenar Road Nam Road Segmei	io: EAP 2021 ie: Holland Ro nt: w/o Briggs	l. Rd.				Project N Job Nu	<i>lame:</i> C mber: 1	Canterw 1304	bod		
SITE	SPECIFIC IN	NPUT DATA				N	DISE M	IODEL	INPUTS	5	
Highway Data				S	ite Con	ditions (Hard =	10, Soft	= 15)		
Average Daily Peak Hour Peak H	Traffic (Adt): Percentage: Iour Volume:	2,500 vehicle 10% 250 vehicle	s		Mei Hei	dium Truc avy Truck	A cks (2 A ks (3+ A	lutos: xles): xles):	15 15 15		
Ve	hicle Speed:	45 mph		L	ehicle l	Mix					
Near/Far La	ne Distance:	48 feet		-	Vehi	cleTvpe		Dav F	venina	Night	Dailv
Site Data						A	itos:	75.5%	14.0%	10.5%	97.42%
Bai	rrier Height	0.0 feet			Me	edium Tru	icks: 4	18.9%	2.2%	48.9%	1.84%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	łeavy Tru	icks: 4	17.3%	5.4%	47.3%	0.74%
Centerline Dis	st. to Barrier:	59.0 feet		٨	loise Sc	ource Ele	vations	(in fee	t)		
Centerline Dist.	to Observer:	59.0 feet				Autos:	0.0	00	,		
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks:	2.2	97			
Observer Height (Above Pad):	5.0 feet			Heav	y Trucks:	8.0	06 G	rade Adj	ustment.	0.0
Pa	ad Elevation:	0.0 feet			ono Er	ulualant	Distanc	a (in fa	o.41		
Roa	ad Elevation:	0.0 feet		-	апе Ец	Autor	DISIANC		el)		
	Road Grade:	0.0%			Madiu	Autos.	54.1	29			
	Right View:	90.0 degre	es es		Heav	y Trucks.	53.9	66 82			
FHWA Noise Mod	el Calculation	15									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresne	el Bi	arrier Atte	en Ber	m Atten
Autos:	68.46	-7.97		-0.62		-1.20	-	4.69	0.0	00	0.000
Medium Trucks:	79.45	-25.21		-0.60		-1.20	-	4.88	0.0	00	0.000
Heavy Trucks:	84.25	-29.17		-0.60		-1.20	-	5.35	0.0	00	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	er attenu	uation)						
VehicleType	Leq Peak Ho	ur Leq Day	/	Leq Ev	ening	Leq N	light	L	.dn	CI	NEL
Autos:	58	3.7	56.7		55.3		49.3		57.8		58.4
Medium Trucks:	52	2.4	48.5		41.0		49.8		56.0		56.0
Heavy Trucks:	53	3.3	49.2		45.8		50.5		56.7		56.8
Vehicle Noise:	60).5	57.9		56.0		54.7		61.6		61.9
Centerline Distant	ce to Noise C	ontour (in feet)								
			L	70 d	BA	65 d	BA	60	dBA	55	dBA
		-	Ldn:	16	5	35		1	76	1	63
		Ci	NEL:	17		37		2	79	1	71

	FH)	WA-RD-77-108	HIGHW	AY NO	OISE PI	REDICTI		DEL			
Scenar	io: EAP 2021					Project I	Name: (Cante	rwood		
Road Nan	ne: Holland Ro	I.				Job NL	Imber:	11304	L .		
Road Segme	nt: w/o Leon F	Rd.									
SITE	SPECIFIC IN	IPUT DATA				N	OISE N	NODE	EL INPUT	5	
Highway Data				S	ite Con	nditions ('Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	1,700 vehicle	s				,	Autos	: 15		
Peak Hour	Percentage:	10%			Me	dium Tru	cks (2 A	(xles)	: 15		
Peak H	lour Volume:	170 vehicle	S		He	avy Truc	ks (3+ A	(xles)	: 15		
Ve	ehicle Speed:	45 mph		v	ehicle	Mix					
Near/Far La	ane Distance:	48 feet		-	Veh	icleType		Day	Evening	Night	t Daily
Site Data						A	utos:	77.5%	6 14.0%	10.5	% 92.00%
Ba	rrier Height	0.0 feet			M	edium Tru	ucks:	48.0%	6 2.0%	50.0	% 3.00%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tri	ucks:	48.0%	6 2.0%	50.0	% 5.00%
Centerline D	ist. to Barrier:	59.0 feet			laisa Si	ource Ele	vation	e (in f	(oot)		
Centerline Dist.	to Observer:	59.0 feet		-	0/30 00	Autos	. 00	000	001)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Trucke	. 21	97			
Observer Height	(Above Pad):	5.0 feet			Hoa	n Trucks	. 2.2	106	Grade Ad	iustme	nt: 0.0
P	ad Elevation:	0.0 feet			near	ly muchs	. 0.0	000	,		
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distand	ce (in	feet)		
	Road Grade:	0.0%				Autos	: 54.	129			
	Left View:	-90.0 degre	es		Mediu	m Trucks	53.9	966			
	Right View:	90.0 degre	es		Heav	/y Trucks	: 53.9	982			
FHWA Noise Mod	lel Calculation	s									-
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Att	en B	erm Atten
Autos:	68.46	-9.90		-0.62		-1.20		-4.69	0.0	000	0.000
Medium Trucks:	79.45	-24.76		-0.60		-1.20		-4.88	0.0	100	0.000
Heavy Trucks:	84.25	-22.54		-0.60		-1.20		-5.35	0.0	100	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenı	lation)					-	
VehicleType	Leq Peak Ho	ur Leq Day	′ L	eq Ev	ening	Leq N	Vight		Ldn		CNEL
Autos:	56	5.7	54.8		53.4		47.4		55.9	1	56.5
Medium Trucks:	52	2.9	48.9		41.1		50.3		56.5	i	56.5
Heavy Trucks:	59	9.9	55.9		48.1		57.4		63.5	,	63.5
Vehicle Noise:	62	2.2	58.9		54.8		58.5		64.9	,	65.0
Centerline Distan	ce to Noise C	ontour (in feet)								
				70 d	BA	65 0	IBA 🗌		60 dBA	Ę	55 dBA
			Ldn:	27		58	В		125		269
		C	VEL:	27		59	9		127		274

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	FH	WA-RD-77-108	HIGHW	AY NO	DISE PI	REDICTIC	N MODE	L		
Scenar Road Nan Road Segme	io: EAP 2021 ne: Scott Rd. nt: w/o Haun I	Rd.				Project N Job Nur	lame: Car nber: 113	nterwood 04		
SITE	SPECIFIC I	VPUT DATA				NC	ISE MO	DEL INPUT	s	
Highway Data				S	ite Cor	ditions (H	lard = 10,	Soft = 15)		
Average Daily	Traffic (Adt):	21,800 vehicle	s				Aut	os: 15		
Peak Hour	Percentage:	10%			Me	dium Truc	ks (2 Axle	s): 15		
Peak F	lour Volume:	2,180 vehicle	s		He	avy Truck	s (3+ Axle	s): 15		
Ve	hicle Speed:	50 mph		V	ehicle	Mix				
Near/Far La	ne Distance:	78 feet			Veh	icleType	Da	y Evening	Night	Daily
Site Data						Au	tos: 75.	5% 14.0%	10.5%	97.42%
Ba	rrier Height:	0.0 feet			М	edium Tru	cks: 48.	9% 2.2%	48.9%	1.84%
Barrier Type (0-W	/all, 1-Berm):	0.0			1	Heavy Tru	cks: 47.	3% 5.4%	47.3%	0.74%
Centerline Di	st. to Barrier:	76.0 feet		N	oise S	ource Ele	vations (i	n feet)		
Centerline Dist.	to Observer:	76.0 feet				Autos:	0.000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.297			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks:	8.006	Grade Ad	justmen	t: 0.0
P	ad Elevation:	0.0 feet		_		,				
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent L	Distance (in feet)		
	Road Grade:	0.0%				Autos:	65.422			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	65.286			
	Right View:	90.0 degre	es		Heav	y Trucks:	65.300			
FHWA Noise Mod	el Calculation	ıs								
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresnel	Barrier Att	en Be	rm Atten
Autos:	70.20	0.98		-1.85		-1.20	-4.	73 0.0	000	0.000
Medium Trucks:	81.00	-16.26		-1.84		-1.20	-4.	38 0.0	000	0.000
Heavy Trucks:	85.38	-20.22		-1.84		-1.20	-5.2	25 0.0	000	0.000
Unmitigated Nois	e Levels (with	nout Topo and	barrier	attenu	ation)					
VehicleType	Leq Peak Ho	ur Leq Da	V L	.eq Eve	ening	Leq N	ight	Ldn	0	NEL
Autos:	68	3.1	66.1		64.8		58.8	67.2	2	67.8
Medium Trucks:	61	1.7	57.8		50.3		59.0	65.2	2	65.3
Heavy Trucks:	62	2.1	58.1		54.7		59.3	65.5	5	65.6
Vehicle Noise:	69	9.8	67.3		65.3		63.8	70.8	3	71.2
Centerline Distan	ce to Noise C	ontour (in fee	t)		_					-
				70 dł	BA	65 dE	BA	60 dBA	58	5 dBA
		-	Ldn:	87		186		402		866
		С	NEL:	91		196		422		909

	FHW	/A-RD-77-108 HI	GHWA	NOISE PH	REDICTIO		EL			
Scenario	: EAP 2021				Project Na	ame: Ca	anterv	vood		
Road Name	e: Scott Rd.				Job Nurr	1 <i>ber:</i> 11	1304			
Road Segmen	t: e/o Haun Ro	d.								
SITE S	PECIFIC IN	PUT DATA			NO	ISE MO	ODEL		s	
Highway Data				Site Con	ditions (H	ard = 1	0, So	ft = 15)		
Average Daily 7	raffic (Adt): 3	6,800 vehicles				AL	utos:	15		
Peak Hour F	Percentage:	10%		Me	dium Truck	<s (2="" ax<="" td=""><td>les):</td><td>15</td><td></td><td></td></s>	les):	15		
Peak Ho	our Volume:	3,680 vehicles		He	avy Trucks	; (3+ Ax	les):	15		
Veh	icle Speed:	50 mph		Vehicle I	Mix	-				
Near/Far Lan	e Distance:	78 feet		Veh	icleType	D	ay	Evening	Night	Daily
Site Data					Aut	os: 7	5.5%	14.0%	10.5%	97.42%
Barı	rier Height:	0.0 feet		Me	ədium Truc	:ks: 4	8.9%	2.2%	48.9%	1.84%
Barrier Type (0-Wa	all, 1-Berm):	0.0		ŀ	-leavy Truc	:ks: 4	7.3%	5.4%	47.3%	0.74%
Centerline Dis	t. to Barrier:	76.0 feet		Noise So	ource Elev	ations	(in fe	et)		
Centerline Dist. te	o Observer:	76.0 feet			Autos:	0.00	0			
Barrier Distance to	o Observer:	0.0 feet		Mediu	m Trucks:	2.29	97			
Observer Height (A	Above Pad):	5.0 feet		Heav	v Trucks:	8.00)6	Grade Ad	justment.	0.0
Pa	d Elevation:	0.0 feet								
Roa	d Elevation:	0.0 feet		Lane Eq	uivalent D	istance	e (in fe	eet)		
R	coad Grade:	0.0%			Autos:	65.42	22			
	Left View:	-90.0 degrees		Mediui	n Trucks:	65.28	36			
	Right view:	90.0 degrees		neav	y mucks.	05.30	0			
FHWA Noise Mode	I Calculations	3				-				
VehicleType	REMEL	Traffic Flow	Distance	e Finite	Road	Fresne	I E	Barrier Att	en Ber	m Atten
Autos:	70.20	3.25	-1	.85	-1.20	-4	1.73	0.0	000	0.00
Medium Trucks:	81.00	-13.99	-1	.84	-1.20	-4	1.88	0.0	000	0.00
Heavy Trucks:	85.38	-17.94	-1	.84	-1.20	-5	5.25	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and ba	rrier att	enuation)						
VehicleType	Leq Peak Hou	r Leq Day	Leq	Evening	Leq Niç	ght		Ldn	CI	NEL
Autos:	70.	4 68.	4	67.1		61.1		69.5	5	70.
Medium Trucks:	64.	0 60.	1	52.6		61.3		67.5	ō	67.
Heavy Trucks:	64.	4 60.	3	57.0		61.6		67.8	5	67.9
Venicle Noise:	72.	1 69.	5	67.6		66.1		73.1		73.4
Centerline Distance	e to Noise Co	ntour (in feet)	-	0.004	05.15			0.104		-10.4
				U dBA	65 dB	А	60	U dBA	55	aBA
		La	<i>I</i> .	123	264			570	1,	221

	FH	WA-RD-77-108	HIGHW	VAY NO	DISE PR	REDICTIO	ON MODEL			
Scenari	io: EAP 2021					Project I	Vame: Can	terwood		
Road Nam	e: Scott Rd.					Job Nu	mber: 113)4		
Road Segmer	nt: w/o Menife	e Rd.								
SITE	SPECIFIC I	NPUT DATA				N	OISE MOI	DEL INPUT	s	
Highway Data				S	te Con	ditions (Hard = 10,	Soft = 15)		
Average Daily	Traffic (Adt):	35,400 vehicle	s				Auto	is: 15		
Peak Hour	Percentage:	10%			Me	dium Tru	cks (2 Axle	s): 15		
Peak H	lour Volume:	3,540 vehicle	s		He	avy Truci	ks (3+ Axle	s): 15		
Ve	hicle Speed:	55 mph		V	ehicle l	Mix				
Near/Far La	ne Distance:	78 feet		-	Veh	icleType	Day	Evening	Night Da	aily
Site Data						A	utos: 75.	5% 14.0%	10.5% 97.4	42%
Bar	rrier Heiaht:	0.0 feet			Me	edium Tru	ucks: 48.9	9% 2.2%	48.9% 1.8	84%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Tru	ucks: 47.3	3% 5.4%	47.3% 0.7	74%
Centerline Dis	st. to Barrier:	76.0 feet		N	oise So	ource Ele	evations (in	feet)		
Centerline Dist.	to Observer:	76.0 feet				Autos.	: 0.000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	n Trucks	2.297			
Observer Height (Above Pad):	5.0 feet			Heav	v Trucks	8.006	Grade Ad	iustment: 0.0	
Pa	ad Elevation:	0.0 feet				,				
Roa	ad Elevation:	0.0 feet		La	ane Eq	uivalent	Distance (n feet)		
1	Road Grade:	0.0%				Autos.	: 65.422			
	Left View:	-90.0 degre	es		Mediur	n Trucks.	65.286			
	Right View:	90.0 degre	es		Heav	y Trucks.	65.300			
FHWA Noise Mode	el Calculatior	ıs								
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresnel	Barrier Att	en Berm At	ten
Autos:	71.78	2.67		-1.85		-1.20	-4.7	3 0.0	000 0	.000
Medium Trucks:	82.40	-14.57		-1.84		-1.20	-4.8	8 0.0	000 0	.000
Heavy Trucks:	86.40	-18.53		-1.84		-1.20	-5.2	5 0.0	000 0	.000
Unmitigated Noise	e Levels (with	nout Topo and	barrier	attenu	ation)					
VehicleType	Leq Peak Ho	ur Leq Day	′ L	Leq Eve	ening	Leq N	light	Ldn	CNEL	
Autos:	71	1.4	69.4		68.1		62.1	70.5	5	71.1
Medium Trucks:	64	1.8	60.9		53.4		62.1	68.3	3	68.4
Heavy Trucks:	64	1.8	60.8		57.4		62.0	68.2		68.3
Vehicle Noise:	73	3.0	70.5		68.6		66.9	73.9)	74.2
Centerline Distant	ce to Noise C	ontour (in feet)							
				70 dE	BA	65 d	IBA	60 dBA	55 dBA	
		_	Ldn:	139		29	8	643	1,385	
		C	NEL:	146		31	4	676	1,457	

	FH	WA-RD-77-108	HIGHWA	AY NO	OISE PF	REDICTIC	ON MO	DEL				
Scenar	rio: EAP 2021					Project N	lame:	Cante	rwood			
Road Nan	ne: Scott Rd.					Job Nu	mber:	11304				
Road Segme	nt: w/o Briggs	Rd.										
SITE	SPECIFIC IN	IPUT DATA				N	DISE M	/IODE	L INPU	тs		
Highway Data				S	ite Con	ditions (l	Hard =	10, S	oft = 15)			
Average Daily	Traffic (Adt):	31,600 vehicle	s					Autos.	15			
Peak Hour	Percentage:	10%			Me	dium Truc	cks (2 /	Axles).	15			
Peak H	lour Volume:	3,160 vehicle	S		He	avy Truck	ks (3+ /	Axles).	15			
Ve	ehicle Speed:	55 mph		v	ehicle l	Mix						
Near/Far La	ane Distance:	78 feet			Veh	icleType		Day	Evening	Ni	ght	Daily
Site Data						AL	utos:	75.5%	6 14.0%	10).5%	97.42%
Ba	rrier Heiaht:	0.0 feet			Me	edium Tru	icks:	48.9%	6 2.2%	48	3.9%	1.84%
Barrier Type (0-V	Vall, 1-Berm):	0.0			ŀ	leavy Tru	icks:	47.3%	5.4%	47	7.3%	0.74%
Centerline D	ist. to Barrier:	76.0 feet		N	loise Sc	ource Ele	vation	s (in f	eet)			
Centerline Dist.	to Observer:	76.0 feet				Autos:	0.	000		-		
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks:	2.	297				
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks:	8.	006	Grade A	djustr	ment:	0.0
P	ad Elevation:	0.0 feet		-	_					-		
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in	feet)			
	Road Grade:	0.0%				Autos:	65.	422				
	Left View:	-90.0 degre	es		Mediur	n Trucks:	65.	286				
	Right View:	90.0 degre	es		Heav	y Trucks:	65.	300				
FHWA Noise Mod	lel Calculation	IS										
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresr	el	Barrier A	tten	Berr	n Atten
Autos:	71.78	2.17		-1.85		-1.20		-4.73	C	.000		0.000
Medium Trucks:	82.40	-15.06		-1.84		-1.20		-4.88	C	.000		0.000
Heavy Trucks:	86.40	-19.02		-1.84		-1.20		-5.25	C	.000		0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	ttenı	uation)							
VehicleType	Leq Peak Ho	ur Leq Day	' Le	q Ev	ening	Leq N	light		Ldn		CN	IEL
Autos:	70	0.9	68.9		67.6		61.6	5	70	.0		70.6
Medium Trucks:	64	.3	60.4		52.9		61.7	,	67	.8		67.9
Heavy Trucks:	64	.3	60.3		56.9		61.5	;	67	.7		67.8
Vehicle Noise:	72	2.5	70.0		68.1		66.4	ŀ	73	.4		73.7
Centerline Distan	ce to Noise C	ontour (in feet)									
				70 di	BA	65 d	BA		60 dBA		55 0	dBA
			Ldn:	128	В	27	7		596		1,2	84
		Ci	NEL:	135	5	29	1		627		1,3	51

Tuesday, March 06, 2018

Tuesday, March 06, 2018

	FH\	WA-RD-77-108	HIGHWA	AY NC	DISE PF	REDICT	ION MO	DEL				
Scenari Road Nam Road Segmer	o: EAP 2021 e: Scott Rd. nt: w/o Leon F	۲d.				Project Job N	Name: lumber:	Cante 11304	rwood			
SITE	SPECIFIC IN	NPUT DATA				N	OISE	MODE	L INPU	TS		
Highway Data				Si	te Con	ditions	(Hard =	= 10, S	oft = 15)			
Average Daily	Traffic (Adt):	27,200 vehicles	S					Autos.	: 15			
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2	Axles).	: 15			
Peak H	our Volume:	2,720 vehicles	S		He	avy Tru	cks (3+	Axles).	: 15			
Vei	hicle Speed:	55 mph		16	hiele l	Mise						
Near/Far Lar	ne Distance:	78 feet		Ve	Voh	WIX ioloTuno		Dav	Fuenin	~ 14	aht	Dailu
Olto Dotto					ven	icie i ype	Autoor	Day	Evenin	g Ni	gnt	Dally
Site Data				_		/ adium T	Autos:	15.5%	6 14.0%	/o 11	J.5%	97.42%
Bar	rier Height:	0.0 feet			1//6		rucks:	48.9%	o 2.2%	/o 41	5.9% 7.2%	1.84%
Barrier Type (0-W	all, 1-Berm):	0.0			r	leavy I	rucks.	47.39	5.4%	6 4	1.3%	0.74%
Centerline Dis	t. to Barrier:	76.0 feet		N	oise So	ource E	levatio	ıs (in f	eet)			
Centerline Dist.	to Observer:	76.0 feet				Auto	s: 0	.000				
Barrier Distance	to Observer:	0.0 feet			Mediur	m Truck	s: 2	.297				
Observer Height (Above Pad):	5.0 feet			Heav	y Truck	s: 8	.006	Grade /	Adjust	ment:	0.0
Pa	d Elevation:	0.0 feet										
Roa	d Elevation:	0.0 feet		Lá	ane Eq	uivalen	t Distar	ice (in	feet)			
F	Road Grade:	0.0%				Auto	s: 65	.422				
	Left View:	-90.0 degree	es		Mediui	т Irucк	S: 65	.286				
	Right View:	90.0 degree	es		Heav	y Truck	S: 65	.300				
FHWA Noise Mode	el Calculation	IS										
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fres	nel	Barrier /	Atten	Berr	n Atten
Autos:	71.78	1.52	-	1.85		-1.20		-4.73	1	0.000		0.000
Medium Trucks:	82.40	-15.72	-	1.84		-1.20		-4.88		0.000		0.000
Heavy Trucks:	86.40	-19.67	-	1.84		-1.20		-5.25		0.000		0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier a	ttenu	ation)							
VehicleType	Leq Peak Ho	ur Leq Day	/ Le	q Eve	ening	Leq	Night		Ldn		CN	IEL
Autos:	70).2	68.2		66.9		60.	9	6	9.3		70.0
Medium Trucks:	63	3.6	59.7		52.2		61.	0	6	7.2		67.2
Heavy Trucks:	63	3.7	59.6		56.2		60.	9	6	7.1		67.2
Vehicle Noise:	71	.8	69.3		67.4		65.	7	7	2.8		73.1
Centerline Distance	e to Noise C	ontour (in feet)									
				70 dE	BA	65	dBA		60 dBA		55	dBA
			Ldn:	116		2	50		539		1,1	62
		CI	VEL:	122		2	63		567		1,2	222

FHWA-RD	-77-108 HIGHW	AY NO	OISE PF	EDICTIO	N MODE	ΞL			
Scenario: EAP 2021				Project Na	ame: Ca	anter	vood		
Road Name: Scott Rd.				Job Nun	ber: 11	304			
Road Segment: e/o Leon Rd.									
SITE SPECIFIC INPUT	DATA			NO	ISE MO	DDE		S	
Highway Data		S	Site Con	ditions (H	ard = 10	0, So	ft = 15)		
Average Daily Traffic (Adt): 13,400	vehicles				Au	itos:	15		
Peak Hour Percentage: 10	%		Mee	dium Truck	(2 Axi	les):	15		
Peak Hour Volume: 1,340	vehicles		Hea	avy Trucks	: (3+ Axi	les):	15		
Vehicle Speed: 55	mph	v	ehicle l	<i>lix</i>					
Near/Far Lane Distance: 78	feet	-	Vehi	cleType	D	ay	Evening	Night	Daily
Site Data				Aut	os: 77	7.5%	14.0%	10.5%	92.00%
Barrier Height: 0.) feet		Me	edium Truc	ks: 48	3.0%	2.0%	50.0%	3.00%
Barrier Type (0-Wall, 1-Berm): 0.)		F	leavy Truc	ks: 48	3.0%	2.0%	50.0%	5.00%
Centerline Dist. to Barrier: 76.) feet		loiso Sa	urco Elov	ations	(in fo	of)		
Centerline Dist. to Observer: 76.) feet	-	0130 00	Autor	0.00	0	01/		
Barrier Distance to Observer: 0.) feet		Modiur	n Trucke:	2.20	7			
Observer Height (Above Pad): 5.) feet		Hoov	v Trucks:	2.25	6	Grade Ad	iustmont	0.0
Pad Elevation: 0.) feet		neav	y muchs.	0.00	0	Orade Haj	usunoni	0.0
Road Elevation: 0.) feet	L	ane Equ	uivalent D	istance	(in f	eet)		
Road Grade: 0.	0%			Autos:	65.42	2			
Left View: -90.) degrees		Mediur	n Trucks:	65.28	6			
Right View: 90.) degrees		Heav	y Trucks:	65.30	0			
FHWA Noise Model Calculations									
VehicleType REMEL Traffi	c Flow Dista	nce	Finite	Road	Fresnel		Barrier Att	en Ber	m Atten
Autos: 71.78	-1.80	-1.85		-1.20	-4	.73	0.0	000	0.000
Medium Trucks: 82.40	-16.67	-1.84		-1.20	-4	.88	0.0	000	0.00
Heavy Trucks: 86.40	-14.45	-1.84		-1.20	-5	.25	0.0	000	0.000
Unmitigated Noise Levels (without To	po and barrier	attenu	uation)					1	
Unmitigated Noise Levels (without To VehicleType Leq Peak Hour	po and barrier Leq Day L	attenı .eq Ev	uation) rening	Leq Ni	ght		Ldn	CI	VEL
Unmitigated Noise Levels (without To VehicleType Leq Peak Hour Autos: 66.9	po and barrier Leq Day L 65.0	attenu .eq Ev	vening 63.6	Leq Ni	ght 57.6		Ldn 66.1	CI	VEL 66.1
Unmitigated Noise Levels (without To VehicleType Leq Peak Hour Autos: 66.9 Medium Trucks: 62.7	po and barrier Leq Day L 65.0 58.7	attenu .eq Ev	ening 63.6 50.9	Leq Ni	ght 57.6 60.1		Ldn 66.1 66.3	CI	VEL 66.3 66.3
Unmitigated Noise Levels (without To VehicleType Leq Peak Hour Autos: 66.9 Medium Trucks: 62.7 Heavy Trucks: 68.9	po and barrier Leq Day L 65.0 58.7 64.9	attenu .eq Ev	<i>vation)</i> <i>ening</i> 63.6 50.9 57.1	Leq Ni	ght 57.6 60.1 66.4		Ldn 66.1 66.3 72.5	CI	VEL 66.3 66.3 72.5
Unmitigated Noise Levels (without To VehicleType Leq Peak Hour Autos: 66.9 Medium Trucks: 62.7 Heavy Trucks: 68.9 Vehicle Noise: 71.6	po and barrier Leq Day L 65.0 58.7 64.9 68.5	attenu .eq Ev	ening 63.6 50.9 57.1 64.7	Leq Ni	9ht 57.6 60.1 66.4 67.7		Ldn 66.1 66.3 72.5 74.2		VEL 66.3 72.9 74.3
Unmitigated Noise Levels (without To VehicleType Leq Peak Hour Autos: 66.9 Medium Trucks: 62.7 Heavy Trucks: 68.9 Vehicle Noise: 71.6 Centerline Distance to Noise Contour	po and barrier Leq Day L 65.0 58.7 64.9 68.5 (in feet) Image: Comparison of the second se	attenu .eq Ev	vening 63.6 50.9 57.1 64.7	Leq Ni	9ht 57.6 60.1 66.4 67.7		Ldn 66.1 66.3 72.5 74.2		NEL 66.7 72.9 74.3
Unmitigated Noise Levels (without To VehicleType Leq Peak Hour Autos: 66.9 Medium Trucks: 62.7 Heavy Trucks: 68.9 Vehicle Noise: 71.6 Centerline Distance to Noise Contour	po and barrier Leq Day L 65.0 58.7 64.9 68.5 (in feet)	attenu .eq Evi 70 di	ening 63.6 50.9 57.1 64.7 BA	Leq Nig 65 dB	ght 57.6 60.1 66.4 67.7	6	Ldn 66.1 66.3 72.5 74.2 0 dBA	CI	06.7 66.3 72.5 74.3 dBA
Unmitigated Noise Levels (without To VehicleType Leg Peak Hour Autos: 66.9 Medium Trucks: 62.7 Heavy Trucks: 68.9 Vehicle Noise: 71.6 Centerline Distance to Noise Contour	po and barrier Leq Day L 65.0 58.7 64.9 68.5 (in feet)	attenu .eq Evi 70 di 144	uation) ening 63.6 50.9 57.1 64.7 BA 4	Leq Nig 65 dB 310	9ht 57.6 60.1 66.4 67.7 A	6	Ldn 66.1 66.3 72.5 74.2 0 dBA 669	C/ 55 1,-	VEL 66.3 72.5 74.3 dBA 441

APPENDIX 8.1:

ON-SITE TRAFFIC NOISE CALCULATIONS



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Scenario: Backyard With Wall Road Name: Holland Rd. Lot No: 38

SITE	SPECIFIC IN	PUT DATA			NO	ISE MODE	<u>EL INPUTS</u>	
Highway Data				Site Con	ditions (H	ard = 10, S	oft = 15)	
Average Daily	Traffic (Adt): 2	27,300 vehicles				Autos	: 10	
Peak Hour	^r Percentage:	10%		Me	dium Truck	ks (2 Axles)	: 10	
Peak H	lour Volume:	2,730 vehicles		He	avy Trucks	s (3+ Axles)	: 10	
Ve	ehicle Speed:	40 mph	_	Vehicle l	Mix			
Near/Far La	ane Distance:	48 feet		Veh	icleType	Dav	Evening	Night Daily
Site Data					Aut	tos: 75.5%	6 14.0%	10.5% 92.00%
Ba	rrier Height	8.0 feet		Me	edium Truc	ks: 48.0%	6 2.0%	50.0% 3.00%
Barrier Type (0-V	Vall. 1-Berm):	0.0		ŀ	leavy Truc	ks: 48.0%	6 2.0%	50.0% 5.00%
Centerline D	ist. to Barrier:	68.0 feet	_	Naiaa Ca		ationa (in f	[a a 4]	
Centerline Dist.	to Observer:	78.0 feet		Noise Sc			eet)	
Barrier Distance	to Observer:	10.0 feet		Madiu	AUTOS:	42.300		
Observer Height	(Above Pad):	3.0 feet		Mealur	n Trucks:	44.597	Crada Adiu	istmont: 00
P	ad Elevation:	42.3 feet		Heav	y Trucks:	50.306	Grade Auju	
Ro	ad Elevation:	42.3 feet		Lane Eq	uivalent D	istance (in	feet)	
Barr	rier Elevation:	43.0 feet			Autos:	75.726		
	Road Grade:	0.0%		Mediur	m Trucks:	75.456		
				Heav	y Trucks:	75.138		
EHWA Noise Moo	lel Calculation	6						
VehicleTvpe	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	n Berm Atten
Autos:	67.36	2.67	-1.8	7	0.00	1.96	-12.22	-15.220
Medium Trucks:	76.31	-12.19	-1.8	6	0.00	1.77	-11.84	40 -14.840
Heavy Trucks:	81.16	-9.97	-1.8	4	0.00	1.32	-10.94	-13.940
Unmitigated Nois	o Lovols (with	out Topo and b	arrior attor	ustion)				
VehicleType	l ea Peak Hou	r Lea Dav	lea F	venina	l ea Nia	aht	l dn	CNEL
Autos:	68	.2 66	5.1	64.9	Loging	58.8	67.2	67.9
Medium Trucks:	62	.3 58	3.3	50.5		59.7	65.9	65.9
Heavy Trucks:	69	.3 65	5.4	57.6		66.8	72.9	73.0
Vehicle Noise:	72	.3 69	9.2	65.7		68.1	74.6	74.8
Mitigated Noise L	evels (with To	po and barrier a	attenuation	1)				
VehicleType	Leq Peak Hou	r Leq Day	Leq E	, vening	Leq Nig	ght	Ldn	CNEL
Autos:	55	.9 53	3.9	52.6		46.6	55.0	55.7
Medium Trucks:	50	.4 46	6.4	38.7		47.9	54.0	54.1
Heavy Trucks:	58	.4 54	1.4	46.6		55.9	62.0	62.0
Vehicle Noise:	60	.8 57	7.5	53.7		56.9	63.3	63.5
Centerline Distan	ce to Noise Co	ontour (in feet)	70 (dBA	65 dB	A	60 dBA	55 dBA
		CNE	EL:	233		737	2,332	7,374

Scenario: Backyard With Wall Road Name: Holland Rd. Lot No: 146

SITE	SPECIFIC IN	PUT DATA			N	DISE M	IODE	L INPUT	5	
Highway Data			,	Site Con	ditions (Hard =	10, So	oft = 15)		
Average Daily	/ Traffic (Adt): 2	7,300 vehicles	6			A	lutos:	10		
Peak Hou	r Percentage:	10%		Me	dium True	cks (2 A	xles):	10		
Peak l	Hour Volume:	2,730 vehicles	5	He	avy Truck	ks (3+ A	xles):	10		
Ve	ehicle Speed:	40 mph		Vehicle I	Mix					
Near/Far La	ane Distance:	48 feet		Veh	icleTvpe		Dav	Evenina	Niaht	Dailv
Site Data					A	utos:	75.5%	5 14.0%	10.5%	92.00%
Ba	arriar Haight	8.0 feet		M	edium Tru	ucks:	48.0%	2.0%	50.0%	3.00%
Barrier Type (0-V	Vall. 1-Berm):	0.0		I	Heavy Tru	ucks:	48.0%	2.0%	50.0%	5.00%
Centerline D	ist. to Barrier:	68.0 feet	_	Noice Se	Juroo Ela	votiona	in f			
Centerline Dist	. to Observer:	78.0 feet	4	NUISE SC		valions	500			
Barrier Distance	e to Observer:	10.0 feet		Modiu	Aulos. m Trucks	· 47.	707			
Observer Height	(Above Pad):	3.0 feet		Loo	n Trucks.	. 49. . 55	506	Grade Ad	iustmont	μ Ο Ο
F	Pad Elevation:	45.2 feet		neav	y TTUCKS.	55.	.506	Orace Auj	usunen	. 0.0
Ro	oad Elevation:	47.5 feet		Lane Eq	uivalent	Distanc	e (in	feet)		
Bari	rier Elevation:	45.2 feet			Autos.	75.0)59			
	Road Grade:	0.0%		Mediur	m Trucks.	74.8	95			
				Heav	y Trucks:	74.8	846			
FHWA Noise Mor	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresn	əl	Barrier Att	en Bei	rm Atten
Autos	: 67.36	2.67	-1.8	3	0.00		1.39	-11.0	080	-14.080
Medium Trucks.	76.31	-12.19	-1.8	2	0.00		1.22	-10.7	'40	-13.740
Heavy Trucks.	: 81.16	-9.97	-1.8	2	0.00		0.86	-9.8	80	-12.880
Unmitigated Nois	se I evels (with	out Topo and	harrier atten	uation)						
VehicleType	Leg Peak Hou	r Leg Day	Leg E	vening	Leg N	light		Ldn	С	NEL
Autos	; 68.	.2 6	66.2	64.9	1	58.9		67.3	3	67.9
Medium Trucks.	62.	.3 5	58.3	50.5		59.7		65.9)	65.9
Heavy Trucks.	: 69.	.4 6	65.4	57.6		66.8		73.0)	73.0
Vehicle Noise.	. 72.	.3 6	69.2	65.8		68.1		74.6	6	74.8
Mitigated Noise L	evels (with To	po and barrier	attenuation	ı)						
VehicleType	Leq Peak Hou	r Leq Day	Leq E	vening	Leq N	light		Ldn	С	NEL
Autos.	: 57.	.1 5	55.1	53.8		47.8		56.2	2	56.8
Medium Trucks.	: 51.	.6 4	47.6	39.8		49.0		55.2	2	55.2
Heavy Trucks.	: 59.	.5 5	55.5	47.7		56.9		63.1		63.1
Vehicle Noise	: 61.	.9 5	58.7	54.9		58.0		64.4	ŀ	64.6
Centerline Distar	nce to Noise Co	ontour (in feet)	70 0	dBA	65 d	BA	e	60 dBA	55	dBA
		CN	VEL:	234		741		2,344		7,414

Scenario: Backyard With Wall Road Name: Leon Rd. Lot No: 29

SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Con	ditions (Hard = 1	10, So	oft = 15)		
Average Daily	Traffic (Adt): 2	28,700 vehicles	S			A	utos:	10		
Peak Hour	r Percentage:	10%		Me	dium Truc	cks (2 A	xles):	10		
Peak H	Hour Volume:	2,870 vehicles	S	He	avy Truck	(3+ A)	xles):	10		
Ve	ehicle Speed:	40 mph	-	Vehicle	Mix					
Near/Far La	ane Distance:	58 feet	-	Veh	icleType	L	Day	Evening	Night	Daily
Site Data			-		A	utos: 7	75.5%	14.0%	10.5%	92.00%
Ba	rrier Height:	6.0 feet		М	edium Tru	icks: 4	18.0%	2.0%	50.0%	3.00%
Barrier Type (0-V	Vall, 1-Berm):	0.0		I	Heavy Tru	icks: 4	18.0%	2.0%	50.0%	5.00%
Centerline D	ist. to Barrier:	185.0 feet	-	Noice C	ouroo Elo	votiona	lin fo	a4)		
Centerline Dist.	to Observer:	195.0 feet	-	Noise So		vations		et)		
Barrier Distance	to Observer:	10.0 feet		Modiu	Autos: m Trucko:	42.	900 107			
Observer Height	(Above Pad):	3.0 feet		Wealur Lloon	n Trucks.	40.	197	Grada Adii	istmont	· 0.0
P	Pad Elevation:	41.7 feet	-	neav	y muchs.	50.	900	Grade Auj	Journerie	. 0.0
Ro	ad Elevation:	42.9 feet		Lane Eq	uivalent l	Distanc	e (in f	feet)		
Barr	rier Elevation:	41.7 feet			Autos:	193.2	16			
	Road Grade:	0.0%		Mediu	m Trucks:	193.1	70			
				Heav	y Trucks:	193.1	81			
EUWA Noiso Moo	lal Calculation	<u>_</u>								
VehicleType	REMEL	s Traffic Flow	Distance	Finite	Road	Fresne	e/	Barrier Atte	en Ber	m Atten
Autos:	67.36	2.89	-5.9)4	0.00		0.48	-8.4	00	-11.400
Medium Trucks:	76.31	-11.98	-5.9	94	0.00		0.45	-8.2	50	-11.250
Heavy Trucks:	81.16	-9.76	-5.9	94	0.00		0.36	-7.8	00	-10.800
, Un mitimata d Naia		aut Tana and	howing otto							
VohioloTypo	Log Pook Hou				Log	liaht		ldn	C	
	Ley Feak Hou	1 Ley Day	62 3	61 0	Leyn	55 0		EUN 63.4	U.	64 (
Medium Trucks:	· 58	4	54 A	46.6		55.8		62 0		62.0
Heavy Trucks:	65	.5	61.5	40.0 53.7		62.9		69.1		69.1
Vehicle Noise:	68	.4	65.3	61.9		64.2		70.7		70.9
Mitigated Noise L	evels (with To	po and barrie	r attenuatio	n)						
VehicleType	Leq Peak Hou	r Leq Day	/ Leq E	vening	Leq N	light		Ldn	С	NEL
Autos:	55.	.9	53.9	52.6		46.6		55.0	I	55.6
Medium Trucks:	50	.1	46.2	38.4		47.6		53.7		53.8
Heavy Trucks:	57.	.7	53.7	45.9		55.1		61.3		61.3
Vehicle Noise:	60	.3	57.2	53.6		56.3		62.8		62.9
Centerline Distan	ce to Noise Co	ontour (in feet) 70	dBA	65 d	BA	6	0 dBA	55	dBA
		Cl	NEL:	239		755		2.389	·	7.554

Scenario: Backyard With Wall Road Name: Leon Rd. Lot No: 344

SITE S	SPECIFIC INP	UT DATA		NOISE MODEL INPUTS						
Highway Data				Site Con	aitions (r	tard = 10, 3	oft = 15)			
Average Daily	Traffic (Adt): 28	,700 vehicles				Autos	: 10			
Peak Hour	Percentage:	10%		Me	dium Truc	ks (2 Axles)	: 10			
Peak H	our Volume: 2	,870 vehicles		He	avy Truck	s (3+ Axles)	2: 10			
Ve	hicle Speed:	40 mph		Vehicle	Mix					
Near/Far La	ne Distance:	58 feet		Veh	icleType	Day	Evening	Night	Daily	
Site Data					AL	itos: 75.5°	% 14.0%	10.5%	92.00%	
Bai	rier Height	80 feet		M	edium Tru	cks: 48.0°	% 2.0%	50.0%	3.00%	
Barrier Type (0-W	all. 1-Berm):	0.0		I	Heavy Tru	cks: 48.0°	% 2.0%	50.0%	5.00%	
Centerline Dis	st to Barrier:	68.0 feet					•			
Centerline Dist.	to Observer:	78.0 feet		Noise So	ource Ele	vations (in	feet)			
Barrier Distance	to Observer:	10.0 feet			Autos:	40.000				
Observer Height (Above Pad):	30 feet		Mediu	m Trucks:	42.297	o , , , , ,			
Pé	ad Elevation:	41.6 feet		Heav	y Trucks:	48.006	Grade Adju	istment:	0.0	
Roa	ad Elevation:	40.0 feet		Lane Eq	uivalent [Distance (in	feet)			
Barri	er Elevation:	41.6 feet			Autos:	73.431				
	Road Grade:	0.0%		Mediu	m Trucks:	73.118				
				Heav	vy Trucks:	72.707				
FHWA Noise Mode	el Calculations	1					1			
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	n Berr	n Atten	
Autos:	67.36	2.89	-1.7	4	0.00	1.68	-11.66	60	-14.660	
Medium Trucks:	76.31	-11.98	-1.7	2	0.00	1.50	-11.30	00	-14.300	
Heavy Trucks:	81.16	-9.76	-1.7	0	0.00	1.10	-10.50	00	-13.500	
Unmitigated Noise	e Levels (withou	ut Topo and ba	arrier atter	nuation)						
VehicleType	Leg Peak Hour	Leq Day	Leg E	vening	Leg N	ight	Ldn	C٨	JEL	
Autos:	68.5	66	.5	65.2		59.2	67.6		68.2	
Medium Trucks:	62.6	58	.6	50.9		60.1	66.2		66.3	
Heavy Trucks:	69.7	65	.7	57.9		67.2	73.3		73.3	
Vehicle Noise:	72.6	69	.5	66.1		68.5	75.0		75.1	
Mitigated Noise L	wale (with Ton	o and barriar a	ttonuction	a)						
VehicleType	Lea Peak Hour			i) Venina	l ea N	iaht	l dn	CA	IFI	
Autos:	56 9	54 <u>54</u>	8	53 5	Legn	47.5	55.9	0/	56.6	
Medium Trucks:	51 Q	۵ ۱	3	30.6		48.8	5 <u>4</u> Q		55.0	
Heavy Trucks	59.2	55	2	47 4		-0.0 56 7	62.8		62.8	
Vehicle Noise:	61.6	58	.4	54.6		57.7	64.2		64.3	
Centerline Distance	ce to Noise Con	tour (in feet)	70	dBA	65 dl	BA	60 dBA	55	dBA	
		CNF		253		801	2 532		8,006	

Scenario: Backyard With Wall Road Name: Holland Rd. Lot No: 38

SITE	SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)							
Average Daily	Traffic (Adt): 2	27,300 vehicles	6			Auto	os: 10				
Peak Hour	^r Percentage:	10%		Me	dium Truc	ks (2 Axle	s <i>):</i> 10				
Peak H	lour Volume:	2,730 vehicles	3	He	avy Truck	s (3+ Axle	s): 10				
Ve	ehicle Speed:	40 mph	-	Vehicle	Mix						
Near/Far La	ane Distance:	48 feet	-	Veh	icleType	Da	y Evening	Night Daily			
Site Data					Αι	<i>itos:</i> 75.	5% 14.0%	10.5% 92.00%			
Ba	rrier Height	8.0 feet		М	edium Tru	cks: 48.	0% 2.0%	50.0% 3.00%			
Barrier Type (0-V	Vall. 1-Berm):	0.0			Heavy Tru	cks: 48.	0% 2.0%	50.0% 5.00%			
Centerline D	ist. to Barrier:	68.0 feet	-	Noine C							
Centerline Dist.	to Observer:	78.0 feet	-	NOISE S	ource Ele	vations (II	n reet)				
Barrier Distance	to Observer:	10.0 feet		Martin	AUtos:	42.30	0				
Observer Height	(Above Pad):	3.0 feet		Mealu	т Trucks:	44.59	1 O Crodo Adiu	ustmant: 00			
P	ad Elevation:	42.3 feet		Heal	/y Trucks:	50.30	6 Grade Adju	usimenii. 0.0			
Ro	ad Elevation:	42.3 feet		Lane Eq	uivalent L	Distance (in feet)				
Barr	ier Elevation:	43.0 feet			Autos:	75.726					
	Road Grade:	0.0%		Mediu	m Trucks:	75.456					
				Heav	/y Trucks:	75.138					
VehicleType	REMEI	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	n Berm Atten			
Autos:	67.36	2 67	-1.8	1 11110	0.00	1 (03/10/	-122	20 -15 220			
Medium Trucks:	76.31	-12 19	-1.8	36	0.00	1.0	77 -11.8	40 -14 840			
Heavy Trucks:	81.16	-9.97	-1.8	34	0.00	1.1	32 -10.9	40 -13.940			
Unmitigated Nois	e Levels (with	out lopo and l	barrier attei	nuation)	L a cr M	io:ht	l dia				
Venicie i ype	Leq Peak Hou	r Leq Day	Leq E	vening	Leq N	ignt 500	Lan 67.2	CNEL			
Aulos. Medium Trucks:	62	.2 (50.1	64.9 50.5		50.0 50.7	65.0	67.5			
Heavy Trucks:	69	3 6	35 <i>4</i>	57.6		66 8	72 9	73 (
Vehicle Noise:	72	3 6	59. 4 59.2	65.7		68.1	74.6	73.0			
Wahiala Tupo	evels (with To	po and barrier		n) Troning	Log N	iaht	l dp	CNEL			
Veriicie i ype	Leq Peak Hou	C Leq Day		sverning	Leq N	Igni An n		CNEL 55 7			
Auius. Medium Trucko:	50		16 /	02.0 20 7		40.0	51.0	50.7			
Heavy Trucks	. UC	.ч ² Л ²	+0.4 54 A	30.1 16 6		47.9 55.0	04.U 62 0	04. I 62 (
Vehicle Noise	60	8 4	57.5	40.0 53 7		56.9	62.0 62.2	63.6			
		······································			<u> </u>	00.3					
Centerline Distan	ce to Noise Co	ontour (in feet)	70	dBA	65 dl	BA	60 dBA	55 dBA			
		CN	VEL:	233		737	2,332	7.374			

Scenario: Backyard With Wall Road Name: Holland Rd. Lot No: 146

SITE SPECIFIC INPUT DATA									
Highway Data				Site Cor	nditions (l	Hard $= 10$, Soft = 15)		
Average Daily	Traffic (Adt):	27,300 vehicles	3			Au	tos: 10		
Peak Hour	Percentage:	10%		Me	edium Truc	ks (2 Axle	əs <i>):</i> 10		
Peak H	lour Volume:	2,730 vehicles	6	He	avy Truck	rs (3+ Axle	əs <i>):</i> 10		
Ve	ehicle Speed:	40 mph		Vehicle	Mix				
Near/Far La	ane Distance:	48 feet		Veh	icleType	Da	ay Evening	Night	Daily
Site Data					AL	utos: 75	.5% 14.0%	10.5%	92.00%
Ba	rrier Height:	80 feet		М	ledium Tru	icks: 48	.0% 2.0%	50.0%	3.00%
Barrier Type (0-V	Vall. 1-Berm):	0.0			Heavy Tru	icks: 48	.0% 2.0%	50.0%	5.00%
Centerline Di	ist. to Barrier:	68.0 feet		N/- / 0					
Centerline Dist.	to Observer:	78.0 feet		Noise S	ource Ele	vations (I	in reet)		
Barrier Distance	to Observer:	10.0 feet			Autos:	47.50	00		
Observer Height	(Above Pad):	3.0 feet		Mealu	m Trucks:	49.7	97 Orada Adi		0.0
P	ad Elevation:	45.2 feet		Heav	/y Trucks:	55.50)6 Grade Adj	ustment.	0.0
Ro	ad Elevation:	47.5 feet		Lane Eq	uivalent l	Distance	(in feet)		
Barr	ier Elevation:	45.2 feet			Autos:	75.059	9		
	Road Grade:	0.0%		Mediu	m Trucks:	74.895	5		
				Heav	/y Trucks:	74.846	6		
FHWA Noise Mod	lel Calculation	S	_						• • •
Vehicle Type	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	en Bern	n Atten
Autos:	67.36	2.67	-1.8	83	0.00	1.	39 -11.0	080	-14.080
Medium Trucks:	76.31	-12.19	-1.8	82	0.00	1.	22 -10.7	40	-13.740
Heavy Trucks:	81.16	-9.97	-1.8	82	0.00	0.	86 -9.8	880	-12.880
Unmitigated Nois	e Levels (with	out Topo and	barrier atte	nuation)					
VehicleType	Leq Peak Hou	ur Leq Day	Leq L	Evening	Leq N	light	Ldn	CN	EL
Autos:	68	.2 (66.2	64.9		58.9	67.3	3	67.9
Medium Trucks:	62	.3 !	58.3	50.5		59.7	65.9)	65.9
Heavy Trucks:	69	.4 (65.4	57.6		66.8	73.0)	73.0
Vehicle Noise:	72	2.3 (69.2	65.8		68.1	74.6	6	74.8
Mitigated Noise I	evels (with To	no and barrier	, attenuatio	<i>n</i>)					
VehicleType	Leg Peak Hou	Ir Leg Dav	Leg l	Evening	Leg N	ight	Ldn	CN	EL
Autos:	57	.1 (55.1	53.8	1	47.8	56.2	2	56.8
Medium Trucks:	51	.6	47.6	39.8		49.0	55.2	2	55.2
Heavy Trucks:	59	.5 4	55.5	47.7		56.9	63.1		63.1
Vehicle Noise:	61	.9	58.7	54.9		58.0	64.4	ļ	64.6
Centerline Distan	ce to Noise Co	ontour (in feet)) 70	dBA	65 dl	BA	60 dBA	55 c	IBA
		CI	VEL:	234	1	741	2.344		7.414

Scenario: Backyard With Wall Road Name: Leon Rd. Lot No: 29

SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Cor	nditions (Hard = 10, Soft = 15)					
Average Daily	Traffic (Adt):	28,700 vehicle	s			Autos	s: 10			
Peak Hour	^r Percentage:	10%		Me	edium Truc	ks (2 Axles)) <i>:</i> 10			
Peak H	lour Volume:	2,870 vehicle	s	He	eavy Truck	s (3+ Axles)): 10			
Ve	ehicle Speed:	40 mph		Vehicle	Mix					
Near/Far La	ane Distance:	58 feet		Veł	nicleType	Day	Evening	Night Daily		
Site Data					A	utos: 75.5	% 14.0%	10.5% 92.00%		
Ba	rrier Height:	6.0 feet		l. M	ledium Tru	icks: 48.0	% 2.0%	50.0% 3.00%		
Barrier Type (0-V	Vall, 1-Berm):	0.0			Heavy Tru	icks: 48.0	% 2.0%	50.0% 5.00%		
Centerline D	ist. to Barrier:	185.0 feet		Noiso S	ourco Elo	vations (in	foot)			
Centerline Dist.	to Observer:	195.0 feet		NUISE S		12 000	ieel)			
Barrier Distance	to Observer:	10.0 feet		Mediu	Auios. Im Trucks:	42.900				
Observer Height	(Above Pad):	3.0 feet		Loo	m Trucks.	50 006	Grade Adiu	stment: 00		
P	ad Elevation:	41.7 feet		Tiea	vy muchs.	50.900	Crade Adja			
Ro	ad Elevation:	42.9 feet		Lane Eq	uivalent l	Distance (ir	ı feet)			
Barr	rier Elevation:	41.7 feet			Autos:	193.216				
	Road Grade:	0.0%		Mediu	m Trucks:	193.170				
				Hea	vy Trucks:	193.181				
FHWA Noise Mod	lel Calculation	S								
VehicleType	REMEL	Traffic Flow	Distance	e Finite	Road	Fresnel	Barrier Atter	n Berm Atten		
Autos:	67.36	2.89	-5	.94	0.00	0.48	-8.40	-11.400		
Medium Trucks:	76.31	-11.98	-5	.94	0.00	0.45	5 -8.25	-11.250		
Heavy Trucks:	81.16	-9.76	-5	.94	0.00	0.36	6 -7.80	-10.800		
Unmitigated Nois	e Levels (with	out Topo and	barrier atte	enuation)						
VehicleType	Leq Peak Hou	ur Leq Day	/ Leq	Evening	Leq N	light	Ldn	CNEL		
Autos:	64	.3	62.3	61.0		55.0	63.4	64.0		
Medium Trucks:	58	3.4	54.4	46.6	i	55.8	62.0	62.0		
Heavy Trucks:	65	5.5	61.5	53.7		62.9	69.1	69.1		
Vehicle Noise:	68	3.4	65.3	61.9)	64.2	70.7	70.9		
Mitigated Noise L	evels (with To	po and barrie	r attenuatio	on)						
VehicleType	Leq Peak Hou	ur Leq Day	/ Leq	Evening	Leq N	light	Ldn	CNEL		
Autos:	55	5.9	53.9	52.6		46.6	55.0	55.6		
Medium Trucks:	50).1	46.2	38.4		47.6	53.7	53.8		
Heavy Trucks:	57	' .7	53.7	45.9)	55.1	61.3	61.3		
Vehicle Noise:	60).3	57.2	53.6	i	56.3	62.8	62.9		
Centerline Distan	ce to Noise C	ontour (in feet) 70	0 dBA	65 di	BA	60 dBA	55 dBA		
		C	NEL:	239		755	2.389	7,554		

Scenario: Backyard With Wall Road Name: Leon Rd. Lot No: 344

SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)						
Average Daily	Traffic (Adt):	28,700 vehicle	s			Autos	: 10			
Peak Hour	^r Percentage:	10%		Me	edium Truc	ks (2 Axles)	: 10			
Peak H	lour Volume:	2,870 vehicles	S	He	eavy Truck	s (3+ Axles)	: 10			
Ve	ehicle Speed:	40 mph		Vehicle	Mix					
Near/Far La	ane Distance:	58 feet		Veł	nicleType	Day	Evening	Night Daily		
Site Data					Αι	itos: 75.5%	% 14.0%	10.5% 92.00%		
Ba	rrier Heiaht:	8.0 feet		N	ledium Tru	cks: 48.09	% 2.0%	50.0% 3.00%		
Barrier Type (0-V	Vall, 1-Berm):	0.0			Heavy Tru	cks: 48.0°	% 2.0%	50.0% 5.00%		
Centerline D	ist. to Barrier:	68.0 feet		Noise S	ource Ele	vations (in	feet)			
Centerline Dist.	to Observer:	78.0 feet		110/30 0		40 000				
Barrier Distance	to Observer:	10.0 feet		Mediu	m Trucks:	42 297				
Observer Height	(Above Pad):	3.0 feet		Hea	wy Trucks:	48 006	Grade Adiu	stment: 0.0		
P	ad Elevation:	41.6 feet		1100	vy mucho.	40.000	erade raja			
Ro	ad Elevation:	40.0 feet		Lane Eq	uivalent L	Distance (in	feet)			
Barr	ier Elevation:	41.6 feet			Autos:	73.431				
	Road Grade:	0.0%		Mediu	m Trucks:	73.118				
				Hea	vy Trucks:	72.707				
FHWA Noise Mod	lel Calculation	S								
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atter	n Berm Atten		
Autos:	67.36	2.89	-1	.74	0.00	1.68	-11.66	-14.660		
Medium Trucks:	76.31	-11.98	-1	.72	0.00	1.50	-11.30	-14.300		
Heavy Trucks:	81.16	-9.76	-1	.70	0.00	1.10	-10.50	-13.500		
Unmitigated Nois	e Levels (with	out Topo and	barrier atte	enuation)						
VehicleType	Leq Peak Hou	ur Leq Day	⁄ Leq	Evening	Leq N	ight	Ldn	CNEL		
Autos:	68	3.5	66.5	65.2		59.2	67.6	68.2		
Medium Trucks:	62	2.6	58.6	50.9)	60.1	66.2	66.3		
Heavy Trucks:	69).7	65.7	57.9		67.2	73.3	73.3		
Vehicle Noise:	72	2.6	69.5	66.1		68.5	75.0	75.1		
Mitigated Noise L	evels (with To	po and barrie	r attenuatio	on)						
VehicleType	Leq Peak Hou	ur Leq Day	/ Leq	Evening	Leq N	ight	Ldn	CNEL		
Autos:	56	5.9	54.8	53.5		47.5	55.9	56.6		
Medium Trucks:	51	.3	47.3	39.6	i	48.8	54.9	55.0		
Heavy Trucks:	59	0.2	55.2	47.4		56.7	62.8	62.8		
Vehicle Noise:	61	.6	58.4	54.6	;	57.7	64.2	64.3		
Centerline Distan	ce to Noise C	ontour (in feet) 70) dBA	65 dl	BA	60 dBA	55 dBA		
		C	NEL:	253	a	801	2.532	8.006		

Scenario: First Floor With Wall Road Name: Eucalyptus Rd. Lot No: 158

SITE	SPECIFIC IN	PUT DATA			N	DISE MODE	EL INPUTS	
Highway Data				Site Con	ditions (Hard = 10, S	oft = 15)	
Average Daily	Traffic (Adt): 2	0,700 vehicles				Autos	: 10	
Peak Hour	Percentage:	10%		Me	dium Tru	cks (2 Axles)	: 10	
Peak H	lour Volume:	2,070 vehicles		He	avy Truc	ks (3+ Axles)	: 10	
Ve	ehicle Speed:	40 mph	-	Vehicle	Mix			
Near/Far La	ane Distance:	36 feet		Veh	icleType	Day	Evening	Night Daily
Site Data					A	utos: 75.5%	6 14.0%	10.5% 97.42%
Ba	rrier Heiaht:	6.0 feet		М	edium Tr	ucks: 48.9%	6 2.2%	48.9% 1.84%
Barrier Type (0-W	Vall, 1-Berm):	0.0			Heavy Tr	ucks: 47.3%	6 5.4%	47.3% 0.74%
Centerline Di	ist. to Barrier:	58.0 feet	F	Noise Su	ource Fle	vations (in f	eet)	
Centerline Dist.	to Observer:	78.0 feet	-	110/00 00	Autos	· 45.000	001)	
Barrier Distance	to Observer:	20.0 feet		Modiu	Aulos m Trucks	· 45.000		
Observer Height	(Above Pad):	5.0 feet		Heav	n Trucks	· 53.006	Grade Adiu	stment: 0.0
P	ad Elevation:	44.5 feet	-	neur	y muono	00.000	<i>C.u.c.r.uju</i>	
Ro	ad Elevation:	45.0 feet	-	Lane Eq	uivalent	Distance (in	feet)	
Barr	ier Elevation:	45.0 feet			Autos	75.518		
	Road Grade:	0.0%		Mediu	m Trucks	75.317		
				Heav	/y Trucks	75.229		
EHWA Noise Mod	lel Calculations	3						
VehicleTvpe	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atter	n Berm Atten
Autos:	67.36	1.72	-1.8	36	0.00	0.23	-7.01	0 -10.010
Medium Trucks:	76.31	-15.52	-1.8	35	0.00	0.14	-6.32	-9.320
Heavy Trucks:	81.16	-19.47	-1.8	34	0.00	0.01	-5.10	-8.100
Unmitigated Nois	e l evels (with	out Topo and b	arrier atte	nuation)				
VehicleTvpe	Lea Peak Hou	r Lea Dav	Lea E	venina	Lea N	liaht	Ldn	CNEL
Autos:	67.	2 65	5.2	63.9		57.9	66.3	66.9
Medium Trucks:	58.	9 55	5.0	47.5		56.3	62.5	62.5
Heavy Trucks:	59.	8 55	5.8	52.4		57.0	63.2	63.3
Vehicle Noise:	68.	.5 66	6.0	64.3		61.9	69.1	69.5
Mitigated Noise L	evels (with Top	po and barrier a	attenuatio	n)				
VehicleType	Leq Peak Hou	r Leq Day	Leq E	vening	Leq N	light	Ldn	CNEL
Autos:	60.	2 58	3.2	56.9	-	50.9	59.3	59.9
Medium Trucks:	52.	6 48	3.7	41.2		50.0	56.2	56.2
Heavy Trucks:	54.	7 50).7	47.3		51.9	58.1	58.2
Vehicle Noise:	61.	.8 59	9.3	57.4		55.8	62.8	63.1

Scenario: First Floor With Wall Road Name: Eucalyptus Rd. Lot No: 472

SITE	SPECIFIC IN	PUT DATA			Ν	OISE MODI	EL INPUTS	5	
Highway Data				Site Con	ditions	(Hard = 10, S	oft = 15)		
Average Daily Peak Hou	r Traffic (Adt): 2 r Percentage:	20,700 vehicles 10%		Me	dium Tru	Autos icks (2 Axles)	: 10 : 10		
Peak		2,070 venicies		пе	avy nuc	KS (S+ AXIES)	. 10		
Ve Noor/For La	enicie Speed:	40 mpn		Vehicle	Mix				
	ane Distance.	So leel		Veh	icleType	Day	Evening	Night	Daily
Site Data					A	utos: 75.59	% 14.0%	10.5%	97.42%
Ba	arrier Height:	6.0 feet		M	edium Tr	ucks: 48.99	% 2.2%	48.9%	1.84%
Barrier Type (0-V	Vall, 1-Berm):	0.0			Heavy Tr	ucks: 47.39	% 5.4%	47.3%	0.74%
Centerline D	ist. to Barrier:	187.0 feet		Noise So	ource El	evations (in	feet)		
Centerline Dist.	to Observer:	207.0 feet			Autos	42.000	,		
Barrier Distance	e to Observer:	20.0 feet		Mediu	m Trucks	: 44.297			
Observer Height F	(Above Pad): Pad Elevation:	5.0 feet 40.7 feet		Heav	/y Trucks	50.006	Grade Adj	ustment:	0.0
Ro	ad Elevation:	42.0 feet		Lane Eq	uivalent	Distance (in	feet)		
Bari	rier Elevation:	40.7 feet			Autos	206.216			
	Road Grade:	0.0%		Mediu	m Trucks	206.172			
				Heav	/y Trucks	206.186			
FHWA Noise Mod	lel Calculation	S							
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	en Beri	m Atten
Autos:	67.36	1.72	-6.2	22	0.00	0.05	-5.5	00	-8.500
Medium Trucks:	76.31	-15.52	-6.2	22	0.00	0.03	-5.3	00	-8.300
Heavy Trucks:	81.16	-19.47	-6.2	22	0.00	0.01	-5.1	00	-8.100
Unmitigated Nois	e Levels (with	out Topo and ba	arrier atte	nuation)					
VehicleType	Leq Peak Hou	r Leq Day	Leq E	Evening	Leq l	Vight	Ldn	CN	√EL
Autos:	62	.9 60).8	59.5		53.5	61.9		62.6
Medium Trucks:	54	.6 50).7	43.2		51.9	58.1		58.1
Heavy Trucks:	55	.5 51	.4	48.0		52.7	58.9		59.0
Vehicle Noise:	64	.1 61	.7	59.9		57.5	64.7		65.1
Mitigated Noise L	evels (with To	po and barrier a	nttenuatio	n)					
VehicleType	Leq Peak Hou	r Leq Day	Leq E	Evening	Leq l	Vight	Ldn	CN	VEL
Autos:	57.	.4 55	5.3	54.0		48.0	56.4		57.1
Medium Trucks:	49	.3 45	5.4	37.9		46.6	52.8		52.8
Heavy Trucks:	50.	.4 46	5.3	42.9		47.6	53.8		53.9
Vehicle Noise:	58	.7 56	5.2	54.5		52.2	59.4		59.8
Scenario: First Floor With Wall Road Name: Craig. Av. Lot No: 350

SITE	SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)							
Average Daily Peak Hour Peak F	Traffic (Adt): 2 Percentage: Iour Volume:	20,700 vehicles 10% 2,070 vehicles	6	Me He	dium Truc avy Truck	Autos cks (2 Axles) (s (3+ Axles)	10 10 10				
Ve	hicle Speed:	40 mph		Vohiclo	Mix						
Near/Far La	ane Distance:	36 feet		Venicie I Veh	icleType	Dav	Evenina	Night Daily			
Site Data				1011	A	utos: 75.5%	6 14.0%	10.5% 97.42%			
Ba	rrier Height:	6.0 feet		М	edium Tru	icks: 48.9%	6 2.2%	48.9% 1.84%			
Barrier Type (0-V	Vall. 1-Berm):	0.0			Heavy Tru	ıcks: 47.3%	6 5.4%	47.3% 0.74%			
Centerline Di	ist. to Barrier:	58.0 feet		Noine S	ouroo Ela	votiono (in f					
Centerline Dist.	to Observer:	78.0 feet		Noise So			eet)				
Barrier Distance	to Observer:	20.0 feet		Modiu	Aulos. m Trucks	39.000					
Observer Height	(Above Pad):	5.0 feet		Heav	y Trucks.	47.506	Grade Adjus	stment: 0.0			
P	ad Elevation.	40.8 leet		Lane Eq	uivalent	Distance (in	feet)				
Barr	ier Elevation:	40.8 feet			Autos	75 642	1000				
Dan	Road Grade:	0.0%		Mediu	m Trucks.	75.388					
		0.070		Heav	y Trucks	75.166					
EUWA Noice Med	lal Calaulation	_									
VehicleType		Traffic Flow	Distance	Finite	Road	Fresnel	Rarrier Δtter	n Berm Atten			
Autos:	67.36	1 72	-1	87	0.00	0.22	-6.94	0 -9.940			
Medium Trucks:	76.31	-15.52	-1.8	85	0.00	0.13	-6.24	0 -9.240			
Heavy Trucks:	81.16	-19.47	-1.8	84	0.00	0.01	-5.10	0 -8.100			
Unmitigated Nais	a Lavala (with	out Topo and	harriar atta	nuction							
VehicleType	Levers (with	r Lea Dav		Tualion) Evening	Lean	liaht	l dn	CNEL			
Autos:	67.	2 (35.2	_voning 63.9	Legn	57.9	66.3	66.9			
Medium Trucks:	58.	.9 5	55.0	47.5		56.3	62.5	62.5			
Heavy Trucks:	59.	.8 5	55.8	52.4		57.1	63.3	63.3			
Vehicle Noise:	68.	.5 (66.0	64.3		61.9	69.1	69.5			
Mitigated Noise L	evels (with To	po and barrier	attenuatio	n)							
VehicleType	Leq Peak Hou	r Leq Day	Leq I	Evening	Leq N	light	Ldn	CNEL			
Autos:	60.	.3 !	58.3	57.0		50.9	59.4	60.0			
Medium Trucks:	52.	.7 4	48.8	41.3		50.1	56.2	56.3			
Heavy Trucks:	54.	.7 !	50.7	47.3		52.0	58.2	58.2			
Vehicle Noise:	61.	.9	59.4	57.5		55.8	62.9	63.2			

Scenario: First Floor With Wall Road Name: Craig. Av. Lot No: 564

SITE	SPECIFIC IN	PUT DATA			Ν	OISE MODI	EL INPUTS	5
Highway Data				Site Cor	ditions	(Hard = 10, S	oft = 15)	
Average Daily Peak Hou Peak I	r Traffic (Adt): 2 r Percentage: Hour Volume:	0,700 vehicles 10% 2,070 vehicles		Me He	dium Tru avy Truc	Autos icks (2 Axles) iks (3+ Axles)	: 10 : 10 : 10	
Ve	ehicle Speed:	40 mph		Vohielo	Mix			
Near/Far La	ane Distance:	36 feet		Venicie	icleType	Dav	Evening	Night Daily
Site Data				VCI		utos: 75.5°	6 14 0%	10.5% 97.42%
Br	wiar Haight	6 0 feet		Μ	, edium Tr	ucks: 48.9%	% 2.2%	48.9% 1.84%
Barrier Type (0-1	Mall 1-Borm):				Heavy Tr	ucks: 47.3%	% 5.4%	47.3% 0.74%
Centerline D	ist to Barrier:	59.0 feet						
Centerline Dist.	to Observer:	79.0 feet		Noise S	ource El	evations (in i	feet)	
Barrier Distance	to Observer:	20.0 feet			Autos	2: 41.000		
Observer Height	(Above Pad):	5.0 feet		Mealu	m Trucks	3: 43.297	Grado Adiu	ustment: 00
F	Pad Elevation:	41.7 feet		nea	y Thucks	. 49.000	Orace Auj	
Ro	ad Elevation:	41.0 feet		Lane Eq	uivalent	Distance (in	feet)	
Bari	rier Elevation:	41.7 feet			Autos	<i>:</i> 76.610		
	Road Grade:	0.0%		Mediu	m Trucks	5: 76.384		
				Heav	/y Trucks	: 76.227		
FHWA Noise Mod	lel Calculations	;						
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	n Berm Atten
Autos:	67.36	1.72	-1.9	92	0.00	0.19	-6.72	20 -9.720
Medium Trucks:	76.31	-15.52	-1.9	91	0.00	0.11	-6.08	80 -9.080
Heavy Trucks:	81.16	-19.47	-1.9	90	0.00	0.01	-5.10	-8.100
Unmitigated Nois	e Levels (witho	out Topo and bar	rier atte	nuation)				
VehicleType	Leq Peak Hou	r Leq Day	Leq E	Evening	Leq	Vight	Ldn	CNEL
Autos:	67.	2 65.	1	63.8		57.8	66.2	66.9
Medium Trucks:	58.	9 55.0	D	47.5		56.2	62.4	62.4
Heavy Trucks	59.	8 55.7	7	52.3		57.0	63.2	63.3
Vehicle Noise:	68.	4 66.0	0	64.2		61.8	69.1	69.4
Mitigated Noise L	evels (with Top.	oo and barrier at	tenuatio	n)				
VehicleType	Leq Peak Hou	r Leq Day	Leq E	Evening	Leq I	Vight	Ldn	CNEL
Autos:	60.	4 58.4	4	57.1		51.1	59.5	60.1
Medium Trucks	52.	8 48.9	9	41.4		50.2	56.3	56.4
Heavy Trucks.	54.	7 50.6	6	47.2		51.9	58.1	58.2
Vehicle Noise:	62.	0 59.5	5	57.6		55.9	62.9	63.3

Scenario: First Floor With Wall Road Name: Holland Rd. Lot No: 38

SITE	SPECIFIC IN	PUT DATA			N	OISE MOD	EL INPUTS	
Highway Data				Site Cor	nditions (Hard = 10, S	Soft = 15)	
Average Daily	Traffic (Adt): 2	7,300 vehicles	6			Autos	: 10	
Peak Hour	r Percentage:	10%		Me	dium Tru	cks (2 Axles)): 10	
Peak H	Hour Volume:	2,730 vehicles	6	He	avy Truc	ks (3+ Axles)): 10	
Ve	ehicle Speed:	40 mph		Vehicle	Mix			
Near/Far La	ane Distance:	48 feet		Veh	nicleTvpe	Dav	Evenina	Night Dailv
Site Data					A	utos: 75.5	% 14.0%	10.5% 92.00%
Ba	orrier Height:	8.0 feet		M	ledium Tri	ucks: 48.0°	% 2.0%	50.0% 3.00%
Barrier Type (0-V	Vall 1-Berm) [.]	0.0			Heavy Tr	ucks: 48.0°	% 2.0%	50.0% 5.00%
Centerline D	ist. to Barrier:	68.0 feet		Naiae O		······································	f===()	
Centerline Dist.	to Observer:	88.0 feet		Noise S	ource Ele		reet)	
Barrier Distance	to Observer:	20.0 feet			Autos	42.300		
Observer Height	(Above Pad):	5.0 feet		Mealu	m Trucks	: 44.597	Crada Adiu	istmenti 0.0
F	ad Elevation:	42.3 feet		Heav	/y Trucks	50.306	Grade Auju	Simerii. 0.0
Ro	ad Elevation:	42.3 feet		Lane Eq	uivalent	Distance (in	feet)	
Barr	rier Elevation:	43.0 feet			Autos	: 84.555		
	Road Grade:	0.0%		Mediu	m Trucks	: 84.285		
				Heav	/y Trucks	: 83.967		
FHWA Noise Mod	lel Calculations			F ' - '' -	Deck		DeviewAtte	
venicie i ype	REMEL		Distance	Finite	Road	Fresnei	Barrier Atte	n Berm Atten
Autos:	67.36	2.67	-2.	35	0.00	0.74	-9.46	-12.460
Meaium Trucks:	76.31	-12.19	-2.	34	0.00	0.59	-8.95	-11.950
Heavy Trucks:	81.10	-9.97	-2.	32	0.00	0.29	-7.43	-10.430
Unmitigated Nois	e Levels (witho	ut Topo and	barrier atte	nuation)				
VehicleType	Leq Peak Hour	· Leq Day	Leq I	Evening	Leq N	light	Ldn	CNEL
Autos:	67.	7 (65.7	64.4		58.4	66.8	67.4
Medium Trucks:	61.8	3 !	57.8	50.0		59.2	65.4	65.4
Heavy Trucks:	68.9	9 (64.9	57.1		66.3	72.5	72.5
Vehicle Noise:	71.8	8 (68.7	65.3		67.6	74.1	74.3
Mitigated Noise L	evels (with Top	o and barrier	r attenuatio	n)				
VehicleType	Leq Peak Hour	· Leq Day	Leq	Évening	Leq N	light	Ldn	CNEL
Autos:	58.2	2 :	56.2	54.9	1	48.9	57.3	57.9
Medium Trucks:	52.8	8 4	48.9	41.1		50.3	56.4	56.5
Heavy Trucks:	61.4	4 క	57.5	49.7		58.9	65.0	65.1
Vehicle Noise:	63.	5 (60.2	56.2		59.8	66.2	66.3

Scenario: First Floor With Wall Road Name: Holland Rd. Lot No: 146

SITE SPECIFIC I	NPUT DATA			NC	DISE MOD	EL INPUTS	5
Highway Data			Site Con	ditions (l	Hard = 10, S	oft = 15)	
Average Daily Traffic (Adt):	27,300 vehicles				Autos	: 10	
Peak Hour Percentage:	10%		Me	dium Truc	cks (2 Axles)	: 10	
Peak Hour Volume:	2,730 vehicles		He	avy Truck	(3+ Axles)	: 10	
Vehicle Speed:	40 mph	-	Vehicle	Mix			
Near/Far Lane Distance:	48 feet	-	Veh	icleTvpe	Dav	Evenina	Night Dailv
Site Data				A	utos: 75.5°	% 14.0%	10.5% 92.00%
Barrier Height:	8.0 feet		M	edium Tru	icks: 48.09	% 2.0%	50.0% 3.00%
Barrier Type (0-Wall, 1-Berm):	0.0		I	Heavy Tru	icks: 48.09	% 2.0%	50.0% 5.00%
Centerline Dist. to Barrier:	68.0 feet	-	Noine Cr		votione (in	(a a 4)	
Centerline Dist. to Observer:	88.0 feet	-	Noise So	burce Ele		reet)	
Barrier Distance to Observer:	20.0 feet			Autos:	47.500		
Observer Height (Above Pad):	5.0 feet		iviediui		49.797	Grada Adi	ustmont: 00
Pad Elevation:	45.2 feet		Heav	y Trucks:	55.506	Grade Auj	
Road Elevation:	47.5 feet	_	Lane Eq	uivalent	Distance (in	feet)	
Barrier Elevation:	45.2 feet			Autos:	84.102		
Road Grade:	0.0%		Mediu	m Trucks:	83.939		
			Heav	y Trucks:	83.889		
EHWA Naisa Madal Calaulatia	20						
VehicleType REMEI	Traffic Flow	Distance	Finite	Road	Fresnel	Rarrier Δtte	n Berm Atten
Autos: 67.30	6 2 67	-2 3	33	0.00	0.41	-8 0	50 -11 050
Medium Trucks: 76.3	1 -12.19	-2 ?	32	0.00	0.30	-7.5	00 -10 500
Heavy Trucks: 81.16	6 -9.97	-2.3	32	0.00	0.10	-6.0	00 -9.000
Unmitigated Noise Levels (With	nout lopo and ba	rrier atte	nuation)	1001	light	l de	
Autos:	TT 65		Everning 64 A	Leq N	58 /	LUII 66.8	GNEL 67 /
Medium Trucks: 6	1.1 03. 1.8 57	8	50.0		59.2	65.4	65.4
Heavy Trucks: 6	8.9 64	9	57.1		66.3	72 5	72 5
Vehicle Noise: 7	1 8 68	е 7	65.3		67.6	74 1	74.3
			, .		0110		
Mitigated Noise Levels (with T	opo and barrier at	tenuatio	n)	1001	liadat	l dia	
	Dur Leq Day	Leq E	Evening	Leq N	EO 2	LUN	
Autos. 5	13.1 D1.	0 2	20.3		50.5	JO./	59.4
Hoovy Trucks: 5	4.0 50.	5	42.5		51.7	57.9	57.8
	20 50	٥	51 1		60.3	66 5	66 5

Scenario: First Floor With Wall Road Name: Leon Rd. Lot No: 29

SITE	SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)							
Average Daily	Traffic (Adt):	28,700 vehicles				Autos.	: 10				
Peak Hou	r Percentage:	10%		Me	dium Truc	ks (2 Axles).	: 10				
Peak l	Hour Volume:	2,870 vehicles		He	avy Truck	s (3+ Axles).	: 10				
Ve	ehicle Speed:	40 mph		Vehicle	Mix						
Near/Far La	ane Distance:	58 feet		Veh	nicleTvpe	Dav	Evenina	Niaht	Dailv		
Site Data					AL	1tos: 75.5%	6 14.0%	10.5%	92.00%		
Ba	orrier Height:	6.0 feet		М	ledium Tru	cks: 48.0%	6 2.0%	50.0%	3.00%		
Barrier Type (0-V	Vall. 1-Berm):	0.0			Heavy Tru	cks: 48.0%	6 2.0%	50.0%	5.00%		
Centerline D	ist. to Barrier:	185.0 feet		Noine C		nationa (in f	(a a 4)				
Centerline Dist.	to Observer:	205.0 feet		Noise S	ource Ele		eet)				
Barrier Distance	to Observer:	20.0 feet			AUtos:	42.900					
Observer Height	(Above Pad):	5.0 feet		Mealu		45.197	Crada Adiu	iotmont:	0.0		
F	Pad Elevation:	41.7 feet		Heav	y Trucks:	50.906	Grade Aujt	isimeni.	0.0		
Ro	ad Elevation:	42.9 feet		Lane Eq	uivalent L	Distance (in	feet)				
Bari	rier Elevation:	41.7 feet			Autos:	202.801					
	Road Grade:	0.0%		Mediu	m Trucks:	202.755					
				Heav	vy Trucks:	202.766					
FHWA Noise Mor	lel Calculation	\$									
VehicleTvpe	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	n Beri	m Atten		
Autos	67.36	2.89	-6.	15	0.00	0.05	-5.50	00	-8.500		
Medium Trucks:	76.31	-11.98	-6.	15	0.00	0.04	-5.40	00	-8.400		
Heavy Trucks:	81.16	-9.76	-6.	15	0.00	0.01	-5.10	00	-8.100		
I Inmitiaated Nois	a l avals (with	out Topo and b	arriar atta	nuation)							
VehicleType	Lea Peak Hou	ur Lea Dav		Tuation) Evenina	l ea N	iaht	l dn	CN	VEI		
Autos	64	.1 62	2.1	60.8	Login	54.8	63.2	01	63.8		
Medium Trucks	58	.2 54	1.2	46.4		55.6	61.8		61.8		
Heavy Trucks	65	.3 61	.3	53.5		62.7	68.9		68.9		
Vehicle Noise:	68	.2 65	5.1	61.7		64.0	70.5		70.7		
Mitigated Noise I	evels (with To	no and barrier a	ottenuatio	<i>n</i>)							
VehicleType	Leg Peak Hou	Ir Leg Day	Leg I	, Evening	Leg N	ight	Ldn	CN	VEL		
Autos	58	.6 56).6 ,	55.3		49.3	57.7		58.3		
Medium Trucks:	52	.8 48	3.8	41.0		50.2	56.4		56.4		
Heavy Trucks:	60	.2 56	6.2	48.4		57.6	63.8		63.8		
Vehicle Noise.	62	.9 59	9.8	56.2		58.8	65.3		65.5		

Scenario: First Floor With Wall Road Name: Leon Rd. Lot No: 344

SITE	SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)							
Average Daily Peak Hour Peak F	[,] Traffic (Adt): 2 r Percentage: Hour Volume:	28,700 vehicles 10% 2,870 vehicles		M H	edium Tru eavy Truc	Aute Icks (2 Axle ks (3+ Axle	os: 10 es): 10 es): 10				
Ve	ehicle Speed:	40 mph		Vohicle	Mix						
Near/Far La	ane Distance:	58 feet		Venicle	hicleType	Da	v Evenina	Niaht	Daily		
Site Data					,	Autos: 75.	5% 14.0%	10.5%	92.00%		
Ba	orrior Hoight:	8.0 feet		٨	/ledium Ti	rucks: 48.	0% 2.0%	50.0%	3.00%		
Barrier Type (0-V	Vall 1-Berm) [.]	0.0			Heavy Ti	rucks: 48.	0% 2.0%	50.0%	5.00%		
Centerline D	ist. to Barrier:	68.0 feet		Noine		ovetiene (i	n fo o 4)				
Centerline Dist.	to Observer:	88.0 feet		Noise a							
Barrier Distance	to Observer:	20.0 feet		Modi	Aulo: Im Trucks	3. 40.00	0 7				
Observer Height P	(Above Pad): Pad Elevation:	5.0 feet 41.6 feet		Hea	vy Truck	s: 48.00	6 Grade Ac	ljustment	: 0.0		
Ro	ad Elevation:	40.0 feet		Lane E	quivalent	Distance (in feet)				
Barr	rier Elevation:	41.6 feet			Autos	s: 82.475					
	Road Grade:	0.0%		Media	um Trucks	s: 82.162					
				Hea	vy Trucks	s: 81.750	1				
FHWA Noise Mod	lel Calculation	S									
VehicleType	REMEL	Traffic Flow	Distance	e Finite	e Road	Fresnel	Barrier At	ten Ber	m Atten		
Autos:	67.36	2.89	-2	.24	0.00	0.6	64 -9.	120	-12.120		
Medium Trucks:	76.31	-11.98	-2	.23	0.00	0.8	50 -8.	500	-11.500		
Heavy Trucks:	81.16	-9.76	-2	.20	0.00	0.2	23 -7.	010	-10.010		
Unmitigated Nois	e Levels (with	out Topo and b	barrier att	enuation)							
VehicleType	Leq Peak Hou	ır Leq Day	Leq	Evening	Leq	Night	Ldn	C	NEL		
Autos:	68	.0 6	6.0	64.	7	58.7	67.	1	67.7		
Medium Trucks:	62	.1 5	58.1	50.3	3	59.6	65.	7	65.7		
Heavy Trucks:	69	.2 6	5.2	57.4	1	66.6	72.	8	72.8		
Vehicle Noise:	72	.1 6	69.0	65.0	6	68.0	74.	5	74.6		
Mitigated Noise L	evels (with To	po and barrier	attenuati	on)							
VehicleType	Leq Peak Hou	ır Leq Day	Leq	Evening	Leq	Night	Ldn	C	NEL		
Autos:	58	.9 5	6.9	55.0	6	49.6	58.	0	58.6		
Medium Trucks:	53	.6 4	9.6	41.8	3	51.1	57.	2	57.2		
Heavy Trucks:	62	.2 5	58.2	50.4	1	59.6	65.	8	65.8		
Vehicle Noise:	64	.2 6	60.9	56.9	9	60.6	66.	9	67.1		

Scenario: Second Floor With Wall Road Name: Eucalyptus Rd. Lot No: 158

SITE	SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)							
Average Daily Peak Hour Peak H	Traffic (Adt): 20 Percentage: Iour Volume: 2	,700 vehicles 10% ,070 vehicles		Me He	dium Truc avy Truck	Autos. ks (2 Axles). s (3+ Axles).	10 10 10				
Ve	hicle Speed:	40 mph	-	Vehicle	Mix						
Near/Far La	ne Distance:	36 feet	-	Veh	icleTvpe	Dav	Evenina I	Night Daily			
Site Data					A	utos: 75.5%	6 14.0%	10.5% 97.42%			
Ba	rrier Height	60 feet		M	edium Tru	icks: 48.9%	6 2.2%	48.9% 1.84%			
Barrier Type (0-W	Vall, 1-Berm):	0.0		I	Heavy Tru	icks: 47.3%	6 5.4%	47.3% 0.74%			
Centerline Di	ist. to Barrier:	58.0 feet	-	Noiso Sa	ourco Elo	vations (in f	(act)				
Centerline Dist.	to Observer:	78.0 feet	-	10/36 50		15 000	eelj				
Barrier Distance	to Observer:	20.0 feet		Mediu	n Trucks	47 297					
Observer Height P	(Above Pad): ad Elevation:	14.0 feet 44.5 feet		Heav	y Trucks:	53.006	Grade Adjus	stment: 0.0			
Ro	ad Elevation:	45.0 feet		Lane Eq	uivalent l	Distance (in	feet)				
Barr	ier Elevation:	45.0 feet			Autos:	77.086					
	Road Grade:	0.0%		Mediu	m Trucks:	76.717					
				Heav	y Trucks:	76.093					
FHWA Noise Mod	lel Calculations		I								
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atter	n Berm Atten			
Autos:	67.36	1.72	-1.9	95	0.00	-0.50	0.00	0 0.000			
Medium Trucks:	76.31	-15.52	-1.9	93	0.00	-0.66	0.00	0 0.000			
Heavy Trucks:	81.16	-19.47	-1.8	39	0.00	-1.18	0.00	0 0.000			
Unmitigated Nois	e Levels (withou	ut Topo and ba	arrier atte	nuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq E	Evening	Leq N	light	Ldn	CNEL			
Autos:	67.1	65	5.1	63.8		57.8	66.2	66.8			
Medium Trucks:	58.9	55	.0	47.5		56.2	62.4	62.4			
Heavy Trucks:	59.8	55	5.7	52.4		57.0	63.2	63.3			
Vehicle Noise:	68.4	66	5.0	64.2		61.8	69.0	69.4			
Mitigated Noise L	evels (with Top	o and barrier a	ttenuatio	n)							
VehicleType	Leq Peak Hour	Leq Day	Leq E	vening	Leq N	light	Ldn	CNEL			
Autos:	67.1	65	5.1	63.8		57.8	66.2	66.8			
Medium Trucks:	58.9	55	.0	47.5		56.2	62.4	62.4			
Heavy Trucks:	59.8	55	5.7	52.4		57.0	63.2	63.3			
Vehicle Noise:	68.4	66	5.0	64.2		61.8	69.0	69.4			

Scenario: Second Floor With Wall Road Name: Eucalyptus Rd. Lot No: 472

SITE	SPECIFIC INF	PUT DATA			NC	ISE MODE	EL INPUTS	5		
Highway Data				Site Conditions (Hard = 10, Soft = 15)						
Average Daily Peak Hour Peak H	Traffic (Adt): 20 Percentage: Hour Volume: 2	0,700 vehicles 10% 2,070 vehicles		Me He	dium Truc avy Truck	Autos: ks (2 Axles). s (3+ Axles).	10 10 10			
Ve	ehicle Speed:	40 mph	_	Vehicle	Mix					
Near/Far La	ane Distance:	36 feet	_	Veh	icleTvpe	Dav	Evenina	Niaht	Dailv	
Site Data					AL	tos: 75.5%	6 14.0%	10.5%	97.42%	
Ba	rrier Height:	6.0 feet		М	edium Tru	cks: 48.9%	6 2.2%	48.9%	1.84%	
Barrier Type (0-V	Vall. 1-Berm):	0.0		I	Heavy Tru	cks: 47.3%	6 5.4%	47.3%	0.74%	
Centerline D	ist. to Barrier:	187.0 feet	-	Noice S		ations (in f	(a.a.t.)			
Centerline Dist.	to Observer:	207.0 feet	_	NUISE SC		12 000	eel)			
Barrier Distance	to Observer:	20.0 feet		Madiu	n Trucks:	42.000				
Observer Height	(Above Pad): ad Elevation:	14.0 feet		Heav	ry Trucks:	50.006	Grade Adjı	ustment: (0.0	
, Ro	ad Elevation:	40.7 leet	-	Lane Eq	uivalent D	Distance (in	feet)			
Bari	ier Elevation:	40.7 feet	_	•	Autos:	206.607	,			
	Road Grade:	0.0%		Mediu	m Trucks:	206.478				
				Heav	y Trucks:	206.269				
FHWA Noise Mod	lel Calculations									
VehicleType	REMEL	Traffic Flow D	Distance	Finite	Road	Fresnel	Barrier Atte	n Berm	Atten	
Autos:	67.36	1.72	-6.2	23	0.00	-1.18	0.00	00	0.000	
Medium Trucks:	76.31	-15.52	-6.2	23	0.00	-1.27	0.00	00	0.000	
Heavy Trucks:	81.16	-19.47	-6.2	22	0.00	-1.48	0.00	00	0.000	
Unmitigated Nois	e Levels (witho	ut Topo and bar	rier atter	nuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq E	vening	Leq N	ight	Ldn	CNE	ΞL	
Autos:	62.8	60.8	3	59.5		53.5	61.9		62.6	
Medium Trucks:	54.6	50.7	7	43.2		51.9	58.1		58.1	
Heavy Trucks:	55.5	5 51.4	ļ	48.0		52.7	58.9		59.0	
Vehicle Noise:	64.1	61.7	7	59.9		57.5	64.7		65.1	
Mitigated Noise L	evels (with Top	o and barrier att	enuatio	n)						
VehicleType	Leq Peak Hour	Leq Day	Leq E	vening	Leq N	ight	Ldn	CNE	EL	
Autos:	62.8	60.8	5 -	59.5		53.5	61.9		62.6	
Medium Trucks:	54.6	50.7	, ,	43.2		51.9	58.1		58.1	
Heavy Trucks:	55.5	51.4	+	48.0		52.7	58.9		59.0	
veriicie ivoise:	64.1	61./	,	59.9		57.5	64.7		65.1	

Scenario: Second Floor With Wall Road Name: Craig. Av. Lot No: 350

SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS							
Highway Data				Site Conditions (Hard = 10, Soft = 15)							
Average Daily	Traffic (Adt): 20),700 vehicles				Autos:	10				
Peak Hou	r Percentage:	10%		Me	dium Trucl	ks (2 Axles):	10				
Peak l	Hour Volume: 2	2,070 vehicles		He	avy Trucks	s (3+ Axles):	10				
Ve	ehicle Speed:	40 mph	_	Vehicle I	Mix						
Near/Far La	ane Distance:	36 feet	_	Veh	icleType	Day	Evening	Night	Daily		
Site Data					Au	tos: 75.5%	6 14.0%	10.5%	97.42%		
Ba	arrier Height:	6.0 feet		M	edium Truc	cks: 48.9%	<i>6</i> 2.2%	48.9%	1.84%		
Barrier Type (0-V	Vall, 1-Berm):	0.0		ŀ	Heavy Truc	cks: 47.3%	<i>5.4</i> %	47.3%	0.74%		
Centerline D	ist. to Barrier:	58.0 feet	_	Noise Sc	ource Flev	ations (in f	eet)				
Centerline Dist	to Observer:	78.0 feet	_	110/30 00	Autoo:	20 500					
Barrier Distance	e to Observer:	20.0 feet		Modiu	Aulos. m Trucks:	39.000 41 707					
Observer Height	(Above Pad):	14.0 feet		Hoay	n Trucks	47.506	Grade Adi	ustment:	0.0		
F	Pad Elevation:	40.8 feet	_	Tieav	y muchs.	47.500		douriont.	0.0		
Ro	oad Elevation:	39.5 feet	_	Lane Eq	uivalent D	istance (in	feet)				
Bari	rier Elevation:	40.8 feet			Autos:	77.422					
	Road Grade:	0.0%		Mediur	m Trucks:	77.001					
				Heav	y Trucks:	76.244					
FHWA Noise Mod	lel Calculations										
VehicleType	REMEL	Traffic Flow D	Distance	Finite	Road	Fresnel	Barrier Atte	en Beri	m Atten		
Autos	67.36	1.72	-1.9	17	0.00	-0.50	0.0	00	0.000		
Medium Trucks	76.31	-15.52	-1.9	4	0.00	-0.66	0.0	00	0.000		
Heavy Trucks.	81.16	-19.47	-1.9	0	0.00	-1.18	0.0	00	0.000		
Unmitigated Nois	e Levels (witho	ut Topo and bar	rier atter	nuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq E	vening	Leq Ni	ght	Ldn	CN	VEL		
Autos	67.1	65.1	1	63.8		57.8	66.2		66.8		
Medium Trucks.	58.9) 55.0)	47.5		56.2	62.4		62.4		
Heavy Trucks.	59.8	3 55.7	7	52.3		57.0	63.2		63.3		
Vehicle Noise.	68.4	65.9)	64.2		61.8	69.0		69.4		
Mitigated Noise L	evels (with Top	o and barrier att	enuation	n)							
VehicleType	Leq Peak Hour	Leq Day	Leq E	vening	Leq Ni	ght	Ldn	CN	√EL		
Autos	67.1	65.1		63.8		57.8	66.2		66.8		
Medium Trucks.	58.9	55.0)	47.5		56.2	62.4		62.4		
Heavy Trucks.	59.8	3 55.7	·	52.3		57.0	63.2		63.3		
Vehicle Noise	68.4	65.9)	64.2		61.8	69.0		69.4		

Scenario: Second Floor With Wall Road Name: Craig. Av. Lot No: 564

SITE	SITE SPECIFIC INPUT DATA										
Highway Data				Site Cor	nditions (Hard = 10, S	oft = 15)				
Average Daily	Traffic (Adt): 2	0,700 vehicles	;			Autos:	10				
Peak Hour	· Percentage:	10%		Me	dium Tru	cks (2 Axles).	10				
Peak H	lour Volume:	2,070 vehicles	;	He	avy Trucl	ks (3+ Axles).	10				
Ve	ehicle Speed:	40 mph		Vehicle	Mix						
Near/Far La	ane Distance:	36 feet		Veh	icleType	Day	Evening	Night Daily			
Site Data					A	utos: 75.5%	6 14.0%	10.5% 97.42%			
Ba	rrier Height	6.0 feet		М	ledium Tru	ucks: 48.9%	6 2.2%	48.9% 1.84%			
Barrier Type (0-V	Vall. 1-Berm):	0.0			Heavy Tru	ucks: 47.3%	6 5.4%	47.3% 0.74%			
Centerline Di	ist. to Barrier:	59.0 feet		Noice S	ouroo Ela	votiono /in f	(act)				
Centerline Dist.	to Observer:	79.0 feet		NUISE S			eel)				
Barrier Distance	to Observer:	20.0 feet		Modiu	Autos. m Trucko	41.000					
Observer Height	(Above Pad):	14.0 feet		Hoo	ni Trucks.	43.297	Grada Adiu	istmont: 00			
P	ad Elevation:	41.7 feet		near	ly muchs.	49.000	Orade Auju	Siment. 0.0			
Ro	ad Elevation:	41.0 feet		Lane Eq	uivalent	Distance (in	feet)				
Barr	ier Elevation:	41.7 feet			Autos.	78.314					
	Road Grade:	0.0%		Mediu	m Trucks.	77.916					
				Heav	/y Trucks	77.213					
FHWA Noise Mod	lel Calculations	:									
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	n Berm Atten			
Autos:	67.36	1.72	-2.	02	0.00	-0.55	0.00	0.000			
Medium Trucks:	76.31	-15.52	-2.	00	0.00	-0.72	0.00	0.000 0.000			
Heavy Trucks:	81.16	-19.47	-1.5	96	0.00	-1.24	0.00	0.000 0.000			
Unmitigated Nois	e l evels (with	out Topo and	harrier atte	nuation)							
VehicleTvpe	Lea Peak Hou	r Lea Dav	Lea I	Evenina	Lea N	liaht	Ldn	CNEL			
Autos:	67.	1 6	65.1	63.7		57.7	66.1	66.8			
Medium Trucks:	58.	8 5	54.9	47.4		56.2	62.3	62.4			
Heavy Trucks:	59.	7 5	55.7	52.3		56.9	63.1	63.2			
Vehicle Noise:	68.	3 6	65.9	64.1		61.8	69.0	69.3			
Mitigated Noise L	evels (with Top	oo and barrier	attenuatio	n)							
VehicleType	Leq Peak Hou	r Leq Day	Leq I	Evening	Leq N	light	Ldn	CNEL			
Autos:	67.	1 6	65.1	63.7		57.7	66.1	66.8			
Medium Trucks:	58.	8 5	54.9	47.4		56.2	62.3	62.4			
Heavy Trucks:	59.	7 5	55.7	52.3		56.9	63.1	63.2			
Vehicle Noise:	68.	3 6	65.9	64.1		61.8	69.0	69.3			

Scenario: Second Floor With Wall Road Name: Holland Rd. Lot No: 38

SITE	SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)							
Average Daily	Traffic (Adt): 27	,300 vehicles				Autos	s: 10				
Peak Hour	r Percentage:	10%		Me	dium Tr	ucks (2 Axles,): 10				
Peak I	Hour Volume: 2	2,730 vehicles		He	avy Tru	cks (3+ Axles,): 10				
Ve	ehicle Speed:	40 mph	_	Vehicle	Mix						
Near/Far La	ane Distance:	48 feet		Veh	icleType	e Day	Evening	Night	Daily		
Site Data						Autos: 75.59	% 14.0%	10.5%	92.00%		
Ba	nrrier Heiaht:	8.0 feet		М	edium T	rucks: 48.0	% 2.0%	50.0%	3.00%		
Barrier Type (0-V	Vall, 1-Berm):	0.0		I	Heavy T	rucks: 48.0°	% 2.0%	50.0%	5.00%		
Centerline D	ist. to Barrier:	68.0 feet	-	Noise Su	ourco E	lovations (in	foot)				
Centerline Dist.	to Observer:	88.0 feet	-	10136 50			ieelj				
Barrier Distance	to Observer:	20.0 feet		Modiu	Aulo m Truck	3. 42.300					
Observer Height	(Above Pad):	14.0 feet		Hoar	N Truck	5. 44.397	Grade Adii	istment [.]	0.0		
F	Pad Elevation:	42.3 feet	-	Tiear	y much	3. 30.300	Crado riaje		0.0		
Ro	ad Elevation:	42.3 feet	_	Lane Eq	uivalen	t Distance (in	ı feet)				
Bari	rier Elevation:	43.0 feet			Auto	s: 85.814					
	Road Grade:	0.0%		Mediu	m Truck	s: 85.469					
				Heav	y Truck	s: 84.876					
FHWA Noise Mod	lel Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	n Bern	Atten		
Autos:	67.36	2.67	-2.4	1	0.00	-0.13	3 0.00	00	0.000		
Medium Trucks:	76.31	-12.19	-2.4	0	0.00	-0.21	0.00	00	0.000		
Heavy Trucks:	81.16	-9.97	-2.3	37	0.00	-0.48	3 0.00	00	0.000		
Unmitigated Nois	e Levels (withou	ut Topo and ba	rrier attei	nuation)							
VehicleType	Leg Peak Hour	Leq Day	Leg E	vening	Leq	Night	Ldn	CN	EL		
Autos:	67.6	65	.6	64.3		58.3	66.7		67.3		
Medium Trucks:	61.7	57	.7	50.0		59.2	65.3		65.4		
Heavy Trucks:	68.8	64	.8	57.1		66.3	72.4		72.5		
Vehicle Noise:	71.7	68	.6	65.2		67.6	74.1		74.2		
Mitigated Noise L	evels (with Top	o and barrier a	ttenuatio	n)							
VehicleType	Leq Peak Hour	Leq Day	Leq E	vening	Leq	Night	Ldn	CN	EL		
Autos:	67.6	65	.6	64.3		58.3	66.7		67.3		
Medium Trucks:	61.7	57	.7	50.0		59.2	65.3		65.4		
Heavy Trucks:	68.8	64	.8	57.1		66.3	72.4		72.5		
Vehicle Noise:	71.7	68	.6	65.2		67.6	74.1		74.2		

Scenario: Second Floor With Wall Road Name: Holland Rd. Lot No: 146

SITE	SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Conditions (Hard = 10, Soft = 15)							
Average Daily	Traffic (Adt): 27	,300 vehicles				Autos	s: 10				
Peak Hour	r Percentage:	10%		Me	dium Tr	ucks (2 Axles,): 10				
Peak I	Hour Volume: 2	,730 vehicles		He	avy Tru	cks (3+ Axles): 10				
Ve	ehicle Speed:	40 mph	-	Vehicle	Mix						
Near/Far La	ane Distance:	48 feet	-	Veh	icleType	ə Day	Evening	Night	Daily		
Site Data			-			Autos: 75.5	% 14.0%	10.5%	92.00%		
Ba	rrier Heiaht:	8.0 feet		М	edium T	rucks: 48.0	% 2.0%	50.0%	3.00%		
Barrier Type (0-V	Vall, 1-Berm):	0.0		I	Heavy T	rucks: 48.0°	% 2.0%	50.0%	5.00%		
Centerline D	ist. to Barrier:	68.0 feet	F	Noise Su	ource F	levations (in	feet)				
Centerline Dist.	to Observer:	88.0 feet	-	110/30 00		e: 47 500	1001				
Barrier Distance	to Observer:	20.0 feet		Modiu	Aulo m Truck	s. 47.300					
Observer Height	(Above Pad):	14.0 feet		Heau	n Truck	s: 55 506	Grade Adiu	ustment: (0.0		
F	Pad Elevation:	45.2 feet	-	near	y muon	0. 00.000					
Ro	ad Elevation:	47.5 feet	-	Lane Eq	uivalen	t Distance (in	i feet)				
Bari	rier Elevation:	45.2 feet			Auto	s: 85.469					
	Road Grade:	0.0%		Mediu	m Truck	s: 85.185					
				Heav	vy Truck	s: 84.745					
FHWA Noise Moo	lel Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	n Berm	Atten		
Autos:	67.36	2.67	-2.4	10	0.00	-0.34	0.00	00	0.000		
Medium Trucks:	76.31	-12.19	-2.3	38	0.00	-0.45	5 0.00	00	0.000		
Heavy Trucks:	81.16	-9.97	-2.3	36	0.00	-0.82	0.00	00	0.000		
Unmitigated Nois	e Levels (withou	ut Topo and ba	rrier attei	nuation)							
VehicleType	Leq Peak Hour	Leq Day	Leg E	vening	Leq	Night	Ldn	CNE	ΞL		
Autos:	67.6	65.	.6	64.3		58.3	66.7		67.4		
Medium Trucks:	61.7	57.	.8	50.0		59.2	65.3		65.4		
Heavy Trucks:	68.8	64.	.8	57.1		66.3	72.4		72.5		
Vehicle Noise:	71.7	68.	.6	65.2		67.6	74.1		74.2		
Mitigated Noise L	evels (with Top	o and barrier a	ttenuatio	n)							
VehicleType	Leq Peak Hour	Leq Day	Leq E	vening	Leq	Night	Ldn	CNE	ΞL		
Autos:	67.6	65.	.6	64.3		58.3	66.7		67.4		
Medium Trucks:	61.7	57.	.8	50.0		59.2	65.3		65.4		
Heavy Trucks:	68.8	64.	.8	57.1		66.3	72.4		72.5		
Vehicle Noise:	71.7	68.	.6	65.2		67.6	74.1		74.2		

Scenario: Second Floor With Wall Road Name: Leon Rd. Lot No: 29

SITE SPECIFIC INPUT DATA Highway Data				NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15)						
Average Daily Peak Hour Peak H	Traffic (Adt): 2 Percentage: Iour Volume:	28,700 vehicles 10% 2,870 vehicles		Autos: 10 Medium Trucks (2 Axles): 10 Heavy Trucks (3+ Axles): 10						
Ve	hicle Speed:	40 mph		Vehicle	Mix					
Near/Far La	Near/Far Lane Distance: 58 feet				nicleType	Day	Evening	Night	Daily	
Site Data						Autos: 75.5%	6 14.0%	10.5%	92.00%	
Ba	rrier Height:	6.0 feet		M	ledium Ti	rucks: 48.0%	6 2.0%	50.0%	3.00%	
Barrier Type (0-W	Vall, 1-Berm):	0.0			Heavy Ti	rucks: 48.0%	6 2.0%	50.0%	5.00%	
Centerline Dist. to Barrier:		185.0 feet		Noise S	ource El	ovations (in t	foot)			
Centerline Dist.	to Observer:	205.0 feet		Noise S			661)			
Barrier Distance	to Observer:	20.0 feet		Mediu	m Truck	2 42.300				
Observer Height	(Above Pad):	14.0 feet		Hear	vv Trucks	s [.] 50,906	Grade Adiu	stment:	0.0	
P	ad Elevation:	41.7 feet					,			
Ro	ad Elevation:	42.9 feet		Lane Eq	uivalent	Distance (in	feet)			
Barr	ier Elevation:	41.7 feet			Autos	s: 203.342				
	Road Grade:	0.0%		Mediu	m Trucks	s: 203.210				
				Hea	vy Trucks	5: 202.995				
FHWA Noise Mod	lel Calculation	S								
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atter	n Beri	m Atten	
Autos:	67.36	2.89	-6.	16	0.00	-1.18	0.00	0	0.000	
Medium Trucks:	76.31	-11.98	-6.	16	0.00	-1.26	0.00	0	0.000	
Heavy Trucks:	81.16	-9.76	-6.	15	0.00	-1.48	0.00	0	0.000	
Unmitigated Nois	e Levels (with	out Topo and	barrier atte	enuation)						
VehicleType	Leq Peak Hou	r Leq Day	' Leq	Evening	Leq	Night	Ldn	CN	VEL	
Autos:	64.	.1 (62.1	60.8		54.8	63.2		63.8	
Medium Trucks:	58.	.2	54.2	46.4		55.6	61.8		61.8	
Heavy Trucks:	65.	.2	61.3	53.5		62.7	68.8		68.9	
Vehicle Noise:	68.	.2	65.1	61.7		64.0	70.5		70.7	
Mitigated Noise L	evels (with To	po and barrie	r attenuatio	on)						
VehicleType	Leq Peak Hou	r Leq Day	' Leq	, Evening	Leq	Night	Ldn	CN	VEL	
Autos:	64.	.1 (62.1	60.8		54.8	63.2		63.8	
Medium Trucks:	58.	.2	54.2	46.4		55.6	61.8		61.8	
Heavy Trucks:	65.	.2	61.3	53.5	·	62.7	68.8		68.9	
Vehicle Noise:	68	.2	65.1	61.7	,	64.0	70.5		70.7	

Scenario: Second Floor With Wall Road Name: Leon Rd. Lot No: 344

SITE SPECIFIC INPUT DATA Highway Data				NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15)						
										Average Daily Traffic (Adt): 28,700 vehicles
Peak Hour Percentage: 10%				Medium Trucks (2 Axles): 10						
Peak I	Hour Volume: 2	2,870 vehicles		He	avy Truck	s (3+ Axles):	10			
Ve	ehicle Speed:	40 mph	-	Vehicle	Mix					
Near/Far La	ane Distance:	58 feet		Veh	icleType	Day	Evening	Night	Daily	
Site Data					AL	itos: 75.5%	6 14.0%	10.5%	92.00%	
Ba	nrrier Heiaht:	8.0 feet		М	edium Tru	cks: 48.0%	6 2.0%	50.0%	3.00%	
Barrier Type (0-V	Vall, 1-Berm):	0.0		Heavy Trucks: 48.0% 2.0% 50.0% 5.0					5.00%	
Centerline D	ist. to Barrier:	68.0 feet		Noise Source Elevations (in feet)						
Centerline Dist.	to Observer:	88.0 feet	-	10/30 00	Autos:	40.000				
Barrier Distance	to Observer:	20.0 feet		Modiu	Aulos. m Trucko:	40.000				
Observer Height	Observer Height (Above Pad): 14			Mediu	TI TIUCKS.	42.297	Grado Adiu	ustmont:	0.0	
F	Pad Elevation:	41.6 feet		neav	y TTUCKS.	46.006	Grade Aujt	usimeni.	0.0	
Ro	ad Elevation:	40.0 feet		Lane Eq	uivalent L	Distance (in	feet)			
Bari	Barrier Elevation: 41.6 feet				Autos:	84.536				
	Road Grade: 0.0%			Medium Trucks: 84.143						
				Heav	y Trucks:	83.431				
FHWA Noise Mod	lel Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	en Beri	n Atten	
Autos:	67.36	2.89	-2.3	35	0.00	-0.18	0.0	00	0.000	
Medium Trucks:	76.31	-11.98	-2.3	33	0.00	-0.27	0.0	00	0.000	
Heavy Trucks	81.16	-9.76	-2.2	29	0.00	-0.56	0.0	00	0.000	
Unmitigated Nois	e Levels (withou	ut Topo and ba	rrier atter	nuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq E	vening	Leq N	ight	Ldn	CN	JEL	
Autos:	67.9	65	.9	64.6		58.6	67.0		67.6	
Medium Trucks:	62.0	58	.0	50.2		59.5	65.6		65.6	
Heavy Trucks:	:ks:69.165.1		.1	57.3	66.6		72.7		72.7	
Vehicle Noise: 72.0		68	.9	65.5		67.9	74.4		74.5	
Mitigated Noise L	evels (with Top	o and barrier a	ttenuatio	n)						
VehicleType	Leq Peak Hour	Leq Day	Leq E	vening	Leq N	ight	Ldn	CN	JEL	
Autos.	67.9	65	.9	64.6		58.6	67.0		67.6	
Medium Trucks:	62.0	58	.0	50.2		59.5	65.6		65.6	
Heavy Trucks:	69.1	65	.1	57.3		66.6	72.7		72.7	
Vehicle Noise:	72.0	68	.9	65.5		67.9	74.4		74.5	