Appendix M-1

Revised Noise Study



West Campus Upper Plateau

REVISED NOISE AND VIBRATION ANALYSIS

MARCH JOINT POWERS AUTHORITY (MARCH JPA)

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LIST OF ABBREVIATED TERMS

(1) Reference

ANSI American National Standards Institute
CEQA California Environmental Quality Act

CFR Code of Federal Regulations

CNEL Community Noise Equivalent Level

dBA A-weighted decibels

EPA Environmental Protection Agency
FHWA Federal Highway Administration
FTA Federal Transit Administration

Hz Hertz

I-215 Interstate 215

INCE Institute of Noise Control Engineering

 $\begin{array}{lll} L_{eq} & & \text{Equivalent continuous (average) sound level} \\ L_{max} & & \text{Maximum level measured over the time interval} \\ L_{min} & & \text{Minimum level measured over the time interval} \\ \text{MARB/IPA} & & \text{March Air Reserve Base/Inland Port Airport} \end{array}$

MJPA March Joint Powers Authority

mph Miles per hour

OPR Office of Planning and Research

PPV Peak Particle Velocity

Project West Campus Upper Plateau

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 <u>revised</u> noise study to determine the potential noise impacts and the necessary noise mitigation measures, if any, for the West Campus Upper Plateau Project ("Project"). <u>This revised study is an update to the West Campus Upper Plateau Noise and Vibration Analysis dated October 2022. <u>Additions are presented in double-underline and deletions are presented with strikethrough.</u> This <u>revised</u> study has been prepared to satisfy applicable March Joint Powers Authority (March JPA) standards and thresholds of significance based on guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1) The results of this West Campus Upper Plateau <u>Revised Noise and Vibration Analysis</u> are summarized below based on the significance criteria in Section 4 of this report. Table ES-1 shows the findings of significance for each potential noise and/or vibration impact under CEQA before and after any required mitigation measures.</u>

Significance Findings Report **Analysis** Section Unmitigated Mitigated Off-Site Traffic 7 Potentially Significant Significant and Unavoidable¹ 9 **Operational Noise** Less Than Significant **Construction Noise** Less Than Significant 10 **Construction Vibration** Less Than Significant

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Although not required to address a potentially significant impact, the applicant will implement the following measures, which would further reduce construction noise impacts:

- MOI-1 Hours of Construction. Project construction activities shall not be conducted during the period from 7:00 p.m. on a given day until 7:00 a.m. on the following day. Additionally, outdoor construction and grading activities, including the operation of any tools or equipment associated with construction, drilling, repair, alteration, grading/grubbing or demolition work within 500 feet of the property line of a residential use or sensitive receptor, shall be prohibited between 5:00 p.m. and 8:00 a.m. on Saturdays, and at any time on Sunday or a Federal Holiday.
- NOI-2 Blasting and Drilling Limits. No blasting shall occur within 1,000 feet of any residence or other sensitive receptor. In the event bedrock material that is not rippable by bulldozer is encountered within 1,000 feet of any residence or other sensitive receptor, the construction contractor shall utilize expansive epoxy or other non-explosive demolition agent for any necessary removal operations. In



¹ The Significant and Unavoidable off-site traffic noise impact is limited to the non-noise sensitive land uses adjacent to the only one study area roadway segment, Cactus Avenue east of Meridian Parkway (Segment #13). This segment is in a developed industrial area and is not located immediately adjacent to any noise sensitive land uses. All other roadway segments will experience off-site traffic noise level impacts that are considered less than significant.

addition to the distance limits, any blasting or drilling activities shall not exceed the City of Riverside's construction noise threshold of 75 dBA $L_{\rm eq}$ for City residents or the County of Riverside's construction noise threshold of 65 dBA $L_{\rm max}$ for County residents.

- NOI-3 Blasting Activities. All blasting activities shall be designed to meet the regulatory construction noise and vibration thresholds outlined on Table 4-1, Significance Criteria Summary.
- NOI-4 Construction Contractor Noise Abatement Best Practices. Prior to the issuance of each grading permit and building permit, the applicant shall provide evidence that the subject plans contain the following requirements and restrictions:
 - All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers, consistent with manufacturers' standards).
 - All stationary construction equipment shall be placed in such a manner so that the emitted noise is directed away from any sensitive receivers.
 - Construction equipment staging areas shall be located at the greatest feasible distance between the staging area and the nearest sensitive receivers.
 - The construction contractor shall limit equipment and material deliveries to the same hours specified for construction equipment for NOI-1.
 - <u>Electrically powered air compressors and similar power tools shall be used,</u> when feasible, in place of diesel equipment.
 - No music or electronically reinforced speech from construction workers shall be allowed within 500 feet of the property line of a residential use or sensitive receptor.



1 INTRODUCTION

This noise analysis has been completed to determine the noise impacts associated with the development of the proposed West Campus Upper Plateau Project ("Project"). This noise study briefly describes the proposed Project, provides information regarding noise fundamentals, sets out the local regulatory setting, presents the study methods and procedures for transportation related CNEL traffic noise analysis, and evaluates the future exterior noise environment. In addition, this study includes an analysis of the potential Project-related long-term stationary-source operational noise and short-term construction noise and vibration impacts.

1.1 SITE LOCATION

The Project site is located on either side of Barton Street and Cactus Avenue in the jurisdiction of the March Joint Powers Authority (March JPA) and unincorporated Riverside County, as shown on Exhibit 1-A. Interstate 215 (I-215) is located approximately 2.5 miles east of the Project site via Cactus Avenue, Alessandro Boulevard, and Van Buren Boulevard.

1.2 PROJECT DESCRIPTION

The proposed Project (as shown on Exhibit 1-B) consists of the following uses:

- Building B 1,250,000 square feet (SF) of high-cube fulfillment center warehouse use
- Building C 587,000 SF of high-cube fulfillment center warehouse use
- Industrial Area 725,561 SF of high-cube fulfillment center warehouse use
- Industrial Area 500,000 SF of high-cube cold storage warehouse use
- Business Park Area 1, 280,403 SF of business park use (30% Office use)
- Mixed Use Area 160,921 SF of retail use (25%)
- Mixed Use Area 482,765 SF of business park use (75%)
- 42.2-acre Active Park (with sports fields)
- 35.8 acres of Park/Open Space use
- Public Facilities 2.84 acres for future sewer lift station and electrical substation

The proposed Project also includes the establishment of a 445.43-acre Conservation Easement in compliance with the Center for Biological Diversity (CBD) Settlement Agreement. According to the West Campus Upper Plateau Traffic Analysis, the proposed Project is anticipated to generate a total of 35,314 trip-ends per day including 2,054 truck trips (in actual vehicles). The on-site Project-related noise sources are expected to include: loading dock activity, roof-top air conditioning, trash enclosure activity, parking lot vehicle movements, truck movements and park activities. This noise analysis is intended to describe the noise level impacts associated with the expected typical operational activities at the Project site.

It is expected that the noise generated by the Project construction equipment will include a combination of crawler tractors, excavators, graders, dozers, scrapers, forklifts, generator sets, welders, paving equipment, and air compressors that when combined can reach high levels. In



addition, rock blasting may be required during grading operations to support Project construction, therefore, this analysis considers the potential blasting noise and vibration levels at the nearest noise sensitive receiver locations.

Moreno Valley Site Bert Rd Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS

EXHIBIT 1-A: LOCATION MAP



6.72 AC 4.49 AC 4.77 AC ARCLIGHT DRIVE MIXED USE 5.75 AC CONSERVATION EASEMENT MIXED USE 9.26 AC P/R/OS 60.28 AC INDUSTRIAL 59.55 AC CONSERVATION EASEMENT MIXED USE 9.12 AC BUNKER HILL DRIVE CONSERVATION EASEMENT BUSINESS PARK 10.74 AC CONSERVATION EASEMENT CONSERVATION EASEMENT

EXHIBIT 1-B: SITE PLAN



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2 FUNDAMENTALS

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

EXHIBIT 2-A: TYPICAL NOISE LEVELS

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

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



at approximately 1,000 feet, which can cause serious discomfort. (3) Another important aspect of noise is the duration of the sound and the way it is described and distributed in time.

2.2 Noise Descriptors

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

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

2.3 SOUND PROPAGATION

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

2.3.1 GEOMETRIC SPREADING

Sound from a localized source (i.e., a stationary point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source. (2)

2.3.2 GROUND ABSORPTION

The propagation path of noise from a highway to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been



expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 ft. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source. (4)

2.3.3 ATMOSPHERIC EFFECTS

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects. (2)

2.3.4 SHIELDING

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

2.4 Noise Control

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

2.5 Noise Barrier Attenuation

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



2.6 LAND USE COMPATIBILITY WITH NOISE

Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are more sensitive to noise intrusion than are commercial or industrial developments and related activities. As ambient noise levels affect the perceived amenity or livability of a development, so too can the mismanagement of noise impacts impair the economic health and growth potential of a community by reducing the area's desirability as a place to live, shop and work. For this reason, land use compatibility with the noise environment is an important consideration in the planning and design process. The FHWA encourages State and Local government to regulate land development in such a way that noise-sensitive land uses are either prohibited from being located adjacent to a highway, or that the developments are planned, designed, and constructed in such a way that noise impacts are minimized. (6)

2.7 COMMUNITY RESPONSE TO NOISE

Approximately sixteen percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints may occur. Twenty to thirty percent of the population will not complain even in very severe noise environments (7 pp. 8-6). Thus, a variety of reactions can be expected from people exposed to any given noise environment.

Surveys have shown that community response to noise varies from no reaction to vigorous action for newly introduced noises averaging from 10 dB below existing to 25 dB above existing. (8) According to research originally published in the Noise Effects Handbook (7), the percentage of high annoyance ranges from approximately 0 percent at 45 dB or less, 10 percent are highly annoyed around 60 dB, and increases rapidly to approximately 70 percent being highly annoyed at approximately 85 dB or greater. Despite this variability in behavior on an individual level, the population can be expected to exhibit the following responses to changes in noise levels as shown on Exhibit 2-B. A change of 3 dBA is considered barely perceptible, and changes of 5 dBA are considered readily perceptible. (4)

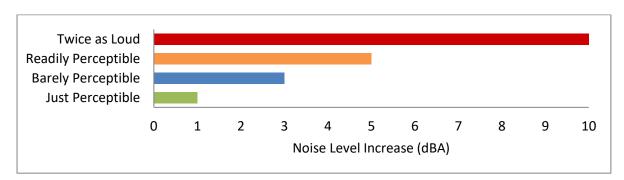


EXHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION

2.8 VIBRATION

Per the Federal Transit Administration (FTA) *Transit Noise Impact and Vibration Impact Assessment Manual* (8), vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure-borne noise. Sources of ground-borne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency.

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

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



Velocity **Typical Sources Human/Structural Response** Level* (50 ft from source) 100 Threshold, minor cosmetic damage Blasting from construction projects fragile buildings Bulldozers and other heavy tracked construction equipment Difficulty with tasks such as 90 reading a VDT screen Commuter rail, upper range Residential annoyance, infrequent 80 Rapid transit, upper range events (e.g. commuter rail) Commuter rail, typical Residential annoyance, frequent Bus or truck over bump events (e.g. rapid transit) Rapid transit, typical Limit for vibration sensitive equipment. Approx. threshold for Bus or truck, typical human perception of vibration 60 Typical background vibration 50

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

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

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



3 REGULATORY SETTING

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

3.1 FEDERAL REGULATIONS

Federal regulations establish noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating) under Title 40 of the Code of Federal Regulations, Part 205, Subpart B. (10) The federal truck pass-by noise standard is 80 dBA at 50 feet from the vehicle pathway centerline, under specified test procedures. These controls are implemented through regulatory controls on truck manufacturers. There are no comparable standards for vibration, which tend to be specific to the roadway surface, the vehicle load, and other factors.

In 1972, the Noise Control Act (42 U.S.C. Section 4901 et seq.) was passed by Congress to promote noise environments in support of public health and welfare. It also established the U.S. Environmental Protection Agency (USEPA) Office of Noise Abatement and Control to coordinate federal noise control activities. The USEPA established guidelines for noise levels that would be considered safe for community exposure without the risk of adverse health or welfare effects. The USEPA found that to prevent hearing loss over the lifetime of a receiver, the yearly average Leq should not exceed 70 dBA, and the Ldn should not exceed 55 dBA in outdoor activity areas or 45 dBA indoors to prevent interference and annoyance. However, in 1982, the USEPA phased out the office's funding as part of a shift in federal noise control policy to transfer the primary responsibility of regulating noise to state and local governments.

3.2 STATE OF CALIFORNIA NOISE REQUIREMENTS

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



3.3 March JPA Noise/Air Quality Element

The adopted March JPA General Plan Noise/Air Quality Element identifies several goals and policies to protect and enhance the quality of life for those who live and work in the March JPA jurisdiction. (12) The Noise Element provides policy guidance which addresses the generation, mitigation, avoidance, and the control of excessive noise. The adopted March JPA General Plan includes the following goals in the Noise/Air Quality Element:

- 1 Ensure that land uses are protected from excessive and unwanted noise.
- Minimize incompatible noise level exposures throughout the Planning Area, and where possible, mitigate the effect of noise incompatibilities to provide a safe and healthy environment.
- Work toward the reduction of noise impacts from vehicular traffic, and aviation and rail operations.

The noise policies specified in the March JPA Noise/Air Quality Element provide the guidelines necessary to satisfy these goals. The policies are provided below:

- Policy 1.1 Establish acceptable limits of noise for various land uses throughout the March JPA Planning Area. Future development that could increase ambient noise levels shall be required to mitigate the anticipated noise increase, to the extent possible.
- Policy 1.2 Noise sensitive uses (such as schools, libraries, hospitals, medical facilities, residential uses, etc.) shall be discouraged in areas where noise levels exceed acceptable limits.
- Policy 1.3 Encourage good acoustical design in new construction.
- Policy 1.4 Provide buffer areas between noise sources and other developments, where practical.
- Policy 2.1 Avoid placing noise sensitive land uses in proximity to areas devoted to noise generating facilities such as areas of aviation related activities, industrial parks, transportation facilities, and other noise generating land uses.
- Policy 2.2 Noise generating facilities shall be located in areas with compatible noise generating land uses (i.e., airport noise contour areas) to minimize land use incompatibilities, noise abatement and mitigation measures needed.
- Policy 2.3 Noise sensitive land uses shall not be located in areas influenced by noise generating land uses, in particular the noise contours associated with the joint use airfield, unless appropriate mitigation is utilized.
- Policy 2.4 March JPA shall evaluate noise sensitivity and noise generation when considering land use Projects and transportation improvement Projects, and where appropriate mitigation measures shall be employed.
- Policy 2.5 March JPA shall utilize and comply with the CALTRANS standards for noise compatibility for aviation generated noise to proposed land use development.
- Policy 3.1 Include mitigating measures such as landscaping, berming and site orientation, in the design of Projects located near noise generating sources such as arterial roadways.
- Policy 3.2 Coordinate with adjacent cities and county agencies for noise abatement.
- Policy 3.3 Adhere to the adopted AICUZ and Comprehensive Land Use Plan standards and promote the use of newer and quieter aircraft and support equipment.
- Policy 3.4 Where appropriate, noise mitigation measures shall be incorporated in the design and approval of development on property located adjacent to aviation and rail facilities.
- Policy 3.5 Where appropriate, development in areas adjacent to freeways, arterial streets, and other noise source shall be designed to reduce the potential for noise impacts.



- Policy 3.6 Regulate the use of local streets by trucks, trailers, and construction vehicles, to the extent possible.
- Policy 3.7 Limit trucking operations to appropriate routes, times and speeds.
- Policy 3.8 Appropriate muffling systems for construction equipment and operations shall be required, as necessary.
- Policy 3.9 March JPA shall encourage and facilitate the use of mass transit services and alternative transportation systems to minimize dependence of the automobile within the Planning Area, thereby minimizing the level of noise generated by surface transportation.

3.4 OPERATIONAL NOISE STANDARDS

To analyze noise impacts originating from a designated fixed location or private property such as the West Campus Upper Plateau Project, stationary-source (operational) noise such as the expected loading dock activity, roof-top air conditioning, trash enclosure activity, parking lot vehicle movements, truck movements and park activities are typically evaluated against standards established under a jurisdiction's Municipal Code. Although the Project site is located within the March JPA, noise-sensitive receivers potentially impacted by operational noise activities are also located in the City of Riverside. Therefore, to accurately describe the potential Project-related operational noise level contributions, this analysis presents the appropriate operational noise standards for each jurisdiction adjacent to the Project site. The March JPA, and the City of Riverside operational noise level standards are shown on Table 3-1.

3.4.1 MARCH JPA OPERATIONAL NOISE STANDARDS

The March JPA Development Code, Chapter 9.10 *Performance Standards*, Section 9.10.140 identifies the exterior stationary-source noise level standards for ALL commercial and industrial land uses. Based on Section 9.10.140 of the Development Code, the exterior noise level shall not exceed 55 dBA L_{eq} at any time beyond the boundaries of the property. (13) Chapter 9.10 of the March JPA Development Code is included in Appendix 3.1.

3.4.2 CITY OF RIVERSIDE OPERATIONAL NOISE STANDARDS

To control unnecessary, excessive and/or annoying noise, the City of Riverside has adopted exterior sound level limits in the Noise Control section (Title 7) of the Municipal Code. Title 7 outlines exterior and interior noise level standards for affected land uses. Title 7 relies on the use of percentile noise descriptors to ensure that the duration of the noise source is fully considered. However, due to the relatively constant intensity of the Project noise activities, the L_{50} or average L_{eq} noise level metrics best describe the Project related operational noise source activities. The L_{eq} noise level metric accounts for noise fluctuations over time by averaging the louder and quieter events and giving more weight to the louder events. In addition, due to the mathematical relationship between the median (L_{50}) and the mean (L_{eq}), the L_{eq} will always be larger than or equal to the L_{50} . The more variable the noise becomes, the larger the L_{eq} becomes in comparison to the L_{50} . Therefore, this noise study conservatively relies on the average L_{eq} sound level limits to describe the Project noise levels.



For noise-sensitive residential properties, Table 7.25.010A identifies exterior noise standards for the daytime (7:00 a.m. to 10:00 p.m.) hours of 55 dBA L_{50} and 45 dBA L_{50} during the nighttime (10:00 p.m. to 7:00 a.m.) hours as shown on Table 3-1. The City of Riverside Municipal Code Title 7 Noise Control section is included in Appendix 3.2.

TABLE 3-1: EXTERIOR NOISE STANDARDS

		Exterior Noise Level Standards (dBA) ¹					
Land Use	Time Period	L ₅₀ (30 mins)	L ₂₅ (15 mins)	L ₈ (5 mins)	L ₂ (1 min)	L _{max} (0 min)	
Desidential	Daytime	55	60	65	70	75	
Residential	Nighttime	45	50	55	60	65	

 $^{^1}$ City of Riverside Municipal Code, Title 7 Noise Control, Section 7.25.010 (A). Section 7.25.010 (B) indicates that if the existing ambient noise level already exceeds any of the exterior noise level limit categories, then the standard shall be increased in five decibel increments in each category as appropriate to encompass the ambient noise level. The percent noise level is the level exceeded "n" percent of the time during the measurement period. L_{50} is the noise level exceeded 50% of the time. "Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

Section 7.25.010(A) indicates that it is unlawful for any person to cause or allow the creation of any noise which exceeds the following:

- 1. The exterior noise standard of the applicable land use category up to 5 dBA for a cumulative period of 30 minutes in any hour (L_{50}); or
- 2. The exterior noise standard of the applicable land use category, plus 5 dBA, for a cumulative period of more than 15 minutes in any hour (L_{25}); or
- 3. The exterior noise standard of the applicable land use category, plus 10 dBA, for a cumulative period of more than 5 minutes in any hour (L_8); or
- 4. The exterior noise standard of the applicable land use category, plus 15 dBA, for a cumulative period of more than 1 minute in any hour (L₂).
- 5. The exterior noise standard for the applicable land use category, plus 20 dBA or the maximum measured ambient noise level, for any period of time (L_{max}) .

3.5 CONSTRUCTION NOISE STANDARDS

To analyze noise impacts originating from the construction of the Project, noise from construction activities is typically limited to the hours of operation established under a jurisdiction's 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 for each jurisdiction adjacent to the Project site including: the March JPA, and the City of Riverside. However, the permitted hours of construction for the March JPA are the only applicable hour restrictions for the Project since the construction activity will be within the March JPA jurisdiction.



3.5.1 March JPA Construction Noise Standards

The March JPA Development Code, Section 9.10.140, states that *outdoor construction and* grading activities, including the operation of any tools or equipment associated with construction, drilling, repair, alteration, grading/grubbing or demolition work within 500 feet of the property line of a residential use, shall be prohibited between the hours of 7:00 p.m. and 7:00 a.m. Monday through Friday and between 5:00 p.m. and 8:00 a.m. on Saturdays or at any time on Sunday or a Federal Holiday. The March JPA Development Code construction noise standards are shown on Table 3-2 and included in Appendix 3.1.

3.5.2 CITY OF RIVERSIDE CONSTRUCTION NOISE STANDARDS

The City of Riverside Municipal Code, Section 7.35.020[G], states that construction activities are limited to the hours of 7:00 a.m. to 7:00 p.m. on weekdays and 8:00 a.m. to 5:00 p.m. on Saturdays, with no activities allowed on Sundays or federal holidays. (14) The land uses in the Project study area with the potential to be impacted by Project-related construction noise levels include noise-sensitive residential land use. Based on the City of Riverside Municipal Code, Table 7.25.010A Exterior Noise Standards, residential land uses have an anytime noise level standard of 75 dBA L_{max} during the daytime hours, and 65 dBA L_{max} during the nighttime hours for construction noise levels. The City of Riverside Municipal Code construction noise standards are shown on Table 3-2 and included in Appendix 3.2.

3.5.3 County of Riverside Construction Noise Standards

Section 9.52.020[I] of the County's Noise Regulation ordinance, provided in Appendix 3.3, 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) Neither the County's General Plan nor County Code establish numeric maximum acceptable construction source noise levels at potentially affected receivers, which would allow for a quantified determination of what CEQA constitutes a substantial temporary or periodic noise increase.

To allow for a quantified determination of what the Noise Regulation Ordinance constitutes as noise that may jeopardize the health, safety or general welfare of Riverside County residents and degrade their quality of life due to Project construction activity, relevant quantified stationary source noise standards established in the General Plan, Policy N 4.1, are used in this analysis to assess the Project construction noise levels at nearby sensitive receivers. Therefore, the daytime noise level standard of 65 dBA L_{eq} and nighttime noise level standard of 45 dBA L_{eq} are used to evaluate the potential Project-related construction noise impacts. (16)



TABLE 3-2: CONSTRUCTION NOISE STANDARDS

Jurisdiction	Land Use	20112		Construction Noise Level Limit at Receiving Use ¹		
	Ose	Constituction Activity	Daytime	Nighttime		
March JPA ²	n/a	7:00 a.m. to 7:00 p.m.	n/a			
City of Riverside ³	Residential	7:00 a.m. to 7:00 p.m. on weekdays; 8:00 a.m. to 5:00 p.m. on Saturdays; no work on Sundays or federal holidays	75 dBA L _{max}	65 dBA L _{max}		
County of Riverside ⁴	Residential	6:00 a.m. to 6:00 p.m. June to September; 7:00 a.m. to 6:00 p.m. October to May	65 dBA L _{eq}	45 dBA L _{eq}		

¹Thresholds based on the City of Riverside and County of Riverside noise level standard for non-transportation noise sources (Table 3-1).

3.6 CONSTRUCTION VIBRATION STANDARDS

Construction activity can result in varying degrees of ground-borne vibration, depending on the equipment and methods used, distance to the affected structures and soil type. (8) Construction vibration is generally associated with pile driving and rock blasting. Other construction equipment such as air compressors, light trucks, hydraulic loaders, etc., generates little or no ground vibration. Occasionally large bulldozers and loaded trucks can cause perceptible vibration levels at close proximity.

The March JPA and the City of Riverside General Plans, Development Code, and Municipal Code do not identify specific vibration level standards. Therefore, the impacts due to vibration are assessed based on vibration level limits identified in the County of Riverside General Plan Noise Element. Vibration levels with peak particle velocity (PPV) of 0.0787 inches per second are considered readily perceptible and PPV above 0.1968 in/sec are considered annoying to people in buildings. Further, County of Riverside General Plan Policy 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 (16). 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. The vibration standards are shown on Table 3-3.

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. The 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, the vibration standard of 0.01 in/sec in RMS



² March Joint Powers Authority, Development Code, Chapter 9.10 Performance Standards, Section 9.10.030 (Appendix 3.1).

³ City of Riverside Municipal Code, Section 7.35.010[B][5] (Appendix 3.2).

⁴ County of Riverside Municipal Code, Section 9.52.020[I] (Appendix 3.3).

[&]quot;Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

velocity levels is used in this analysis to assess the human perception of vibration levels due to Project-related construction activities. The County of Riverside General Plan Policy 16.3 vibration perception threshold of 0.01 RMS in/sec was intended to control perceptible ground vibration for very low range of noise frequency (0 to 100 Hertz) due to passing trains. This policy is more restrictive than the vibration thresholds outlined by the FTA to control construction vibration levels. (8)

TABLE 3-3: VIBRATION ANNOYANCE STANDARDS

Jurisdiction	Root-Mean-Square (RMS) Velocity (in/sec)
March JPA	n/a
City of Riverside	n/a
County of Riverside ¹	0.01

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

3.7 MARCH AIR RESERVE BASE/INLAND PORT AIRPORT LAND USE COMPATIBILITY

The March Air Reserve Base/Inland Port Airport (MARB/IPA) is located less than one mile east of the Project site. The *Riverside County Airport Land Use Compatibility Plan Policy Document* (RC ALUCP) includes the policies for determining the land use compatibility of the Project. Policy 4.1.5 *Noise Exposure for Other Land Uses* of the RC ALUCP requires that land uses, demonstrate compatibility with the acceptable noise levels on Table 2B. The Table 2B *Supporting Compatibility Criteria: Noise* matrix is shown on Exhibit 3-B and indicates that the Project's mixed use, business park and industrial land uses (service commercial, wholesale trade, warehousing, light industrial) experience *clearly acceptable* exterior noise levels below 60 dBA CNEL. *Normally acceptable* noise levels for industrial land uses range from 60 to 65 dBA CNEL. *Marginally acceptable* noise levels at industrial land uses range from 65 to 70 dBA CNEL. (17)

According to the Supporting Compatibility Criteria: Noise matrix, the Project's Park use will experience clearly acceptable exterior noise levels below 55 dBA CNEL, normally acceptable noise levels from 55 to 65 dBA CNEL and marginally acceptable noise levels above 65 dBA CNEL. For marginally acceptable noise levels: the indicated noise exposure will cause moderate interference with outdoor activities and with indoor activities when windows are open. The land use is acceptable on the conditions that outdoor activities are minimal and construction features which provide sufficient noise attenuation are used (e.g., installation of air conditioning so that windows can be kept closed). Under other circumstances, the land use should be discouraged. (17)

The noise contour boundaries used to determine the potential aircraft-related noise impacts at the Project site are found on Figure 6-9 of the March Air Reserve Base 2018 Final Air Installations Compatible Uses Zones Study and are presented on Exhibit 3-C of this report. Based on the 2018 noise level contours for the MARB/IPA, the Project development area is located mostly between the 60 to 65 dBA CNEL noise level contour boundaries and is considered *normally acceptable*. In addition, the outdoor activities at the business park and mixed-use land uses within the Project



[&]quot;n/a" = The General Plan, Development, and Municipal Codes do not identify specific vibration level standards.

site are expected to be minimal and include employees traveling from their vehicles to the office buildings within the site. Therefore, based on the RC ALUCP compatibility criteria, conventional construction methods will eliminate noise intrusions upon indoor activities and thus is allowed under the RC ALUCP. (17)



EXHIBIT 3-B: RC ALUCP SUPPORTING COMPATIBILITY CRITERIA: NOISE

CNEL (dB)

Land Use Category	50–55	55–60	60–65	65–70	70–75
Residential *					
single-family, nursing homes, mobile homes	++	0	_		
multi-family, apartments, condominiums	++	+	0		
Public					
schools, libraries, hospitals	+	0	_		
churches, auditoriums, concert halls	+	0	0	_	
transportation, parking, cemeteries	++	++	++	+	0
Commercial and Industrial					
offices, retail trade	++	+	0	0	_
service commercial, wholesale trade, warehousing, light industrial	++	++	+	0	0
general manufacturing, utilities, extractive industry	++	++	++	+	+
Agricultural and Recreational					
cropland	++	++	++	++	+
livestock breeding	++	+	0	0	_
parks, playgrounds, zoos	++	+	+	0	_
golf courses, riding stables, water recreation	++	++	+	0	0
outdoor spectator sports	++	+	+	0	_
amphitheaters	+	0	_		

Land Use Acceptability Interpretation/Comments Clearly Acceptable The activities associated with the specified land use can be carried out with essentially no interference from the noise exposure. Noise is a factor to be considered in that slight interference with outdoor activities may Normally Acceptable occur. Conventional construction methods will eliminate most noise intrusions upon indoor activities. Marginally Acceptable The indicated noise exposure will cause moderate interference with outdoor activities and with indoor activities when windows are open. The land use is acceptable on the conditions that outdoor activities are minimal and construction features which provide sufficient noise attenuation are used (e.g., installation of air conditioning so that windows can be kept closed). Under other circumstances, the land use should be discouraged. Normally Unacceptable Noise will create substantial interference with both outdoor and indoor activities. Noise intrusion upon indoor activities can be mitigated by requiring special noise insulation construction. Land uses which have conventionally constructed structures and/or involve outdoor activities which would be disrupted by noise should generally be avoided. Unacceptable noise intrusion upon land use activities will occur. Adequate structural Clearly Unacceptable noise insulation is not practical under most circumstances. The indicated land use should be avoided unless strong overriding factors prevail and it should be prohibited if outdoor activities are involved.

Source: Riverside County Airport Land Use Compatibility Plan, Table 2B.



 ^{*} Subtract 5 dB for low-activity outlying airports (Chiriaco Summit and Desert Center)

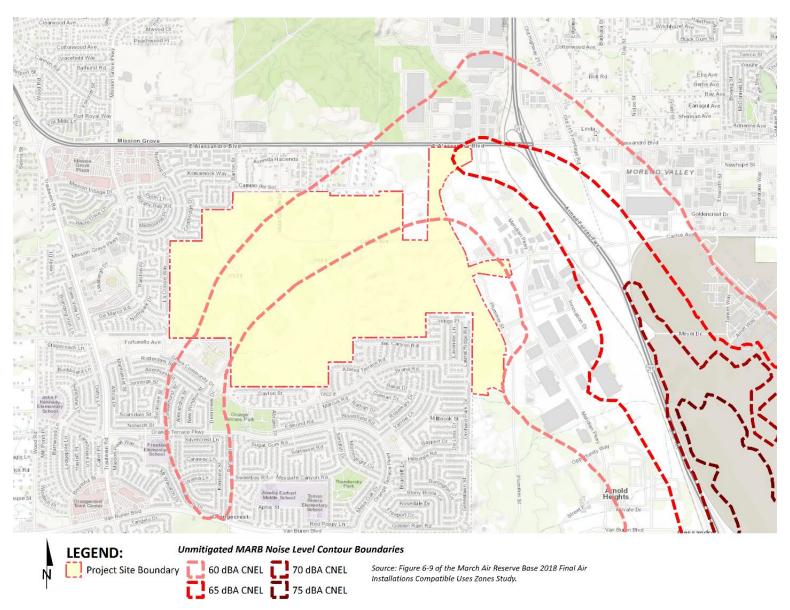


EXHIBIT 3-C: MARB/IPA FUTURE AIRPORT NOISE CONTOURS



4 SIGNIFICANCE CRITERIA

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

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

4.1 Noise Level Increases (Threshold A)

Noise level increases resulting from the Project are evaluated based on the Appendix G CEQA Guidelines. Under CEQA, consideration must be given to the magnitude of the increase, the existing baseline ambient noise levels, and the location of receivers to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes that there is no single noise increase that renders the noise impact significant. (18) 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.

4.1.1 SUBSTANTIAL PERMANENT NOISE LEVEL INCREASES

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

The FICON guidance provides an established source of criteria to assess the impacts of substantial permanent increase in ambient noise levels. Based on the FICON criteria, the amount to which a given noise level increase is considered acceptable is reduced when the without Project noise levels are already shown to exceed certain land-use specific exterior noise level criteria. The specific levels are based on typical responses to noise level increases of 5 dBA or *readily perceptible*, 3 dBA or *barely perceptible*, and 1.5 dBA depending on the underlying without Project noise levels for noise-sensitive uses. These levels of increases and their perceived



acceptance are consistent with guidance provided by both the Federal Highway Administration (4 p. 9) and Caltrans (20 p. 2_48).

4.1.2 SUBSTANTIAL TEMPORARY OF OR PERIODIC NOISE LEVEL INCREASES

To control the noise-generating construction activities, the temporary noise level increases over the existing ambient conditions must be considered under CEQA Significance Threshold A. Therefore, the Caltrans *Traffic Noise Analysis Protocol* 12 dBA L_{eq} *substantial* noise level increase threshold is used in this analysis to assess temporary noise level increases. (21) In California a substantial noise increase is considered to occur when the project's predicted noise level exceeds the existing noise level by 12 dBA or more. The use of 12 dB was established in California many years ago and is based on the concept that a 10 dB increase generally is perceived as a doubling of loudness. (2 pp. 3-2)

If the Project-related construction noise levels generate a temporary noise level increase above the existing ambient noise levels of up to 12 dBA L_{eq} , then the Project construction noise level increases will be considered a potentially significant impact. Although the Caltrans recommendations were specifically developed to assess traffic noise impacts, the 12 dBA L_{eq} substantial noise level increase threshold is used in California to address the temporary noise level increases with the potential to exceed existing conditions. (21) However, the construction activities associated with the West Campus Upper Plateau Project are likely to take several years and cannot reasonably be considered as a short-term temporary noise impact. Therefore, due to the expected duration of construction, a "barely-perceptible" 5 dBA noise level increase threshold has been used to assess the potential impacts associated with the construction related noise level increases.

4.2 VIBRATION (THRESHOLD B)

As described in Section 3.6, the vibration impacts originating from the construction of the West Campus Upper Plateau Project are appropriately evaluated against the thresholds of significance outlined in the County of Riverside General Plan (16). These guidelines identify 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, which is used in this noise study to assess potential human response (annoyance) due to Project construction vibration levels.

4.3 CEQA Guidelines Not Further Analyzed (Threshold C)

The closest airport which would require additional noise analysis under CEQA Significance Criteria C is the March Air Reserve Base/Inland Port Airport (MARB/IPA) which is located less than one mile east of the Project site. As previously indicated in Section 3.7, the noise contour boundaries of MARB/IPA are presented on Exhibit 3-C of this report and shows that the Project's mixed use, business park, industrial and park land uses are considered *normally acceptable* land use since the development area is located mostly between the 60 to 65 dBA CNEL contour. Therefore, the Project impacts are considered *less than significant*, and no further noise analysis is provided under CEQA Significance Criteria C.



4.4 SIGNIFICANCE CRITERIA SUMMARY

Noise impacts shall be considered significant if any of the following occur as a direct result of the proposed development. Table 4-1 shows the significance criteria summary matrix.

TABLE 4-1: SIGNIFICANCE CRITERIA SUMMARY

A	1 111	1	Constitution (a)	Significance Criteria			
Analysis	Land Use	Jurisdiction	Condition(s)	Daytime	Nighttime		
			If ambient is < 60 dBA CNEL	≥ 5 dBA CNEL Project increase			
Off Cit-	Noise- Sensitive ¹	All	If ambient is 60 - 65 dBA CNEL	≥ 3 dBA CNEL F	roject increase		
Off-Site Traffic	SCHSILIVE		If ambient is > 65 dBA CNEL	≥ 1.5 dBA CNEL	Project increase		
- Traine	Non-Noise-	All	If ambient is < 70 dBA CNEL	≥ 5 dBA CNEL F	roject increase		
	Sensitive ¹	All	If ambient is > 70 dBA CNEL	≥ 3 dBA CNEL F	roject increase		
		March JPA ²	Noise Level Threshold	55 dB	A Leq		
0	Noise-	City of Riverside ³	Exterior Noise Level Standard	55 dBA L _{eq}	45 dBA L _{eq}		
Operational	Sensitive	All ¹	If ambient is < 60 dBA L _{eq} ≥ 5 dBA L _{eq} Project in		oject increase		
			If ambient is 60 - 65 dBA L _{eq}	eq ≥ 3 dBA L _{eq} Project increase			
			If ambient is > 65 dBA L _{eq}	≥ 1.5 dBA L _{eq} Project increase			
		March JPA	Permitted hours between 7:00 a.m. to 7:00 p.m. ⁴				
	Noise- Sensitive	City of Riverside ⁵	Exempt from the exterior noise level standards between the hours of 7:0 p.m. and 7:00 a.m. on weekdays, between the hours of 5:00 p.m. and 8:0 a.m. on Saturdays, or at any time on Sunday or a federal holiday.				
Construction		City of Riverside	Noise Level Threshold ⁶	75 dBA L _{max}	65 dBA L _{max}		
		County of Riverside	Noise Level Threshold ⁷	65 dBA L _{eq}	45 dBA L _{eq}		
			Noise Level Increase ⁸	5 dBA L _{eq}	n/a		
		All	Vibration Annoyance Threshold ⁹	0.01 RMS (in/sec)			

¹ FICON, 1992.



² March Joint Powers Authority, Development Code, Chapter 9.10 Performance Standards, Section 9.10.140 (Appendix 3.1).

³ City of Riverside Municipal Code, Title 7 Noise Control, Table 7.25.010A Exterior Noise Standards (Appendix 3.2).

⁴ March Joint Powers Authority, Development Code, Chapter 9.10 Performance Standards, Section 9.10.140 (Appendix 3.1).

⁵ City of Riverside Municipal Code Section 7.35.020(G).

⁶ City of Riverside Municipal Code, Section 7.35.010[B][5] (Appendix 3.2).

⁷Threshold based on the County of Riverside noise level standard for non-transportation noise sources (Table 3-1).

 $^{^{\}rm 8}$ FHWA - Highway Traffic Noise Analysis and Abatement Policy and Guidance

⁹ County of Riverside General Plan Noise Element, Policy N 16.3.

[&]quot;Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

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5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, 24-hour noise level measurements were taken at eight locations within the public right-of-way throughout 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 Thursday July 22nd, 2021. 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 equivalent daytime and nighttime hourly noise levels. 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. (22)

5.2 Noise Measurement Locations

The long-term noise level measurements were positioned as close to the nearest sensitive receiver locations as possible to assess the existing ambient hourly noise levels surrounding the Project site. Both Caltrans and the FTA recognize that it is not reasonable to collect noise level measurements that can fully represent every part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development projects. This is demonstrated in the Caltrans general site location guidelines which indicate that, sites must be free of noise contamination by sources other than sources of interest. Avoid sites located near sources such as barking dogs, lawnmowers, pool pumps, and air conditioners unless it is the express intent of the analyst to measure these sources. (2) 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. (8)

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. (8) 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. Therefore, the noise level measurement locations accurately describe the background ambient noise levels necessary to assess the projects incremental noise contributions.

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.

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

Location ¹	Description	Noise	Average Level L _{eq}) ²
		Daytime	Nighttime
L1	Located north of the Project site near single-family residence at 7602 Greenock Way.	52.7	50.3
L2	Located north of the Project site near single-family residence at 14210 Rancho Vista Road.	51.8	49.0
L3	Located north of the Project site near single-family residence at 20630 Camino Del Sol.	50.0	46.5
L4	Located south of the Project site near single-family residence at 20870 Indigo Point.	48.4	45.0
L5	Located south of the Project site near single-family residence at 8256 Gardenia Vista Drive.	49.0	45.6
L6	Located south of the Project site near single-family residence at 8360 Clover Creek Road.	61.5	56.6
L7	Located south of the Project site near The Grove Community Church at 19900 Grove Community Drive.	51.6	47.5
L8	Located west of the Project site near single-family residence at 8079 La Crosse Way.	47.3	43.9

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

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.



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

[&]quot;Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

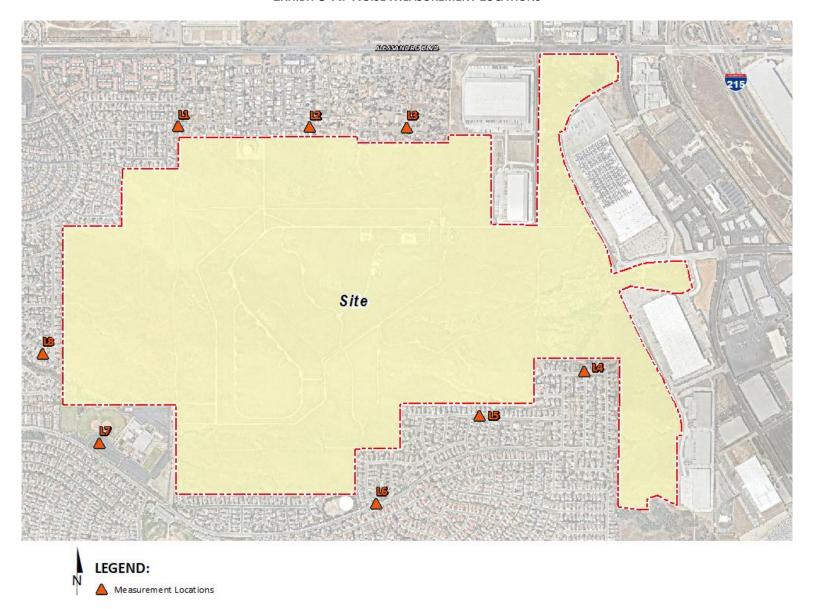


EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS



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6 TRAFFIC NOISE METHODS AND PROCEDURES

The following section outlines the methods and procedures used to estimate and analyze the future traffic noise environment. Consistent with the *State Land Use Compatibility Guidelines*, all transportation related noise levels are presented in terms of the 24-hour CNELs.

6.1 FHWA TRAFFIC NOISE PREDICTION MODEL

The expected roadway noise level increases from vehicular traffic were calculated by Urban Crossroads, Inc. using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108. (23) This methodology is commonly used to describe the off-site traffic noise levels throughout California and is consistent with the March JPA General Plan Noise Element.

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. (24) Adjustments are then made to the REMEL to account for: the roadway classification (e.g., collector, secondary, major or arterial), the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT), the travel speed, the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, the roadway grade, the angle of view (e.g., whether the roadway view is blocked), the site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping), and the percentage of total ADT which flows each hour throughout a 24-hour period. Research conducted by Caltrans has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model used in this analysis. (25)

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 19 off-site study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per the Moreno Valley, City of Riverside and March JPA General Plan, and the posted vehicle speeds. The ADT volumes used in this study area presented on Table 6-2 are based on *West Campus Upper Plateau Traffic Analysis by Urban Crossroads, Inc.* for the following traffic scenarios. (26)

- 1. Existing (2021) Conditions (E)
- 2. Existing + Project (E+P) Conditions
- 3. Existing plus Ambient Growth (EA)
- 4. Existing plus Ambient Growth plus Project (EAP)
- 5. Opening Year Cumulative (2028) Without Project Conditions (OYC)
- 6. Opening Year Cumulative (2028) With Project Conditions (OYCP)
- 7. Horizon Year (2045) Without Project Conditions
- 8. Horizon Year (2045) With Project Conditions



The ADT volumes vary for each roadway segment based on the existing traffic volumes and the combination of project traffic distributions. This analysis relies on a comparative evaluation of the off-site traffic noise impacts at the boundary of the right-of-way of the receiving adjacent land use, without and with project ADT traffic volumes from the Project traffic study. To quantify the off-site noise levels, the Project related truck trips were added to the heavy truck category in the FHWA noise prediction model. The addition of the Project related truck trips increases the percentage of heavy trucks in the vehicle mix. This approach recognizes that the FHWA noise prediction model is significantly influenced by the number of heavy trucks in the vehicle mix.

Table 6-3 provides the time of day (daytime, evening, and nighttime) vehicle splits. Table 6-4 shows the traffic flow by vehicle type (vehicle mix) used for all without Project traffic scenarios, and Tables 6-5 to 6-8 show the vehicle mixes used for the with Project traffic scenarios. Due to the added Project truck trips, the increase in Project traffic volumes and the distributions of trucks on the study area road segments, the percentage of autos, medium trucks and heavy trucks will vary for each of the traffic scenarios. This explains why the existing and future traffic volumes and vehicle mixes vary between seemingly identical study area roadway segments.



TABLE 6-1: OFF-SITE ROADWAY PARAMETERS

ID	Roadway	Segment	Classification ¹	Receiving Land Use ²	Distance from Centerline to Receiving Land Use (Feet) ³	Vehicle Speed (mph)
1	Alessandro Blvd.	s/o Arlington Av.	Arterial	Sensitive	60'	50
2	Alessandro Blvd.	s/o Canyon Crest Dr.	Arterial	Sensitive	60'	50
3	Trautwein Rd.	n/o Van Buren Blvd.	Arterial	Sensitive	44'	50
4	Barton St.	n/o Van Buren Blvd.	Local	Sensitive	33'	30
5	Sycamore Canyon Blvd.	n/o Cottonwood Av.	Arterial	Non-Sensitive	55'	45
6	Meridian Pkwy.	n/o Van Buren Blvd.	Secondary Highway	Non-Sensitive	56'	45
7	Day St.	n/o Alessandro Blvd.	Minor Arterial	Sensitive	44'	25
8	Frederick St.	n/o Cactus Av.	Minor Arterial	Non-Sensitive	44'	40
9	Alessandro Blvd.	w/o Barton St.	Arterial	Sensitive	60'	55
10	Alessandro Blvd.	e/o Barton St.	Arterial	Sensitive	60'	55
11	Alessandro Blvd.	e/o Meridian Pkwy.	Arterial	Non-Sensitive	60'	45
12	Alessandro Blvd.	w/o Day St.	Divided Major Arterial	Sensitive	67'	45
13	Cactus Av.	e/o Meridian Pkwy.	Arterial/Urban Arterial Highway	Non-Sensitive	60'	45
14	Cactus Av.	w/o Elsworth St.	Divided Major Arterial	Non-Sensitive	67'	45
15	Orange Terrace Pkwy.	e/o Trautwein Rd.	Arterial	Sensitive	55'	45
16	Van Buren Blvd.	w/o Wood Rd.	Arterial	Sensitive	60'	50
17	Van Buren Blvd.	e/o Wood Rd.	Arterial	Sensitive	60'	50
18	Van Buren Blvd.	e/o Orange Terrace Pkwy.	Arterial	Sensitive	60'	50
19	Van Buren Blvd.	e/o Meridian Pkwy.	Arterial	Non-Sensitive	60'	50

¹ West Campus Upper Plateau Traffic Analysis, Urban Crossroads, Inc.



² Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

³ Distance to receiving land use is based upon the right-of-way distances.

TABLE 6-2: AVERAGE DAILY TRAFFIC VOLUMES

					Ave	erage Daily T	raffic Volume	es¹		
ID	Roadway	Segment	Existing (2021) Existing plus Ambient		Opening Year Cumulative (2028)		Horizon Year (2045)			
			Without Project	With Project	Without Project	With Project	Without Project	With Project	Without Project	With Project
1	Alessandro Blvd.	s/o Arlington Av.	51,552	53,547	59,217	61,212	62,119	64,114	72,525	74,521
2	Alessandro Blvd.	s/o Canyon Crest Dr.	48,548	51,541	55,767	58,760	62,261	65,254	72,851	75,845
3	Trautwein Rd.	n/o Van Buren Blvd.	19,731	20,064	22,665	22,998	33,567	33,900	39,015	39,348
4	Barton St.	n/o Van Buren Blvd.	3,375	4,040	3,877	4,542	5,685	6,350	6,716	7,381
5	Sycamore Canyon Blvd.	n/o Cottonwood Av.	13,087	13,855	15,033	15,801	16,647	17,415	19,473	20,241
6	Meridian Pkwy.	n/o Van Buren Blvd.	12,903	20,093	14,821	22,011	15,703	22,893	19,422	26,612
7	Day St.	n/o Alessandro Blvd.	9,913	10,579	11,387	12,053	12,893	13,559	15,094	15,759
8	Frederick St.	n/o Cactus Av.	10,147	10,812	11,656	12,321	12,508	13,173	14,646	15,311
9	Alessandro Blvd.	w/o Barton St.	42,275	46,599	48,561	52,885	49,805	54,129	58,590	62,914
10	Alessandro Blvd.	e/o Barton St.	42,360	46,351	48,659	52,650	50,399	54,390	59,226	63,217
11	Alessandro Blvd.	e/o Meridian Pkwy.	44,072	50,059	50,625	56,612	52,834	58,821	62,393	68,380
12	Alessandro Blvd.	w/o Day St.	26,874	28,205	30,870	32,201	36,990	38,321	43,210	44,540
13	Cactus Av.	e/o Meridian Pkwy.	19,011	35,724	21,838	38,551	21,888	38,601	28,137	44,850
14	Cactus Av.	w/o Elsworth St.	26,874	28,932	30,870	32,928	36,990	39,048	43,210	45,267
15	Orange Terrace Pkwy.	e/o Trautwein Rd.	8,884	8,884	10,205	10,205	10,277	10,277	18,352	18,352
16	Van Buren Blvd.	w/o Wood Rd.	32,691	34,686	37,552	39,547	46,276	48,271	54,110	56,106
17	Van Buren Blvd.	e/o Wood Rd.	30,101	32,762	34,577	37,237	44,791	47,451	52,492	55,153
18	Van Buren Blvd.	e/o Orange Terrace Pkwy.	30,048	34,704	34,516	39,172	51,616	56,272	60,749	65,405
19	Van Buren Blvd.	e/o Meridian Pkwy.	33,413	35,281	38,381	40,249	81,701	83,569	95,267	97,135

¹ West Campus Upper Plateau Traffic Analysis, Urban Crossroads, Inc.



TABLE 6-3: TIME OF DAY VEHICLE SPLITS

Vakiala Tura		Time of Day Splits ¹		Total of Time of
Vehicle Type	Daytime	Evening	Nighttime	Day Splits
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%

¹ County of Riverside General Plan Noise Element. Typical Southern California vehicle mix. Values rounded to the nearest one-hundredth.

TABLE 6-4: EXISTING VEHICLE MIX

Classification		Total % Traffic Flow		Total
Classification	Autos	Medium Trucks	Heavy Trucks	Total
All Segments	94.08%	2.20%	3.73%	100.00%

Based on an existing vehicle count taken at Meridian Parkway and Cactus Avenue (West Campus Upper Plateau Traffic Analysis, Urban Crossroads, Inc.). Vehicle mix percentage values rounded to the nearest one-hundredth.

TABLE 6-5: EXISTING + PROJECT VEHICLE MIX

				With P	roject ¹	
ID	Roadway	Segment	Autos	Medium Trucks	Heavy Trucks	Total ²
1	Alessandro Blvd.	s/o Arlington Av.	94.30%	2.11%	3.59%	100.00%
2	Alessandro Blvd.	s/o Canyon Crest Dr.	94.42%	2.07%	3.51%	100.00%
3	Trautwein Rd.	n/o Van Buren Blvd.	94.18%	2.16%	3.66%	100.00%
4	Barton St.	n/o Van Buren Blvd.	95.05%	1.84%	3.11%	100.00%
5	Sycamore Canyon Blvd.	n/o Cottonwood Av.	93.66%	2.08%	4.26%	100.00%
6	Meridian Pkwy.	n/o Van Buren Blvd.	95.17%	1.41%	3.41%	100.00%
7	Day St.	n/o Alessandro Blvd.	94.45%	2.06%	3.49%	100.00%
8	Frederick St.	n/o Cactus Av.	94.44%	2.06%	3.50%	100.00%
9	Alessandro Blvd.	w/o Barton St.	94.63%	1.99%	3.38%	100.00%
10	Alessandro Blvd.	e/o Barton St.	94.59%	2.01%	3.41%	100.00%
11	Alessandro Blvd.	e/o Meridian Pkwy.	94.79%	1.93%	3.28%	100.00%
12	Alessandro Blvd.	w/o Day St.	94.36%	2.09%	3.55%	100.00%
13	Cactus Av.	e/o Meridian Pkwy.	91.96%	1.17%	6.87%	100.00%
14	Cactus Av.	w/o Elsworth St.	94.29%	2.04%	3.67%	100.00%
15	Orange Terrace Pkwy.	e/o Trautwein Rd.	94.08%	2.20%	3.73%	100.00%
16	Van Buren Blvd.	w/o Wood Rd.	94.42%	2.07%	3.51%	100.00%
17	Van Buren Blvd.	e/o Wood Rd.	94.56%	2.02%	3.42%	100.00%
18	Van Buren Blvd.	e/o Orange Terrace Pkwy.	94.87%	1.90%	3.23%	100.00%
19	Van Buren Blvd.	e/o Meridian Pkwy.	93.81%	2.08%	4.11%	100.00%

 $^{^{\}rm 1}\,\text{Total}$ of vehicle mix percentage values rounded to the nearest one-hundredth.



[&]quot;Daytime" = 7:00 a.m. to 7:00 p.m.; "Evening" = 7:00 p.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

TABLE 6-6: EAP VEHICLE MIX

				With P	roject¹	
ID	Roadway	Segment	Autos	Medium Trucks	Heavy Trucks	Total ²
1	Alessandro Blvd.	s/o Arlington Av.	94.27%	2.13%	3.60%	100.00%
2	Alessandro Blvd.	s/o Canyon Crest Dr.	94.38%	2.08%	3.54%	100.00%
3	Trautwein Rd.	n/o Van Buren Blvd.	94.16%	2.17%	3.67%	100.00%
4	Barton St.	n/o Van Buren Blvd.	94.94%	1.88%	3.18%	100.00%
5	Sycamore Canyon Blvd.	n/o Cottonwood Av.	93.72%	2.09%	4.19%	100.00%
6	Meridian Pkwy.	n/o Van Buren Blvd.	95.08%	1.48%	3.44%	100.00%
7	Day St.	n/o Alessandro Blvd.	94.40%	2.08%	3.52%	100.00%
8	Frederick St.	n/o Cactus Av.	94.40%	2.08%	3.52%	100.00%
9	Alessandro Blvd.	w/o Barton St.	94.56%	2.02%	3.42%	100.00%
10	Alessandro Blvd.	e/o Barton St.	94.53%	2.03%	3.44%	100.00%
11	Alessandro Blvd.	e/o Meridian Pkwy.	94.70%	1.96%	3.33%	100.00%
12	Alessandro Blvd.	w/o Day St.	94.32%	2.11%	3.57%	100.00%
13	Cactus Av.	e/o Meridian Pkwy.	92.12%	1.24%	6.64%	100.00%
14	Cactus Av.	w/o Elsworth St.	94.26%	2.06%	3.68%	100.00%
15	Orange Terrace Pkwy.	e/o Trautwein Rd.	94.08%	2.20%	3.73%	100.00%
16	Van Buren Blvd.	w/o Wood Rd.	94.38%	2.09%	3.54%	100.00%
17	Van Buren Blvd.	e/o Wood Rd.	94.50%	2.04%	3.46%	100.00%
18	Van Buren Blvd.	e/o Orange Terrace Pkwy.	94.78%	1.94%	3.28%	100.00%
19	Van Buren Blvd.	e/o Meridian Pkwy.	93.84%	2.09%	4.06%	100.00%

¹ Total of vehicle mix percentage values rounded to the nearest one-hundredth.



TABLE 6-7: OYC 2028 WITH PROJECT VEHICLE MIX

				With P	roject ¹	
ID	Roadway	Segment	Autos	Medium Trucks	Heavy Trucks	Total ²
1	Alessandro Blvd.	s/o Arlington Av.	94.26%	2.13%	3.61%	100.00%
2	Alessandro Blvd.	s/o Canyon Crest Dr.	94.35%	2.10%	3.55%	100.00%
3	Trautwein Rd.	n/o Van Buren Blvd.	94.14%	2.18%	3.69%	100.00%
4	Barton St.	n/o Van Buren Blvd.	94.70%	1.97%	3.34%	100.00%
5	Sycamore Canyon Blvd.	n/o Cottonwood Av.	93.75%	2.10%	4.15%	100.00%
6	Meridian Pkwy.	n/o Van Buren Blvd.	95.04%	1.51%	3.45%	100.00%
7	Day St.	n/o Alessandro Blvd.	94.37%	2.09%	3.54%	100.00%
8	Frederick St.	n/o Cactus Av.	94.38%	2.09%	3.54%	100.00%
9	Alessandro Blvd.	w/o Barton St.	94.55%	2.02%	3.43%	100.00%
10	Alessandro Blvd.	e/o Barton St.	94.51%	2.04%	3.45%	100.00%
11	Alessandro Blvd.	e/o Meridian Pkwy.	94.68%	1.97%	3.35%	100.00%
12	Alessandro Blvd.	w/o Day St.	94.28%	2.12%	3.60%	100.00%
13	Cactus Av.	e/o Meridian Pkwy.	92.12%	1.25%	6.64%	100.00%
14	Cactus Av.	w/o Elsworth St.	94.23%	2.08%	3.69%	100.00%
15	Orange Terrace Pkwy.	e/o Trautwein Rd.	94.08%	2.20%	3.73%	100.00%
16	Van Buren Blvd.	w/o Wood Rd.	94.32%	2.11%	3.57%	100.00%
17	Van Buren Blvd.	e/o Wood Rd.	94.41%	2.07%	3.52%	100.00%
18	Van Buren Blvd.	e/o Orange Terrace Pkwy.	94.57%	2.02%	3.42%	100.00%
19	Van Buren Blvd.	e/o Meridian Pkwy.	93.96%	2.15%	3.89%	100.00%

¹ Total of vehicle mix percentage values rounded to the nearest one-hundredth.



TABLE 6-8: HY 2045 WITH PROJECT VEHICLE MIX

				With P	roject ¹	
ID	Roadway	Segment	Autos	Medium Trucks	Heavy Trucks	Total ²
1	Alessandro Blvd.	s/o Arlington Av.	94.24%	2.14%	3.63%	100.00%
2	Alessandro Blvd.	s/o Canyon Crest Dr.	94.31%	2.11%	3.58%	100.00%
3	Trautwein Rd.	n/o Van Buren Blvd.	94.13%	2.18%	3.69%	100.00%
4	Barton St.	n/o Van Buren Blvd.	94.61%	2.00%	3.39%	100.00%
5	Sycamore Canyon Blvd.	n/o Cottonwood Av.	93.79%	2.11%	4.09%	100.00%
6	Meridian Pkwy.	n/o Van Buren Blvd.	94.91%	1.60%	3.49%	100.00%
7	Day St.	n/o Alessandro Blvd.	94.33%	2.10%	3.57%	100.00%
8	Frederick St.	n/o Cactus Av.	94.33%	2.10%	3.56%	100.00%
9	Alessandro Blvd.	w/o Barton St.	94.48%	2.05%	3.47%	100.00%
10	Alessandro Blvd.	e/o Barton St.	94.45%	2.06%	3.49%	100.00%
11	Alessandro Blvd.	e/o Meridian Pkwy.	94.60%	2.00%	3.40%	100.00%
12	Alessandro Blvd.	w/o Day St.	94.25%	2.13%	3.61%	100.00%
13	Cactus Av.	e/o Meridian Pkwy.	92.39%	1.38%	6.23%	100.00%
14	Cactus Av.	w/o Elsworth St.	94.21%	2.10%	3.69%	100.00%
15	Orange Terrace Pkwy.	e/o Trautwein Rd.	94.08%	2.20%	3.73%	100.00%
16	Van Buren Blvd.	w/o Wood Rd.	94.29%	2.12%	3.59%	100.00%
17	Van Buren Blvd.	e/o Wood Rd.	94.36%	2.09%	3.55%	100.00%
18	Van Buren Blvd.	e/o Orange Terrace Pkwy.	94.50%	2.04%	3.46%	100.00%
19	Van Buren Blvd.	e/o Meridian Pkwy.	93.98%	2.15%	3.87%	100.00%

¹ Total of vehicle mix percentage values rounded to the nearest one-hundredth.



7 OFF-SITE TRAFFIC NOISE ANALYSIS

To assess the off-site transportation CNEL noise level impacts associated with the proposed Project, noise contours were developed based on the West Campus Upper Plateau *Traffic Analysis* (26). Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway.

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 to 7-8 present a summary of the exterior traffic noise levels for each traffic condition. Appendix 7.1 includes the traffic noise level contours worksheets.

TABLE 7-1: EXISTING CONTOURS

ID	Road	d Segment		CNEL at Receiving	Distance to Contour from Centerline (Feet)		
טו	Road	Segment	Land Use ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Alessandro Blvd.	s/o Arlington Av.	Sensitive	78.1	208	448	966
2	Alessandro Blvd.	s/o Canyon Crest Dr.	Sensitive	77.8	200	431	928
3	Trautwein Rd.	n/o Van Buren Blvd.	Sensitive	75.8	107	230	495
4	Barton St.	n/o Van Buren Blvd.	Sensitive	65.8	RW	RW	80
5	Sycamore Canyon Blvd.	n/o Cottonwood Av.	Non-Sensitive	72.9	86	186	401
6	Meridian Pkwy.	n/o Van Buren Blvd.	Non-Sensitive	71.9	75	162	350
7	Day St.	n/o Alessandro Blvd.	Sensitive	67.5	RW	65	140
8	Frederick St.	n/o Cactus Av.	Non-Sensitive	71.3	RW	116	251
9	Alessandro Blvd.	w/o Barton St.	Sensitive	78.1	207	446	961
10	Alessandro Blvd.	e/o Barton St.	Sensitive	78.1	207	446	962
11	Alessandro Blvd.	e/o Meridian Pkwy.	Non-Sensitive	76.5	163	352	758
12	Alessandro Blvd.	w/o Day St.	Sensitive	74.8	139	300	645
13	Cactus Av.	e/o Meridian Pkwy.	Non-Sensitive	72.9	93	201	433
14	Cactus Av.	w/o Elsworth St.	Non-Sensitive	74.8	139	300	645
15	Orange Terrace Pkwy.	e/o Trautwein Rd.	Sensitive	71.3	67	144	310
16	Van Buren Blvd.	w/o Wood Rd.	Sensitive	76.1	154	331	713
17	Van Buren Blvd.	e/o Wood Rd.	Sensitive	75.8	145	313	675
18	Van Buren Blvd.	e/o Orange Terrace Pkwy.	Sensitive	75.8	145	313	674

ID	Road	Segment	Receiving	CNEL at Receiving	Distance to Contour from Centerline (Feet)		
ID	коаа		Land Use ¹	Land Use (dBA)²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
19	Van Buren Blvd.	e/o Meridian Pkwy.	Non-Sensitive	76.2	155	335	721

¹ Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

TABLE 7-2: EXISTING + PROJECT CONTOURS

	D I	Comment	Receiving	CNEL at Receiving		Distance to Contour from Centerline (Feet)		
ID	Road	Segment	Land Use ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	
1	Alessandro Blvd.	s/o Arlington Av.	Sensitive	78.2	210	452	974	
2	Alessandro Blvd.	s/o Canyon Crest Dr.	Sensitive	77.9	203	437	941	
3	Trautwein Rd.	n/o Van Buren Blvd.	Sensitive	75.8	107	231	497	
4	Barton St.	n/o Van Buren Blvd.	Sensitive	65.9	RW	RW	82	
5	Sycamore Canyon Blvd.	n/o Cottonwood Av.	Non-Sensitive	73.5	95	204	440	
6	Meridian Pkwy.	n/o Van Buren Blvd.	Non-Sensitive	73.5	96	206	444	
7	Day St.	n/o Alessandro Blvd.	Sensitive	67.6	RW	65	141	
8	Frederick St.	n/o Cactus Av.	Non-Sensitive	71.4	55	118	254	
9	Alessandro Blvd.	w/o Barton St.	Sensitive	78.2	212	457	985	
10	Alessandro Blvd.	e/o Barton St.	Sensitive	78.2	212	457	984	
11	Alessandro Blvd.	e/o Meridian Pkwy.	Non-Sensitive	76.7	168	362	779	
12	Alessandro Blvd.	w/o Day St.	Sensitive	74.8	140	303	652	
13	Cactus Av.	e/o Meridian Pkwy.	Non-Sensitive	77.3	184	396	853	
14	Cactus Av.	w/o Elsworth St.	Non-Sensitive	75.0	145	312	671	
15	Orange Terrace Pkwy.	e/o Trautwein Rd.	Sensitive	71.3	67	144	310	
16	Van Buren Blvd.	w/o Wood Rd.	Sensitive	76.2	156	335	723	
17	Van Buren Blvd.	e/o Wood Rd.	Sensitive	75.9	148	319	688	
18	Van Buren Blvd.	e/o Orange Terrace Pkwy.	Sensitive	76.0	150	324	697	
19	Van Buren Blvd.	e/o Meridian Pkwy.	Non-Sensitive	76.7	167	359	774	

 $^{^{\}mathrm{1}}$ Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.



 $^{^{2}}$ The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

[&]quot;RW" = Location of the respective noise contour falls within the right-of-way of the road.

 $^{^{2}}$ The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

[&]quot;RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-3: EA WITHOUT PROJECT CONTOURS

	David.	Comment	Receiving	CNEL at Receiving		ce to Conto nterline (Fe	-
ID	Road	Segment	Land Use ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Alessandro Blvd.	s/o Arlington Av.	Sensitive	78.7	228	492	1059
2	Alessandro Blvd.	s/o Canyon Crest Dr.	Sensitive	78.4	219	472	1017
3	Trautwein Rd.	n/o Van Buren Blvd.	Sensitive	76.4	117	252	543
4	Barton St.	n/o Van Buren Blvd.	Sensitive	66.4	RW	RW	88
5	Sycamore Canyon Blvd.	n/o Cottonwood Av.	Non-Sensitive	73.6	95	204	440
6	Meridian Pkwy.	n/o Van Buren Blvd.	Non-Sensitive	72.5	83	178	383
7	Day St.	n/o Alessandro Blvd.	Sensitive	68.1	RW	71	153
8	Frederick St.	n/o Cactus Av.	Non-Sensitive	71.9	59	128	275
9	Alessandro Blvd.	w/o Barton St.	Sensitive	78.7	227	489	1054
10	Alessandro Blvd.	e/o Barton St.	Sensitive	78.7	227	490	1055
11	Alessandro Blvd.	e/o Meridian Pkwy.	Non-Sensitive	77.1	179	386	831
12	Alessandro Blvd.	w/o Day St.	Sensitive	75.4	152	329	708
13	Cactus Av.	e/o Meridian Pkwy.	Non-Sensitive	73.5	102	220	475
14	Cactus Av.	w/o Elsworth St.	Non-Sensitive	75.4	152	329	708
15	Orange Terrace Pkwy.	e/o Trautwein Rd.	Sensitive	71.9	73	158	340
16	Van Buren Blvd.	w/o Wood Rd.	Sensitive	76.7	168	363	782
17	Van Buren Blvd.	e/o Wood Rd.	Sensitive	76.4	159	343	740
18	Van Buren Blvd.	e/o Orange Terrace Pkwy.	Sensitive	76.4	159	343	739
19	Van Buren Blvd.	e/o Meridian Pkwy.	Non-Sensitive	76.8	170	367	791

 $^{^{\}mathrm{1}}$ Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

TABLE 7-4: EAP CONTOURS

	Road Segment Receiving		CNEL at Receiving	Distance to Contour from Centerline (Feet)			
ID	Land Use ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL		
1	Alessandro Blvd.	s/o Arlington Av.	Sensitive	78.8	230	495	1067
2	Alessandro Blvd.	s/o Canyon Crest Dr.	Sensitive	78.5	222	478	1030
3	Trautwein Rd.	n/o Van Buren Blvd.	Sensitive	76.4	117	253	544
4	Barton St.	n/o Van Buren Blvd.	Sensitive	66.5	RW	RW	90
5	Sycamore Canyon Blvd.	n/o Cottonwood Av.	Non-Sensitive	74.1	103	221	477
6	Meridian Pkwy.	n/o Van Buren Blvd.	Non-Sensitive	73.9	102	220	475
7	Day St.	n/o Alessandro Blvd.	Sensitive	68.2	RW	72	154



 $^{^{\}rm 2}$ The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

[&]quot;RW" = Location of the respective noise contour $\bar{\mathsf{falls}}$ within the right-of-way of the road.

ID	Band	Sagment	Receiving	CNEL at Receiving	Distance to Contour from Centerline (Feet)			
טו	Road	Segment	Land Use ¹	Land Use (dBA)²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	
8	Frederick St.	n/o Cactus Av.	Non-Sensitive	72.0	60	129	278	
9	Alessandro Blvd.	w/o Barton St.	Sensitive	78.8	232	500	1077	
10	Alessandro Blvd.	e/o Barton St.	Sensitive	78.8	232	500	1076	
11	Alessandro Blvd.	e/o Meridian Pkwy.	Non-Sensitive	77.3	183	395	852	
12	Alessandro Blvd.	w/o Day St.	Sensitive	75.4	154	331	714	
13	Cactus Av.	e/o Meridian Pkwy.	Non-Sensitive	77.5	190	410	883	
14	Cactus Av.	w/o Elsworth St.	Non-Sensitive	75.6	158	340	733	
15	Orange Terrace Pkwy.	e/o Trautwein Rd.	Sensitive	71.9	73	158	340	
16	Van Buren Blvd.	w/o Wood Rd.	Sensitive	76.8	170	367	791	
17	Van Buren Blvd.	e/o Wood Rd.	Sensitive	76.5	162	349	753	
18	Van Buren Blvd.	e/o Orange Terrace Pkwy.	Sensitive	76.6	164	353	762	
19	Van Buren Blvd.	e/o Meridian Pkwy.	Non-Sensitive	77.2	181	391	842	

¹ Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

TABLE 7-5: OYC 2028 WITHOUT PROJECT CONTOURS

10	Bood	Commont	Receiving	CNEL at Receiving	Distance to Contour from Centerline (Feet)			
ID	Road	Segment	Land Use ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	
1	Alessandro Blvd.	s/o Arlington Av.	Sensitive	78.9	236	507	1093	
2	Alessandro Blvd.	s/o Canyon Crest Dr.	Sensitive	78.9	236	508	1095	
3	Trautwein Rd.	n/o Van Buren Blvd.	Sensitive	78.1	152	327	705	
4	Barton St.	n/o Van Buren Blvd.	Sensitive	68.0	RW	RW	113	
5	Sycamore Canyon Blvd.	n/o Cottonwood Av.	Non-Sensitive	74.0	102	219	471	
6	Meridian Pkwy.	n/o Van Buren Blvd.	Non-Sensitive	72.8	86	185	399	
7	Day St.	n/o Alessandro Blvd.	Sensitive	68.7	RW	77	167	
8	Frederick St.	n/o Cactus Av.	Non-Sensitive	72.2	62	134	288	
9	Alessandro Blvd.	w/o Barton St.	Sensitive	78.8	231	497	1071	
10	Alessandro Blvd.	e/o Barton St.	Sensitive	78.8	233	501	1080	
11	Alessandro Blvd.	e/o Meridian Pkwy.	Non-Sensitive	77.3	184	397	855	
12	Alessandro Blvd.	w/o Day St.	Sensitive	76.1	172	371	798	
13	Cactus Av.	e/o Meridian Pkwy.	Non-Sensitive	73.5	102	221	475	
14	Cactus Av.	w/o Elsworth St.	Non-Sensitive	76.1	172	371	798	
15	Orange Terrace Pkwy.	e/o Trautwein Rd.	Sensitive	71.9	74	159	342	
16	Van Buren Blvd.	w/o Wood Rd.	Sensitive	77.6	194	417	898	



 $^{^{2}}$ The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

[&]quot;RW" = Location of the respective noise contour falls within the right-of-way of the road.

	Band	Commont	Receiving	CNEL at Receiving Receiving		e to Contou nterline (Fe	
ID	Road	Segment	Land Use ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
17	Van Buren Blvd.	e/o Wood Rd.	Sensitive	77.5	189	408	879
18	Van Buren Blvd.	e/o Orange Terrace Pkwy.	Sensitive	78.1	208	449	966
19	Van Buren Blvd.	e/o Meridian Pkwy.	Non-Sensitive	80.1	282	607	1308

¹ Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

TABLE 7-6: OYC 2028 WITH PROJECT CONTOURS

ın	Bood	Command	Receiving	CNEL at Receiving	Distance to Contour from Centerline (Feet)			
ID	Road	Segment	Land Use ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	
1	Alessandro Blvd.	s/o Arlington Av.	Sensitive	79.0	237	511	1101	
2	Alessandro Blvd.	s/o Canyon Crest Dr.	Sensitive	79.0	238	514	1107	
3	Trautwein Rd.	n/o Van Buren Blvd.	Sensitive	78.1	152	328	707	
4	Barton St.	n/o Van Buren Blvd.	Sensitive	68.1	RW	RW	115	
5	Sycamore Canyon Blvd.	n/o Cottonwood Av.	Non-Sensitive	74.5	109	235	507	
6	Meridian Pkwy.	n/o Van Buren Blvd.	Non-Sensitive	74.1	105	227	488	
7	Day St.	n/o Alessandro Blvd.	Sensitive	68.7	RW	78	168	
8	Frederick St.	n/o Cactus Av.	Non-Sensitive	72.3	63	135	291	
9	Alessandro Blvd.	w/o Barton St.	Sensitive	78.9	236	508	1094	
10	Alessandro Blvd.	e/o Barton St.	Sensitive	79.0	237	511	1101	
11	Alessandro Blvd.	e/o Meridian Pkwy.	Non-Sensitive	77.5	189	406	875	
12	Alessandro Blvd.	w/o Day St.	Sensitive	76.2	173	373	804	
13	Cactus Av.	e/o Meridian Pkwy.	Non-Sensitive	77.5	190	410	884	
14	Cactus Av.	w/o Elsworth St.	Non-Sensitive	76.3	177	382	822	
15	Orange Terrace Pkwy.	e/o Trautwein Rd.	Sensitive	71.9	74	159	342	
16	Van Buren Blvd.	w/o Wood Rd.	Sensitive	77.7	195	421	907	
17	Van Buren Blvd.	e/o Wood Rd.	Sensitive	77.6	192	414	891	
18	Van Buren Blvd.	e/o Orange Terrace Pkwy.	Sensitive	78.2	212 458		986	
19	Van Buren Blvd.	e/o Meridian Pkwy.	Non-Sensitive	80.3	291	626	1348	

¹ Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.



 $^{^{2}}$ The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

[&]quot;RW" = Location of the respective noise contour falls within the right-of-way of the road.

² The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

[&]quot;RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-7: HY 2045 WITHOUT PROJECT CONTOURS

9	D l	Comment	Receiving	CNEL at Receiving		ce to Conto nterline (Fe	
ID	Road	Segment	Land Use ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Alessandro Blvd.	s/o Arlington Av.	Sensitive	79.6	261	563	1212
2	Alessandro Blvd.	s/o Canyon Crest Dr.	Sensitive	79.6	262	564	1216
3	Trautwein Rd.	n/o Van Buren Blvd.	Sensitive	78.7	168	362	779
4	Barton St.	n/o Van Buren Blvd.	Sensitive	68.8	RW	59	127
5	Sycamore Canyon Blvd.	n/o Cottonwood Av.	Non-Sensitive	74.7	113	243	523
6	Meridian Pkwy.	n/o Van Buren Blvd.	Non-Sensitive	73.7	99	213	459
7	Day St.	n/o Alessandro Blvd.	Sensitive	69.4	RW	86	185
8	Frederick St.	n/o Cactus Av.	Non-Sensitive	72.9	69	149	320
9	Alessandro Blvd.	w/o Barton St.	Sensitive	79.5	257	554	1194
10	Alessandro Blvd.	e/o Barton St.	Sensitive	79.5	259	558	1203
11	Alessandro Blvd.	e/o Meridian Pkwy.	Non-Sensitive	78.0	206	444	956
12	Alessandro Blvd.	w/o Day St.	Sensitive	76.8	191	411	886
13	Cactus Av.	e/o Meridian Pkwy.	Non-Sensitive	74.6	121	261	562
14	Cactus Av.	w/o Elsworth St.	Non-Sensitive	76.8	191	411	886
15	Orange Terrace Pkwy.	e/o Trautwein Rd.	Sensitive	74.4	108	233	503
16	Van Buren Blvd.	w/o Wood Rd.	Sensitive	78.3	215	463	997
17	Van Buren Blvd.	e/o Wood Rd.	Sensitive	78.2	211	454	977
18	Van Buren Blvd.	e/o Orange Terrace Pkwy.	Sensitive	78.8	232	232 500	
19	Van Buren Blvd.	e/o Meridian Pkwy.	Non-Sensitive	80.7	312 673		1449

 $^{^{1}}$ Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

TABLE 7-8: HY 2045 WITH PROJECT CONTOURS

	Road Segment Receiving Land Use ¹	CNEL at Receiving	Contouling (Foot)				
ID		Segment	Land Use ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Alessandro Blvd.	s/o Arlington Av.	Sensitive	79.6	263	566	1220
2	Alessandro Blvd.	s/o Canyon Crest Dr.	Sensitive	79.7	264	570	1227
3	Trautwein Rd.	n/o Van Buren Blvd.	Sensitive	78.7	168	362	781
4	Barton St.	n/o Van Buren Blvd.	Sensitive	68.8	RW	60	128
5	Sycamore Canyon Blvd.	n/o Cottonwood Av.	Non-Sensitive	75.1	120	258	557
6	Meridian Pkwy.	n/o Van Buren Blvd.	Non-Sensitive	74.8	117	252	544
7	Day St.	n/o Alessandro Blvd.	Sensitive	69.4	RW 86		186



 $^{^{\}rm 2}$ The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

[&]quot;RW" = Location of the respective noise contour falls within the right-of-way of the road.

ID	Road	Segment	Receiving	CNEL at Receiving	Distance to Contour from Centerline (Feet)			
טו	ROAU		Land Use ¹	Land Use (dBA)²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	
8	Frederick St.	n/o Cactus Av.	Non-Sensitive	73.0	70	150	323	
9	Alessandro Blvd.	w/o Barton St.	Sensitive	79.6	262	564	1216	
10	Alessandro Blvd.	e/o Barton St.	Sensitive	79.6	263	567	1223	
11	Alessandro Blvd.	e/o Meridian Pkwy.	Non-Sensitive	78.2	210	452	975	
12	Alessandro Blvd.	w/o Day St.	Sensitive	76.9	192	414	891	
13	Cactus Av.	e/o Meridian Pkwy.	Non-Sensitive	78.0	204	440	949	
14	Cactus Av.	w/o Elsworth St.	Non-Sensitive	77.0	196	421	908	
15	Orange Terrace Pkwy.	e/o Trautwein Rd.	Sensitive	74.4	108	233	503	
16	Van Buren Blvd.	w/o Wood Rd.	Sensitive	78.4	217	467	1006	
17	Van Buren Blvd.	e/o Wood Rd.	Sensitive	78.3	213	459	989	
18	Van Buren Blvd.	e/o Orange Terrace Pkwy.	Sensitive	78.9	236	509	1096	
19	Van Buren Blvd.	e/o Meridian Pkwy.	Non-Sensitive	80.9	320	690	1488	

¹ Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

7.2 EXISTING + PROJECT TRAFFIC NOISE LEVEL INCREASES

An analysis of existing traffic noise levels plus traffic noise generated by the proposed Project has been included in this report to fully analyze all the existing traffic scenarios identified in the *West Campus Upper Plateau Traffic Analysis*. This scenario is analyzed to show the potential impacts of the Project using the existing baseline consistent with the Project Traffic Analysis. Table 7-1 shows the Existing conditions CNEL noise levels. The Existing exterior noise levels are expected to range from 65.8 to 78.1 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-2 shows the Existing + Project conditions will range from 65.9 to 78.2 dBA CNEL. Table 7-9 shows that the Project off-site traffic noise level impacts will range from 0.0 to 4.4 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, one of the study area roadway segments is shown to experience *potentially significant* off-site traffic noise level increases due to the proposed Project conditions. The segment is described below.

• Cactus Avenue east of Meridian Parkway (Segment #13).

Section 7.9 describes the off-site traffic noise mitigation measures considered in this analysis. All other roadway segments would not experience noise level increases under Existing + Project conditions that would exceed the established thresholds of significance.



² The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

[&]quot;RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-9: EXISTING + PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Road	Segment	Receiving		L at Rece nd Use (d		Incremental Noise Level Increase Threshold ²	
			Land Use ¹	No Project	With Project	Project Addition	Limit	Exceeded?
1	Alessandro Blvd.	s/o Arlington Av.	Sensitive	78.1	78.2	0.1	1.5	No
2	Alessandro Blvd.	s/o Canyon Crest Dr.	Sensitive	77.8	77.9	0.1	1.5	No
3	Trautwein Rd.	n/o Van Buren Blvd.	Sensitive	75.8	75.8	0.0	1.5	No
4	Barton St.	n/o Van Buren Blvd.	Sensitive	65.8	65.9	0.1	1.5	No
5	Sycamore Canyon Blvd.	n/o Cottonwood Av.	Non-Sensitive	72.9	73.5	0.6	3.0	No
6	Meridian Pkwy.	n/o Van Buren Blvd.	Non-Sensitive	71.9	73.5	1.6	3.0	No
7	Day St.	n/o Alessandro Blvd.	Sensitive	67.5	67.6	0.1	1.5	No
8	Frederick St.	n/o Cactus Av.	Non-Sensitive	71.3	71.4	0.1	3.0	No
9	Alessandro Blvd.	w/o Barton St.	Sensitive	78.1	78.2	0.1	1.5	No
10	Alessandro Blvd.	e/o Barton St.	Sensitive	78.1	78.2	0.1	1.5	No
11	Alessandro Blvd.	e/o Meridian Pkwy.	Non-Sensitive	76.5	76.7	0.2	3.0	No
12	Alessandro Blvd.	w/o Day St.	Sensitive	74.8	74.8	0.0	1.5	No
13	Cactus Av.	e/o Meridian Pkwy.	Non-Sensitive	72.9	77.3	4.4	3.0	Yes
14	Cactus Av.	w/o Elsworth St.	Non-Sensitive	74.8	75.0	0.2	3.0	No
15	Orange Terrace Pkwy.	e/o Trautwein Rd.	Sensitive	71.3	71.3	0.0	1.5	No
16	Van Buren Blvd.	w/o Wood Rd.	Sensitive	76.1	76.2	0.1	1.5	No
17	Van Buren Blvd.	e/o Wood Rd.	Sensitive	75.8	75.9	0.1	1.5	No
18	Van Buren Blvd.	e/o Orange Terrace Pkwy.	Sensitive	75.8	76.0	0.2	1.5	No
19	Van Buren Blvd.	e/o Meridian Pkwy.	Non-Sensitive	76.2	76.7	0.5	3.0	No

¹ Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

7.3 EA TRAFFIC NOISE LEVEL INCREASES

Table 7-3 presents the Existing plus Ambient Growth without Project conditions CNEL noise levels. The Existing plus Ambient Growth without Project exterior noise levels are expected to range from 66.4 to 78.7 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-4 shows the EAP conditions will range from 66.5 to 78.8 dBA CNEL. Table 7-10 shows that the Project off-site traffic noise level increases will range from 0.0 to 4.0 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, one of the study area roadway segments is shown to experience *potentially significant* off-site traffic noise level increases due to the proposed Project conditions. The segment is described below.

Cactus Avenue east of Meridian Parkway (Segment #13).



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

³ Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?

Section 7.9 describes the off-site traffic noise mitigation measures considered in this analysis. All other roadway segments would not experience noise level increases under the EAP conditions that would exceed the established thresholds of significance.

TABLE 7-10: EAP TRAFFIC NOISE LEVEL INCREASES

ID	Road	Segment	Receiving		EL at Rece nd Use (d		Incremental Noise Level Increase Threshold ²	
			Land Use ¹	No Project	With Project	Project Addition	Limit	Exceeded?
1	Alessandro Blvd.	s/o Arlington Av.	Sensitive	78.7	78.8	0.1	1.5	No
2	Alessandro Blvd.	s/o Canyon Crest Dr.	Sensitive	78.4	78.5	0.1	1.5	No
3	Trautwein Rd.	n/o Van Buren Blvd.	Sensitive	76.4	76.4	0.0	1.5	No
4	Barton St.	n/o Van Buren Blvd.	Sensitive	66.4	66.5	0.1	1.5	No
5	Sycamore Canyon Blvd.	n/o Cottonwood Av.	Non-Sensitive	73.6	74.1	0.5	3.0	No
6	Meridian Pkwy.	n/o Van Buren Blvd.	Non-Sensitive	72.5	73.9	1.4	3.0	No
7	Day St.	n/o Alessandro Blvd.	Sensitive	68.1	68.2	0.1	1.5	No
8	Frederick St.	n/o Cactus Av.	Non-Sensitive	71.9	72.0	0.1	3.0	No
9	Alessandro Blvd.	w/o Barton St.	Sensitive	78.7	78.8	0.1	1.5	No
10	Alessandro Blvd.	e/o Barton St.	Sensitive	78.7	78.8	0.1	1.5	No
11	Alessandro Blvd.	e/o Meridian Pkwy.	Non-Sensitive	77.1	77.3	0.2	3.0	No
12	Alessandro Blvd.	w/o Day St.	Sensitive	75.4	75.4	0.0	1.5	No
13	Cactus Av.	e/o Meridian Pkwy.	Non-Sensitive	73.5	77.5	4.0	3.0	Yes
14	Cactus Av.	w/o Elsworth St.	Non-Sensitive	75.4	75.6	0.2	3.0	No
15	Orange Terrace Pkwy.	e/o Trautwein Rd.	Sensitive	71.9	71.9	0.0	1.5	No
16	Van Buren Blvd.	w/o Wood Rd.	Sensitive	76.7	76.8	0.1	1.5	No
17	Van Buren Blvd.	e/o Wood Rd.	Sensitive	76.4	76.5	0.1	1.5	No
18	Van Buren Blvd.	e/o Orange Terrace Pkwy.	Sensitive	76.4	76.6	0.2	1.5	No
19	Van Buren Blvd.	e/o Meridian Pkwy.	Non-Sensitive	76.8	77.2	0.4	3.0	No

¹ Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

7.4 OYC 2028 TRAFFIC NOISE LEVEL INCREASES

Table 7-5 presents the Opening Year Cumulative (2028) without Project conditions CNEL noise levels. The Opening Year Cumulative (2028) without Project exterior noise levels are expected to range from 68.0 to 80.1 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-6 shows the Opening Year Cumulative (2028) with Project conditions will range from 68.1 to 80.3 dBA CNEL. Table 7-11 shows that the Project offsite traffic noise level increases will range from 0.0 to 4.0 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, one of the study area roadway segments



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

³ Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?

is shown to experience *potentially significant* off-site traffic noise level increases due to the proposed Project conditions. The segment is described below.

• Cactus Avenue east of Meridian Parkway (Segment #13).

Section 7.9 describes the off-site traffic noise mitigation measures considered in this analysis. All other roadway segments would not experience noise level increases under Opening Year Cumulative (2028) with Project conditions that would exceed the established thresholds of significance.

TABLE 7-11: OYC 2028 WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Road	Segment	Receiving		EL at Rece nd Use (d	_	Incremental Noise Level Increase Threshold ²	
			Land Use ¹	No Project	With Project	Project Addition	Limit	Exceeded?
1	Alessandro Blvd.	s/o Arlington Av.	Sensitive	78.9	79.0	0.1	1.5	No
2	Alessandro Blvd.	s/o Canyon Crest Dr.	Sensitive	78.9	79.0	0.1	1.5	No
3	Trautwein Rd.	n/o Van Buren Blvd.	Sensitive	78.1	78.1	0.0	1.5	No
4	Barton St.	n/o Van Buren Blvd.	Sensitive	68.0	68.1	0.1	1.5	No
5	Sycamore Canyon Blvd.	n/o Cottonwood Av.	Non-Sensitive	74.0	74.5	0.5	3.0	No
6	Meridian Pkwy.	n/o Van Buren Blvd.	Non-Sensitive	72.8	74.1	1.3	3.0	No
7	Day St.	n/o Alessandro Blvd.	Sensitive	68.7	68.7	0.0	1.5	No
8	Frederick St.	n/o Cactus Av.	Non-Sensitive	72.2	72.3	0.1	3.0	No
9	Alessandro Blvd.	w/o Barton St.	Sensitive	78.8	78.9	0.1	1.5	No
10	Alessandro Blvd.	e/o Barton St.	Sensitive	78.8	79.0	0.2	1.5	No
11	Alessandro Blvd.	e/o Meridian Pkwy.	Non-Sensitive	77.3	77.5	0.2	3.0	No
12	Alessandro Blvd.	w/o Day St.	Sensitive	76.1	76.2	0.1	1.5	No
13	Cactus Av.	e/o Meridian Pkwy.	Non-Sensitive	73.5	77.5	4.0	3.0	Yes
14	Cactus Av.	w/o Elsworth St.	Non-Sensitive	76.1	76.3	0.2	3.0	No
15	Orange Terrace Pkwy.	e/o Trautwein Rd.	Sensitive	71.9	71.9	0.0	1.5	No
16	Van Buren Blvd.	w/o Wood Rd.	Sensitive	77.6	77.7	0.1	1.5	No
17	Van Buren Blvd.	e/o Wood Rd.	Sensitive	77.5	77.6	0.1	1.5	No
18	Van Buren Blvd.	e/o Orange Terrace Pkwy.	Sensitive	78.1	78.2	0.1	1.5	No
19	Van Buren Blvd.	e/o Meridian Pkwy.	Non-Sensitive	80.1	80.3	0.2	3.0	No

¹ Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

7.5 HY 2045 TRAFFIC NOISE LEVEL INCREASES

Table 7-7 presents the Horizon Year (2045) without Project conditions CNEL noise levels. The Horizon Year (2045) without Project exterior noise levels are expected to range from 68.8 to 80.7 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or



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

³ Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?

topography. Table 7-8 shows the Horizon Year (2045) with Project conditions will range from 68.8 to 80.9 dBA CNEL. Table 7-12 shows that the Project off-site traffic noise level increases will range from 0.0 to 3.4 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, one of the study area roadway segments is shown to experience potentially significant off-site traffic noise level increases due to the proposed Project conditions. The segment is described below.

• Cactus Avenue east of Meridian Parkway (Segment #13).

Section 7.9 describes the off-site traffic noise mitigation measures considered in this analysis. All other roadway segments would not experience noise level increases under Horizon Year (2045) with Project conditions that would exceed the established thresholds of significance.

TABLE 7-12: HY 2045 WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Road	Segment	Receiving	CNEL at Receiving Land Use (dBA) ¹			Incremental Noise Level Increase Threshold ²	
			Land Use ¹	No Project	With Project	Project Addition	Limit	Exceeded?
1	Alessandro Blvd.	s/o Arlington Av.	Sensitive	79.6	79.6	0.0	1.5	No
2	Alessandro Blvd.	s/o Canyon Crest Dr.	Sensitive	79.6	79.7	0.1	1.5	No
3	Trautwein Rd.	n/o Van Buren Blvd.	Sensitive	78.7	78.7	0.0	1.5	No
4	Barton St.	n/o Van Buren Blvd.	Sensitive	68.8	68.8	0.0	1.5	No
5	Sycamore Canyon Blvd.	n/o Cottonwood Av.	Non-Sensitive	74.7	75.1	0.4	3.0	No
6	Meridian Pkwy.	n/o Van Buren Blvd.	Non-Sensitive	73.7	74.8	1.1	3.0	No
7	Day St.	n/o Alessandro Blvd.	Sensitive	69.4	69.4	0.0	1.5	No
8	Frederick St.	n/o Cactus Av.	Non-Sensitive	72.9	73.0	0.1	3.0	No
9	Alessandro Blvd.	w/o Barton St.	Sensitive	79.5	79.6	0.1	1.5	No
10	Alessandro Blvd.	e/o Barton St.	Sensitive	79.5	79.6	0.1	1.5	No
11	Alessandro Blvd.	e/o Meridian Pkwy.	Non-Sensitive	78.0	78.2	0.2	3.0	No
12	Alessandro Blvd.	w/o Day St.	Sensitive	76.8	76.9	0.1	1.5	No
13	Cactus Av.	e/o Meridian Pkwy.	Non-Sensitive	74.6	78.0	3.4	3.0	Yes
14	Cactus Av.	w/o Elsworth St.	Non-Sensitive	76.8	77.0	0.2	3.0	No
15	Orange Terrace Pkwy.	e/o Trautwein Rd.	Sensitive	74.4	74.4	0.0	1.5	No
16	Van Buren Blvd.	w/o Wood Rd.	Sensitive	78.3	78.4	0.1	1.5	No
17	Van Buren Blvd.	e/o Wood Rd.	Sensitive	78.2	78.3	0.1	1.5	No
18	Van Buren Blvd.	e/o Orange Terrace Pkwy.	Sensitive	78.8	78.9	0.1	1.5	No
19	Van Buren Blvd.	e/o Meridian Pkwy.	Non-Sensitive	80.7	80.9	0.2	3.0	No

¹ Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.



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

³ Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?

7.6 OFF-SITE TRAFFIC NOISE IMPACTS

The study area roadway segment that would exceed the established thresholds of significance criteria outlined on Table 4-1 is limited to the non-noise sensitive land uses adjacent to Cactus Avenue east of Meridian Parkway (Segment #13). All other roadway segments will experience off-site traffic noise level impacts that are considered less than significant. The off-site Traffic Noise Analysis shows that Project traffic noise level increases on one non-sensitive study area roadway segment #13 will exceed the incremental noise level increase thresholds outlined on Table 4-1 for the following traffic conditions.

- Existing (2021) Conditions (E)
- Existing plus Project (E+P) Conditions
- Existing plus Ambient Growth (EA)
- Existing plus Ambient Growth plus Project (EAP)
- Opening Year Cumulative (2028) Without Project Conditions (OYC)
- Opening Year Cumulative (2028) With Project Conditions (OYCP)
- Horizon Year (2045) Without Project Conditions
- Horizon Year (2045) With Project Conditions

It should be noted that significant off-site traffic noise level increases identified under Existing + Project Conditions do not have the potential to occur, since the Project will not be fully developed and occupied under existing conditions, but rather under future conditions. Additionally, Segment #13 is in a developed industrial area and is not located immediately adjacent to any noise sensitive land uses. To reduce the *potentially significant* Project traffic noise level increases on the study area roadway segment (Segment #13) for the traffic conditions mentioned above, potential noise mitigation measures are identified in this analysis. Potential mitigation measures discussed below include rubberized asphalt hot mix pavement.

7.6.1 RUBBERIZED ASPHALT

Due to the potential noise attenuation benefits, rubberized asphalt is considered as a mitigation measure for the off-site Project-related traffic noise level increases. 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 (27). 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 automobile 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. (2) According to research conducted by Caltrans (27) and the Canadian Ministry of Transportation and Highways (28), a 4 dBA reduction in tire/pavement noise is attainable using rubberized asphalt under typical operating conditions.

The effectiveness of reducing traffic noise levels on roadways with high percentages of heavy trucks is limited, since the heavy truck engine and exhaust noise is not affected by rubberized alternative pavement due to the truck engine and exhaust stack height above the pavement



itself. (27) Per Caltrans guidance, a truck stack height is modeled using a height of 11.5 feet above the road. (29) With the primary off-site traffic noise source for the Project consisting of heavy trucks with a stack height of 11.5 feet off the ground, the tire/pavement noise reduction benefits associated with rubberized asphalt will be primarily limited to autos.

While the off-site Project-related traffic noise level increases could theoretically be reduced with the 4 dBA reduction provided by rubberized asphalt, the reduction would not provide reliable benefits for the noise levels generated by heavy truck traffic. This is, as previously stated, due to the noise source height difference between automobiles and trucks. 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 and would not reduce truck-related off-site traffic noise levels associated with truck engine and exhaust stacks to less than significant levels. Since the use of rubberized asphalt would not lower the off-site traffic noise levels below a level of significance, rubberized asphalt is not proposed as mitigation for the Project and the off-site Project-related traffic noise level increases at adjacent land uses along non-sensitive Segment #13 would remain potentially significant.

7.6.2 SIGNIFICANT OFF-SITE TRAFFIC NOISE IMPACTS

Rubberized asphalt was considered as a potential noise mitigation measure to reduce the *potentially significant* off-site traffic noise level increases along non-sensitive Segment #13 as shown on Tables 7-9 to 7-12. However, the use of rubberized asphalt would not eliminate the off-site traffic noise level increases to the non-noise sensitive land uses adjacent to Cactus Avenue east of Meridian Parkway (Segment #13). This segment is in a developed industrial area and is not located immediately adjacent to any noise sensitive land uses. Therefore, the Project-related off-site traffic noise level increases are considered a *significant and unavoidable* impact for the non-noise sensitive land uses adjacent to Cactus Avenue east of Meridian Parkway (Segment #13). All other roadway segments will experience off-site traffic noise level impacts that are considered less than significant.

7.7 CUMULATIVE TRAFFIC NOISE LEVEL INCREASES

Table 7-13 presents a summary of the cumulative and project incremental noise level increases for each of the study area roadway segments. The cumulative traffic noise level increase increment describes the difference between the HY 2045 with Project conditions and the Existing (baseline) conditions. Based on the significance criteria for off-site traffic noise presented in Table 4-1, twelve of the study area roadway segments are shown to experience *potentially significant* off-site traffic noise level increases due to cumulative conditions. These segments are listed below will experience this *potentially significant* off-site traffic noise level increase without the Project.

- Alessandro Blvd. south of Canyon Crest Drive (Segment #2)
- Trautwein Rd. north of Van Buren Blvd. (Segment #3)
- Barton St. north of Van Buren Blvd. (Segment #4)
- Meridian Pkwy. north of Van Buren Blvd. (Segment #6)
- Day St. north of Alessandro Blvd. (Segment #7)



- Alessandro Blvd. west of Day St. (Segment #12)
- Cactus Avenue east of Meridian Parkway (Segment #13)
- Orange Terrace Pkwy. east of Trautwein Rd. (Segment #15)
- Van Buren Blvd. west of Wood Rd. (Segment #16)
- Van Buren Blvd. east of Wood Rd. (Segment #17)
- Van Buren Blvd. east of Orange Terrace Pkwy. (Segment #18)
- Van Buren Blvd. east of Meridian Pkwy. (Segment #19)

The Project increment shown on Table 7-13 represents the difference between the existing without Project and the existing with Project conditions. Based on the significance criteria for off-site traffic noise presented in Table 4-1, one of the study area roadway segments is shown to experience *cumulatively considerable* off-site traffic noise level increase due to the added Project traffic. The segment is described below.

Cactus Avenue east of Meridian Parkway (Segment #13).

Section 7.6 describes the off-site traffic noise mitigation measures considered in this analysis. All other roadway segments would not experience project-related cumulatively considerable off-site traffic noise level increases that would exceed the established thresholds of significance.



TABLE 7-13: CUMULATIVE PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Road	Segment	Receiving Land Use ¹	CNEL at Receiving Land Use (dBA) ²			Cumulative Conditions			Cumulatively Considerable Project Contribution		
				Existing No Project (a)	Existing With Project (b)	HY 2045 With Project	Cumulative Increase (c-a)	Cumulative Limit	Cumulative Impact? ³	Project Increment (c-b)	Project Limit	Project Impact? ³
1	Alessandro Blvd.	s/o Arlington Av.	Sensitive	78.1	78.2	79.6	1.5	1.5	Yes	0.1	1.5	No
2	Alessandro Blvd.	s/o Canyon Crest Dr.	Sensitive	77.8	77.9	79.7	1.9	1.5	Yes	0.1	1.5	No
3	Trautwein Rd.	n/o Van Buren Blvd.	Sensitive	75.8	75.8	78.7	2.9	1.5	Yes	0.0	1.5	No
4	Barton St.	n/o Van Buren Blvd.	Sensitive	65.8	65.9	68.8	3.0	1.5	Yes	0.1	1.5	No
5	Sycamore Canyon Blvd.	n/o Cottonwood Av.	Non-Sensitive	72.9	73.5	75.1	2.2	3.0	No	0.6	3.0	No
6	Meridian Pkwy.	n/o Van Buren Blvd.	Non-Sensitive	71.9	73.5	74.8	2.9	3.0	No	1.6	3.0	No
7	Day St.	n/o Alessandro Blvd.	Sensitive	67.5	67.6	69.4	1.9	1.5	Yes	0.1	1.5	No
8	Frederick St.	n/o Cactus Av.	Non-Sensitive	71.3	71.4	73.0	1.7	3.0	No	0.1	3.0	No
9	Alessandro Blvd.	w/o Barton St.	Sensitive	78.1	78.2	79.6	1.5	1.5	Yes	0.1	1.5	No
10	Alessandro Blvd.	e/o Barton St.	Sensitive	78.1	78.2	79.6	1.5	1.5	Yes	0.1	1.5	No
11	Alessandro Blvd.	e/o Meridian Pkwy.	Non-Sensitive	76.5	76.7	78.2	1.7	3.0	No	0.2	3.0	No
12	Alessandro Blvd.	w/o Day St.	Sensitive	74.8	74.8	76.9	2.1	1.5	Yes	0.0	1.5	No
13	Cactus Av.	e/o Meridian Pkwy.	Non-Sensitive	72.9	77.3	78.0	5.1	3.0	Yes	4.4	3.0	Yes
14	Cactus Av.	w/o Elsworth St.	Non-Sensitive	74.8	75.0	77.0	2.2	3.0	No	0.2	3.0	No
15	Orange Terrace Pkwy.	e/o Trautwein Rd.	Sensitive	71.3	71.3	74.4	3.1	1.5	Yes	0.0	1.5	No
16	Van Buren Blvd.	w/o Wood Rd.	Sensitive	76.1	76.2	78.4	2.3	1.5	Yes	0.1	1.5	No
17	Van Buren Blvd.	e/o Wood Rd.	Sensitive	75.8	75.9	78.3	2.5	1.5	Yes	0.1	1.5	No
18	Van Buren Blvd.	e/o Orange Terrace Pkwy.	Sensitive	75.8	76.0	78.9	3.1	1.5	Yes	0.2	1.5	No
19	Van Buren Blvd.	e/o Meridian Pkwy.	Non-Sensitive	76.2	76.7	80.9	4.7	3.0	Yes	0.5	3.0	No

¹ Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.



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

³ Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?

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8 SENSITIVE RECEIVER LOCATIONS

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

To describe the potential off-site Project noise levels, ten receiver locations in the vicinity of the Project site were identified. All distances are measured from the Project site boundary to the outdoor living areas (e.g., private backyards) or at the building façade, whichever is closer to the Project site. The selection of receiver locations is based on FHWA guidelines and is consistent with additional guidance provided by Caltrans and the FTA, as previously described in Section 5.2. Other sensitive land uses in the Project study area that are located at greater distances than those identified in this noise study will experience lower noise levels than those presented in this report due to the additional attenuation from distance and the shielding of intervening structures. Distance is measured in a straight line from the project boundary to each receiver location.

- R1: Location R1 represents the existing noise sensitive residence at 20081 Camino Del Sol, approximately 44 feet north of the Project site in the unincorporated area of Riverside County. R1 is placed in the private outdoor living areas (backyard) facing the Project site. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment.
- R2: Location R2 represents the existing noise sensitive residence at 20351 Camino Del Sol, approximately 14 feet north of the Project site in the unincorporated area of Riverside County. R2 is placed in the private outdoor living areas (backyard) facing the Project site. A 24-hour noise measurement was taken near this location, L2, to describe the existing ambient noise environment.
- R3: Location R3 represents the existing noise sensitive residence at 20635 Camino Del Sol, approximately 15 feet north of the Project site in the unincorporated area of Riverside County. R3 is placed in the private outdoor living areas (backyard) facing the Project site. A 24-hour noise measurement was taken near this location, L3, to describe the existing ambient noise environment.
- R4: Location R4 represents the existing noise sensitive residence at 20852 Indigo Point, approximately 29 feet south of the Project site in the City of Riverside. R4 is placed in the private outdoor living areas (backyard) facing the Project site. A 24-hour noise



- measurement was taken near this location, L4, to describe the existing ambient noise environment.
- R5: Location R5 represents the existing noise sensitive residence at 20698 Iris Canyon Road, approximately 11 feet south of the Project site in the City of Riverside. R5 is placed in the private outdoor living areas (backyard) facing the Project site. A 24-hour noise measurement was taken near this location, L5, to describe the existing ambient noise environment.
- R6: Location R6 represents the existing noise sensitive residence at 8301 Clover Creek Road, approximately 34 feet south of the Project site in the City of Riverside. R6 is placed in the private outdoor living areas (backyard) facing the Project site. A 24-hour noise measurement was taken near this location, L5, to describe the existing ambient noise environment.
- R7: Location R7 represents the existing noise sensitive residence at 20304 Dayton Street, approximately 21 feet south of the Project site in the City of Riverside. R7 is placed in the private outdoor living areas (backyard) facing the Project site. A 24-hour noise measurement was taken near this location, L5, to describe the existing ambient noise environment.
- R8: Location R8 represents the existing noise sensitive Grove Community Church and preschool at 19900 Grove Community Drive, approximately 176 feet south of the Project site in the City of Riverside. R8 is placed on the Church's building façade facing the Project site. A 24-hour noise measurement was taken near this location, L7, to describe the existing ambient noise environment.
- R9: Location R9 represents the existing noise sensitive residence at 8044 La Crosse Way, approximately 24 feet west of the Project site in the City of Riverside. R9 is placed in the private outdoor living areas (backyard) facing the Project site. A 24-hour noise measurement was taken near this location, L8, to describe the existing ambient noise environment.
- R10: Location R10 represents the existing noise sensitive residence at 941 Saltcoats Drive, approximately 16 feet north of the Project site in the City of Riverside. R10 is placed in the private outdoor living areas (backyard) facing the Project site. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment.



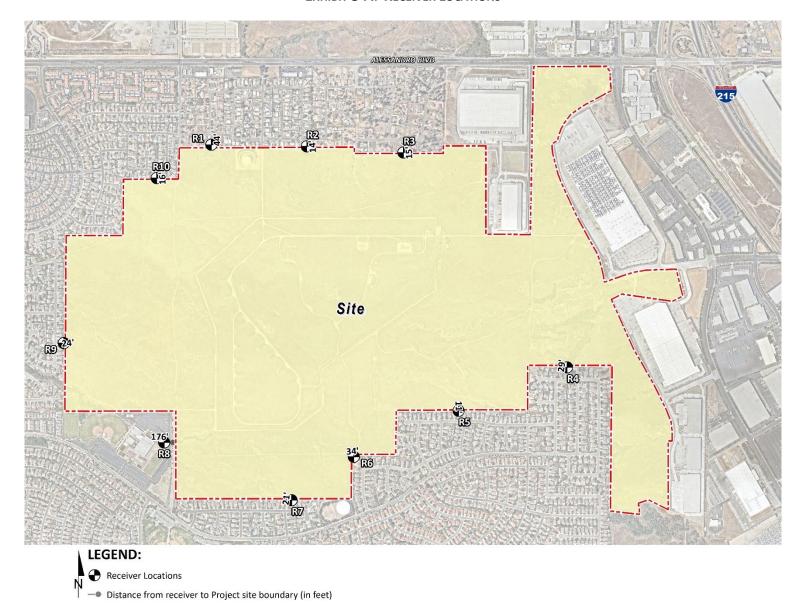


EXHIBIT 8-A: RECEIVER LOCATIONS



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9 OPERATIONAL NOISE IMPACTS

This section analyzes the potential stationary-source operational noise impacts at the nearest receiver locations, identified in Section 8, resulting from the operation of the proposed West Campus Upper Plateau Project. Exhibit 9-A identifies the noise source locations used to assess the operational noise levels.

9.1 OPERATIONAL NOISE SOURCES

This operational noise analysis is intended to describe noise level impacts associated with the expected typical of daytime and nighttime activities at the Project site. To present the potential worst-case noise conditions, this analysis assumes the Project would be operational 24 hours per day, seven days per week. Consistent with similar warehouse and industrial uses, the Project business operations would primarily be conducted within the enclosed buildings, except for traffic movement, parking, as well as loading and unloading of trucks at designated loading bays. The on-site Project-related noise sources are expected to include: loading dock activity, roof-top air conditioning, trash enclosure activity, parking lot vehicle movements, truck movements and park activities.

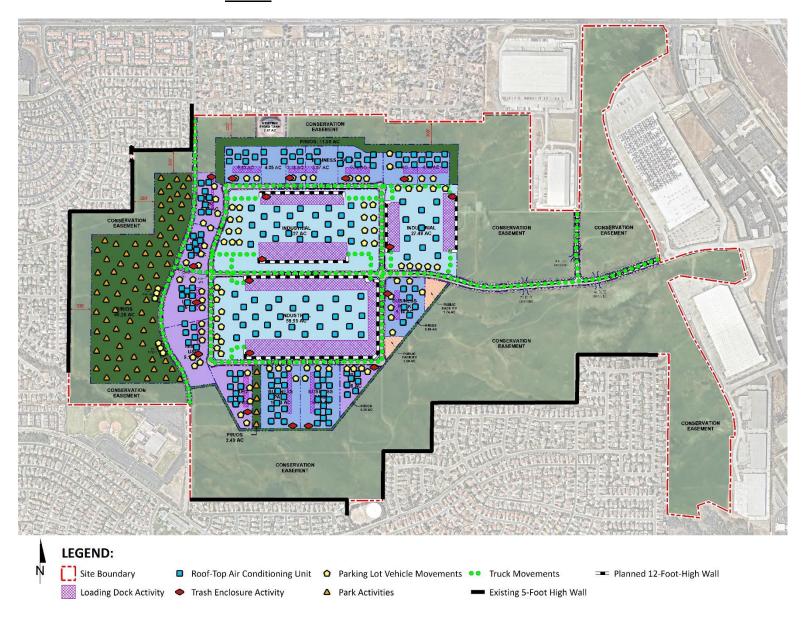
9.2 REFERENCE NOISE LEVELS

To estimate the Project operational noise impacts, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with the development of the proposed Project. This section provides a detailed description of the reference noise level measurements shown on Table 9-1 used to estimate the Project operational noise impacts. It is important to note that the following projected noise levels assume the worst-case noise environment with the loading dock activity, roof-top air conditioning, trash enclosure activity, parking lot vehicle movements, truck movements and park activities all operating at the same time. These sources of noise activity will likely vary throughout the day.

9.2.1 MEASUREMENT PROCEDURES

The reference noise level measurements presented in this section were collected using a Larson Davis LxT Type 1 precisions sound level meter (serial number 01146). The LxT sound level meter was calibrated using a Larson-Davis calibrator, Model CAL 200, was programmed in "slow" mode to record noise levels in "A" weighted form and was located at approximately five feet above the ground elevation for each measurement. 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. (22)





REVISED EXHIBIT 9-A: OPERATIONAL NOISE SOURCE LOCATIONS



TABLE 9-1: REFERENCE NOISE LEVEL MEASUREMENTS

Noise Source ¹	Noise Source		n./ ur²	Reference Noise Level	Sound Power	
Noise Source	Height (Feet)	Day	Night	(dBA L _{eq}) @ 50 Feet	Level (dBA)³	
Loading Dock Activity	8'	60	60	65.7	111.5	
Roof-Top Air Conditioning Units	5'	39	28	57.2	88.9	
Trash Enclosure Activity	5'	10	10	57.3	89.0	
Parking Lot Vehicle Movements	5'	60	60	56.1	87.8	
Truck Movements	8'	_4	_4	59.8	93.2	
Park Activities	5'	60'	0'	49.4	81.1	

¹ As measured by Urban Crossroads, Inc.

9.2.2 LOADING DOCK ACTIVITY

The reference loading dock activities are intended to describe the typical outdoor operational noise activities associated with the Project. This includes truck idling, reefer activity (refrigerator truck/cold storage), deliveries, backup alarms, trailer docking including a combination of tractor trailer semi-trucks, two-axle delivery trucks, and background operation activities. Since the noise levels generated by cold storage loading dock activity can be slightly higher due to the use of refrigerated trucks or reefers. The reference noise level measurement was taken in the center of the loading dock activity area and represents multiple concurrent noise sources resulting in a combined noise level of 65.7 dBA Leq at a uniform distance of 50 feet. Specifically, the reference noise level measurement represents one truck located approximately 30 feet from the noise level meter with another truck passing by to park roughly 20 feet away, both with their engines idling. Throughout the reference noise level measurement, a separate docked and running reefer truck was located approximately 50 feet east of the measurement location. Additional background noise sources included truck pass-by noise, truck drivers talking to each other next to docked trucks, and air brake release noise when trucks parked.

9.2.3 ROOF-TOP AIR CONDITIONING UNITS

The noise level measurements describe a single mechanical roof-top air conditioning unit. The reference noise level represents a Lennox SCA120 series 10-ton model packaged air conditioning unit. At the uniform reference distance of 50 feet, the reference noise levels are 57.2 dBA $L_{\rm eq}$. Based on the typical operating conditions observed over a four-day measurement period, the roof-top air conditioning units are estimated to operate for and average 39 minutes per hour during the daytime hours, and 28 minutes per hour during the nighttime hours. These operating conditions reflect peak summer cooling requirements with measured temperatures approaching



² Anticipated duration (minutes within the hour) of noise activity during typical hourly conditions expected at the Project site.

[&]quot;Daytime" = 7:00 a.m. - 10:00 p.m.; "Nighttime" = 10:00 p.m. - 7:00 a.m.

³ Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings.

⁴ Truck Movements are calculated based on the number of events by time of day (See Table 9-2).

96 degrees Fahrenheit (°F) with average daytime temperatures of 82°F. For this noise analysis, the air conditioning units are expected to be located on the roof of the Project buildings.

9.2.4 TRASH ENCLOSURE ACTIVITY

To describe the noise levels associated with a trash enclosure activity, Urban Crossroads collected a reference noise level measurement at an existing trash enclosure containing two dumpster bins. The trash enclosure noise levels describe metal gates opening and closing, metal scraping against concrete floor sounds, dumpster movement on metal wheels, and trash dropping into the metal dumpster. The reference noise levels describe trash enclosure noise activities when trash is dropped into an empty metal dumpster, as would occur at the Project Site. The measured reference noise level at the uniform 50-foot reference distance is 57.3 dBA L_{eq} for the trash enclosure activity. The reference noise level describes the expected noise source activities associated with the trash enclosures for the Project's proposed building. Typical trash enclosure activities are estimated to occur for 10 minutes per hour.

9.2.5 PARKING LOT VEHICLE MOVEMENTS

To describe the on-site parking lot activity, a long-term 29-hour reference noise level measurement was collected in the center of activity within the staff parking lot of a warehouse distribution center. At 50 feet from the center of activity, the parking lot produced a reference noise level of 56.1 dBA L_{eq} . Parking activities are expected to take place during the full hour (60 minutes) throughout the daytime and evening hours. The parking lot noise levels are mainly due cars pulling in and out of parking spaces in combination with car doors opening and closing.

9.2.6 TRUCK MOVEMENTS

The truck movements reference noise level measurement was collected over a period of 1 hour and 28 minutes and represents multiple heavy trucks entering and exiting the outdoor loading dock area producing a reference noise level of 59.8 dBA L_{eq} at 50 feet. The noise sources included at this measurement location account for trucks entering and existing the Project driveways and maneuvering in and out of the outdoor loading dock activity area. Consistent with the *West Campus Upper Plateau Traffic Analysis* prepared by Urban Crossroads, Inc., the Project is expected to generate a total of approximately 2,054 two-way truck trips per day (26). Using the estimated number of truck trips in combination with time-of-day vehicle splits, the number of truck movements were calculated. As shown on Table 9-2, this information is then used to calculate the truck movements operational noise source activity based on the number of events by time of day.



TABLE 9-2: TRUCK MOVEMENTS BY LOCATION

Truck Movements Location	Total		Truck	Time of	Day Vehicle	e Splits³	Truc	k Moveme	ents ⁴
	Project Truck Trips ¹	Trip Dist.	Trips by Location ²	Day	Evening	Night	Day	Evening	Night
All Driveways	2,054	100%	2,054	86.50%	2.70%	10.80%	1,777	55	222

¹ Total Project truck trips according to Table 4-2 of the West Campus Upper Plateau Traffic Analysis.

9.2.7 PARK ACTIVITIES

To represent the potential noise level impacts associated with the Project's Park activities, a reference noise level measurement was collected at the Founders Park in the unincorporated community of Ladera Ranch in the County of Orange. The reference noise levels collected at the Founders Park are expected to reflect the noise level activities within the open space-recreation land use areas of the Project site, since the reference noise level measurement includes girls' youth soccer games, coaches shouting instructions, and parents speaking on cell phones at five feet from the noise level measurement location, and background noise levels from kids playing on swing sets and people cheering and clapping at 50 feet from the noise level measurement location. Using the uniform reference distance of 50 feet, the reference park activity noise level is 49.4 dBA Leq. The playground activities are estimated to occur for 60 minutes during the peak hour conditions.

9.3 CADNAA NOISE PREDICTION MODEL

To fully describe the exterior operational noise levels from the Project, Urban Crossroads, Inc. developed a noise prediction model using the CadnaA (Computer Aided Noise Abatement) computer program. CadnaA can analyze multiple types of noise sources using the spatially accurate Project site plan, georeferenced Nearmap aerial imagery, topography, buildings, and barriers in its calculations to predict outdoor noise levels. Using the ISO 9613-2 protocol, CadnaA will calculate the distance from each noise source to the noise receiver locations, using the ground absorption, distance, and barrier/building attenuation inputs to provide a summary of noise level at each receiver and the partial noise level contributions by noise source. Consistent with the ISO 9613-2 protocol, the CadnaA noise prediction model relies on the reference sound power level (Lw) to describe individual noise sources.

While sound pressure levels (e.g., L_{eq}) quantify in decibels the intensity of given sound sources at a reference distance, sound power levels (L_{w}) are connected to the sound source and are independent of distance. Sound pressure levels vary substantially with distance from the source and diminish because of intervening obstacles and barriers, air absorption, wind, and other factors. Sound power is the acoustical energy emitted by the sound source and is an absolute value that is not affected by the environment. The operational noise level calculations provided in this noise study account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly



² Calculated trip trucks per location represents the product of the total project truck trips and the trip distribution.

³ County of Riverside General Plan Noise Element. Typical Southern California vehicle mix. Values rounded to the nearest one-hundredth.

⁴ Calculated time of day truck movements by location.

[&]quot;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.

outward in a spherical pattern. A default ground attenuation factor of 0.5 was used in the CadnaA noise analysis to account for mixed ground representing a combination of hard and soft surfaces. Appendix 9.1 includes the detailed noise model inputs used to estimate the Project operational noise levels presented in this section.

9.4 Project Operational Noise Levels

Using the reference noise levels to represent the proposed Project operations that include loading dock activity, roof-top air conditioning, trash enclosure activity, parking lot vehicle movements, truck movements and park activities, Urban Crossroads, Inc. calculated the operational source noise levels that are expected to be generated at the Project site and the Project-related noise level increases that would be experienced at each of the sensitive receiver locations. Table 9-3 shows the Project operational noise levels during the daytime hours of 7:00 a.m. to 10:00 p.m. The daytime hourly noise levels at the off-site receiver locations are expected to range from 33.9 to 47.7 dBA Leq.

TABLE 9-3: DAYTIME PROJECT OPERATIONAL NOISE LEVELS

Naiss Coursel		Opera	ational I	Noise Le	vels by	Receive	er Locat	ion (dB/	A Leq)	
Noise Source ¹	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10
Loading Dock Activity	45.3	42.0	36.5	37.4	29.4	43.2	39.4	41.6	33.1	36.8
Roof-Top Air Conditioning Units	36.2	35.2	33.2	27.6	25.9	34.7	31.3	35.9	29.2	31.7
Trash Enclosure Activity	13.6	9.8	5.8	6.4	0.0	14.7	12.7	20.9	5.6	12.1
Parking Lot Vehicle Movements	27.1	22.7	19.0	20.4	12.3	26.1	22.2	34.1	24.1	19.9
Truck Movements	43.0	38.6	36.1	41.9	30.8	43.5	35.8	45.3	35.4	36.7
Park Activities	22.3	13.6	5.7	3.6	2.0	14.8	15.7	27.6	27.3	20.8
Total (All Noise Sources)	47.7	44.3	40.3	43.4	33.9	46.7	41.5	47.4	38.5	40.5

¹ See Exhibit 9-A for the noise source locations. CadnaA noise model calculations are included in Appendix 9.1.

Table 9-4 shows the Project operational noise levels during the nighttime hours of $10:00 \, \text{p.m.}$ to $7:00 \, \text{a.m.}$ The nighttime hourly noise levels at the off-site receiver locations are expected to range from $31.0 \, \text{to} \, 45.9 \, \text{dBA L}_{eq.}$ The differences between the daytime and nighttime noise levels are largely related to the estimated duration of noise activity as outlined in Table 9-1 and Appendix 9.1.



TABLE 9-4: NIGHTTIME PROJECT OPERATIONAL NOISE LEVELS

Noise Source ¹		Opera	ational I	Noise Le	vels by	Receive	r Locati	ion (dB	A Leq)	
Noise Source-	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10
Loading Dock Activity	45.3	42.0	36.5	37.4	29.4	43.2	39.4	41.6	33.1	36.8
Roof-Top Air Conditioning Units	33.8	32.8	30.8	25.2	23.5	32.2	28.9	33.5	26.8	29.3
Trash Enclosure Activity	12.7	8.8	4.8	5.5	0.0	13.7	11.7	20.0	4.6	11.2
Parking Lot Vehicle Movements	27.1	22.7	19.0	20.4	12.3	26.1	22.2	34.1	24.1	19.9
Truck Movements	34.0	29.6	27.1	32.9	21.8	34.5	26.8	36.2	26.3	27.7
Park Activities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total (All Noise Sources)	45.9	42.8	38.0	39.0	31.0	44.1	40.1	43.7	35.1	38.0

¹ See Exhibit 9-A for the noise source locations. CadnaA noise model calculations are included in Appendix 9.1.

9.5 Project Operational Noise Level Compliance

To demonstrate compliance with local noise regulations, the Project-only operational noise levels are evaluated against exterior noise level thresholds based on the March JPA and City of Riverside exterior noise level standards at the nearest noise-sensitive receiver locations. Table 9-5 shows the operational noise levels associated with West Campus Upper Plateau Project will not exceed the daytime and nighttime exterior noise level standards. Therefore, the operational noise impacts are considered *less than significant* at the nearby noise-sensitive receiver locations.

TABLE 9-5: OPERATIONAL NOISE LEVEL COMPLIANCE

Receiver	Jurisdiction	Project Op Noise Level	perational s (dBA Leq)²		l Standards Leq)³	Noise Level Standards Exceeded? ⁴		
Location		Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime	
R1	County of Riverside	47.7	45.9	55	55	No	No	
R2		44.3	42.8	55	45	No	No	
R3	Miverside	40.3	38.0	55	55	No	No	
R4		43.4	39.0	55	45	No	No	
R5		33.9	31.0	55	45	No	No	
R6		46.7	44.1	55	45	No	No	
R7	City of Riverside	41.5	40.1	55	45	No	No	
R8	Riverside	47.4	43.7	55	45	No	No	
R9		38.5	35.1	55	45	No	No	
R10		40.5	38.0	55	45	No	No	

¹ See Exhibit 8-A for the receiver locations.



² Proposed Project operational noise levels as shown on Tables 9-3 and 9-4.

³ Exterior noise level standards, as shown on Table 4-1.

⁴ Do the estimated Project operational noise source activities exceed the noise level standards?

[&]quot;Daytime" = 7:00 a.m. - 10:00 p.m.; "Nighttime" = 10:00 p.m. - 7:00 a.m.

9.6 Project Operational Noise Level Increases

To describe the Project operational noise level increases, the Project operational noise levels are combined with the existing ambient noise levels measurements for the nearest receiver locations potentially impacted by Project operational noise sources. Since the units used to measure noise, decibels (dB), are logarithmic units, the Project-operational and existing ambient noise levels cannot be combined using standard arithmetic equations. (2) Instead, they must be logarithmically added using the following base equation:

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

Where "SPL1," "SPL2," etc. are equal to the sound pressure levels being combined, or in this case, the Project-operational and existing ambient noise levels. The difference between the combined Project and ambient noise levels describes the Project noise level increases to the existing ambient noise environment. As indicated on Tables 9-6, the Project will generate a daytime operational noise level increases ranging from 0.1 to 2.0 dBA L_{eq} at the nearest receiver locations. Table 9-7 shows that the Project will generate a nighttime operational noise level increases ranging from 0.1 to 2.3 dBA L_{eq} at the nearest receiver locations. Project-related operational noise level increases will satisfy the operational noise level increase significance criteria presented in Table 4-1. Therefore, the increases at the sensitive receiver locations will be *less than significant*.

TABLE 9-6: DAYTIME PROJECT OPERATIONAL NOISE LEVEL INCREASES

Receiver Location ¹	Total Project Operational Noise Level ²	Measurement Location ³	Reference Ambient Noise Levels ⁴	Combined Project and Ambient ⁵	Project Increase ⁶	Increase Criteria ⁷	Increase Criteria Exceeded?
R1	47.7	L1	52.7	53.9	1.2	5.0	No
R2	44.3	L2	51.8	52.5	0.7	5.0	No
R3	40.3	L3	50.0	50.4	0.4	5.0	No
R4	43.4	L4	48.4	49.6	1.2	5.0	No
R5	33.9	L5	49.0	49.1	0.1	5.0	No
R6	46.7	L5	49.0	51.0	2.0	5.0	No
R7	41.5	L5	49.0	49.7	0.7	5.0	No
R8	47.4	L7	51.6	53.0	1.4	5.0	No
R9	38.5	L8	47.3	47.8	0.5	5.0	No
R10	40.5	L1	52.7	53.0	0.3	5.0	No

¹ See Exhibit 8-A for the receiver locations.



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

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

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

⁵ Represents the combined ambient conditions plus the Project activities.

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

⁷ Significance increase criteria as shown on Table 4-1.

TABLE 9-7: NIGHTTIME OPERATIONAL NOISE LEVEL INCREASES

Receiver Location ¹	Total Project Operational Noise Level ²	Measurement Location ³	Reference Ambient Noise Levels ⁴	Combined Project and Ambient ⁵	Project Increase ⁶	Increase Criteria ⁷	Increase Criteria Exceeded?
R1	45.9	L1	50.3	51.7	1.4	5.0	No
R2	42.8	L2	49.0	49.9	0.9	5.0	No
R3	38.0	L3	46.5	47.1	0.6	5.0	No
R4	39.0	L4	45.0	46.0	1.0	5.0	No
R5	31.0	L5	45.6	45.7	0.1	5.0	No
R6	44.1	L5	45.6	47.9	2.3	5.0	No
R7	40.1	L5	45.6	46.7	1.1	5.0	No
R8	43.7	L7	47.5	49.0	1.5	5.0	No
R9	35.1	L8	43.9	44.4	0.5	5.0	No
R10	38.0	L1	50.3	50.5	0.2	5.0	No

¹ See Exhibit 8-A for the receiver locations.



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

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

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

⁵ Represents the combined ambient conditions plus the Project activities.

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

⁷ Significance increase criteria as shown on Table 4-1.

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10 CONSTRUCTION ANALYSIS

This section analyzes potential impacts resulting from the short-term construction activities associated with the development of the Project. Exhibit 10-A shows the limits of construction noise source activity including the off-site roadway and utility improvements in relation to the nearest sensitive receiver locations previously described in Section 8.

10.1 Construction Noise Standards

To analyze noise impacts originating from the construction of the West Campus Upper Plateau Project, noise from construction activities is typically limited to the hours of operation established under a jurisdiction's 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 for each jurisdiction adjacent to the Project site including: the March JPA, City of Riverside, and the County of Riverside.

10.2 Construction Noise Levels

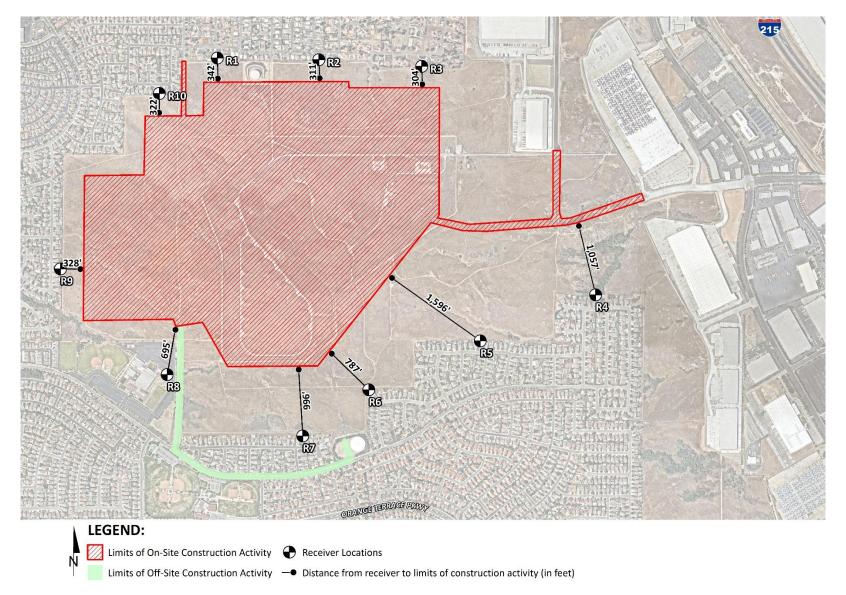
The FTA *Transit Noise and Vibration Impact Assessment Manual* recognizes that construction projects are accomplished in several different stages and outlines the procedures for assessing noise impacts during construction. Each stage has a specific equipment mix, depending on the work to be completed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

- Mass Grading
- Blasting
- Remedial Grading
- Building Construction
- Architectural Coating
- Paving

10.3 Construction Reference Noise Levels

To describe construction noise activities, this construction noise analysis was prepared using reference construction equipment noise levels from the Federal Highway Administration (FHWA) published the Roadway Construction Noise Model (RCNM), which includes a national database of construction equipment reference noise emission levels. (30) The RCNM equipment database, provides a comprehensive list of the noise generating characteristics for specific types of construction equipment. In addition, the database provides an acoustical usage factor to estimate the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation.





REVISED EXHIBIT 10-A: CONSTRUCTION NOISE SOURCE ACTIVITY



10.4 Construction Noise Analysis

Using the reference construction equipment noise levels and the CadnaA noise prediction model, calculations of the Project construction noise level impacts at the nearby sensitive receiver locations were completed. Consistent with FTA guidance for general construction noise assessment, Table 10-1 presents the combined noise levels for the loudest construction equipment, assuming they operate at the same time. As shown on Table 10-2, the highest construction noise levels are expected to range from 39.7 to 48.0 dBA L_{eq} and 44.7 to 53.0 dBA L_{max} at the nearby receiver locations. Appendix 10.1 includes the detailed CadnaA construction noise model inputs.

TABLE 10-1: CONSTRUCTION REFERENCE NOISE LEVELS

Construction Stage	Reference Construction		ce Noise 50 Feet ¹		ed/Max Level²	
Stage	Activity	Leq	Lmax	Leq	Lmax	
	Graders	81	85			
Mass Grading	Excavators	77	81	83	85	
Grading	Compactors	76	83			
	Drilling Rig	72	79			
Blasting	Warning Horn	70	83	82	94	
	Blasting	81	94			
	Graders	81	85			
Remedial Grading	Excavators	77	81	83	85	
Grading	Compactors	76	83			
	Cranes	73	81			
Building Construction	Tractors	80	84	81	84	
Construction	Welders	70	74			
	Cranes	73	81			
Architectural Coating	Air Compressors	74	78	77	81	
Coating	Generator Sets	70	73			
	Pavers	avers 74 77				
Paving	Paving Equipment	82	85	83	85	
	Rollers	73	80			

¹ FHWA Roadway Construction Noise Model (RCNM).



² Represents the combined noise level for all equipment assuming they operate at the same time consistent with FTA Transit Noise and Vibration Impact Assessment guidance.

TABLE 10-2: CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY

			Construction	n Noise Leve	els (dBA L _{eq})					Constructio	n Noise Leve	Is (dBA L _{max})		
Receiver Location ¹	Mass Grading	Blasting	Remedial Grading	Building Cons.	Arch. Coating	Paving	Highest Levels ²	Mass Grading	Blasting	Remedial Grading	Building Cons.	Arch. Coating	Paving	Highest Levels ²
R1	47.2	46.2	47.2	45.2	41.2	47.2	47.2	49.2	58.2	49.2	48.2	45.2	49.2	58.2
R2	48.0	47.0	48.0	46.0	42.0	48.0	48.0	50.0	59.0	50.0	49.0	46.0	50.0	59.0
R3	46.8	45.8	46.8	44.8	40.8	46.8	46.8	48.8	57.8	48.8	47.8	44.8	48.8	57.8
R4	39.7	38.7	39.7	37.7	33.7	39.7	39.7	41.7	50.7	41.7	40.7	37.7	41.7	50.7
R5	42.3	41.3	42.3	40.3	36.3	42.3	42.3	44.3	53.3	44.3	43.3	40.3	44.3	53.3
R6	44.7	43.7	44.7	42.7	38.7	44.7	44.7	46.7	55.7	46.7	45.7	42.7	46.7	55.7
R7	43.5	42.5	43.5	41.5	37.5	43.5	43.5	45.5	54.5	45.5	44.5	41.5	45.5	54.5
R8	46.0	45.0	46.0	44.0	40.0	46.0	46.0	48.0	57.0	48.0	47.0	44.0	48.0	57.0
R9	47.2	46.2	47.2	45.2	41.2	47.2	47.2	49.2	58.2	49.2	48.2	45.2	49.2	58.2
R10	47.8	46.8	47.8	45.8	41.8	47.8	47.8	49.8	58.8	49.8	48.8	45.8	49.8	58.8

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



² Construction noise level calculations based on distance from the construction activity, which is measured from the Project site boundary to the nearest receiver locations. CadnaA construction noise model inputs are included in Appendix 10.1.

10.5 CONSTRUCTION NOISE LEVEL COMPLIANCE

The construction noise analysis shows that the highest construction noise levels will occur when construction activities take place at the edge of the Project site. Table 10-3 shows the unmitigated peak daytime construction noise levels at the nearby sensitive receiver locations will range from 46.8 to 47.2 dBA L_{eq} and 50.7 to 59.0 dBA L_{max} and will not exceed the daytime construction noise level thresholds for each jurisdiction at the nearby sensitive receiver locations. Therefore, the noise impacts due to Project construction noise are considered *less than significant* at all receiver locations.

TABLE 10-3: CONSTRUCTION NOISE LEVEL COMPLIANCE

Receiver Location ¹	Jurisdiction	Peak Con Activity No		Thres	hold³	Threshold Exceeded? ⁴		
Location		Leq	Lmax	Leq	Lmax	Leq	Lmax	
R1	County of Riverside	47.2	-	65	-	No	-	
R2		48.0	-	65	-	No	-	
R3	Miverside	46.8	-	65	-	No	-	
R4		-	50.7	-	75	-	No	
R5		-	53.3	-	75	-	No	
R6		-	55.7	-	75	-	No	
R7	City of Riverside	-	54.5	-	75	-	No	
R8	Riverside	-	57.0	-	75	-	No	
R9		-	58.2	-	75	-	No	
R10		-	58.8	-	75	-	No	

¹ Construction noise receiver locations are shown on Exhibit 10-A.

10.6 Temporary Construction Noise Level Increases

To describe the temporary Project construction noise level contributions to the existing ambient noise environment, the Project construction noise levels were combined with the existing ambient noise levels measurements at the off-site receiver locations. The difference between the combined Project-construction and ambient noise levels are is used to describe the construction noise level contributions. Temporary noise level increases that would be experienced at sensitive receiver locations when Project construction-source noise is added to the ambient daytime conditions are presented on Table 10-4.

A temporary noise level increase of 12 dBA is considered a potentially significant impact based on the Caltrans substantial noise level increase criteria which is used to assess the Project-construction noise level increases. (21) However, the construction activities associated with the West Campus Upper Plateau Project are likely to take several years and cannot reasonably be



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

³ Construction noise standards as shown on Table 3-2.

⁴ Do the estimated Project operational noise source activities exceed the noise level standards?

[&]quot;Daytime" = 7:00 a.m. - 10:00 p.m.; "Nighttime" = 10:00 p.m. - 7:00 a.m.

considered as a short-term temporary noise impact. Therefore, due to the expected duration of construction, a "barely-perceptible" 5 dBA noise level increase threshold has been used to assess the potential impacts associated with the construction related noise level increases. As indicated in Table 10-4, the Project will contribute construction noise level increases ranging from 0.5 to 3.0 dBA L_{eq} during the daytime hours at the closest sensitive receiver locations. Since the worst-case temporary noise level increases of up to 3.0 dBA L_{eq} during Project construction will not exceed the 5 dBA L_{eq} noise level increase significance threshold, the construction noise level increases are considered *less than significant* temporary noise impacts.

TABLE 10-4: DAYTIME TEMPORARY CONSTRUCTION NOISE LEVEL INCREASES

Receiver Location ¹	Total Project Construction Noise Level ²	Measurement Location ³	Reference Ambient Noise Levels ⁴	Combined Project and Ambient ⁵	Project Increase ⁶	Increase Criteria ⁷	Increase Criteria Exceeded?
R1	47.2	L1	52.7	53.8	1.1	5	No
R2	48.0	L2	51.8	53.3	1.5	5	No
R3	46.8	L3	50.0	51.7	1.7	5	No
R4	39.7	L4	48.4	48.9	0.5	5	No
R5	42.3	L5	49.0	49.8	0.8	5	No
R6	44.7	L5	49.0	50.4	1.4	5	No
R7	43.5	L5	49.0	50.1	1.1	5	No
R8	46.0	L7	51.6	52.7	1.1	5	No
R9	47.2	L8	47.3	50.3	3.0	5	No
R10	47.8	L1	52.7	53.9	1.2	5	No

 $^{^{\}mbox{\scriptsize 1}}$ See Exhibit 10-A for the receiver locations.

10.7 OFF-SITE CONSTRUCTION NOISE ANALYSIS

To support the Project development, there will be grading, trenching, and paving for off-site improvements associated with the utility installation of a proposed reclaimed water tank for the Project as shown on Exhibit 10-A. The proposed reclaimed water tank site is located south of the Project site and accessed from Grove Community Drive within the City of Riverside. Construction would consist of an aboveground 0.5-million-gallon prefabricated, bolted steel tank on a poured concrete slab next to an existing water tank on an already disturbed and graded site. The new tank would be connected to a new reclaimed water line to be installed along Grove Community Drive, traveling west to connect to Barton Street and north to connect with the Specific Plan Area. Construction would occur beginning in 2023 and would involve remedial grading, pouring a concrete pad, assembling the tank, trenching and utility line installation and connections to provide the reclaimed water to the Project site.



² Total Project daytime construction noise levels as shown on Table 10-2.

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

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

⁵ Represents the combined ambient conditions plus the Project construction activities.

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

⁷ Significance increase criteria as shown on Table 4-1.

Construction of the off-site utility improvements will be primarily within the existing public right-of-way (ROW) and be of brief duration. It is expected that the off-site construction activities would not take place at any one location for more than four days due to the nature of the linear construction activity. Construction noise from this off-site work would, therefore, be relatively short-term and the noise levels would be reduced as construction work moves linearly along the selected alignment and farther from sensitive uses. The loudest phase of construction associated with off-site improvements would likely be grading/excavation activities, which would generate similar noise levels compared to the grading/excavation phase of the proposed project's on-site construction activities previously outlined on Table 10-1. Both March JPA and the City of Riverside noise standards exempt ROW and utility construction.\(^1\) Although not required to address a potentially significant impact, the Project will comply with March JPA's permitted hours of construction and implement noise abatement best practices as detailed in NOI-4 to minimize the potential construction noise impacts of the off-site improvements.

10.87 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. Ground-borne vibration levels resulting from typical construction activities occurring within the Project site were estimated by data published by the Federal Transit Administration (FTA). (8) 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 10-6. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the potential Project construction vibration levels 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} x (25/D)^{1.5}

TABLE 10-5: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

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

Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual

¹ March JPA Development Code § 9.10.140(3), (4). City of Riverside Municipal Code § 7.35.020(E), (F).





Using the vibration source level of construction equipment provided on Table 10-5 and the construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts. Table 10-6 presents the expected Project related vibration levels at the nearby receiver locations. At distances ranging from 304 to 1,596 feet from Project construction activities, construction vibration velocity levels are estimated to range from 0.000 to 0.001 in/sec RMS and will remain below the County of Riverside threshold of 0.01 in/sec RMS at all receiver locations, as shown on Table 10-6. Therefore, the Project-related vibration impacts are considered *less than significant* during the construction activities at the Project site.

TABLE 10-6: PROJECT CONSTRUCTION VIBRATION LEVELS

	Distance		Receiver	Levels (in/s	sec) RMS ²		Threshold	
Receiver ¹	to Const. Activity (Feet)	Small Bulldozer	Jack- hammer	Loaded Trucks	Large Bulldozer	Peak Vibration	(in/sec) RMS ⁴	Threshold Exceeded? ⁵
R1	342'	0.000	0.000	0.001	0.001	0.001	0.01	No
R2	311'	0.000	0.001	0.001	0.001	0.001	0.01	No
R3	304'	0.000	0.001	0.001	0.001	0.001	0.01	No
R4	1,057'	0.000	0.000	0.000	0.000	0.000	0.01	No
R5	1,596'	0.000	0.000	0.000	0.000	0.000	0.01	No
R6	787'	0.000	0.000	0.000	0.000	0.000	0.01	No
R7	996'	0.000	0.000	0.000	0.000	0.000	0.01	No
R8	695'	0.000	0.000	0.000	0.000	0.000	0.01	No
R9	328'	0.000	0.001	0.001	0.001	0.001	0.01	No
R10	322'	0.000	0.001	0.001	0.001	0.001	0.01	No

¹ Receiver locations are shown on Exhibit 10-A.

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

10.98 BLASTING IMPACTS

If blasting is determined to be required during excavation and grading, the blasting contractor is required to obtain blasting permit(s) from the State, and to notify Riverside County Sheriff's Department within 24 hours of planned blasting events. All blasting activities shall be designed to meet the regulatory construction noise and vibration thresholds outlined on Table 4-1. These construction thresholds may be satisfied by modifying the blast design and/or through the use alternative rock breaking methods. Alternative rock breaking methods may include the use of non-explosive techniques such as expanding chemical agents (epoxy resin). Even though the epoxy resin is capable of breaking rock overtime without explosive blasting, these activities still require drilling and other construction equipment to complete. In addition, while these



² Based on the Vibration Source Levels of Construction Equipment included on Table 10-7. 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.

³ County of Riverside General Plan Noise Element, Policy N 16.3.

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

alternative methods are effective in breaking rock without the use of explosives, they are typically more costly and time intensive. The Project will utilize alternative rock breaking methods instead of blasting within 1,000 feet of any residence or other sensitive receptor.

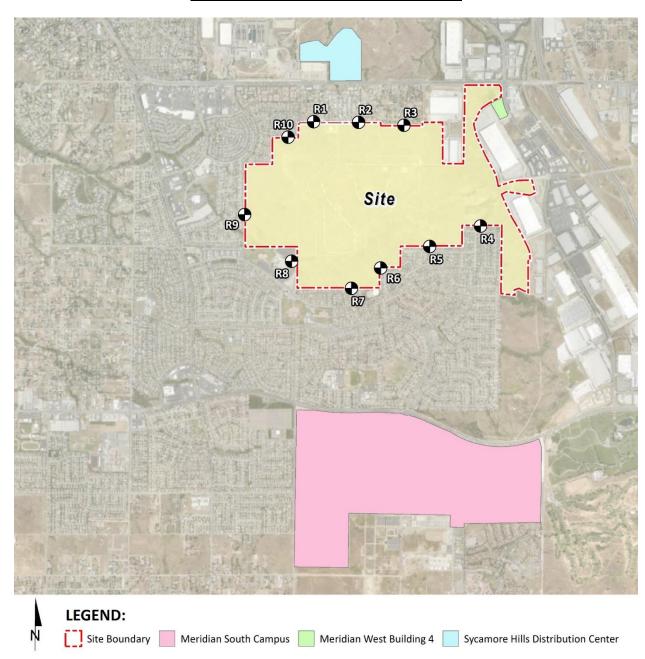
10.10 CUMULATIVE CONSTRUCTION NOISE LEVEL INCREASES

Although unlikely, it is possible the Project could be under construction at the same time as nearby developments, including Sycamore Hills Distribution Center, Meridian South Campus Buildings F, G, and 1, and Meridian West Building 4 as shown below on Exhibit 10-B. Since noise levels diminish quickly at a rate of 6 dB for each doubling of distance from a source, the potential cumulative construction noise source activities are expected to be lower than the Project-related construction noise levels. This is largely due to distance, topography, intervening building structures and development between the nearest noise sensitive receiver locations and the potential "under construction projects." Using the reference construction equipment noise levels published by the Federal Highway Administration (FHWA) in the Roadway Construction Noise Model (RCNM), in combination with the FTA guidance for noise assessment, the potential construction noise levels were calculated for each of the "under construction projects." The construction noise levels from the Sycamore Hills Distribution Center are expected to range from 32.5 to 46.2 dBA L_{eq} at the Project noise sensitive receiver locations without accounting for any intervening building structures or topography. The cumulative construction noise levels from the Meridian South Campus are estimated at 24.8 to 34.8 dBA Leq, and 30.2 to 42.5 dBA Leq from Meridian West Building 4. With the Project related construction noise levels ranging from 33.7 to 48.0 dBA Lea, the cumulative construction noise levels are not expected to meaningfully contribute to a potential cumulative construction noise increase.

In addition, the existing ambient noise levels ranging from 47.3 to 61.5 dBA L_{eq} show that noise from intervening roadways, specifically Alessandro Boulevard for the Sycamore Hills Distribution Center and Van Buren Boulevard for the Meridian South Campus development, will likely overshadow the potential cumulative construction noise source levels from these external projects. Therefore, the proximity of the West Campus Upper Plateau project site to the nearest noise sensitive receiver locations suggests that any potential cumulative construction noise levels will be diminished below ambient levels and washed out by intervening roadway traffic noise.



EXHIBIT 10-B: CUMULATIVE PROJECT LOCATIONS





11 REFERENCES

- 1. **State of California.** *California Environmental Quality Act, Appendix G.* 2018.
- 2. California Department of Transportation Environmental Program. *Technical Noise Supplement A Technical Supplement to the Traffic Noise Analysis Protocol.* Sacramento, CA: s.n., September 2013.
- 3. Environmental Protection Agency Office of Noise Abatement and Control. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. March 1974. EPA/ONAC 550/9/74-004.
- 4. U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning, Noise and Air Quality Branch. Highway Traffic Noise Analysis and Abatement Policy and Guidance. December 2011.
- 5. **U.S. Department of Transportation Federal Highway Administration.** *Highway Noise Barrier Design Handbook.* 2001.
- 6. **U.S. Department of Transportation, Federal Highway Administration.** *Highway Traffic Noise in the United States, Problem and Response.* April 2000. p. 3.
- 7. **U.S. Environmental Protection Agency Office of Noise Abatement and Control.** *Noise Effects Handbook-A Desk Reference to Health and Welfare Effects of Noise.* October 1979 (revised July 1981). EPA 550/9/82/106.
- 8. **U.S. Department of Transportation, Federal Transit Administration.** *Transit Noise and Vibration Impact Assessment Manual.* September 2018.
- 9. U.S. Government Publishing Office. Code of Federal Regulations, Title 40, Part 205, Subpart B.
- 10. Office of Planning and Research. State of California General Plan Guidelines. October 2017.
- 11. March Joint Powers Authority. General Plan Noise/Air Quality Element. 1999.
- 12. Development Code, Chapter 9.10 Performance Standards.
- 13. City of Riverside. Municipal Code, Title 7 Noise Control.
- 14. **County of Riverside.** Municipal Code, Title 9 Public, Peace, Morals and Welfare, Chapter 9.52 Noise Regulation.
- 15. —. General Plan Noise Element. December 2015.
- 16. —. Airport Land Use Compatibility Plan. October 2004.
- 17. California Court of Appeal. *Gray v. County of Madera, F053661.* 167 Cal.App.4th 1099; Cal.Rptr.3d, October 2008.
- 18. **Federal Interagency Committee on Noise.** *Federal Agency Review of Selected Airport Noise Analysis Issues.* August 1992.
- 19. California Department of Transportation. Technical Noise Supplement. November 2009.
- 20. Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects. May 2011.
- 21. American National Standards Institute (ANSI). Specification for Sound Level Meters ANSI S1.4-2014/IEC 61672-1:2013.
- 22. **U.S. Department of Transportation, Federal Highway Administration.** *FHWA Highway Traffic Noise Prediction Model.* December 1978. FHWA-RD-77-108.



- 23. California Department of Transportation Environmental Program, Office of Environmental Engineering. Use of California Vehicle Noise Reference Energy Mean Emission Levels (Calveno REMELs) in FHWA Highway Traffic Noise Prediction. September 1995. TAN 95-03.
- 24. **California Department of Transportation.** *Traffic Noise Attenuation as a Function of Ground and Vegetation Final Report.* June 1995. FHWA/CA/TL-95/23.
- 25. **Urban Crossroads, Inc.** West Campus Upper Plateau Traffic Analysis. October 2022.
- 26. California Department of Transportation Environmental Program. *I-80 Davis OGAC Pavement Noise Study.* September 2001.
- 27. Canadian Ministry of Transportation and Highways, Highway Environment Branch. Open-Graded Asphalt 'Quiet Pavement' Assessment of Traffic Noise Reduction Performance. November 1995.
- 28. **California Department of Transportation.** *Highway Design Manual, Chapter 1100 Highway Traffic Noise Abatement.* November 2017.
- 29. U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning. FHWA Roadway Construction Noise Model. January, 2006.



12 CERTIFICATION

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed West Campus Upper Plateau 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) 584-3148.

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EDUCATION

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

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

PROFESSIONAL REGISTRATIONS

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

PROFESSIONAL AFFILIATIONS

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

PROFESSIONAL CERTIFICATIONS

Certified Acoustical Consultant – County of San Diego • March, 2018
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:

MARCH JPA DEVELOPMENT CODE



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CHAPTER 9.10

PERFORMANCE STANDARDS

TEM OMMINGE ST	
Sections:	
9.10.010	Purpose and Intent
9.10.020	Applicability
9.10.030	Exemptions
9.10.040	Administration
9.10.050	Air Quality
9.10.060	Electrical or Electronic Interference
9.10.070	Fire and Explosive Hazards
9.10.080	Liquid and Solid Wastes
9.10.090	Radioactive Wastes
9.10.100	Heat and Cold
9.10.110	Light and Glare
9.10.120	Maintenance of Open Areas
9.10.130	Mechanical and Electrical Equipment
9.10.140	Noise and Sound

Section 9.10.010 Purpose and Intent

Vibration

Odors

9.10.150

9.10.160

9.10.170

The purpose and intent of this Chapter is to explicitly describe the location, configuration, design, amenities, operation, and other standards for proposed development projects that may impact the surrounding neighborhood. The performance standards set maximum tolerance limits on certain adverse effects created by any use or development of land.

Outdoor Storage, Trash Areas, and Service Areas

Section 9.10.020 Applicability

Applicability

These performance standards shall apply to all land uses, in all districts, unless specifically stated otherwise in this Title. All uses shall be subject to these performance standards, the General Development Standards of Chapter 9.08, the Specific Use Development Standards of Chapter 9.09, the requirements of the underlying district, and all other requirements of this Title.

Section 9.10.030 Exemptions

Exemptions

The following uses or activities are exempt from the provisions of this Chapter.

- 1. Emergency equipment, vehicles, devices, and activities.
- 2. Temporary construction, maintenance, or demolition activities between the hours of 7:00 a.m. and 7:00 p.m.

Section 9.10.040 Administration

The standards of this Chapter shall be enforced by the department or agency having enforcement authority over the subject matter. Upon discovery of any potential violation of these standards, the appropriate department or agency shall investigate and initiate corrective action as deemed necessary.

Section 9.10.050 Air Quality

No operation or activity otherwise permitted under this Title shall cause the emission of any smoke, fly ash, dust, fumes, vapors, gases or other forms of air pollution which exceeds the requirements of the South Coast Air Quality Management District or the requirements of any Air Quality Plan or General Plan Air Quality Element adopted by the March JPA.

Section 9.10.060 Electrical or Electronic Interference

No operation or activity otherwise permitted under this Title shall cause any source of electrical or electronic disturbance that adversely affects persons or the operation of equipment on other property and is not in conformance with the regulations of the Federal Communication Commission.

Section 9.10.070 Fire and Explosive Hazards

An operation or activity otherwise permitted under this Title involving the storage of flammable or explosive materials shall be provided with adequate safety devices against the hazard of fire and explosion and adequate fire-fighting and fire suppression equipment and devices in accordance with the requirements of the Uniform Fire Code. Open fire burning of waste material is prohibited. Closed system incineration of waste material, where such activity is otherwise permitted under this Title and is required for research, medical or similar uses, may be permitted subject to the requirements of the California Department of Health and South Coast Air Quality Management District or other requirements of any Air Quality Plan or General Plan Air Quality Element adopted by the March JPA.

Section 9.10.080 Liquid and Solid Wastes

No operation or action otherwise permitted under this Title shall discharge at any point into any public street, public sewer, private sewage disposal system, stream, body of water or into the ground, any materials which can contaminate any water supply, interfere with bacterial processes in sewage treatment, or otherwise cause the emission of dangerous or offensive elements, except in accordance with standards approved by the California Department of Public Health or other governmental agency having jurisdiction over liquid and solid waste.

Section 9.10.090 Radioactive Wastes

No operation or activities otherwise permitted under this Title shall be permitted which result at any time in the release or emission of any fissionable or radioactive materials into the atmosphere, the ground, groundwater or sewage systems except as provided by and in accordance with State law. Any such operation or activity which handles, tests, transports, stores or in any way uses fissionable or radioactive material shall prepare a study addressing the probability of the release of such material and implement all recommendations identified by the study.

Section 9.10.100 Heat and Cold

No operation or activity otherwise permitted under this Title shall emit heat or cold which would cause a temperature increase or decrease on any adjacent property in excess of 10 degrees Fahrenheit, whether the change is in the air, on the ground, or in any structure, or in any body of water.

Section 9.10.110 Light and Glare

No operation, activity, sign, or lighting fixture shall create illumination which exceeds 0.5 foot-candles minimum maintained on any adjacent property, whether the illumination is direct or indirect light from the source. All lighting shall be designed to project downward and shall not create glare on adjacent properties.

Section 9.10.120 Maintenance of Open Areas

Except as otherwise provided in this Title, all open areas shall be landscaped, surfaced, or treated and maintained permanently in a dust-free, weed-free condition.

Section 9.10.130 Mechanical and Electrical Equipment

All mechanical and electrical equipment, including air conditioners, antennas, pumps, transformers, and heating and ventilating equipment shall be located, operated and screened in a manner that does not disturb adjacent uses and activities. In addition, all central building electrical controlling equipment and switching facilities shall be located within the building for all commercial, industrial and business facilities.

Section 9.10.140 Noise and Sound

Unless otherwise specified in Chapter 9.08, General Development Standards, or Chapter 9.09, Specific Use Development Standards, all commercial and industrial uses shall be operated so that noise created by any loudspeaker, bells, gongs, buzzers, or other noise attention or attracting devices shall not exceed 55 dBA at any one time beyond the boundaries of the property. Sounds emitting from any of the aforementioned devices, including or live or recorded music, shall cease between the hours of 10:00 p.m. and 7:00 a.m. if the sound therefrom creates a noise disturbance across the property line of a residential use.

Additionally, outdoor construction and grading activities, including the operation of any tools or equipment associated with construction, drilling, repair, alteration, grading/grubbing or demolition work within 500 feet of the property line of a residential use, shall be prohibited between the hours of 7:00 p.m. and 7:00 a.m. Monday through Friday and between 5:00 p.m. and 8:00 a.m. on Saturdays or at any time on Sunday or a Federal Holiday.

The following activities are exempt from the provisions of this Section:

- 1. Emergency Work. This Section does not apply to the emission of sound for the purpose of alerting persons to the existence of an emergency or in the performance of emergency work if the work is necessary to address immediate public health and safety related issues as deemed necessary by the March JPA Building Official or Engineer.
- 2. Federal or State Highway/Freeway Projects or preempted activities. This Section does not apply to roadwork on federal or state highways or any other activity the noise level of which is regulated by state or federal law.
- 3. Right-of-way construction. This Section does not prohibit work performed within the rights-of-way when it is deemed by the March JPA Engineer that such work will create traffic congestion and/or

hazardous or unsafe conditions.

4. Public health, welfare and safety activities. This Section does not apply to construction maintenance and repair operations conducted by public agencies and/or utility companies or their contractors which are deemed necessary to serve the best interests of the public and to protect the public health, welfare and safety, including but not limited to, trash collection, street sweeping, debris and limb removal, removal of downed wires, restoring electrical service, repairing traffic signals, unplugging sewers or storm drains, vacuuming catch basins, repairing of damaged poles, removal of abandoned vehicles, repairing of water hydrants and mains, gas lines, oil lines, sewers, storm drains, roads, sidewalks, etc.

Section 9.10.150 Odors

No operation or activity shall be permitted which emits odorous gases or other odorous matter in such quantities as to be dangerous, injurious, noxious, or otherwise objectionable to a level that is detectable with or without the aid of instruments at or beyond the lot line of the property containing said operation or activity.

Section 9.10.160 Outdoor Storage, Trash Areas, and Service Areas

All storage areas for storage of maintenance equipment or vehicles or refuse, and all collection areas and service areas, shall be enclosed or effectively screened from public view with a fence, wall, landscaping, berming or a combination thereof. Doors to trash enclosures shall be closed at all times except when the enclosure is being accessed for refuse disposal or pick-up. The screening requirements of Section 9.08.150 are also referenced and not intended to be superseded hereby.

Section 9.10.170 Vibration

No vibration shall be permitted which can be felt at or beyond the property line.

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APPENDIX 3.2:

CITY OF RIVERSIDE MUNICIPAL CODE



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Title 7 - NOISE CONTROL

Chapter 7.05 - POLICY AND INTENT

7.05.010 - Policy and intent.

It shall be the policy of the City to maintain and preserve the quiet atmosphere of the City, to implement programs aimed at retaining ambient noise levels throughout the City, and to mitigate noise conflicts.

It is determined that certain noise levels are detrimental to the public health, safety and welfare and are contrary to the public interest. Therefore, the City Council declares that creating, maintaining, causing or allowing to create, maintain or cause any noise in a manner not in conformity with the provisions of this title, is a public nuisance and shall be punishable as such.

In order to control unnecessary, excessive and/or annoying noise in the City, it is declared to be the policy of the City to prohibit such noise generated by the sources specified in this title. It shall be the goal of the City to minimize noise levels and mitigate the effects of noise to provide a safe and healthy living environment.

(Ord. 7489 § 1, 2019; Ord. 6273 § 1 (part), 1996)

Chapter 7.10 - DEFINITIONS

7.10.010 - Definitions generally.

For the purposes of this title, the words and phrases defined in this chapter shall have the meanings respectively ascribed to them by this chapter.

(Ord. 7489 § 3, 2019)

7.10.015 - A-weighted sound level.

A-weighted sound level" means the sound pressure level in decibels as measured on a sound-level meter using the A-weighing network. The level is designated dB(A) or dBA.

(Ord. 7489 § 4, 2019; Ord. 6273 § 1(part), 1996)

7.10.020 - Agricultural property.

"Agricultural property" means a parcel of real property which is developed for agricultural and incidental residential purposes which is located within any permitted zone.

(Ord. 6273 § 1(part), 1996)

7.10.025 - Ambient noise level.

"Ambient noise level" means the all-encompassing noise level associated with a given environment, being a composite of sounds from all sources, excluding an alleged offensive noise, at the location and approximate time at which the comparison with the offensive noise is to be made. The ambient noise level constitutes the normal or existing level of environmental noise at a given location.

(Ord. 6273 § 1(part), 1996)

7.10.030 - Commercial purpose.

"Commercial purpose" means the use, operation or maintenance of any sound amplification equipment for the purpose of advertising any business, goods or services, or for the purposes of attracting the attention of the public, or soliciting patronage of customers to any performance, show, entertainment, exhibition or event, or for the purpose of demonstrating such sound equipment.

(Ord. 6273 § 1(part), 1996)

7.10.035 - Construction.

"Construction" means any site preparation including grading, building, fabricating, assembly, substantial repair, alteration, blasting, jack hammering, pile drivers and the like.

(<u>Ord. 7489</u> § 5, 2019; Ord. 6273 § 1(part), 1996)

7.10.036 - Community & Economic Development Director.

"Community & Economic Development Director" means the duly appointed and acting head of the Community & Economic Development Department and/or his/her designee.

(Ord. 7489 § 6, 2019)

7.10.040 - Community support land use category.

"Community support land use category" means areas developed with schools, libraries, fire stations, hospitals and similar uses in any zone.

(Ord. 6273 § 1(part), 1996)

7.10.045 - Cumulative period.

"Cumulative period" means a total period of time composed of time segments which may be continuous or discontinuous.

(Ord. 6273 § 1(part), 1996)

7.10.050 - Decibel (dB).

"Decibel (dB)" means a unit for measuring amplitude of a sound, equal to 20 times the logarithm to the base ten of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).

(Ord. 7489 § 7, 2019; Ord. 6273 § 1(part), 1996)

7.10.055 - Demolition.

"Demolition" means any dismantling, intentional destruction or removal of structures, site improvements, landscaping or utilities.

(Ord. 6273 § 1(part), 1996)

7.10.060 - Emergency.

"Emergency" means any occurrence or set of circumstances involving actual or imminent physical trauma or property damage which demands immediate action.

(Ord. 6273 § 1(part), 1996)

7.10.065 - Emergency work.

"Emergency work" means work made necessary to restore property to a safe condition following a physical trauma or property damage caused by an emergency or work necessary to prevent or minimize damage from a potential emergency.

(Ord. 6273 § 1(part), 1996)

7.10.070 - Fixed noise source.

"Fixed noise source" means a stationary device which creates sounds from a fixed location, including residential, agricultural, industrial and commercial machinery and equipment, pumps fans, compressors, air conditioners and refrigeration devices.

(Ord. 6273 § 1(part), 1996)

7.10.075 - Grading.

"Grading" means any excavating and/or filling of earth material to prepare a site for construction or the placement of improvements.

(Ord. 6273 § 1(part), 1996)

7.10.080 - Impulsive sound.

"Impulsive sound" means sound of short duration, usually less than one second, with an abrupt onset and rapid decay. Examples include explosions, drum beats, drop-forge impacts, fire crackers, discharge of firearms and one object striking another.

(Ord. 6273 § 1(part), 1996)

7.10.085 - Industrial land use category.

"Industrial land use category" means any area occupied by land uses whose primary operation involves warehousing, manufacturing, assembling, distributing, packaging or processing goods in the BMP, I, and AIR zones.

(Ord. 6273 § 1(part), 1996)

7.10.090 - Intrusive noise.

"Intrusive noise" means a noise which intrudes over and above the existing ambient noise. The relative intrusiveness of the sound depends upon its amplitude, duration, frequency and time of occurrence, tonal or informational content as well as its relationship to the prevailing ambient noise level.

(Ord. 6273 § 1(part), 1996)

7.10.095 - Minor maintenance.

"Minor maintenance" means work required to keep property used for residential purposes in an existing state.

(Ord. 6273 § 1(part), 1996)

7.10.100 - Mobile noise source.

"Mobile noise source" means any noise source other than a fixed noise source.

(Ord. 6273 § 1(part), 1996)

7.10.105 - Motor vehicle.

"Motor vehicle" means any self-propelled vehicle as defined in the California Vehicle Code, including all onhighway types of motor vehicles subject to registration under said code, and all off-highway type motor vehicles subject to identification under said code.

(Ord. 6273 § 1(part), 1996)

7.10.110 - Muffler or sound dissipative device.

"Muffler or sound dissipative device" means a device for abating the sound of escaping gases from an internal combustion engine.

(Ord. 7489 § 8, 2019; Ord. 6273 § 1(part), 1996)

7.10.115 - Noise.

"Noise" means any sound which exceeds the appropriate actual or presumed ambient noise level or which annoys or tends to disturb humans or which causes or tends to cause an adverse psychological or physiological effect on humans.

(Ord. 6273 § 1(part), 1996)

7.10.120 - Noise Control Officer.

"Noise Control Officer" means the City official(s) or duly authorized representative(s) with the responsibility to enforce the noise ordinance.

(Ord. 6273 § 1(part), 1996)

7.10.125 - Noise disturbance.

"Noise disturbance" means any sound which, as judged by a City police officer or code enforcement officer, annoys or disturbs a reasonable person of normal sensitivities or exceeds a standard set forth in this title.

(Ord. 7489 § 9, 2019; Ord. 6273 § 1(part), 1996)

7.10.130 - Noise source.

"Noise source" means a disturbance causing operation which originates from noise generating mechanism. An example of a noise source is the combination of a motor, pump and compressor.

(Ord. 6273 § 1(part), 1996)

7.10.135 - Noise zone.

"Noise zone" means defined areas of generally consistent land use where the ambient noise levels are generally similar within a range of five decibels.

(Ord. 6273 § 1(part), 1996)

7.10.140 - Nonurban land use category.

"Nonurban land use category" means vacant land or land primarily for agricultural production containing ten acres or more.

(Ord. 6273 § 1(part), 1996)

7.10.145 - Office/commercial land use category.

"Office/commercial land use category" means areas developed with office and/or commercial uses in the O, CRC, CR-NC, CR, and CG zones.

(Ord. 6967 § 2, 2007; Ord. 6273 § 1(part), 1996)

7.10.150 - Person.

"Person" means any individual, association, partnership or corporation and includes any officer, employee, department, agency or instrumentality of a State or any political subdivision of a State.

(Ord. 6273 § 1(part), 1996)

7.10.155 - Powered model vehicle.

"Powered model vehicle" means airborne, waterborne or land-borne vehicles such as model airplanes, model boats, and model vehicles of any type or size which are not designed for carrying persons or property and which can be propelled in any form other than manpower or wind power.

(Ord. 6273 § 1(part), 1996)

7.10.160 - Public recreation facility land use category.

"Public recreation facility land use category" means areas developed with public parks and other public recreational facilities.

(Ord. 6273 § 1(part), 1996)

7.10.165 - Public right-of-way.

"Public right-of-way" means any street, avenue, boulevard, highway, sidewalk or alley or similar place which is owned or controlled by a government entity.

(Ord. 6273 § 1(part), 1996)

7.10.170 - Public space.

"Public space" means any real property or structures which are owned or controlled by a government entity.

(Ord. 6273 § 1(part), 1996)

7.10.175 - Residential land use category.

"Residential land use category" means areas primarily used for residential purposes in the RE, RA-5, RR, RC, R-1-1-1/2 acre, R-1-13000, R-1-10500, R-1-8500, R-1-7000, R-3-2500, R-3-4000, R-3-3000, R-3-2000, R-3-1500, and R-4 zones.

(Ord. 6967, § 2, 2007; Ord. 6273 § 1(part), 1996)

7.10.180 - Sound.

"Sound" means an oscillation in pressure, particle displacement, particle velocity or other physical parameter, in a medium with internal forces that causes compression and rarefaction of that medium. The description of sound may include any characteristic of such sound, including duration, intensity and frequency.

(Ord. 6273 § 1(part), 1996)

7.10.185 - Sound amplifying equipment.

"Sound amplifying equipment" means any device for the amplification of the human voice, or music, or any other sound, excluding devices in motor vehicles when heard only by the occupants of the vehicle, excluding warning devices on authorized emergency vehicles or horns or other warning devices on any vehicle used only for traffic safety purposes.

(Ord. 6273 § 1(part), 1996)

7.10.190 - Sound level.

"Sound level" means the weighted sound pressure level obtained by the use of a sound level meter and frequency weighing network, such as A, B or C, as specified in American National Standards Institute specifications for sound level meter ANSI S1.4-1971 or the latest approved revision thereof. If the frequency weighing method used is not stated, the A-weighing shall apply.

(Ord. 6273 § 1(part), 1996)

7.10.195 - Sound level meter.

"Sound level meter" means an instrument, including a microphone, an amplifier, an output meter, and frequency weighing networks for the measurement of sound levels which satisfies the requirements for S2A meters in American National Standards Institute specifications for sound level meters, S1.4-1971, or the most recent revision thereof.

(Ord. 6273 § 1(part), 1996)

7.10.200 - Sound pressure.

"Sound pressure" means the instantaneous difference between the actual pressure and the average or barometric pressure at a given point in space, as produced by sound energy.

(Ord. 6273 § 1(part), 1996)

7.10.205 - Sound pressure level.

"Sound pressure level" means 20 times the logarithm to the base ten of the ratio of the pressure of this sound to the reference pressure, which reference pressure shall be explicitly stated.

(Ord. 7489 § 10, 2019; Ord. 6273 § 1(part), 1996)

7.10.210 - Supplementary definitions of technical terms.

Definitions of technical terms not defined herein shall be obtained from the American National Standard, "Acoustical Terminology" S1.1-1961 (R-1971) or the latest revision thereof.

(Ord. 6273 § 1 (part), 1996)

7.15.005 - Administration and enforcement.

- A. The noise regulation shall be enforced by the Code Enforcement Division of the Community & Economic Development Department and/or the Riverside Police Department.
- B. It shall be the responsibility of the Code Enforcement Division and/or the Riverside Police Department to enforce the provisions of this title and to perform all other functions required by this title. Such duties shall include, but not be limited to investigating potential violations, issuing warning notices and citations, and providing evidence to the City Attorney for legal action.
- C. A violation of these regulations may be prosecuted as a misdemeanor or as an infraction. Each day a violation occurs shall constitute a separate offense and shall be punishable as such. However, nothing in these regulations shall prevent any code compliance officer or his duly authorized representatives from efforts to obtain voluntary compliance by way of warning, notice or education.

(Ord. 7489 § 11, 2019; Ord. 7341 § 6, 2016; Ord. 6959 § 1, 2007; Ord. 6844 § 15, 2006; Ord. 6273 § 1 (part), 1996)

7.15.010 - Fines and penalties.

- A. Any violation of this title shall be subject to fines as set forth in <u>Chapter 1.17</u> of the Riverside Municipal Code.
- B. The civil fines and criminal penalties imposed shall be in addition to any other fines and/or penalties imposed for violation of local, State, and/or Federal law.

(Ord. 7489 § 13, 2019)

7.15.015 - Responsible parties.

Persons responsible for violations of this title shall include the person, persons, entity, or entities responsible for the noise disturbance including, but not limited to, the property owner, business operations, renters, or lessees on whose premises the noise originates.

(Ord. 7489 § 14, 2019)

Chapter 7.20 - SOUND LEVEL MEASUREMENT

7.20.010 - Sound level measurement.

Except as provided by Chapter 17.35, General Noise Regulations, any sound or noise level measurement made to enforce this title shall be measured with a sound level meter using the A-weighting scale at slow response. The exterior noise level shall be measured at the position or positions along the complainant's property line closest to the noise source or where the noise level is highest. If the complaint concerns an interior source, noise measurements shall be made at a point at least four feet from the wall, ceiling or floor nearest the noise source with windows opened or closed as would be normal for the season.

(Ord. 7489 § 15, 2019; Ord. 6273 § 1 (part), 1996)

Chapter 7.23 - AMBIENT SOUND LEVELS

Footnotes:

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Editor's note— Ord. 7489 § 16, adopted Nov. 5, 2019, amended the title of Ch. 7.23 from "Ambient Noise Levels" to "Ambient Sound Levels," as set out herein.

7.23.010 - Ambient sound levels.

<u>Title 7</u> - Noise Control of the Riverside Municipal Code shall be consistent with Title 24 of the California Code of Regulations as may be amended from time to time.

(Ord. 7489 § 17, 2019; Ord. 6967 § 3, 2007)

7.23.020 - Mixed use development.

Where a new development proposal includes a mix of residential and nonresidential uses within the same project, the interior ambient noise standard for the residential component of the project may be increased by five decibels.

(Ord. 7489 § 18, 2019; Ord. 6967 § 3, 2007)

7.23.030 - Infill single-family residential development.

Where a new development proposal includes an infill single-family residential use, the interior ambient noise standard for the proposal may be increased by five decibels.

(Ord. 7489 § 19, 2019; Ord. 6967 § 3, 2007)

Chapter 7.25 - NUISANCE EXTERIOR SOUND LEVEL LIMITS

7.25.010 - Exterior sound level limits.

- A. Unless a variance has been granted as provided in this title, it shall be unlawful for any person to cause or allow the creation of any noise which exceeds the following:
 - 1. The exterior noise standard of the applicable land use category, up to five decibels, for a cumulative period of more than 30 minutes in any hour; or
 - 2. The exterior noise standard of the applicable land use category, plus five decibels, for a cumulative period of more than 15 minutes in any hour; or
 - 3. The exterior noise standard of the applicable land use category, plus ten decibels, for a cumulative period of more than five minutes in any hour; or
 - 4. The exterior noise standard of the applicable land use category, plus 15 decibels, for the cumulative period of more than one minute in any hour; or
 - 5. The exterior noise standard for the applicable land use category, plus 20 decibels or the maximum

measured ambient noise level, for any period of time.

- B. If the measured ambient noise level exceeds that permissible within any of the first four noise limit categories, the allowable noise exposure standard shall be increased in five decibel increments in each category as appropriate to encompass the ambient noise level. In the event the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.
- C. If possible, the ambient noise level shall be measured at the same location along the property line with the alleged offending noise source inoperative. If for any reason the alleged offending noise source cannot be shut down, then the ambient noise must be estimated by performing a measurement in the same general area of the source but at a sufficient distance that the offending noise is inaudible. If the measurement location is on the boundary between two different districts, the noise shall be the arithmetic mean of the two districts.
- D. Where the intruding noise source is an air-conditioning unit or refrigeration system which was installed prior to the effective date of this title, the exterior noise level when measured at the property line shall not exceed 60 dBA for units installed before 1-1-80 and 55 dBA for units installed after 1-1-80.

Exterior Noise Standards Land Use Category Time Period Noise Level Residential Night (10:00 p.m. to 7:00 a.m.) 45 dBA 55 dBA Day (7:00 a.m. to 10:00 p.m.) Office/commercial Any time 65 dBA Industrial 70 dBA Any time Any time Community support 60 dBA

Table 7.25.010A

Table 7.25.010.B

65 dBA

70 dBA

Land Use Catego	ry/Zoning Matrix
Land Use Category	Underlying Zone
Residential	RE, RA-5, RR, RC, R-1-1/2 acre, R-1-13000, R-1-10500,
	R-1-8500, R-1-7000, R-3-2500,
	R-3-4000, R-3-3000, R-3-2000, R-3-1500, R-4
Office/commercial	O, CRC, CR-NC, CR, CG
Industrial	BMP, I, AIR
Community support	Any permitted zone
Nonurban	Any permitted zone

(Ord. 7489 § 20, 21(Exh. A), 2019; Ord. 6967 § 5, 2007; Ord. 6273 § 1 (part), 1996)

Any time

Any time

Chapter 7.30 - NUISANCE INTERIOR SOUND LEVEL LIMITS

Public recreation facility

Nonurban

7.30.015 - Interior sound level limits.

- A. No person shall operate or cause to be operated, any source of sound indoors which causes the noise level, when measured inside another dwelling unit, school or hospital, to exceed:
 - 1. The interior noise standard for the applicable land category area, up to five decibels, for a cumulative period of more than five minutes in any hour;
 - 2. The interior noise standard for the applicable land use category, plus five decibels, for a cumulative period of more than one minute in any hour;
 - 3. The interior noise standard for the applicable land use category, plus ten decibels or the maximum measured ambient noise level, for any period of time.
- B. If the measured interior ambient noise level exceeds that permissible within the first two noise limit categories in this section, the allowable noise exposure standard shall be increased in five decibel increments in each category as appropriate to reflect the interior ambient noise level. In the event the interior ambient noise level exceeds the third noise limit category, the maximum allowable interior noise level under said category shall be increased to reflect the maximum interior ambient noise level.
- C. The interior noise standard for various land use districts shall apply, unless otherwise specifically indicated, within structures located in designated zones with windows opened or closed as is typical of the season.

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	Interior Noise Standard		
Land Use Category	Time Period	Noise Level	
Residential	Night (10 p.m. to 7 a.m.)	35 dBA	
	Day (7 a.m. to 10 p.m.)	45 dBA	
School	7 a.m. to 10 p.m. (while schoo	l is in 45 dBA	
	session)		
Hospital	Any time	45 dBA	

(Ord. 7489 § 22, 23(Exh. B), 2019; Ord. 6273 § 1 (part), 1996)

Chapter 7.35 - GENERAL NOISE REGULATIONS

7.35.010 - General noise regulations.

- A. It is unlawful for any person to make, continue, or cause to be made or continued any noise disturbance. The factors which should be considered in determining whether a violation of this section exists, include the following:
 - 1. The sound level of the objectionable noise.
 - 2. The sound level of the ambient noise.
 - 3. The proximity of the noise to dwelling units, hospital, hotels and the like.
 - 4. The zoning of the area.
 - 5. The population density of the area.
 - 6. The time of day or night.

- 7. The duration of the noise.
- 8. Whether the noise is recurrent, intermittent, or constant.
- 9. Whether the noise is produced by a commercial or noncommercial activity.
- 10. Whether the nature of the noise is usual or unusual.
- 11. Whether the noise is natural or unnatural.
- B. It is unlawful for any person to make, continue, or cause to be made or continued any noise disturbance.
- C. Any noise plainly audible through partitions common to two dwelling units within a building shall be prohibited.

(Ord. 7489 § 24, 2019; Ord. 7341 §6, 2016; Ord. 6959 §2, 2007; Ord. 6328 § 1, 1996; Ord. 6273 § 1 (part), 1996)

7.35.020 - Exemptions.

The following activities shall be exempt from the provisions of this title:

- A. *Emergency work*. The provisions of this title shall not apply to the emission of sound for the purpose of alerting persons to the existence of an emergency or in the performance of emergency work.
- B. *School events*. Sanctioned school activities conducted on public or private school grounds including but not limited to school athletic and entertainment events are exempted from the provisions of this chapter conducted between the hours of 7:00 a.m. and 11:00 p.m.
- C. *Federal or State preempted activities*. The provisions of this Chapter shall not apply to any other activity the noise level of which is regulated by state or federal law.
- D. *Minor maintenance to residential property*. The provisions of this title shall not apply to noise sources associated with minor maintenance to property used for residential purposes, provided the activities take place between the hours of 7:00 a.m. and 10:00 p.m.
- E. *Right-of-way construction*. The provisions of this title shall not apply to any work performed in the City right-of-ways when, in the opinion of the Public Works Director or his designee, such work will create traffic congestion and/or hazardous or unsafe conditions.
- F. *Public health, welfare and safety activities*. The provisions of this title shall not apply to construction maintenance and repair operations conducted by public agencies and/or utility companies or their contractors which are deemed necessary to serve the best interests of the public and to protect the public health, welfare and safety, including but not limited to, trash collection, street sweeping, debris and limb removal, removal of downed wires, restoring electrical service, repairing traffic signals, unplugging sewers, vacuuming catch basins, repairing of damaged poles, removal of abandoned vehicles, repairing of water hydrants and mains, gas lines, oil lines, sewers, storm drains, roads, sidewalks, etc.
- G. *Construction.* Noise sources associated with construction, repair, remodeling, or grading of any real property; provided a permit has been obtained from the City as required; and provided said activities do not take place between the hours of 7:00 p.m. and 7:00 a.m. on weekdays, between the hours of 5:00 p.m. and 8:00 a.m. on Saturdays, or at any time on Sunday or a federal holiday.
- H. *Warning devices*. Warning devices necessary for the protection of public safety, as for example fire, police, and ambulance sirens, including the testing of such devices, are exempted from the provisions of this title.

I. *Agriculture*. Any agricultural activity, operation, or facility, or appurtenances thereof (e.g., wind machines), co or maintained for commercial purposes, and in a manner consistent with proper and accepted customs and as allowed under California Civil Code Section 3482 as amended from time to time.

(Ord. 7489 § 25, 2019; Ord. 7341 § 6, 2016; Ord. 6917 § 1, 2006; Ord. 6328 § 2, 1996; Ord. 6273 § 1 (part), 1996)

Chapter 7.40 - VARIANCE PROCEDURE

7.40.010 - Variance procedure.

- A. The Community & Economic Development Director is authorized to grant variances for exemption from any provision of this title, and may limit area of applicability, noise levels, time limits, and other terms and conditions determined appropriate to protect the public health, safety, and welfare. The provisions of this section shall in no way affect the duty to obtain any permit or license required by law for such activities.
- B. Any person seeking a variance pursuant to this section shall file an application with the Community & Economic Development Director. The application shall be signed by the property owner or owner's representative using forms supplied by the Community & Economic Development Department-Planning Division. The application shall contain information which demonstrates that bringing the source of the sound or activity into compliance with this title would constitute an unreasonable hardship to the applicant, the community, or other persons. The Community & Economic Development Director may require additional information if it is necessary to make a determination regarding the variance request. The application shall be accompanied by a fee established by resolution of the City Council.
- C. A separate application shall be filed for each noise source; provided, however, several mobile sources under common ownership or several fixed sources on a single property may be combined into one application. Any person who claims to be adversely affected by the allowance of the variance may file a statement with the Community & Economic Development Director containing any information to support his claim. If the Community & Economic Development Director determines that a sufficient controversy exists regarding a variance application, the variance may be set for public hearing before the Planning Commission.
- D. Public notice of the consideration of a proposed variance from the standards of this title shall be provided by the Community & Economic Development Director by mailing such notice to property owners within 300 feet of the exterior boundaries of the property under consideration. The notice shall invite interested persons to notify the Planning Division of any concerns or comments within ten days of the date of the notice.
- E. In determining whether to grant or deny the application, the Community & Economic Development Director or the Planning Commission shall consider comments received from property owners within 300 feet, hardship on the applicant, the community, or other persons affected and property affected and any other adverse impacts. The requested variance may be granted in whole or in part and upon such terms and conditions as it deems necessary if, from the facts presented on the application, the Community & Economic Development Director or the Planning Commission finds that:
 - 1. The strict application of the provisions of this title would result in practical difficulties or unnecessary hardships inconsistent with the general purpose of this Title; 2. There are exceptional circumstances or conditions applicable to the property involved or to the intended use or development of the property that do not apply generally to other property in the same zone or neighborhood;

- 3. The granting of such variance will not be materially detrimental to the public welfare or injurious to the proprimprovements in the zone or neighborhood in which the property is located;
- 4. The granting of such variance will not be contrary to the objectives of any part of the adopted General Plan.
- F. A variance shall be granted by a notice to the applicant containing all the necessary conditions, including any time limits on the permitted activity. The variance shall not become effective until all the conditions are agreed to by the applicant. Noncompliance with any condition of the variance shall terminate the variance and subject the person holding it to those provisions of this title for which the variance was granted.
- G. A variance shall be valid for a period not exceeding one year after the date on which it was granted. Applications for extensions of the time limits specified in variances or for the modification of other substantial conditions shall be treated like applications for initial variances.
- H. In the event the Community & Economic Development Director does not approve an application for a variance within ten days after the application is filed it shall be placed on the agenda of the next regularly scheduled Planning Commission, unless the Commission refers the matter to the City Council.

(Ord. 7489 § 26, 2019; Ord. 7341 § 6, 2016; Ord. 6967 § 7, 2007; Ord. 6462 § 8-10, 1999; Ord. 6273 § 1 (part), 1996)

7.40.020 - Appeals.

Any person aggrieved by the approval or disapproval of a variance, may appeal the decision of the Community & Economic Development Director or Planning Commission to the City Council within ten days after the date of such approval or disapproval. The City Council shall hold a hearing thereon, upon notice to the applicant, considering the same criteria presented to the Community & Economic Development Director.

(Ord. 7489 § 27, 2019; Ord. 6462 § 11, 1999; Ord. 6273 § 1 (part), 1996)

Chapter 7.45 - SEVERABILITY

7.45.010 - Severability.

If any section, subsection, sentence, clause or phrase in this title is for any reason held to be invalid or unconstitutional by decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this title. The City Council hereby declares that it would have passed this title and each section, subsection, clause or phrase thereof irrespective of the fact that any one or more other sections, subsections, clauses or phrases may be declared invalid or unconstitutional.

(Ord. 6328 § 3, 1996)

APPENDIX 3.3:

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)

9.52.030 - Definitions.

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

"Audio equipment" means a television, stereo, radio, tape player, compact disc player, mp3 player, I-POD or other similar device.

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

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

"Governmental agency" means the United States, the state of California, Riverside County, any city within Riverside County, any special district within Riverside County or any combination of these agencies.

"Land use permit" means a discretionary permit issued by Riverside County pursuant to Riverside County Ordinance No. 348.

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

"Motor vehicle sound system" means a stereo, radio, tape player, compact disc player, mp3 player, I-POD or other similar device.

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

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

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

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

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

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

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

"Sound level meter" means an instrument meeting the standards of the American National Standards Institute for Type 1 or Type 2 sound level meters or an instrument that provides equivalent data.

(Ord. 847 § 3, 2006)

9.52.040 - General sound level standards.

No person shall create any sound, or allow the creation of any sound, on any property that causes the exterior sound level on any other occupied property to exceed the sound level standards set forth in Table 1.

TABLE 1 Sound Level Standards (Db L $_{max}$)

GENERAL PLAN	GENERAL PLAN LAND	GENERAL PLAN LAND			MUM L LEVEL
FOUNDATION COMPONENT	USE DESIGNATION	USE DESIGNATION NAME	DENSITY	7 am— 10 pm	10 pm—7 am
	EDR	Estate Density Residential	2 AC	55	45
	VLDR	Very Low Density Residential	1 AC	55	45
	LDR	Low Density Residential	1/2 AC	55	45
	MDR	Medium Density Residential	2—5	55	45
Community	MHDR	Medium High Density Residential	5—8	55	45
Development	HDR	High Density Residential	8—14	55	45
	VHDR	Very High Density Residential	14—20	55	45
	H'TDR	Highest Density Residential	20+	55	45
	CR	Retail Commercial		65	55
	СО	Office Commercial		65	55
	СТ	Tourist Commercial		65	55

	CC	Community Center		65	55
	LI	Light Industrial		75	55
	HI	Heavy Industrial		75	75
	ВР	Business Park		65	45
	PF	Public Facility		65	45
		Specific Plan-Residential		55	45
		Specific Plan-Commercial		65	55
	SP	Specific Plan-Light Industrial		75	55
		Specific Plan-Heavy Industrial		75	75
	EDR	Estate Density Residential	2 AC	55	45
Rural Community	VLDR	Very Low Density Residential	1 AC	55	45
	LDR	Low Density Residential	1/2 AC	55	45
	RR	Rural Residential	5 AC	45	45
Rural	RM	Rural Mountainous	10 AC	45	45
	RD	Rural Desert	10 AC	45	45
Agriculture	AG	Agriculture	10 AC	45	45
Open Space	С	Conservation		45	45
5 pc 3 pace	СН	Conservation Habitat		45	45

REC	Recreation		45	45
RUR	Rural	20 AC	45	45
W	Watershed		45	45
MR	Mineral Resources		75	45

(Ord. 847 § 4, 2006)

9.52.050 - Sound level measurement methodology.

Sound level measurements may be made anywhere within the boundaries of an occupied property. The actual location of a sound level measurement shall be at the discretion of the enforcement officials identified in Section 9.52.080 of this chapter. Sound level measurements shall be made with a sound level meter. Immediately before a measurement is made, the sound level meter shall be calibrated utilizing an acoustical calibrator meeting the standards of the American National Standards Institute. Following a sound level measurement, the calibration of the sound level meter shall be re-verified. Sound level meters and calibration equipment shall be certified annually.

(Ord. 847 § 5, 2006)

9.52.060 - Special sound sources standards.

The general sound level standards set forth in Section 9.52.040 of this chapter apply to sound emanating from all sources, including the following special sound sources, and the person creating, or allowing the creation of, the sound is subject to the requirements of that section. The following special sound sources are also subject to the following additional standards, the failure to comply with which constitutes separate violations of this chapter:

A. Motor Vehicles.

- 1. Off-Highway Vehicles.
 - a. No person shall operate an off-highway vehicle unless it is equipped with a USDA-qualified spark arrester and a constantly operating and properly maintained muffler. A muffler is not considered constantly operating and properly maintained if it is equipped with a cutout, bypass or similar device.
 - b. No person shall operate an off-highway vehicle unless the noise emitted by the vehicle is not more than ninety-six (96) dBA if the vehicle was manufactured on or after January 1, 1986 or is not more than one hundred one (101) dBA if the vehicle was manufactured before January 1, 1986. For purposes of this subsection, emitted noise shall be measured a distance of twenty (20) inches from the vehicle tailpipe using test procedures established by the Society of Automotive Engineers under Standard J-1287.
- Sound Systems. No person shall operate a motor vehicle sound system, whether affixed to the vehicle or not, between the hours of ten p.m. and eight a.m., such that the sound system is audible to the human ear inside any inhabited dwelling. No person shall operate

a motor vehicle sound system, whether affixed to the vehicle or not, at any other time such that the sound system is audible to the human ear at a distance greater than one hundred (100) feet from the vehicle.

- B. Power Tools and Equipment. No person shall operate any power tools or equipment between the hours of ten p.m. and eight a.m. such that the power tools or equipment are audible to the human ear inside an inhabited dwelling other than a dwelling in which the power tools or equipment may be located. No person shall operate any power tools or equipment at any other time such that the power tools or equipment are audible to the human ear at a distance greater than one hundred (100) feet from the power tools or equipment.
- C. Audio Equipment. No person shall operate any audio equipment, whether portable or not, between the hours of ten p.m. and eight a.m. such that the equipment is audible to the human ear inside an inhabited dwelling other than a dwelling in which the equipment may be located. No person shall operate any audio equipment, whether portable or not, at any other time such that the equipment is audible to the human ear at a distance greater than one hundred (100) feet from the equipment.
- D. Sound-Amplifying Equipment and Live Music. No person shall install, use or operate sound-amplifying equipment, or perform, or allow to be performed, live music unless such activities comply with the following requirements. To the extent that these requirements conflict with any conditions of approval attached to an underlying land use permit, these requirements shall control:
 - 1. Sound-amplifying equipment or live music is prohibited between the hours of ten p.m. and eight a.m.
 - 2. Sound emanating from sound-amplifying equipment or live music at any other time shall not be audible to the human ear at a distance greater than two hundred (200) feet from the equipment or music.

(Ord. 847 § 6, 2006)

9.52.070 - Exceptions.

Exceptions may be requested from the standards set forth in Section 9.52.040 or 9.52.060 of this chapter and may be characterized as construction-related, single-event or continuous-events exceptions.

- A. Application and Processing.
 - Construction-Related Exceptions. An application for a construction-related exception shall be made to and considered by the director of building and safety on forms provided by the building and safety department and shall be accompanied by the appropriate filing fee. No public hearing is required.
 - 2. Single-Event Exceptions. An application for a single-event exception shall be made to and considered by the planning director on forms provided by the planning department and shall be accompanied by the appropriate filing fee. No public hearing is required.
 - 3. Continuous-Events Exceptions. An application for a continuous-events exception shall be made to the planning director on forms provided by the planning department and shall be accompanied by the appropriate filing fee. Upon receipt of an application for a continuous-events exception, the planning director shall set the matter for public hearing before the planning commission, notice of which shall be given as provided in Section 18.26c of Riverside County Ordinance No. 348. Notwithstanding the above, an application for a continuous-events exception that is associated with an application for a land use permit shall be processed concurrently with the land use permit in the same manner that the land use permit is required to be processed.

- B. Requirements for Approval. The appropriate decisionmaking body or officer shall not approve an exception application unless the applicant demonstrates that the activities described in the application would not be detrimental to the health, safety or general welfare of the community. In determining whether activities are detrimental to the health, safety or general welfare of the community, the appropriate decisionmaking body or officer shall consider such factors as the proposed duration of the activities and their location in relation to sensitive receptors. If an exception application is approved, reasonable conditions may be imposed to minimize the public detriment, including, but not limited to, restrictions on sound level, sound duration and operating hours.
- C. Appeals. The director of building and safety's decision on an application for a construction-related exception is considered final. The planning director's decision on an application for a single-event exception is considered final. After making a decision on an application for a continuous-events exception, the appropriate decisionmaking body or officer shall mail notice of the decision to the applicant. Within ten (10) calendar days after the mailing of such notice, the applicant or an interested person may appeal the decision to the board of supervisors. Upon receipt of an appeal and payment of the appropriate appeal fee, the clerk of the board shall set the matter for hearing not less than five days nor more than thirty (30) days thereafter and shall give written notice of the hearing in the same manner as notice of the hearing was given by the appropriate hearing officer or body. The board of supervisors shall render its decision within thirty (30) days after the appeal hearing is closed.
- D. Effect of a Pending Continuous-Events Exception Application. For a period of one hundred eighty (180) days from the effective date of this chapter, no person creating any sound prohibited by this chapter shall be considered in violation of this chapter if the sound is related to a use that is operating pursuant to an approved land use permit, if an application for a continuous-events exception has been filed to sanction the sound and if a decision on the application is pending.

(Ord. 847 § 7, 2006)

9.52.080 - Enforcement.

The Riverside County sheriff and code enforcement shall have the primary responsibility for enforcing this chapter; provided, however, the sheriff and code enforcement may be assisted by the public health department. Violations shall be prosecuted as described in Section 9.52.100 of this chapter, but nothing in this chapter shall prevent the sheriff, code enforcement or the department of public health from engaging in efforts to obtain voluntary compliance by means of warnings, notices, or educational programs.

(Ord. 847.1 § 1, 2007: Ord. 847 § 8, 2006)

9.52.090 - Duty to cooperate.

No person shall refuse to cooperate with, or obstruct, the enforcement officials identified in Section 9.52.080 of this chapter when they are engaged in the process of enforcing the provisions of this chapter. This duty to cooperate may require a person to extinguish a sound source so that it can be determined whether sound emanating from the source violates the provisions of this chapter.

(Ord. 847 § 9, 2006)

9.52.100 - Violations and penalties.

Any person who violates any provision of this chapter once or twice within a one hundred eighty (180) day period shall be guilty of an infraction. Any person who violates any provision of this chapter more than twice within a one hundred eighty (180) day period shall be guilty of a misdemeanor. Each day a violation is committed or permitted to continue shall constitute a separate offense and shall be punishable as such. Penalties shall not exceed the following amounts:

- A. For the first violation within a one hundred eighty (180) day period, the minimum mandatory fine shall be five hundred dollars (\$500.00).
- B. For the second violation within a one hundred eighty (180) day period, the minimum mandatory fine shall be seven hundred fifty dollars (\$750.00).
- C. For any further violations within a one hundred eighty (180) day period, the minimum mandatory fine shall be one thousand dollars (\$1,000.00) or imprisonment in the county jail for a period not exceeding six months, or both.

(Ord. 847 § 10, 2006)

APPENDIX 5.1:

STUDY AREA PHOTOS



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L1-E 33, 54' 48.180000"117, 18' 49.890000"



L1-N 33, 54' 48.140000"117, 18' 50.050000"



L1-S 33, 54' 48.220000"117, 18' 49.830000"



L1-W 33, 54' 48.240000"117, 18' 49.940000"



L2-E 33, 54' 48.290000"117, 18' 26.570000"



L2-N 33, 54' 48.290000"117, 18' 26.570000"



L2-S 33, 54' 48.290000"117, 18' 26.570000"



L2-W 33, 54' 48.290000"117, 18' 26.570000"



L3-E 33, 54' 48.360000"117, 18' 9.490000"



L3-N 33, 54' 48.320000"117, 18' 9.460000"



L3-S 33, 54' 48.360000"117, 18' 9.490000"



L3-W 33, 54' 48.390000"117, 18' 9.490000"



L4-E 33, 54' 12.760000"117, 17' 37.870000"



L4-N 33, 54' 12.780000"117, 17' 37.870000"



L4-S 33, 54' 12.760000"117, 17' 37.870000"



L4-W 33, 54' 12.760000"117, 17' 37.900000"



L5-E 33, 54' 6.060000"117, 17' 56.080000"



L5-N 33, 54' 6.100000"117, 17' 56.140000"



L5-S 33, 54' 6.050000"117, 17' 56.110000"



L5-W 33, 54' 6.100000"117, 17' 56.110000"



L6-E 33, 53' 53.070000"117, 18' 14.210000"



L6-N 33, 53' 53.110000"117, 18' 14.210000"



L6-S 33, 53' 53.070000"117, 18' 14.210000"



L6-W 33, 53' 53.080000"117, 18' 14.210000"



L7-E 33, 54' 1.540000"117, 19' 3.130000"



L7-N 33, 54' 1.540000"117, 19' 3.130000"



L7-S 33, 54' 1.530000"117, 19' 3.150000"



L7-W 33, 54' 1.540000"117, 19' 3.130000"



L8-E 33, 54' 14.590000"117, 19' 13.150000"



L8-N 33, 54' 14.590000"117, 19' 13.180000"



L8-S 33, 54' 14.590000"117, 19' 13.180000"



L8-W 33, 54' 14.590000"117, 19' 13.180000"

APPENDIX 5.2:

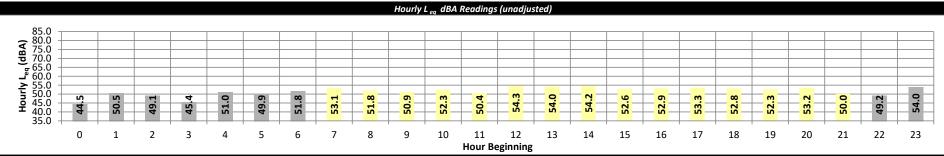
NOISE LEVEL MEASUREMENT WORKSHEETS



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24-Hour Noise Level Measurement SummaryDate: Friday, July 23, 2021Location: L1- Located north of the Project site near single-familyMeter: Piccolo IIJN: 14064Project: West Campus Upper Plateauresidence at 7602 Greenock Way.Analyst: A. Khan



								11041 50	B							
Timeframe	Hour	L_{eq}	L max	L min	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L _{eq}
	0	44.5	49.1	42.6	48.7	48.1	47.1	46.5	44.6	43.9	43.1	42.9	42.7	44.5	10.0	54.5
	1	50.5	61.4	41.8	61.2	61.0	59.3	55.0	46.5	44.8	42.3	42.1	41.9	50.5	10.0	60.5
	2	49.1	60.4	42.2	60.1	59.8	57.2	53.3	44.6	43.5	42.6	42.4	42.3	49.1	10.0	59.1
Night	3	45.4	52.3	42.1	52.0	51.6	50.2	49.2	45.2	43.6	42.5	42.4	42.2	45.4	10.0	55.4
	4	51.0	60.2	43.5	60.0	59.7	58.8	57.0	49.9	45.0	44.0	43.8	43.6	51.0	10.0	61.0
	5	49.9	59.9	46.7	57.5	56.5	54.5	53.3	49.4	48.0	47.1	46.9	46.8	49.9	10.0	59.9
	6	51.8	59.8	47.3	59.5	59.0	57.3	55.7	51.9	49.4	47.8	47.6	47.4	51.8	10.0	61.8
	7	53.1	69.0	44.6	68.1	66.4	62.6	60.4	53.7	48.0	45.3	45.0	44.7	53.1	0.0	53.1
	8	51.8	74.4	45.3	74.1	73.9	73.3	72.5	66.3	58.1	46.7	46.0	45.6	51.8	0.0	51.8
	9	50.9	71.1	43.4	70.5	69.7	66.9	64.6	57.8	51.1	44.7	44.2	43.6	50.9	0.0	50.9
	10	52.3	60.9	43.2	60.5	59.9	58.5	57.1	52.9	49.4	44.3	43.8	43.4	52.3	0.0	52.3
	11	50.4	58.9	41.5	58.6	58.3	56.8	55.2	50.9	46.6	42.3	42.0	41.7	50.4	0.0	50.4
	12	54.3	64.5	43.1	63.9	63.3	61.8	60.7	56.7	52.7	45.2	44.5	43.3	54.3	0.0	54.3
_	13	54.0	64.7	45.1	64.3	63.7	62.2	60.2	54.7	50.5	46.2	45.7	45.2	54.0	0.0	54.0
Day	14	54.2	67.3	46.6	67.0	66.7	64.2	61.2	54.7	50.6	47.4	47.1	46.7	54.2	0.0	54.2
	15	52.6	66.9	45.6	66.6	65.9	64.2	61.9	52.6	48.5	46.4	46.1	45.7	52.6	0.0	52.6
	16	52.9	62.0	46.4	61.3	60.4	58.6	57.1	53.3	50.0	47.3	47.0	46.5	52.9	0.0	52.9
	17	53.3	62.7	45.7	62.3	61.6	60.0	58.3	52.7	49.2	46.6	46.2	45.9	53.3	0.0	53.3
	18	52.8	62.9	44.0	62.3	61.7	59.4	57.7	52.3	48.5	44.9	44.5	44.1	52.8	0.0	52.8
	19	52.3	67.8	43.2	67.3	66.5	64.3	61.9	53.9	48.8	44.1	43.7	43.3	52.3	5.0	57.3
	20	53.2	62.9	42.2	62.5	62.0	60.7	58.7	53.4	46.7	43.0	42.6	42.3	53.2	5.0	58.2
	21	50.0	60.3	41.7	59.9	59.3	56.6	54.6	49.3	45.0	42.4	42.1	41.8	50.0	5.0	55.0
Night	22 23	49.2	58.3	42.9	58.0	57.6 64.0	56.2 61.5	54.3 59.2	48.3	45.3	43.4	43.2 42.8	43.0 42.6	49.2	10.0 10.0	59.2
Tim of some		54.0	65.6	42.5	64.7				51.4	45.8	42.9			54.0		64.0
Timeframe	Hour	L _{eq}	L max	L min	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%		L _{eq} (dBA)	Minhadina
Day	Min Max	50.0	58.9 74.4	41.5	58.6	58.3	56.6	54.6	49.3	45.0	42.3	42.0	41.7	24-Hour	Daytime	Nighttime
Energy		54.3 52.7		46.6	74.1	73.9	73.3 62.0	72.5 60.1	66.3 54.3	58.1	47.4	47.1	46.7		(7am-10pm)	(10pm-7am)
Energy	Min	44.5	Aver	41.8	64.6	64.0 48.1	47.1	46.5	44.6	49.6	45.1	44.7 42.1	44.3 41.9	E2 0	E2 7	EO 2
Night	Max	44.5 54.0	49.1 65.6	41.8 47.3	48.7 64.7	48.1 64.0	47.1 61.5	46.5 59.2	44.6 51.9	43.5 49.4	42.3 47.8	42.1 47.6	41.9	52.0	52.7	50.3
Energy	Average	50.3	Aver		58.0	57.5	55.8	59.2	48.0	45.5	44.0	47.6	47.4			
Lileigy	Average	30.3	AVEI	uge.	36.0	37.5	33.6	33.7	46.0	43.3	44.0	43.0	43.0			



Location: L2 - Located north of the Project site near single-family Meter: Piccolo II

Date: Thursday, July 22, 2021 Project: West Campus Upper Plateau residence at 14210 Rancho Vista Road.

Hourly L _{eq} dBA Readings (unadjusted) 85.0 80.0 75.0 70.0 65.0 66.0 60.0 45.0 40.0 35.0 54.5 49.3 53. 50. 43. 0 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 1 **Hour Beginning**

Timeframe	Hour	L _{eq}	L max	L min	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L _{eq}
	0	41.4	49.6	38.7	49.3	48.9	46.5	44.3	40.4	39.8	39.1	39.0	38.8	41.4	10.0	51.4
	1	44.9	69.3	39.2	68.4	66.8	61.3	56.0	45.5	41.6	39.7	39.5	39.3	44.9	10.0	54.9
	2	45.8	55.6	40.3	54.8	54.1	52.0	50.5	44.5	42.2	40.9	40.7	40.4	45.8	10.0	55.8
Night	3	46.0	54.4	43.1	54.1	53.2	50.0	48.1	45.6	44.7	43.7	43.5	43.3	46.0	10.0	56.0
	4	47.7	58.1	44.4	57.9	57.4	55.6	54.4	49.7	46.0	44.9	44.7	44.5	47.7	10.0	57.7
	5	52.5	58.9	46.6	57.9	57.2	56.0	55.5	53.5	51.7	48.5	47.8	47.0	52.5	10.0	62.5
	6	54.8	65.4	45.9	64.9	64.1	61.5	59.5	55.8	53.1	48.5	47.6	46.4	54.8	10.0	64.8
	7	52.8	65.6	43.2	65.2	64.5	61.3	59.3	54.4	50.7	45.4	44.6	43.6	52.8	0.0	52.8
	8	51.7	69.1	46.2	68.7	68.5	67.8	67.2	61.7	57.9	52.2	50.4	47.3	51.7	0.0	51.7
	9	52.2	64.3	40.6	63.9	63.0	59.4	56.9	52.4	49.2	42.8	41.9	40.9	52.2	0.0	52.2
	10	50.4	59.3	41.0	58.9	58.3	56.1	54.5	51.0	47.8	43.1	42.1	41.3	50.4	0.0	50.4
	11	50.6	62.3	41.5	61.8	61.2	58.3	55.7	51.1	48.1	43.5	42.7	41.9	50.6	0.0	50.6
	12	50.7	74.0	41.1	73.3	72.3	68.9	66.2	57.2	52.5	44.0	42.7	41.6	50.7	0.0	50.7
	13	52.7	66.2	41.8	65.5	64.7	62.8	61.5	57.0	50.5	43.5	42.7	42.0	52.7	0.0	52.7
Day	14	51.6	62.2	43.2	61.2	60.1	57.2	55.5	51.8	48.6	44.6	44.0	43.4	51.6	0.0	51.6
	15	52.3	62.6	45.2	61.9	60.7	57.5	55.7	52.2	49.6	46.7	46.1	45.4	52.3	0.0	52.3
	16	50.4	67.2	43.8	66.6	65.8	62.4	57.5	50.2	47.2	44.5	44.2	43.9	50.4	0.0	50.4
	17	49.3	62.5	43.9	61.9	60.8	56.6	53.4	46.9	45.4	44.3	44.1	43.9	49.3	0.0	49.3
	18	50.7	64.5	42.3	64.0	63.1	61.1	59.7	53.7	48.0	43.4	42.9	42.5	50.7	0.0	50.7
	19	53.5	66.9	39.8	66.3	65.6	64.2	62.8	55.1	45.0	40.6	40.3	40.0	53.5	5.0	58.5
	20	54.5	65.8	37.9	65.4	64.5	61.7	59.8	53.1	45.4	39.3	38.5	38.1	54.5	5.0	59.5
	21	50.2	60.6	37.5	59.8	59.0	56.4	54.8	51.0	44.3	38.7	38.0	37.6	50.2	5.0	55.2
Night	22	45.4	58.1	37.9	57.4	56.1	52.1	48.5	43.1	40.1	38.5	38.2	38.1	45.4	10.0	55.4
, in the second	23	43.2	55.2	38.0	54.7	53.5	49.6	46.2	39.9	39.2	38.4	38.3	38.1	43.2	10.0	53.2
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%		L _{eq} (dBA)	
Day	Min	49.3	59.3	37.5	58.9	58.3	56.1	53.4	46.9	44.3	38.7	38.0	37.6	24-Hour	Daytime	Nighttime
, ,	Max	54.5	74.0	46.2	73.3	72.3	68.9	67.2	61.7	57.9	52.2	50.4	47.3		(7am-10pm)	(10pm-7am)
Energy	Average	51.8		age:	64.3	63.5	60.8	58.7	53.3	48.7	43.8	43.0	42.2		54.0	40.0
Night	Min	41.4	49.6	37.9	49.3	48.9	46.5	44.3	39.9	39.2	38.4	38.2	38.1	50.9	51.8	49.0
•	Max	54.8	69.3	46.6	68.4	66.8	61.5	59.5	55.8	53.1	48.5	47.8	47.0			
Energy	Average	49.0	Aver	age:	57.7	56.8	53.8	51.4	46.4	44.3	42.5	42.1	41.8			



JN: 14064

Analyst: A. Khan

Location: L3 - Located north of the Project site near single-family Meter: Piccolo II

Date: Thursday, July 22, 2021 JN: 14064 Project: West Campus Upper Plateau residence at 20630 Camino Del Sol. Analyst: A. Khan

Hourly L _{eq} dBA Readings (unadjusted) 85.0 80.0 75.0 70.0 65.0 66.0 60.0 45.0 40.0 35.0 48.2 48.0 51.6 49.1 52.7 45.4 48.7 51.7 43. 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 **Hour Beginning**

Timeframe	Hour	L_{eq}	L max	L min	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}
	0	45.9	61.6	39.2	61.1	60.8	59.5	58.4	49.3	41.9	39.9	39.6	39.3	45.9	10.0	55.9
	1	43.4	51.6	38.7	50.5	49.8	48.5	47.7	43.9	40.8	39.4	39.2	38.8	43.4	10.0	53.4
	2	43.1	51.5	40.0	51.0	50.3	48.0	46.1	42.3	41.5	40.5	40.4	40.1	43.1	10.0	53.1
Night	3	43.3	50.8	40.2	50.6	50.2	48.3	46.3	42.6	41.7	40.8	40.6	40.3	43.3	10.0	53.3
	4	46.6	58.4	42.4	57.9	57.2	56.0	55.3	49.6	45.4	43.0	42.7	42.5	46.6	10.0	56.6
	5	49.8	63.7	44.1	62.8	62.0	60.2	58.8	53.6	50.1	44.7	44.5	44.2	49.8	10.0	59.8
	6	50.8	62.7	45.7	61.9	61.1	58.8	56.8	51.1	48.5	46.6	46.3	45.9	50.8	10.0	60.8
	7	50.3	65.5	41.5	64.8	63.7	60.9	59.1	53.0	47.8	42.5	42.1	41.7	50.3	0.0	50.3
	8	48.7	66.4	45.3	65.7	65.2	63.8	63.0	59.1	54.1	47.4	46.1	45.5	48.7	0.0	48.7
	9	48.2	65.9	38.8	64.8	63.4	60.9	59.0	52.4	46.8	40.3	39.6	39.1	48.2	0.0	48.2
	10	51.7	62.2	39.9	61.5	60.9	59.1	57.9	52.5	46.8	41.4	40.7	40.1	51.7	0.0	51.7
	11	50.5	62.1	42.8	61.7	61.1	58.7	57.4	54.2	49.9	44.5	43.6	43.1	50.5	0.0	50.5
	12	48.0	65.1	38.5	64.8	64.4	63.1	61.3	48.9	45.1	39.9	39.3	38.7	48.0	0.0	48.0
	13	50.7	67.1	41.2	66.7	66.2	64.2	62.2	55.8	46.6	42.1	41.7	41.3	50.7	0.0	50.7
Day	14	46.7	57.2	41.9	56.4	55.8	54.0	52.0	49.0	45.4	42.7	42.5	42.0	46.7	0.0	46.7
	15	47.9	55.4	44.2	54.9	54.3	52.6	51.3	48.0	46.2	44.8	44.6	44.3	47.9	0.0	47.9
	16	51.6	66.0	45.1	65.3	64.8	63.6	62.7	58.7	55.3	48.9	45.8	45.2	51.6	0.0	51.6
	17	49.1	60.4	44.4	59.4	58.9	57.8	57.0	52.7	47.8	45.1	44.8	44.5	49.1	0.0	49.1
	18	50.9	66.8	43.4	66.0	65.3	63.8	62.5	57.2	50.3	45.0	44.4	43.7	50.9	0.0	50.9
	19	52.7	69.6	41.2	68.8	68.1	66.5	65.1	58.5	50.2	42.7	42.1	41.4	52.7	5.0	57.7
	20	51.1	69.2	39.7	68.6	68.1	67.0	65.9	61.4	54.3	41.2	40.6	39.9	51.1	5.0	56.1
	21	45.4	54.5	39.6	54.1	53.6	51.1	49.1	45.2	42.7	40.4	40.0	39.7	45.4	5.0	50.4
Night	22	44.6	51.4	40.5	51.1	50.6	49.1	48.0	45.4	42.9	41.1	40.9	40.6	44.6	10.0	54.6
Nigit	23	41.6	47.8	38.6	47.3	46.8	45.7	44.6	41.6	40.4	39.2	39.0	38.8	41.6	10.0	51.6
Timeframe	Hour	L eq	L max	L min	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	_	L _{eq} (dBA)	
Day	Min	45.4	54.5	38.5	54.1	53.6	51.1	49.1	45.2	42.7	39.9	39.3	38.7	24-Hour	Daytime	Nighttime
Day	Max	52.7	69.6	45.3	68.8	68.1	67.0	65.9	61.4	55.3	48.9	46.1	45.5	E-7 71001	(7am-10pm)	(10pm-7am)
Energy /	Average	50.0	Aver	age:	62.9	62.2	60.5	59.0	53.8	48.6	43.3	42.5	42.0			
Night	Min	41.6	47.8	38.6	47.3	46.8	45.7	44.6	41.6	40.4	39.2	39.0	38.8	49.0	50.0	46.5
Mignit	Max	50.8	63.7	45.7	62.8	62.0	60.2	58.8	53.6	50.1	46.6	46.3	45.9			
Energy /	Average	46.5	Aver	age:	54.9	54.3	52.7	51.3	46.6	43.7	41.7	41.4	41.2			



Location: L4 - Located south of the Project site near single-family Meter: Piccolo II

Project: West Campus Upper Plateau residence at 20870 Indigo Point.

Date: Thursday, July 22, 2021

r: Piccolo II JN: 14064 Analyst: A. Khan

Hourly L _{eq} dBA Readings (unadjusted) 85.0 80.0 75.0 70.0 65.0 66.0 60.0 45.0 40.0 35.0 49.9 45.0 48.0 45.3 45.9 49.8 51.7 **Hour Beginning**

Timeframe	Hour	L_{eq}	L max	L min	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}
	0	45.0	47.8	42.9	47.4	47.2	46.7	46.3	45.3	44.8	43.8	43.5	43.1	45.0	10.0	55.0
	1	42.5	45.2	41.2	45.0	44.7	44.0	43.6	42.8	42.2	41.6	41.5	41.3	42.5	10.0	52.5
	2	42.8	47.1	41.3	46.6	46.1	45.0	44.4	42.9	42.4	41.7	41.6	41.4	42.8	10.0	52.8
Night	3	41.4	43.5	40.2	43.3	43.1	42.7	42.5	41.7	41.1	40.5	40.4	40.3	41.4	10.0	51.4
	4	45.8	52.5	41.9	52.3	52.0	51.4	50.6	45.3	43.1	42.3	42.1	42.0	45.8	10.0	55.8
	5	46.8	60.3	43.0	59.7	58.7	55.2	52.3	45.3	44.1	43.4	43.3	43.1	46.8	10.0	56.8
	6	48.2	54.3	45.0	53.7	53.2	51.9	50.8	48.8	47.2	45.7	45.5	45.2	48.2	10.0	58.2
	7	49.9	71.0	43.2	70.9	70.7	70.2	68.2	60.4	53.7	44.7	43.9	43.4	49.9	0.0	49.9
	8	45.0	60.8	42.9	60.4	60.0	58.8	57.2	52.5	50.1	43.9	43.4	43.0	45.0	0.0	45.0
	9	48.0	70.7	42.1	70.0	69.3	64.5	61.1	53.1	47.4	43.4	42.8	42.3	48.0	0.0	48.0
	10	51.7	62.0	46.5	61.5	60.9	57.3	55.4	51.9	49.9	47.5	47.0	46.6	51.7	0.0	51.7
	11	44.8	56.3	38.6	55.6	54.9	52.2	49.9	46.5	43.0	39.3	39.0	38.7	44.8	0.0	44.8
	12	47.8	59.1	43.2	58.4	57.5	56.0	54.6	51.2	48.7	44.4	44.0	43.3	47.8	0.0	47.8
	13	53.2	77.2	48.7	76.8	76.0	73.4	71.6	63.9	59.1	51.6	50.5	49.1	53.2	0.0	53.2
Day	14	46.7	63.1	39.7	62.8	62.1	60.1	58.3	51.1	45.0	40.4	40.1	39.8	46.7	0.0	46.7
	15	45.3	57.6	41.6	57.0	56.1	53.6	51.7	48.0	44.2	42.3	42.0	41.7	45.3	0.0	45.3
	16	46.8	55.3	43.7	55.0	54.5	52.7	51.2	48.3	46.7	44.4	44.1	43.8	46.8	0.0	46.8
	17	45.9	52.9	42.6	52.6	52.4	50.5	48.7	46.0	44.7	43.1	42.9	42.7	45.9	0.0	45.9
	18	45.4	66.4	39.9	66.1	65.7	63.9	62.1	52.3	44.6	40.6	40.3	40.0	45.4	0.0	45.4
	19	47.4	65.4	38.5	65.0	64.7	63.6	62.3	56.0	48.4	39.9	39.2	38.7	47.4	5.0	52.4
	20	49.8	60.8	38.7	60.5	60.2	59.6	58.9	53.9	45.0	39.8	39.3	38.9	49.8	5.0	54.8
	21	47.0	52.8	44.4	52.3	51.8	50.6	49.7	47.0	46.1	44.6	44.5	44.5	47.0	5.0	52.0
Night	22	45.4	55.5	41.8	55.0	53.9	50.9	48.1	44.0	43.0	42.2	42.0	41.8	45.4	10.0	55.4
	23	42.7	45.5	41.5	45.2	44.9	44.2	43.7	42.9	42.5	41.9	41.8	41.6	42.7	10.0	52.7
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%		L _{eq} (dBA)	
Day	Min	44.8	52.8	38.5	52.3	51.8	50.5	48.7	46.0	43.0	39.3	39.0	38.7	24-Hour	Daytime	Nighttime
,	Max	53.2	77.2	48.7	76.8	76.0	73.4	71.6	63.9	59.1	51.6	50.5	49.1		(7am-10pm)	(10pm-7am)
Energy	Average	48.4	Aver		61.7	61.1	59.1	57.4	52.1	47.8	43.3	42.9	42.4	47.6	40.6	45 6
Night	Min	41.4	43.5	40.2	43.3	43.1	42.7	42.5	41.7	41.1	40.5	40.4	40.3	47.4	48.4	45.0
	Max	48.2	60.3	45.0	59.7	58.7	55.2	52.3	48.8	47.2	45.7	45.5	45.2			
Energy	Average	45.0	Aver	age:	49.8	49.3	48.0	46.9	44.3	43.4	42.6	42.4	42.2			



Location: L5 - Located south of the Project site near single-family Meter: Piccolo II

Date: Thursday, July 22, 2021 JN: 14064 Project: West Campus Upper Plateau residence at 8256 Gardenia Vista Drive. Analyst: A. Khan

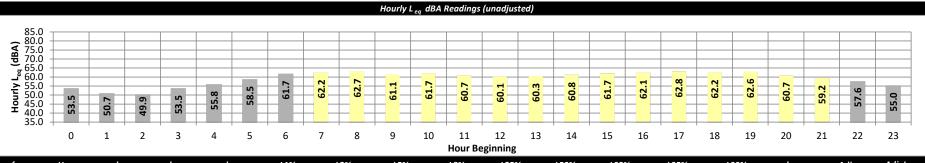
Hourly L _{eq} dBA Readings (unadjusted) 85.0 80.0 75.0 70.0 65.0 66.0 60.0 45.0 40.0 35.0 49.8 51.0 50.1 48.5 45.8 48.1 43. 43. 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 **Hour Beginning**

Timeframe	Hour	L _{eq}	L max	L min	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}
	0	45.1	47.6	43.8	47.4	47.2	46.8	46.5	45.5	44.8	44.1	44.0	43.8	45.1	10.0	55.1
	1	44.0	47.9	42.5	47.7	47.5	46.0	45.1	44.2	43.7	42.9	42.8	42.6	44.0	10.0	54.0
	2	45.0	49.8	43.1	49.5	49.0	48.1	47.2	45.3	44.3	43.5	43.4	43.2	45.0	10.0	55.0
Night	3	41.2	44.4	39.9	43.9	43.4	42.6	42.3	41.5	40.9	40.3	40.2	40.0	41.2	10.0	51.2
	4	43.0	52.6	41.7	52.4	52.3	52.1	51.6	46.5	43.2	42.1	41.9	41.8	43.0	10.0	53.0
	5	48.7	53.5	47.5	53.1	52.6	51.2	50.1	48.5	48.2	47.7	47.7	47.5	48.7	10.0	58.7
	6	49.4	57.8	45.9	57.3	56.5	54.5	52.8	48.7	47.5	46.3	46.2	46.0	49.4	10.0	59.4
	7	48.0	66.5	42.4	66.4	65.9	63.8	62.1	50.4	46.6	43.3	43.1	42.6	48.0	0.0	48.0
	8	47.1	68.5	49.7	68.1	67.7	66.3	64.1	59.5	56.3	51.4	50.7	50.0	47.1	0.0	47.1
	9	46.5	61.5	41.2	61.2	60.8	58.7	57.0	51.1	47.8	42.2	41.8	41.4	46.5	0.0	46.5
	10	49.8	59.6	40.9	59.1	58.4	56.5	55.0	51.0	46.6	42.5	41.9	41.2	49.8	0.0	49.8
	11	46.5	58.2	39.6	57.7	56.9	54.1	51.9	47.3	43.1	40.3	40.0	39.7	46.5	0.0	46.5
	12	46.5	70.3	40.6	67.8	66.1	61.6	58.1	50.1	46.1	41.4	41.1	40.7	46.5	0.0	46.5
	13	51.2	79.2	46.2	78.5	77.5	74.3	72.0	64.5	58.7	49.0	47.6	46.5	51.2	0.0	51.2
Day	14	51.3	65.8	44.5	65.4	64.9	63.2	61.4	56.3	51.4	45.7	45.1	44.7	51.3	0.0	51.3
	15	50.5	69.4	55.4	69.0	68.6	67.5	66.8	64.7	62.8	57.6	56.7	55.7	50.5	0.0	50.5
	16	51.0	60.8	44.5	60.3	59.7	58.0	56.8	52.4	49.3	45.7	45.1	44.6	51.0	0.0	51.0
	17	50.1	59.8	44.2	58.9	57.9	55.4	53.9	50.5	48.4	45.4	44.9	44.4	50.1	0.0	50.1
	18	48.1	69.0	41.8	68.7	68.2	66.2	64.0	54.4	47.7	42.9	42.5	42.0	48.1	0.0	48.1
	19	47.7	68.5	39.6	68.2	68.0	67.1	65.3	56.9	47.9	40.6	40.2	39.7	47.7	5.0	52.7
	20	48.5	64.6	42.5	64.3	63.9	63.2	62.7	56.9	48.9	43.2	42.9	42.6	48.5	5.0	53.5
	21	45.8	55.3	40.7	54.9	53.9	51.3	49.9	45.5	43.0	41.2	41.0	40.8	45.8	5.0	50.8
Night	22	43.7	51.7	40.2	51.3	50.6	48.5	47.0	43.5	41.8	40.7	40.5	40.3	43.7	10.0	53.7
, in the second	23	43.7	49.8	41.7	49.5	48.8	46.9	45.9	43.5	42.9	42.2	42.0	41.8	43.7	10.0	53.7
Timeframe	Hour	L _{eq}	L max	L min	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%		L _{eq} (dBA)	
Day	Min	45.8	55.3	39.6	54.9	53.9	51.3	49.9	45.5	43.0	40.3	40.0	39.7	24-Hour	Daytime	Nighttime
, ,	Max	51.3	79.2	55.4	78.5	77.5	74.3	72.0	64.7	62.8	57.6	56.7	55.7		(7am-10pm)	(10pm-7am)
Energy	Average	49.0	Aver		64.6	63.9	61.8	60.1	54.1	49.6	44.8	44.3	43.8			
Night	Min	41.2	44.4	39.9	43.9	43.4	42.6	42.3	41.5	40.9	40.3	40.2	40.0	48.0	49.0	45.6
•	Max	49.4	57.8	47.5	57.3	56.5	54.5	52.8	48.7	48.2	47.7	47.7	47.5			
Energy	Average	45.6	Aver	age:	50.2	49.8	48.5	47.6	45.2	44.2	43.3	43.2	43.0			



Location: L6 - Located south of the Project site near single-family Meter: Piccolo II

Date: Thursday, July 22, 2021 JN: 14064 Project: West Campus Upper Plateau residence at 8360 Clover Creek Road. Analyst: A. Khan



Timeframe	Hour	L eq	L max	L min	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L _{eq}
	0	53.5	65.7	39.1	65.3	64.7	61.7	59.2	48.0	41.4	39.4	39.3	39.1	53.5	10.0	63.5
	1	50.7	63.4	39.6	63.0	62.3	58.6	55.5	45.0	40.7	39.9	39.8	39.7	50.7	10.0	60.7
	2	49.9	62.1	41.8	61.6	60.7	57.4	54.6	45.2	43.0	42.3	42.1	41.9	49.9	10.0	59.9
Night	3	53.5	67.1	40.0	66.5	65.6	61.8	57.8	44.2	41.2	40.4	40.3	40.1	53.5	10.0	63.5
	4	55.8	69.0	42.1	68.6	67.6	63.9	60.3	48.5	43.8	42.5	42.4	42.2	55.8	10.0	65.8
	5	58.5	72.7	43.5	72.2	71.3	67.7	64.9	54.6	47.9	44.0	43.8	43.6	58.5	10.0	68.5
	6	61.7	73.1	42.1	72.7	71.9	69.3	67.5	59.6	52.1	43.4	42.7	42.2	61.7	10.0	71.7
	7	62.2	73.8	41.5	73.4	72.5	70.0	67.9	59.9	52.4	43.8	42.7	41.9	62.2	0.0	62.2
	8	62.7	73.8	40.4	73.4	72.6	70.3	68.7	62.2	55.3	42.5	41.5	40.6	62.7	0.0	62.7
	9	61.1	72.7	40.1	72.3	71.4	68.9	67.3	59.8	51.4	41.8	41.1	40.3	61.1	0.0	61.1
	10	61.7	73.0	53.0	72.6	71.7	69.3	67.5	60.8	55.9	53.6	53.4	53.1	61.7	0.0	61.7
	11	60.7	71.6	50.0	71.2	70.2	67.9	66.2	59.5	53.6	50.6	50.4	50.1	60.7	0.0	60.7
	12	60.1	71.2	38.7	70.8	69.9	67.8	66.0	58.6	50.2	40.2	39.5	38.9	60.1	0.0	60.1
	13	60.3	72.3	41.9	71.9	71.2	69.4	67.9	61.4	53.1	44.6	43.5	42.2	60.3	0.0	60.3
Day	14	60.8	76.3	40.6	75.8	75.0	72.4	70.2	61.6	54.3	42.9	41.4	40.8	60.8	0.0	60.8
	15	61.7	73.2	41.7	72.7	71.8	69.3	67.7	61.2	53.4	43.4	42.4	41.8	61.7	0.0	61.7
	16	62.1	72.8	42.4	72.3	71.4	69.0	67.7	61.9	54.2	43.9	43.3	42.6	62.1	0.0	62.1
	17	62.8	73.8	41.9	73.3	72.5	70.1	68.7	63.3	56.1	43.9	42.7	42.1	62.8	0.0	62.8
	18	62.2	73.7	40.0	73.2	72.6	70.4	68.8	62.7	54.6	42.2	41.1	40.2	62.2	0.0	62.2
	19	62.6	72.7	40.9	72.4	71.7	70.0	68.5	62.4	55.1	43.3	42.0	41.0	62.6	5.0	67.6
	20	60.7	71.6	39.0	71.2	70.5	68.4	66.7	59.3	49.6	40.5	39.8	39.2	60.7	5.0	65.7
	21	59.2	70.7	37.2	70.2	69.4	66.8	65.0	57.4	48.2	38.3	37.7	37.3	59.2	5.0	64.2
Night	22	57.6	69.8	37.9	69.3	68.5	65.6	63.2	54.1	46.7	38.9	38.6	38.2	57.6	10.0	67.6
	23	55.0	67.7	37.8	67.3	66.3	63.3	60.6	49.0	41.0	38.3	38.1	37.9	55.0	10.0	65.0
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%		L _{eq} (dBA)	
Day	Min	59.2	70.7	37.2	70.2	69.4	66.8	65.0	57.4	48.2	38.3	37.7	37.3	24-Hour	Daytime	Nighttime
, i	Max	62.8	76.3	53.0	75.8	75.0	72.4	70.2	63.3	56.1	53.6	53.4	53.1		(7am-10pm)	(10pm-7am)
Energy	Average	61.5	Aver		72.5	71.6	69.3	67.6	60.8	53.2	43.7	42.8	42.1	60.0	C4 F	
Night	Min	49.9	62.1	37.8	61.6	60.7	57.4	54.6	44.2	40.7	38.3	38.1	37.9	60.2	61.5	56.6
	Max	61.7	73.1	43.5	72.7	71.9	69.3	67.5	59.6	52.1	44.0	43.8	43.6			
Energy	Average	56.6	Aver	age:	67.4	66.5	63.3	60.4	49.8	44.2	41.0	40.8	40.6			



24-Hour Noise Level Measurement Summary Location: L7 - Located south of the Project site near The Grove Date: Thursday, July 22, 2021 Meter: Piccolo II JN: 14064 Community Church at 19900 Grove Community Drive. Project: West Campus Upper Plateau Analyst: A. Khan Hourly Lea dBA Readings (unadjusted) 85.0 85.0 80.0 75.0 70.0 65.0 60.0 Hourly Hourly L 6 50.2 49.4 48.3 56. 50. 50. 50. 48. 49. 69. 20 53. 53 49. 40.0 35.0 2 3 7 8 9 10 12 19 21 23 0 4 5 6 13 15 16 17 18 20 22 1 11 14 **Hour Beginning** Timeframe Hour L_{eq} L_{max} L_{min} L1% L2% L5% L8% L25% L50% L90% L95% L99% L_{eq} Adj. Adj. L eq 0 43.8 47.0 42.1 46.7 46.4 45.9 45.4 44 1 43.4 42.6 42.4 42.3 43.8 10.0 53.8 1 46.5 51.9 44.3 51.6 51.3 50.2 49.2 46.3 45.6 44.8 44.7 44.5 46.5 10.0 56.5 2 45.2 48.3 43.5 47.5 47.0 43.9 48.1 48.0 45.6 44.8 43.8 43.6 45.2 10.0 55.2 Night 3 44.7 48.6 43.2 48.4 47.3 46.4 43.6 54.7 48.1 44.9 44.3 43.5 43.3 44.7 10.0 4 45.1 45.5 10.0 57.4 47.4 53.8 53.5 53.3 52.4 51.5 49.3 47.2 45.4 45.2 47.4 5 48.3 54.9 45.8 54.4 53.9 53.0 52.3 49.9 47.5 46.3 46.1 45.9 48.3 10.0 58.3 6 50.2 54.0 47.9 53.7 53.4 52.7 52.2 50.8 49.7 48.4 48.2 48.0 50.2 10.0 60.2 50.2 56.3 46.5 55.9 55.5 54.3 53.3 50.8 49.0 47.2 46.9 46.7 50.2 0.0 50.2 8 50.9 70.8 48.0 70.7 70.5 69.8 69.4 58.6 49.3 48.8 48.2 50.9 0.0 50.9 65.7 9 62.0 52.5 61.7 61.3 59.9 53.9 53.5 56.0 60.6 58.1 56.2 52.7 56.0 0.0 56.0 10 50.9 58.8 46.1 58.4 57.8 56.9 56.3 54.1 51.6 47.2 46.7 46.3 50.9 0.0 50.9 11 48.4 56.4 54.8 46.4 43.2 42.8 48.4 57.6 42.7 57.1 53.8 49.2 43.7 48.4 0.0 12 51.0 60.3 44.6 59.8 59.4 58.3 57.4 52.6 49.4 45.7 45.1 44.7 51.0 0.0 51.0 13 50.6 62.7 44.9 62.2 61.7 60.6 59.9 57.3 51.7 46.2 45.7 45.2 50.6 0.0 50.6 Day 14 49.9 59.1 43.7 58.7 58.2 57.0 55.7 51.1 47.4 44.6 44.2 43.8 49.9 0.0 49.9 15 50.5 61.3 43.5 60.7 60.1 58.9 58.1 54.3 48.3 44.4 44.0 43.7 50.5 0.0 50.5 16 49.9 59.1 58.3 56.5 55.3 45.0 49.9 49.9 44.1 58.8 51.5 47.8 44.6 44.2 0.0 17 50.9 58.8 44.9 58.4 58.0 56.8 55.8 50.4 48.3 45.9 45.5 45.1 50.9 0.0 50.9 18 51.8 62.9 44.3 62.5 62.2 61.1 60.0 52.9 48.6 45.7 45.2 44.5 51.8 0.0 51.8 19 53.1 43.1 64.5 62.8 48.1 44.5 44.0 58.1 66.4 66.0 65.6 54.9 43.4 53.1 5.0 20 53.5 61.0 42.8 60.7 60.3 59.1 58.5 54.9 50.0 44.3 43.6 43.0 53.5 5.0 58.5 21 49.6 59.3 41.2 56.1 49.0 42.1 41.7 49.6 54.6 58.6 57.8 55.1 45.6 41.3 5.0 22 48.1 56.3 42.8 55.8 55.3 53.4 52.3 47.9 46.0 43.6 43.3 43.0 48.1 10.0 58.1 Night 23 49.4 59.8 43.4 59.3 58.4 56.0 54.0 47.5 45.5 44.0 43.7 43.5 49.4 10.0 59.4



Lea (dBA)

Daytime

(7am-10pm)

51.6

50.5

Nighttime

(10pm-7am)

47.5

L8%

53.3

69.4

58.1

45.4

54.0

50.0

L25%

49.0

65.7

53.8

44.1

50.8

47.4

L50%

45.6

58.6

49.8

43.4

49.7

46.0

L90%

42.1

53.9

46.0

42.6

48.4

44.8

L95%

41.7

53.5

45.5

42.4

48.2

44.6

L99%

41.3

52.7

45.0

42.3

48.0

44.4

L max

56.3

70.8

47.0

59.8

Average

Average:

Timeframe

Day

Night

Hour

Min

Max

Max

Energy Average

Energy Average

 L_{ea}

48.4

56.0

51.6

43.8

50.2

47.5

L1%

55.9

70.7

60.7

46.7

59.3

52.4

L min

41.2

52.5

42.1

47.9

L2%

55.5

70.5

60.2

46.4

58.4

52.0

L5%

54.3

69.8

59.0

45.9

56.0

50.9

Location: L8 - Located west of the Project site near single-family Meter: Piccolo II

Date: Thursday, July 22, 2021 Project: West Campus Upper Plateau residence at 8079 La Crosse Way.

Hourly L _{eq} dBA Readings (unadjusted) 85.0 80.0 75.0 70.0 65.0 66.0 60.0 45.0 40.0 35.0 43.4 48.8 46.4 39. 48. 49. 45. 50. 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 **Hour Beginning**

Timeframe	Hour	L _{eq}	L max	L min	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L eq	Adj.	Adj. L _{eq}
	0	39.7	41.3	38.7	41.1	41.0	40.7	40.5	40.0	39.5	39.1	39.0	38.8	39.7	10.0	49.7
	1	40.7	45.9	39.1	45.7	45.3	43.8	42.5	40.6	40.0	39.5	39.4	39.2	40.7	10.0	50.7
	2	39.5	40.9	38.6	40.7	40.6	40.2	40.1	39.7	39.4	39.0	38.9	38.8	39.5	10.0	49.5
Night	3	39.2	40.5	38.4	40.3	40.2	39.9	39.8	39.4	39.2	38.8	38.7	38.5	39.2	10.0	49.2
	4	41.3	50.7	39.7	50.5	50.3	49.7	48.9	45.6	41.6	40.2	40.1	39.9	41.3	10.0	51.3
	5	45.1	51.8	40.6	51.0	50.4	48.9	47.9	45.7	44.1	42.1	41.7	41.0	45.1	10.0	55.1
	6	47.8	63.6	50.4	62.9	62.4	61.0	60.0	57.7	55.4	51.9	51.4	50.8	47.8	10.0	57.8
	7	47.7	66.0	45.0	65.5	65.1	63.3	61.8	56.3	51.5	46.6	46.0	45.3	47.7	0.0	47.7
	8	47.4	74.0	44.4	73.5	73.0	71.9	71.4	66.7	60.0	45.3	44.9	44.6	47.4	0.0	47.4
	9	43.4	56.0	42.2	55.7	55.4	54.7	54.1	51.9	48.5	43.3	42.9	42.3	43.4	0.0	43.4
	10	46.4	57.0	42.3	56.5	56.1	54.9	54.3	51.7	48.5	43.1	42.8	42.5	46.4	0.0	46.4
	11	45.1	53.4	40.7	53.0	52.3	50.1	48.6	45.1	43.0	41.3	41.1	40.8	45.1	0.0	45.1
	12	48.5	54.2	43.8	53.7	53.2	52.2	51.5	49.4	47.5	45.2	44.8	44.2	48.5	0.0	48.5
	13	46.5	60.1	40.8	59.6	59.1	58.1	57.2	53.0	47.0	41.7	41.4	41.0	46.5	0.0	46.5
Day	14	49.5	57.6	45.9	57.3	56.7	54.9	53.9	50.0	48.7	46.9	46.5	46.1	49.5	0.0	49.5
	15	45.4	57.2	41.3	56.8	56.2	54.8	53.7	47.3	43.5	41.9	41.7	41.5	45.4	0.0	45.4
	16	45.9	52.5	41.9	52.1	51.6	49.9	48.6	46.3	44.9	42.6	42.3	42.0	45.9	0.0	45.9
	17	47.5	52.2	44.5	51.8	51.4	50.3	49.5	48.1	47.1	45.3	45.0	44.7	47.5	0.0	47.5
	18	44.4	56.8	40.8	56.3	55.8	54.8	53.8	48.0	42.9	41.4	41.2	41.0	44.4	0.0	44.4
	19	48.8	60.5	39.9	60.2	59.8	58.7	57.5	48.9	42.5	40.5	40.3	40.0	48.8	5.0	53.8
	20	50.9	58.2	48.5	57.0	56.0	54.0	53.0	51.6	49.7	49.0	48.8	48.6	50.9	5.0	55.9
	21	44.9	48.1	44.7	47.0	46.1	45.1	44.9	44.8	44.8	44.7	44.7	44.7	44.9	5.0	49.9
Night	22	45.2	45.4	45.2	45.3	45.3	45.3	45.3	45.3	45.2	45.2	45.2	45.2	45.2	10.0	55.2
	23	46.2	46.3	46.1	46.3	46.3	46.3	46.3	46.2	46.2	46.2	46.2	46.2	46.2	10.0	56.2
Timeframe	Hour	L _{eq}	L max	L min	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%		L _{eq} (dBA)	
Day	Min	43.4	48.1	39.9	47.0	46.1	45.1	44.9	44.8	42.5	40.5	40.3	40.0	24-Hour	Daytime	Nighttime
	Max	50.9	74.0	48.5	73.5	73.0	71.9	71.4	66.7	60.0	49.0	48.8	48.6		(7am-10pm)	(10pm-7am)
Energy	Average	47.3		rage:	57.1	56.5	55.2	54.3	50.6	47.3	43.9	43.6	43.3	46.6	47.0	40.6
Night	Min	39.2	40.5	38.4	40.3	40.2	39.9	39.8	39.4	39.2	38.8	38.7	38.5	46.3	47.3	43.9
	Max	47.8	63.6	50.4	62.9	62.4	61.0	60.0	57.7	55.4	51.9	51.4	50.8			
Energy Average		43.9	Avei	rage:	47.1	46.8	46.2	45.7	44.5	43.4	42.4	42.3	42.0			



JN: 14064

Analyst: A. Khan

APPENDIX 7.1:

OFF-SITE TRAFFIC NOISE CONTOURS



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Add degreen. So Annigon Av.	Project Name: West Campus Upper Plate Job Number: 14064								
SITE SPECIFIC INPUT DATA NOISE MOI		S							
Highway Data Site Conditions (Hard = 10,	Soft = 15)								
Average Daily Traffic (Adt): 51,552 vehicles Auto	s: 15								
Peak Hour Percentage: 9.80% Medium Trucks (2 Axle.	s): 15								
Peak Hour Volume: 5,052 vehicles Heavy Trucks (3+ Axle.	s): 15								
Vehicle Speed: 50 mph									
Near/Far Lane Distance: 42 feet VehicleType Day	Evening	Night	Daily						
Site Data Autos: 71.9	9% 12.2%	15.9%	94.08%						
Barrier Height: 0.0 feet Medium Trucks: 75.3	3% 7.0%	17.7%	2.20%						
Barrier Type (0-Wall, 1-Berm): 0.0 Heavy Trucks: 60.4	12.0%	27.6%	3.73%						
Centerline Dist. to Barrier: 60.0 feet Noise Source Elevations (in	foot)								
Centerline Dict to Observer: 60.0 foot	Autos: 0.000								
Parrier Distance to Observer 0.0 feet	Medium Trucks: 2.297								
Observer Height (Above Pad): 5.0 foot	Heavy Trucks: 8.004 Grade Adjustment								
Pad Elevation: 0.0 feet	,								
	Lane Equivalent Distance (in feet)								
Road Grade: 0.0% Autos: 56.427									
Left View: -90.0 degrees Medium Trucks: 56.270									
Right View: 90.0 degrees Heavy Trucks: 56.285									
FHWA Noise Model Calculations									
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel	Barrier At		rm Atten						
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Autos: 70.20 4.47 -0.89 -1.20 -4.6	9 0.	.000	0.000						
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Autos: 70.20 4.47 -0.89 -1.20 -4.6 Medium Trucks: 81.00 -11.84 -0.87 -1.20 -4.6	9 0.	.000	0.000						
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Autos: 70.20 4.47 -0.89 -1.20 -4.6	9 0.	.000	0.000						
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Autos: 70.20 4.47 -0.89 -1.20 -4.6 Medium Trucks: 81.00 -11.84 -0.87 -1.20 -4.6 Heavy Trucks: 85.38 -9.55 -0.87 -1.20 -5.3 Unmitigated Noise Levels (without Topo and barrier attenuation)	9 0. 8 0. 4 0.	.000 .000 .000	0.000 0.000 0.000						
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Autos: 70.20 4.47 -0.89 -1.20 -4.6 Medium Trucks: 81.00 -11.84 -0.87 -1.20 -4.8 Heavy Trucks: 85.38 -9.55 -0.87 -1.20 -5.3 Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night	9 0. 8 0. 4 0.	.000 .000 .000	0.000 0.000 0.000						
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Autos: 70.20 4.47 -0.89 -1.20 -4.6 Medium Trucks: 81.00 -11.84 -0.87 -1.20 -4.6 Heavy Trucks: 85.38 -9.55 -0.87 -1.20 -5.3 Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Autos: 72.6 70.4 68.8 65.1	9 0. 8 0. 4 0. Ldn 72.	000 000 000 000	0.000 0.000 0.000 NEL 73.:						
VehicleType	9 0. 8 0. 4 0. Ldn 72.	000 000 000 000 7	0.000 0.000 0.000 NEL 73.:						
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Autos: 70.20 4.47 -0.89 -1.20 -4.6 Medium Trucks: 81.00 -11.84 -0.87 -1.20 -4.6 Heavy Trucks: 85.38 -9.55 -0.87 -1.20 -5.3 Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Autos: 72.6 70.4 68.8 65.1	9 0. 8 0. 4 0. Ldn 72.	000 000 000 000 7 .5	0.000 0.000 0.000 <i>NEL</i> 73.:						
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Autos: 70.20 4.47 -0.89 -1.20 -4.6 Medium Trucks: 81.00 -11.84 -0.87 -1.20 -4.6 Heavy Trucks: 85.38 -9.55 -0.87 -1.20 -5.3 Unmitigated Noise Levels (without Topo and barrier attenuation) Vehicle Type Leq Peak Hour Leq Day Leq Evening Leq Night Autos: 72.6 70.4 68.8 65.1 Medium Trucks: 67.1 65.2 60.8 60.1 Heavy Trucks: 73.8 70.9 69.9 68.7 Vehicle Noise: 76.7 74.2 72.7 70.7	9 0.8 0.4 0.4 0.4 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7	000 000 000 000 7 .5	0.000 0.000 0.000 <i>NEL</i> 73.:						
Autos: 70.20 4.47 -0.89 -1.20 -4.67	9 0.8 0.4 0.4 0.4 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7	000 000 000 000 Ci	0.000 0.000 0.000						
VehicleType	9 0.8 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	000 000 000 000 7 5 5 8	0.000 0.000 0.000 NEL 73.2 67.8 75.8						

FI	IWA-RD	0-77-108 HIGH	IWAY	NOISE	PREDIC	CTION	IODEL	(9/12/2	021)		
Scenario: EA Road Name: Ales Road Segment: s/o							t Name: lumber:		Campus Up	per Plat	е
SITE SPEC	FIC IN	PUT DATA							L INPUT	S	
Highway Data					Site Cor	ditions	(Hard	= 10, Sc	oft = 15)		
Average Daily Traffic		59,217 vehicle	es					Autos:			
Peak Hour Percer		9.80%				edium Ti		,			
Peak Hour Vo		5,803 vehicle	S		He	eavy Tru	icks (3+	Axles):	15		
Vehicle S		50 mph		1	/ehicle	Mix					
Near/Far Lane Dist	ance:	42 feet			Veh	icleType	е	Day	Evening	Night	Daily
Site Data							Autos:	71.9%	12.2%	15.9%	94.08%
Barrier He	eiaht:	0.0 feet			М	edium 7	rucks:	75.3%	7.0%	17.7%	2.20%
Barrier Type (0-Wall, 1-E	•	0.0				Heavy 7	rucks:	60.4%	12.0%	27.6%	3.73%
Centerline Dist. to B		60.0 feet		1	Voise S	ource E	levatio	ns (in fe	eet)		
Centerline Dist. to Obs		60.0 feet				Auto	s: (0.000			
Barrier Distance to Obs		0.0 feet			Mediu	m Truck		2.297			
Observer Height (Above	Pad Elevation: 0.0 feet				Hear	vy Truck	(s: 8	3.004	Grade Ad	iustment	0.0
				-							
		0.0 feet		1	Lane Eq				reet)		
Road G		0.0%				Auto		3.427			
	View:	-90.0 degre				m Truck	-	3.270			
Right	view:	90.0 degre	es		пеа	vy Truck	(S: 5t	6.285			
FHWA Noise Model Calc											
VehicleType REI		Traffic Flow		stance		Road	Fres		Barrier Att		m Atten
Autos:	70.20	5.08		-0.8	-	-1.20		-4.69		000	0.00
Medium Trucks:	81.00	-11.24 -8.95		-0.8		-1.20 -1.20		-4.88 -5.34		000	0.00
Heavy Trucks:	85.38					-1.20		-5.34	0.0	000	0.00
Unmitigated Noise Level VehicleType Leg Pe	s (witho eak Hou			er atten Leg Ev		100	Night	1	Ldn		NEL
Autos:	зак пои 73		71.1	Ley E	69.4		rvigrit 65	7	73.3		73.
Medium Trucks:	67		65.8		61.4		60		68.1		68
Heavy Trucks:	74		71.5		70.5		69		76.		76.4
Vehicle Noise:	77.		74.8		73.3		71		78.4		78.
Centerline Distance to N	oise Co	ntour (in feet)								
				70 0	iBA	65	dBA	6	60 dBA	55	dBA
			Ldn:		040		46		1.004		2.163
			Luii.		216		46	O	1,004		2,100

Road Nan	rio: E+P ne: Alessandro nt: s/o Arlingtor						Name: umber:		Campus Up	per Plat	е
SITE Highway Data	SPECIFIC IN	PUT DATA		Cit	to Con	ditions			L INPUT	3	
	- cc (4 m)			310	e Con	uitions	(naru -				
Average Daily	. ,	53,547 vehicle	S			diam To		Autos:	15 15		
	Percentage:	9.80%				dium Tr		,			
		5,248 vehicles	•		не	avy Tru	CKS (3+	Axies):	15		
	hicle Speed:	50 mph		Ve	hicle l	Vix					
Near/Far La	ne Distance:	42 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						-	Autos:	71.9%	12.2%	15.9%	94.30%
Ra	rrier Height:	0.0 feet			М	edium T	rucks:	75.3%	7.0%	17.7%	2.11%
Barrier Type (0-W	-	0.0			- 1	Heavy Ti	rucks:	60.4%	12.0%	27.6%	3.59%
Centerline Di	. ,	60.0 feet									
Centerline Dist.		60.0 feet		No	ise So	ource El			et)		
Barrier Distance		0.0 feet				Auto.		.000			
Observer Height	5.0 feet				m Truck		.297				
	ad Elevation:	0.0 feet			Heav	y Truck	s: 8	.004	Grade Adj	ustment.	0.0
Road Elevation: 0.0 feet Lane Equivalent Distance (in feet)											
	Road Grade:	0.0%				Auto		427			
	Left View:	-90.0 degree	e		Mediu	m Truck	s: 56	270			
	Right View:	90.0 degree				y Truck		.285			
						,					
FHWA Noise Mod											
VehicleType	REMEL	Traffic Flow	Distar		Finite	Road	Fres		Barrier Att		m Atten
Autos:	70.20	4.65		-0.89		-1.20		-4.69		100	0.000
Medium Trucks:	81.00	-11.84		-0.87		-1.20		-4.88		100	0.000
Heavy Trucks:	85.38	-9.55		-0.87		-1.20		-5.34	0.0	100	0.000
Unmitigated Nois								_			
VehicleType	Leq Peak Hou			eq Eve		Leq	Night		Ldn		VEL
Autos:	72.	-	70.6		69.0		65.	-	72.9		73.4
Medium Trucks:	67.		35.2		60.8		60.		67.5		67.8
Heavy Trucks:	73.	-	70.9		69.9		68.		75.5		75.8
	76.	8	74.3		72.7		70.	.7	77.8	5	78.2
Vehicle Noise:											
	ce to Noise Co	ntour (in feet)		70 dD	14	65	AD A		O ADA	FE	AD A
	ce to Noise Co	, ,		70 dB		65	dBA		0 dBA	55	dBA
Vehicle Noise:	ce to Noise Co	,	Ldn:	70 dB	199 210	65	dBA 428 452	В	0 dBA 923 974	55	dBA 1,989 2.099

Wednesday, September 28, 2022

FHWA	RD-77-10	8 HIGHW	AY NOIS	E PREDIC	TION M	ODEL (9/1	2/2021)	
Scenario: EAP Road Name: Alessan Road Segment: s/o Arlin					.,	Name: We lumber: 140	st Campus Upp 64	er Plate
SITE SPECIFIC	INPUT	DATA			N	IOISE MO	DEL INPUTS	
Highway Data				Site Con	ditions	(Hard = 10,	Soft = 15)	
Average Daily Traffic (Adt Peak Hour Percentage Peak Hour Volume Vehicle Speed	9.80° 5,999	vehicles mph			avy Tru	Aut ucks (2 Axle cks (3+ Axle	s): 15	
Near/Far Lane Distance	: 42	feet		Veh	icleType	Da	/ Evening	Night Daily
Site Data Barrier Heigh Barrier Type (0-Wall, 1-Berm) feet			edium Ti Heavy Ti	rucks: 75.		15.9% 94.27% 17.7% 2.13% 27.6% 3.60%
Centerline Dist. to Barrie	: 60.0) feet		Noise S	ource El	evations (ii	n feet)	
Centerline Dist. to Observe Barrier Distance to Observe Observer Height (Above Pad Pad Elevatio Road Elevatio Road Gradi	: 0.0 : 5.0 : 0.0) feet) feet) feet) feet) feet) feet		Hear	Auto m Truck yy Truck uivalent Auto	s: 2.297 s: 8.004	Grade Adju	stment: 0.0
Left Viev Right Viev	: 90.0	degrees degrees			m Truck vy Truck	00.270		
FHWA Noise Model Calculat		F: 1	D: /	1 =: ::			10	
VehicleType REMEL Autos: 70 Medium Trucks: 81 Heavy Trucks: 85	20 00	5.23 -11.24 -8.95			-1.20 -1.20 -1.20	-4.i -4.i	38 0.00	0.000 0 0.000
,					-1.20	-5.	34 0.00	0.000
Unmitigated Noise Levels (w			_					
VehicleType Leq Peak		Leq Day		Evening	,	Night	Ldn	CNEL
Autos: Medium Trucks:	73.3 67.7	71 65	-	69.5 61.4		65.9 60.7	73.5 68.1	73.9 68.4
Heavy Trucks:	74.4	71		70.5		69.3	76.1	76.4
Vehicle Noise:	77.4	74	.9	73.3		71.3	78.4	78.8
Centerline Distance to Noise	Contour	(in feet)						
) dBA	65	dBA	60 dBA	55 dBA
		La		218		469	1,011	2,179
		CNE	L:	230		495	1,067	2,299

, September 28, 2022 Wednesday, September 28, 2022

	FHWA-R	D-77-108 HIGH	WAY	NOISE	PREDIC	CTION M	ODEL	(9/12/2	021)		
Road Na	ario: OYC me: Alessandro lent: s/o Arlingto							West (Campus Up	per Plat	е
	SPECIFIC II	NPUT DATA			a:: a				L INPUT	s	
Highway Data					Site Cor	ditions	(Hard				
Average Dail	y Traffic (Adt):	62,119 vehicle	es					Autos:	15		
Peak Hou	ır Percentage:	9.80%			Me	edium Tri	ucks (2	Axles):	15		
Peak	Hour Volume:	6,088 vehicles	S		He	eavy Truc	cks (3+	Axles):	15		
V	/ehicle Speed:	50 mph		F	Vehicle	Mix					
Near/Far L	.ane Distance:	42 feet				icleType		Dav	Evening	Night	Dailv
Site Data							Autos:	71.9%		15.9%	. ,
	arrier Height:	0.0 feet			М	edium Ti		75.3%		17.7%	
Barrier Type (0-		0.0 1661				Heavy Ti	rucks:	60.4%	12.0%	27.6%	
** '	vvaii, 1-Berm): Dist. to Barrier:	0.0 60.0 feet		L							2 370
	t to Observer:	60.0 feet			Noise S	ource El	evatio	ns (in fe	eet)		
Barrier Distanc		0.0 feet				Auto	s: 0	0.000			
				Medium Trucks: 2.297							
Observer Heigh	. ,	5.0 feet			Heavy Trucks: 8.004 Grade Adjustment: 0.						0.0
	Pad Elevation:	0.0 feet 0.0 feet		H	Lane Equivalent Distance (in feet)						
R	Road Grade:	0.0 reet 0.0%		H	Lane Ly	Auto		6.427	ieeij		
					44-45	m Truck		3.270			
	Left View:	-90.0 degree						5.285			
	Right View:	90.0 degree	es		пеа	vy Truck	s: 50	0.285			
FHWA Noise Mo	del Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	inel	Barrier Att	en Ber	m Atten
Autos	s: 70.20	5.28		-0.8	9	-1.20		-4.69	0.0	000	0.000
Medium Trucks	s: 81.00	-11.03		-0.8	7	-1.20		-4.88	0.0	000	0.000
Heavy Trucks	s: 85.38	-8.74		-0.8	7	-1.20		-5.34	0.0	000	0.000
Unmitigated Nois	se Levels (with	out Topo and	barri	er atter	nuation)						
VehicleType	Leq Peak Ho		_	Leq E	vening	-	Night		Ldn		NEL
Autos			71.3		69.6		66		73.	-	74.0
Medium Trucks			66.0		61.6		60		68.3	-	68.6
Heavy Trucks	s:74	1.6	71.7		70.7		69	.5	76.3	3	76.6
Vehicle Noise	9: 77	7.5	75.1		73.5		71	.5	78.0	3	78.9
Centerline Distar	nce to Noise C	ontour (in feet))					1			
			L	70	dBA	65	dBA		60 dBA		dBA
			Ldn:		223		48		1,036		2,233
		CI	VEL:		236		50	7	1,093		2,356

Project Name: West Campus Upper Plat Job Number: 14064	ate
Auton Site Conditions (Hard = 10, Soft = 15)	
Average Daily Traffic (Adt): 72,525 vehicles Peak Hour Percentage: 9,80% Medium Trucks: (2 Axles): 15 Medium Trucks: (2 Axles): 15 Wehicle Speed: 50 mph Near/Far Lane Distance: 42 feet Vehicle Mix Vehicle Type Day Evening Night Nigh	
Peak Hour Percentage: 9.80% Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15	
Near/Far Lane Distance: 42 feet Venicle M/N	
Venicie lype Day	
Autos: 71.9% 12.2% 15.9%	Daily
Barrier Type (C-Wall, 1-Berm): 0.0 teet	
Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 60.0 feet Centerline Dist. to Observer: 60.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: 90.0 degrees Right View: 90.0 degrees FFHWA Noise Model Calculations	6 2.20%
Centerline Dist. to Observer: 60.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees FHWA Noise Model Calculations	% 3.73%
Centerline Dist. to Observer: 6.0.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Glevation: 0.0 feet Road Grade: 0.0% Left View: 90.0 degrees Right View: 90.0 degrees Heavy Trucks: 56.270 Heavy Trucks: 56.285 FHWA Noise Model Calculations	
Barrier Distance to Observer: Observer Height (Above Pad): 5.0 feet Pad Elevation: Road Elevation: 0.0 feet Road Grade: 0.0% Left View: 90.0 degrees Right View: 90.0 degrees Heavy Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment Lane Equivalent Distance (in feet) Autos: 66.270 Heavy Trucks: 56.285	
Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Grade: 0.0% Lane Equivalent Distance (in feet) Road Grade: 0.0% Autos: 56.427 Left View: 90.0 degrees Right View: 90.0 degrees PHWA Noise Model Calculations	
Pad Elevation: 0.0 feet	nt: 0.0
Road Grade: 0.0% Autos: 56.427	n. 0.0
Left View: -90.0 degrees Medium Trucks: 56.270 Right View: 90.0 degrees Heavy Trucks: 56.285 FHWA Noise Model Calculations	
Right View: 90.0 degrees Heavy Trucks: 56.285 FHWA Noise Model Calculations	
FHWA Noise Model Calculations	
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Be.	
	erm Atten
Autos: 70.20 5.96 -0.89 -1.20 -4.69 0.000	0.00
Medium Trucks: 81.00 -10.36 -0.87 -1.20 -4.88 0.000	0.000
Heavy Trucks: 85.38 -8.07 -0.87 -1.20 -5.34 0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)	
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn C	CNEL
Autos: 74.1 71.9 70.3 66.6 74.2	74.7
Medium Trucks: 68.6 66.6 62.3 61.6 69.0	
Heavy Trucks: 75.2 72.3 71.3 70.2 76.9	69.2
Vehicle Noise: 78.2 75.7 74.1 72.2 79.2	69.2 77.3
Centerline Distance to Noise Contour (in feet)	
	77.3 79.6
Ldn: 248 533 1,149	77.3 79.6 5 dBA
CNEL: 261 563 1,212	77.3 79.6

Scenario	: OYCP					Proiect	Name:	West	Campus U	oper Plat	e
Road Name	: Alessandro	Blvd.						14064			-
Road Segmen	t: s/o Arlingto	n Av.									
	PECIFIC IN	IPUT DATA			04- 0				L INPUT	S	
Highway Data					Site Cor	ditions (Hara -				
Average Daily T	. ,	64,114 vehicl	les					Autos:			
Peak Hour F	-	9.80%				edium Tru		,			
	our Volume:	6,283 vehicle	es		He	eavy Truc	ks (3+	Axles):	15		
	icle Speed:	50 mph			Vehicle	Mix					
Near/Far Lan	e Distance:	42 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						Α	utos:	71.9%	12.2%	15.9%	94.269
Barı	ier Height:	0.0 feet			М	ledium Tr	ucks:	75.3%	7.0%	17.7%	2.139
Barrier Type (0-Wa	-	0.0				Heavy Tr	ucks:	60.4%	12.0%	27.6%	3.619
Centerline Dis	t. to Barrier:	60.0 feet			Noise S	ource Ele	evatio	ns (in f	eet)		
Centerline Dist. to	Observer:	60.0 feet				Autos		.000	001)		
Barrier Distance to	o Observer:	0.0 feet			Mediu	m Trucks		297			
Observer Height (A	Above Pad):	5.0 feet				vy Trucks		.004	Grade Ad	iustment	0.0
Pa	d Elevation:	0.0 feet								,	
Road Elevation: 0.0 feet					Lane Eq	uivalent			feet)		
R	oad Grade:	0.0%				Autos		3.427			
	Left View:	-90.0 degre	es			m Trucks		3.270			
	Right View:	90.0 degre	es		Hea	vy Trucks	: 56	3.285			
FHWA Noise Mode	Calculation	s									
VehicleType	REMEL	Traffic Flow	D	istance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	70.20			-0.		-1.20		-4.69		000	0.00
Medium Trucks:	81.00			-0.		-1.20		-4.88		000	0.00
Heavy Trucks:	85.38	-8.74	ļ	-0.	87	-1.20		-5.34	0.0	000	0.00
Unmitigated Noise										1	
, , ,	Leq Peak Hou				Evening	Leq I	_		Ldn		NEL
Autos:		3.5	71.4		69.7		66		73.		74.
Medium Trucks:		7.9	66.0		61.6		60		68.3	-	68.
Heavy Trucks:		1.6	71.7		70.7		69		76.3		76.
Vehicle Noise:	77	7.6	75.1		73.5		71	.5	78.0	6	79.
Centerline Distance	e to Noise C	ontour (in fee	t)								10.4
) dBA	65 (_	60 dBA		dBA
			Ldn.		225		48	4	1,044		2,249
		_	NEL		237		51		1.101		2.373

Wednesday, September 28, 2022

	FHWA-RD	-77-108 HIGH\	VAY NO	ISE PREDI	CTION N	IODEL (9/12	/2021)	
Scenario Road Name Road Segmen	: Alessandro					Name: Wes	st Campus Upp 64	er Plate
	PECIFIC IN	PUT DATA					DEL INPUTS	
Highway Data				Site Co.	nditions	(Hard = 10,	Soft = 15)	
	Percentage:	74,521 vehicle: 9.80% 7,303 vehicles 50 mph	8		eavy Tru	Auto ucks (2 Axle cks (3+ Axle	s): 15	
Near/Far Lan	e Distance:	42 feet			hicleType	Day	Evening	Night Daily
Site Data						Autos: 71.	9% 12.2%	15.9% 94.24%
Barrier Type (0-Wa	rier Height: all, 1-Berm):	0.0 feet 0.0		٨	fedium T Heavy T			17.7% 2.14% 27.6% 3.63%
Centerline Dis	t. to Barrier:	60.0 feet		Noise S	ource E	evations (ir	feet)	
Centerline Dist. to Barrier Distance to Observer Height (A Pac Roa	60.0 feet 0.0 feet 5.0 feet 0.0 feet	Hea	Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0 Lane Equivalent Distance (in feet)					
	oad Grade:	0.0%			Auto			
	Left View: Right View:	-90.0 degree			ım Truck ıvy Truck	s: 56.270		
FHWA Noise Mode	l Calculations	;						
VehicleType	REMEL	Traffic Flow	Distan	ce Finite	Road	Fresnel	Barrier Atter	n Berm Atten
Autos:	70.20	6.08		-0.89	-1.20	-4.6		
Medium Trucks: Heavy Trucks:	81.00 85.38	-10.36 -8.07		-0.87 -0.87	-1.20 -1.20	-4.8 -5.3		
Unmitigated Noise	I evels (witho	ut Tono and h	arrier a	ttenuation)				
	Leg Peak Hou			g Evening		Night	Ldn	CNEL
Autos:	74.		2.1	70.4		66.8	74.3	74.8
Medium Trucks:	68.	6 6	6.6	62.3	3	61.6	69.0	69.2
Heavy Trucks:	75.	2 7	2.3	71.3	3	70.2	76.9	77.3
Vehicle Noise:	78.	3 7	5.8	74.2	2	72.2	79.3	79.6
Centerline Distance	e to Noise Co	ntour (in feet)						
				70 dBA	65	dBA	60 dBA	55 dBA
		L	.dn:	249		537	1,156	2,491
		CN	EL:	263		566	1,220	2,628

, September 28, 2022 Wednesday, September 28, 2022

	FHWA-RI	D-77-108 HIGH	lWAY	NOISE	PREDIC	TION N	IODEL (9/12/2	021)		
	io: E ne: Alessandro nt: s/o Canyon						Name: lumber:		Campus Up	oper Pla	te
	SPECIFIC IN	NPUT DATA			a:. a				L INPUT	s	
Highway Data				-	Site Con	ditions					
Average Daily	Traffic (Adt):	48,548 vehicl	es					Autos:			
Peak Hour	Percentage:	9.80%					ucks (2)	/			
Peak H	lour Volume:	4,758 vehicle	S		He	avy Tru	cks (3+)	Axles):	15		
Ve	hicle Speed:	50 mph		- 1	Vehicle i	Mix					
Near/Far La	ne Distance:	42 feet		F		icleType		Day	Evening	Night	Daily
Site Data							Autos:	71.9%	12.2%	15.9%	94.08%
Ra	rrier Height:	0.0 feet			М	edium T	rucks:	75.3%	7.0%	17.7%	2.20%
Barrier Type (0-W		0.0				Heavy T	rucks:	60.4%	12.0%	27.6%	3.73%
Centerline Di		60.0 feet		H	Noise So	urco E	lovation	c (in f	not)		
Centerline Dist.	to Observer:	60.0 feet		H.	WOISE SC	Auto		000	ei)		
Barrier Distance											
Observer Height	(Above Pad):	5.0 feet	.0 feet Heavy Trucks: 8.004 Grade Adjustment:					- 0.0			
P	ad Elevation:	0.0 feet							0.0		
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in i	feet)		
	Road Grade:	0.0%				Auto		427			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 56.	270			
	Right View:	90.0 degre	es		Heav	ry Truck	s: 56.	285			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow		stance		Road	Fresr	_	Barrier Att		rm Atten
Autos:	70.20			-0.8	-	-1.20		-4.69		000	0.000
Medium Trucks:				-0.8		-1.20		-4.88		000	0.000
Heavy Trucks:	85.38	-9.81		-0.8	17	-1.20		-5.34	0.0	000	0.000
Unmitigated Noise			barri	er atten	nuation)						
VehicleType	Leq Peak Hou			Leq E	vening		Night		Ldn	_	NEL
Autos:		2.3	70.2		68.5		64.9		72.	-	72.9
Medium Trucks:		3.8	64.9		60.6		59.8	-	67.2	_	67.5
Heavy Trucks:		3.5	70.6		69.6		68.		75.		75.5
Vehicle Noise:		3.5	74.0		72.4		70.4	1	77.	5	77.8
Centerline Distant	ce to Noise Co	ontour (in feet)								
			L	70	dBA	65	dBA		60 dBA		dBA
			Ldn:		189		408		879		1,894
		С	NEL:		200		431		928		1,999

FHWA-R	D-77-108 HIGH	WAY I	NOISE	PREDIC	CTION N	MODEL (9/1	2/2021)	
Scenario: EA Road Name: Alessandr Road Segment: s/o Canyo						t Name: We Number: 140	est Campus Upp 064	per Plate
SITE SPECIFIC II	NPUT DATA						DEL INPUTS	1
Highway Data			S	ite Cor	nditions	(Hard = 10), Soft = 15)	
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume:	55,767 vehicl 9.80% 5,465 vehicle					Au rucks (2 Axl icks (3+ Axl	,	
Vehicle Speed:	50 mph		ν	'ehicle	Mix			
Near/Far Lane Distance:	42 feet			Ver	icleType	e Da	ay Evening	Night Daily
Site Data						Autos: 71	.9% 12.2%	15.9% 94.08%
Barrier Height:	0.0 feet			M	ledium 7	rucks: 75	5.3% 7.0%	17.7% 2.20%
Barrier Type (0-Wall, 1-Berm):	0.0				Heavy 7	rucks: 60	0.4% 12.0%	27.6% 3.73%
Centerline Dist. to Barrier:	60.0 feet			laina C		levations (i	in fact)	
Centerline Dist. to Observer:	60.0 feet			ioise s	Auto			
Barrier Distance to Observer:	0.0 feet				m Truck	0.00		
Observer Height (Above Pad):	5.0 feet							ustment: 0.0
Pad Elevation:	0.0 feet			пеа	vy Truck	15. 0.004	4 Orace Auje	istinent. 0.0
Road Elevation:	0.0 feet		L	ane Eq	uivalen	t Distance	(in feet)	
Road Grade:	0.0%				Auto	os: 56.42	7	
Left View:	-90.0 degre	es		Mediu	m Truck	ks: 56.27	0	
Right View:	90.0 degre	es		Hea	vy Truck	ks: 56.28	5	
FHWA Noise Model Calculation	18							
VehicleType REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresnel	Barrier Atte	n Berm Atten
Autos: 70.20	4.82		-0.89)	-1.20	-4.	.69 0.00	0.000
Medium Trucks: 81.00	-11.50		-0.87	,	-1.20	-4.	.88 0.00	0.000
Heavy Trucks: 85.38	9.21		-0.87	,	-1.20	-5.	.34 0.00	0.000
Unmitigated Noise Levels (with	nout Topo and	barrie	r attenu	uation)				
VehicleType Leq Peak Ho	ur Leq Day	V	Leq Ev	ening	Leq	Night	Ldn	CNEL
Autos: 7	2.9	70.8		69.1		65.5	73.1	73.5
Medium Trucks: 6	7.4	65.5		61.2		60.4	67.8	68.1
Heavy Trucks: 7	4.1	71.2		70.2	!	69.1	75.8	76.1
Vehicle Noise: 7	7.1	74.6		73.0)	71.0	78.1	78.4
Centerline Distance to Noise C	ontour (in feet)						
			70 d	BA	65	dBA	60 dBA	55 dBA
		Ldn:		208		448	964	2,078
	С	NEL:		219		472	1,017	2,192

	FHWA-RI	D-77-108 HIGH	WAY	NOISE	PREDIC	TION M	ODEL	(9/12/20)21)		
	io: E+P								ampus Up	per Plat	е
	ne: Alessandro					Job N	umber:	14064			
Road Segme	nt: s/o Canyon	Crest Dr.									
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				S	Site Cor	ditions	(Hard =	= 10, So	ft = 15)		
Average Daily	Traffic (Adt):	51,541 vehicle	es.					Autos:	15		
Peak Hour	Percentage:	9.80%			Me	dium Tru	ucks (2	Axles):	15		
Peak H	lour Volume:	5,051 vehicles	6		He	avy Truc	cks (3+	Axles):	15		
Ve	hicle Speed:	50 mph		v	/ehicle	Mix					
Near/Far La	ne Distance:	42 feet		F		icleType		Day	Evening	Night	Daily
Site Data						F	Autos:	71.9%	12.2%	15.9%	94.429
Ra	rrier Height:	0.0 feet			М	edium Tr	rucks:	75.3%	7.0%	17.7%	2.079
Barrier Type (0-W	-	0.0				Heavy Tr	rucks:	60.4%	12.0%	27.6%	3.519
Centerline Di	st. to Barrier:	60.0 feet			loico S	ource Ele	ovation	ne (in fo	of)		
Centerline Dist.	to Observer:	60.0 feet		-	ioise si	Autos		.000	ei)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Trucks		.000			
Observer Height ((Above Pad):	5.0 feet				vy Trucks		.004	Grade Ad	iustmant	. 0 0
Pa	ad Elevation:	0.0 feet			rica	ry Trucks	s. u	.004	Orace Au	usunone	. 0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distar	ice (in f	eet)		
	Road Grade:	0.0%				Autos	s: 56	.427			
	Left View:	-90.0 degree	es.			m Trucks		.270			
	Right View:	90.0 degree	es.		Hea	y Trucks	s: 56	.285			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	70.20	4.49		-0.89)	-1.20		-4.69	0.0	000	0.00
Medium Trucks:	81.00	-12.10		-0.87	7	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	85.38	-9.81		-0.87	7	-1.20		-5.34	0.0	000	0.00
Unmitigated Noise	e Levels (with	out Topo and I	barrie	r attenu	uation)						
VehicleType	Leq Peak Hou		_	Leq Ev			Night		Ldn		NEL
Autos:	72		70.5		68.8		65.	_	72.7		73.
Medium Trucks:	66		64.9		60.6		59.	-	67.2	-	67.
Heavy Trucks:	73		70.6		69.6		68.		75.2		75.
Vehicle Noise:	76	.6	74.1		72.5		70.	.5	77.6	3	77.
Centerline Distant	ce to Noise Co	ontour (in feet)		70			/D.4				10.4
				70 d		65 (dBA		0 dBA		dBA
			Ldn:		192		414		891		1,92
		CN	VEL:		203		43	7	941		2,02

Wednesday, September 28, 2022

	FHWA-RD	-77-108 HIGHV	VAY NOI	SE PREDIC	CTION M	IODEL (9/1:	2/2021)	
Road Nam	io: EAP ne: Alessandro nt: s/o Canyon					Name: We lumber: 140	st Campus Up 64	pper Plate
	SPECIFIC IN	PUT DATA					DEL INPUT	S
	Traffic (Adt): Percentage: four Volume:	58,760 vehicles 9.80% 5.758 vehicles	\$	Ме	edium Tri	(Hard = 10, Aut ucks (2 Axie cks (3+ Axie	os: 15 es): 15	
Ve	hicle Speed: ne Distance:	50 mph 42 feet		Vehicle		,	·	Night Daily
Barrier Type (0-W	. ,	0.0 feet 0.0			ledium Ti Heavy Ti	rucks: 75	9% 12.2% 3% 7.0% 4% 12.0%	15.9% 94.38% 17.7% 2.08% 27.6% 3.54%
	to Observer: to Observer: (Above Pad): ad Elevation:	60.0 feet 60.0 feet 0.0 feet 5.0 feet 0.0 feet		Mediu Hea	Auto m Truck vy Truck	s: 2.297 s: 8.004	. Grade Adj	iustment: 0.0
	ad Elevation: Road Grade: Left View: Right View:	0.0 feet 0.0% -90.0 degrees 90.0 degrees		Mediu	Auto m Truck vy Truck	s: 56.270)	
FHWA Noise Mod	el Calculations							
VehicleType Autos: Medium Trucks: Heavy Trucks:	70.20 81.00 85.38	5.06 -11.50 -9.21	-(e	-1.20 -1.20 -1.20	-4. -4. -5.	88 0.0	en Berm Atten 000 0.000 000 0.000 000 0.000
Unmitigated Noise	e I evels (with	out Tono and h	arrier at	tenuation)				
VehicleType	Leq Peak Hou	r Leq Day	Leq	Evening		Night	Ldn	CNEL
Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	73 67 74	.4 6	1.0 5.5 1.2 4.7	69.4 61.2 70.2 73.1	!	65.7 60.4 69.1 71.1	73.3 67.8 75.8	3 68.1 3 76.1
Centerline Distant	ce to Noise Co	ntour (in feet)						
		, ,		70 dBA	65	dBA 450	60 dBA	55 dBA
		CN	dn: EL:	210 222		453 478	976 1,030	,

Wednesday, September 28, 2022

FHWA-F	RD-77-108 HIGH	IWAY	NOISE	PREDIC	TION N	IODEL	(9/12/20	021)		
Scenario: OYC Road Name: Alessandi Road Segment: s/o Canyo							: West 0	Campus U	pper Plat	е
SITE SPECIFIC I	NPUT DATA							L INPUT	s	
Highway Data			S	ite Con	ditions	(Hard	= 10, Sc	oft = 15)		
Average Daily Traffic (Adt):	62,261 vehicle	es					Autos:			
Peak Hour Percentage:	9.80%						Axles):			
Peak Hour Volume:	- , -	S		He	avy Tru	cks (3+	Axles):	15		
Vehicle Speed:	50 mph		V	'ehicle l	Mix					
Near/Far Lane Distance:	42 feet			Veh	icleType	9	Day	Evening	Night	Daily
Site Data						Autos:	71.9%	12.2%	15.9%	94.08%
Barrier Height:	0.0 feet			M	edium 7	rucks:	75.3%	7.0%	17.7%	2.20%
Barrier Type (0-Wall, 1-Berm):	0.0			I	leavy 7	rucks:	60.4%	12.0%	27.6%	3.73%
Centerline Dist. to Barrier:	60.0 feet		^	loise Sc	urce E	levatio	ns (in fe	eet)		
Centerline Dist. to Observer:	60.0 feet				Auto		0.000	,		
Barrier Distance to Observer:	0.0 feet			Mediu	n Truck	s: 2	297			
Observer Height (Above Pad):				Heav	y Truck	s: 8	3.004	Grade Ad	justment	0.0
Pad Elevation:			<u> </u>		•					
Road Elevation:			L	ane Eq			_ •	feet)		
Road Grade:					Auto		3.427			
Left View:					n Truck		3.270			
Right View:	90.0 degre	es		Heav	y Truck	s: 56	3.285			
FHWA Noise Model Calculatio	-									
VehicleType REMEL	Traffic Flow		tance		Road	Fres		Barrier Att	_	m Atten
Autos: 70.2			-0.89		-1.20		-4.69		000	0.000
Medium Trucks: 81.0			-0.87		-1.20		-4.88		000	0.000
Heavy Trucks: 85.3			-0.87		-1.20		-5.34	0.0	000	0.000
Unmitigated Noise Levels (wit										
VehicleType Leq Peak Ho	our Leq Day 73.4	71.3	Leq Ev	_	Leq	Night		Ldn 73.		NEL 74.0
	3.4	66.0		69.6 61.7		66 60		68.		68.6
	74.6	71.7		70.7		69		76.	-	76.6
	7.5	75.1		73.5		71		78.		78.9
Centerline Distance to Noise C	Contour (in feet)								
Contentino Diotanos to Noico C	yomour (m root		70 d	'BA	65	dBA	6	60 dBA	55	dBA
		Ldn:		224		48	2	1,038	3	2,236
	C	NEL:		236		50	0	1.095		2.359

		0-77-108 HIGH						•			
Scenario:		D							Campus Up	per Pla	e
Road Name: Road Segment:						JOD I	iumber.	14064			
	PECIFIC IN	PUT DATA							L INPUT	5	
Highway Data				S	ite Con	ditions	(Hard		oft = 15)		
Average Daily Tr		72,851 vehicle	es					Autos:			
Peak Hour Pe	-	9.80%				dium Ti		,			
	ır Volume:	7,139 vehicle	S		He	avy Tru	cks (3+	Axles).	15		
	cle Speed:	50 mph		ν	/ehicle	Mix					
Near/Far Lane	Distance:	42 feet			Veh	icleType	,	Day	Evening	Night	Daily
Site Data							Autos:	71.9%	12.2%	15.9%	94.08%
Barrio	er Height:	0.0 feet			М	edium 7	rucks:	75.3%	7.0%	17.7%	2.20%
Barrier Type (0-Wali	-	0.0			1	Heavy 7	rucks:	60.4%	12.0%	27.6%	3.73%
Centerline Dist.		60.0 feet		٨	loise So	ource E	levatio	ns (in f	eet)		
Centerline Dist. to		60.0 feet				Auto	s: (0.000			
Barrier Distance to		0.0 feet			Mediu	m Truck		2.297			
Observer Height (Al	,	5.0 feet			Heav	/y Truck	s: 8	3.004	Grade Ad	ustmen	: 0.0
	Elevation:	0.0 feet		L		•					
	Elevation:	0.0 feet			ane Eq				reet)		
	ad Grade:	0.0%				Auto		5.427			
	Left View:	-90.0 degre				m Truck		3.270			
F	Right View:	90.0 degre	es		near	y Truck	:S: 5t	5.285			
FHWA Noise Model											
VehicleType	REMEL	Traffic Flow		tance		Road	Fres		Barrier Att		m Atten
Autos:	70.20	5.98		-0.89		-1.20		-4.69		000	0.00
Medium Trucks:	81.00	-10.34		-0.87		-1.20		-4.88		000	0.00
Heavy Trucks:	85.38	-8.05		-0.87		-1.20		-5.34	0.0	000	0.00
Unmitigated Noise L							A.E In A	_	1 -1	_	NIE!
VehicleType Le	eq Peak Hou 74		72.0	Leq Ev	rening 70.3		Night 66	6	Ldn 74.2		NEL 74.
Medium Trucks:	68		66.7		62.3		61		69.0	-	69.
Heavy Trucks:	75.		72.4		71.4		70		77.0		77.3
Vehicle Noise:	78		75.7		74.2		72		79.3		79.1
Centerline Distance	to Noise Co	ntour (in foot	1					_			
	10 110/36 00	intour (III leet		70 d	ID A	65	dBA		60 dBA	55	dBA
			Ldn:	70 0	248	00	53		1.153	00	2.483

Scenario Road Name Road Segment	: Alessandro						Name: umber:		ampus Up	per Plat	е
SITE S Highway Data	PECIFIC IN	IPUT DATA		-	te Cond				L INPUT	S	
				31	te Conc	illions	•				
Average Daily T	. ,	65,254 vehicle	es					Autos:	15		
Peak Hour P	-	9.80%					ıcks (2	,	15		
	ur Volume:	6,395 vehicle	S		неа	ivy Iruc	cks (3+ .	4xies):	15		
	icle Speed:	50 mph		Ve	ehicle N	lix					
Near/Far Lane	e Distance:	42 feet			Vehic	сеТуре		Day	Evening	Night	Daily
Site Data						A	lutos:	71.9%	12.2%	15.9%	94.359
Barr	ier Height:	0.0 feet			Me	dium Ti	rucks:	75.3%	7.0%	17.7%	2.109
Barrier Type (0-Wa	-	0.0			Н	leavy Ti	rucks:	60.4%	12.0%	27.6%	3.55%
Centerline Dist	. ,	60.0 feet		A/	oise So	uraa El	ovetion	a (in fe	n#l		
Centerline Dist. to	Observer:	60.0 feet		/40	Jise 30	Auto:			ei)		
Barrier Distance to	Observer:	0.0 feet			Mediun			000 297			
Observer Height (A	bove Pad):	5.0 feet				Truck:		004	Grade Ad	iustment	. 0.0
Pac	d Elevation:	0.0 feet			i icav	ritucks	s. o.	004	Orace Au	usunone	0.0
Road	d Elevation:	0.0 feet		Lá	ne Equ	ivalent	Distan	ce (in t	eet)		
R	oad Grade:	0.0%				Auto	s: 56	427			
	Left View:	-90.0 degree	es		Mediun	1 Truck	s: 56	270			
	Right View:	90.0 degree	es		Heav	/ Truck	s: 56	285			
FHWA Noise Model	Calculation	s									
VehicleType	REMEL	Traffic Flow	Distan		Finite I		Fresi		Barrier Att		m Atten
Autos:	70.20			-0.89		-1.20		-4.69		000	0.00
Medium Trucks:	81.00			-0.87		-1.20		-4.88		000	0.00
Heavy Trucks:	85.38	-8.73		-0.87		-1.20		-5.34	0.0	000	0.00
Unmitigated Noise	•							1			
	eq Peak Hou			eq Eve		Leq	Night		Ldn		NEL
Autos:	73		71.5		69.8		66.	_	73.8		74.
Medium Trucks:	67 74		66.0 71.7		61.7 70.7		60. 69.	-	68.3 76.3		68. 76.
Heavy Trucks: Vehicle Noise:	77		71.7 75.2		73.6		71.	-	76.3		76. 79.
					73.0		71.	5	70.0	,	19.
	to Noise Co	ontour (in feet	,	70 dE	BA .	65	dBA	6	0 dBA	55	dBA
Centerline Distance	to Noise Co	ontour (in feet	Ldn:	70 dE	3A 226	65	dBA 487		0 dBA 1.049		dBA 2.26

Wednesday, September 28, 2022

	FHWA-RI	D-77-108 HIGHV	VAY NOI	SE PREDIC	TION N	IODEL (9	/12/20)21)		
Scenan Road Nam Road Segmei	e: Alessandro					Name: V lumber: 1		ampus Up	per Plat	te
	SPECIFIC IN	IPUT DATA						L INPUTS	3	
	Traffic (Adt): Percentage:	75,845 vehicles 9.80% 7.433 vehicles	;	Ме	edium Tr	(Hard = 1 A ucks (2 A cks (3+ A	lutos: xles):	15 15 15 15		
	hicle Speed:	50 mph 42 feet		Vehicle		,	Day	Evening	Night	Daily
Site Data							71.9%		15.9%	94.31%
Barrier Type (0-W	. ,	0.0 feet 0.0			edium T Heavy T		75.3% 60.4%		17.7% 27.6%	
Centerline Dis		60.0 feet		Noise S	ource El	evations	(in fe	et)		
	to Observer: Above Pad): ad Elevation:	60.0 feet 0.0 feet 5.0 feet 0.0 feet		Hea	Auto m Truck yy Truck	s: 2.2 s: 8.0	97	Grade Adj	ustment	t: 0.0
	ad Elevation:	0.0 feet		Lane Eq		Distanc		eet)		
,	Road Grade: Left View: Right View:	0.0% -90.0 degrees 90.0 degrees			Auto m Truck yy Truck	s: 56.2	70			
FHWA Noise Mode	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Distance	e Finite	Road	Fresne	el .	Barrier Atte	en Bei	rm Atten
Autos:	70.20			0.89	-1.20		4.69	0.0		0.000
Medium Trucks: Heavy Trucks:	81.00 85.38).87).87	-1.20 -1.20		4.88 5.34	0.0		0.000
Unmitigated Noise	Levels (with	out Topo and b	arrier att	enuation)						
VehicleType	Leq Peak Hou	ur Leq Day	Leg	Evening	Leq	Night		Ldn	С	NEL
Autos:			2.1	70.5		66.8		74.4		74.9
Medium Trucks:			6.7	62.3		61.6		69.0		69.3
Heavy Trucks: Vehicle Noise:			2.4 5.8	71.4 74.2		70.2 72.2		77.0 79.3		77.3 79.7
Centerline Distance	e to Noise Co	ontour (in feet)								
		(7	0 dBA	65	dBA	6	0 dBA	55	dBA
		L CN:	dn: =ı ·	251 264		540 570		1,163 1,227		2,506 2,644
		CIVI	204		510		1,221		2,044	

inesday, September 28, 2022

	FHWA-R	D-77-108 HIGH	WAY	NOISE	PREDIC	TION M	ODEL (9/12/20	021)		
	rio: E me: Trautwein l ent: n/o Van Bu						Name: \ umber:		Campus Up	per Pla	te
	SPECIFIC II	IPUT DATA							L INPUT	S	
Highway Data					Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	19,731 vehicle	es					Autos:	15		
Peak Hou	r Percentage:	9.80%			Me	dium Tri	ucks (2 A	(xles	15		
Peak	Hour Volume:	1,934 vehicle	S		He	avy Truc	cks (3+ A	(xles	15		
V	ehicle Speed:	50 mph		1	Vehicle	Mix					
Near/Far L	ane Distance:	24 feet				icleType		Day	Evening	Night	Daily
Site Data							Autos:	71.9%	12.2%	15.9%	94.08%
Bi	arrier Heiaht:	0.0 feet			М	edium Ti	rucks:	75.3%	7.0%	17.7%	2.20%
Barrier Type (0-V		0.0			1	Heavy Ti	rucks:	60.4%	12.0%	27.6%	3.73%
Centerline D	ist. to Barrier:	44.0 feet		ł	Noise So	urce El	ovation	e (in fa	not)		
Centerline Dist	to Observer:	44.0 feet		1	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Auto:		000	,00,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		297			
Observer Height	(Above Pad):	5.0 feet				vy Truck		004	Grade Ad	iustmen	t: 0.0
F	Pad Elevation:	0.0 feet								doumon	0.0
Ro	oad Elevation:	0.0 feet			Lane Eq	uivalent	Distanc	e (in i	feet)		
	Road Grade:	0.0%				Auto		626			
	Left View:	-90.0 degree	es			m Truck		418			
	Right View:	90.0 degree	es		Heav	y Truck	s: 42.	438			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresn	el	Barrier Att	en Be	rm Atten
Autos	70.20	0.30		0.9	94	-1.20		-4.61	0.0	000	0.000
Medium Trucks				0.9		-1.20		-4.87		000	0.000
Heavy Trucks	85.38	-13.72		0.9	96	-1.20		-5.50	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	er atte	nuation)						
VehicleType	Leq Peak Ho		_	Leq E	vening	_	Night		Ldn		NEL
Autos			68.1		66.4		62.8		70.4		70.8
Medium Trucks			62.8		58.5		57.8		65.2	-	65.4
Heavy Trucks			68.5		67.5		66.4		73.1		73.4
Vehicle Noise	: 74	1.4	71.9		70.3		68.4	·	75.4	1	75.8
Centerline Distan	ce to Noise C	ontour (in feet) _								
			L	70	dBA	65	dBA	6	0 dBA		5 dBA
			Ldn:		101		218		469		1,010
		C	NEL:		107		230		495		1,066

	FHWA-KI	D-77-108 HIGH	HWAY	NOISE	PKEDIC	HONN	IODEL	(9/12/20	J21)		
	e: Trautwein F							West 0	Campus U	per Plat	e
Road Segmen											
	SPECIFIC IN	IPUT DATA			i4- O				L INPUT	S	
Highway Data				3	ite Cor	ditions	(Hara				
Average Daily	. ,	22,665 vehicl	les					Autos:	15		
	Percentage:	9.80%				edium Tr		,			
	our Volume:	2,221 vehicle	es		He	eavy Tru	cks (3+	Axles):	15		
	nicle Speed:	50 mph		V	ehicle	Mix					
Near/Far Lar	ne Distance:	24 feet			Veh	icleType	,	Day	Evening	Night	Daily
Site Data							Autos:	71.9%	12.2%	15.9%	94.08%
Bar	rier Height:	0.0 feet			М	edium T	rucks:	75.3%	7.0%	17.7%	2.20%
Barrier Type (0-Wa		0.0				Heavy T	rucks:	60.4%	12.0%	27.6%	3.739
Centerline Dis	t. to Barrier:	44.0 feet		A/	laica S	ource E	lovatio	ne (in fe	not)		
Centerline Dist. t	o Observer:	44.0 feet		14	orse si	Auto		•	eu		
Barrier Distance t	o Observer:	0.0 feet			Modiu	m Truck		0.000 2.297			
Observer Height (/	Above Pad):	5.0 feet				vy Truck		3.004	Grade Ad	iuetmant	- 0.0
Pa	d Elevation:	0.0 feet			пеа	vy IIuck	.s. c	5.004	Orauc Au	asancin	. 0.0
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalen	t Distai	nce (in i	feet)		
F	Road Grade:	0.0%				Auto	s: 42	2.626			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 42	2.418			
	Right View:	90.0 degre	es		Hea	vy Truck	s: 42	2.438			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	inel	Barrier Att	en Ber	m Atten
Autos:	70.20	0.91		0.94		-1.20		-4.61		000	0.00
Medium Trucks:	81.00	-15.41		0.97		-1.20		-4.87		000	0.00
Heavy Trucks:	85.38	-13.12		0.96		-1.20		-5.50	0.0	000	0.00
Unmitigated Noise			_								
	Leq Peak Hοι		,	Leq Eve			Night		Ldn		NEL
Autos:	70		68.7		67.0		63		71.0	-	71.
Medium Trucks:	65		63.4		59.1		58		65.8	-	66.
Heavy Trucks:	72		69.1		68.1		67		73.		74.
Vehicle Noise:	75		72.5		70.9		69	.0	76.0)	76.
Centerline Distanc	e to Noise Co	ontour (in fee	t)	70 di	D.A	65	dBA	1 4	i0 dBA		dBA
				/ U al	שמ	1 00	UDM	1 0	U UDM	1 22	UDM
			Ldn:		111		23	0	514		1,108

	FHWA-RD	D-77-108 HIGH	WAY I	NOISE I	PREDIC	CTION M	IODEL	(9/12/20	021)		
	rio: E+P ne: Trautwein F	24					Name: umber:		Campus Up	per Plat	е
	nt: n/o Van Bu					300 14	umber.	14004			
	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data				S	ite Con	ditions	(Hard =	= 10, So	ft = 15)		
Average Daily	Traffic (Adt):	20,064 vehicle	s					Autos:	15		
Peak Hour	Percentage:	9.80%			Me	dium Tru	ucks (2	Axles):	15		
Peak H	lour Volume:	1,966 vehicles	3		He	avy Truc	cks (3+	Axles):	15		
Ve	hicle Speed:	50 mph		ν	ehicle	Mix					
Near/Far La	ne Distance:	24 feet		ŕ		icleType		Day	Evening	Night	Daily
Site Data							Autos:	71.9%	12.2%	15.9%	94.189
Ra	rrier Height:	0.0 feet			М	edium Ti	rucks:	75.3%	7.0%	17.7%	2.169
Barrier Type (0-W	-	0.0				Heavy Ti	rucks:	60.4%	12.0%	27.6%	3.669
Centerline Di	st. to Barrier:	44.0 feet			loise S	ource El	evation	ns (in fe	et)		
Centerline Dist.	to Observer:	44.0 feet		-	.0.00 0	Auto:		.000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck:		297			
Observer Height	(Above Pad):	5.0 feet				vy Truck		.004	Grade Ad	iustment	0.0
P	ad Elevation:	0.0 feet				•					
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent			eet)		
	Road Grade:	0.0%				Auto		.626			
	Left View:	-90.0 degree	es.			m Truck		.418			
	Right View:	90.0 degree	es .		Hear	y Truck	s: 42	.438			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	tance		Road	Fres		Barrier Att		m Atten
Autos:		0.38		0.94		-1.20		-4.61		000	0.00
Medium Trucks:		-16.01		0.97		-1.20		-4.87		000	0.00
Heavy Trucks:	85.38	-13.72		0.96	i	-1.20		-5.50	0.0	000	0.00
Unmitigated Noise	•							_			
VehicleType	Leq Peak Hou			Leq Ev			Night		Ldn	_	VEL
Autos:			68.2		66.5		62.	-	70.5	-	70.
Medium Trucks:			62.8 68.5		58.5		57. 66.	-	65.2	-	65.
Heavy Trucks: Vehicle Noise:			71.9		67.5 70.3		68.		73. ⁻ 75. ⁴		73. 75.
Centerline Distant	ce to Noise Co	ntour (in feet)									
	0 /10/03 00			70 d	BA	65	dBA	6	i0 dBA	55	dBA
			Ldn:		101		218	В	471		1,01
		CI	VEL:	107 231 497			1,07				

Wednesday, September 28, 2022

FHWA-R	D-77-108 HIGHW	AY NOISE	E PREDIC	TION N	IODEL (9/12	/2021)	
Scenario: EAP Road Name: Trautwein Road Segment: n/o Van B				.,	Name: Wes lumber: 1406	t Campus Upp 64	er Plate
SITE SPECIFIC I	NPUT DATA			ı	IOISE MOD	EL INPUTS	
Highway Data			Site Con	ditions	(Hard = 10,	Soft = 15)	
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume: Vehicle Speed: Near/Far Lane Distance:	22,998 vehicles 9.80% 2,254 vehicles 50 mph 24 feet		Vehicle	eavy Tru Mix	Auto ucks (2 Axle: cks (3+ Axle:	s): 15 s): 15	
Site Data			ven	icleType	Day		Night Daily 15.9% 94.16%
Barrier Height: Barrier Type (0-Wall, 1-Berm): Centerline Dist. to Barrier: Centerline Dist. to Observer: Barrier Distance to Observer:	0.0 feet 0.0 44.0 feet 44.0 feet 0.0 feet		Noise S	edium T Heavy T ource El Auto	rucks: 75.3 rucks: 60.4 levations (in s: 0.000	7.0% 1% 12.0%	17.7% 2.17% 27.6% 3.67%
Observer Height (Above Pad): Pad Elevation:	5.0 feet 0.0 feet		Hear	m Truck /y Truck	s: 8.004	Grade Adjus	stment: 0.0
Road Elevation: Road Grade: Left View: Right View:	0.0 feet 0.0% -90.0 degrees 90.0 degrees		Mediu	Auto m Truck yy Truck	s: 42.418	песу	
FHWA Noise Model Calculation	18						
VehicleType REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atter	Berm Atten
Autos: 70.20 Medium Trucks: 81.00 Heavy Trucks: 85.30	-15.41	0.0 2.0 2.0	97	-1.20 -1.20 -1.20	-4.6 -4.8 -5.5	7 0.00	0.000
Unmitigated Noise Levels (with	out Topo and ba	arrier atte	nuation)				
VehicleType Leq Peak Ho			vening	Leq	Night	Ldn	CNEL
	0.9 68	-	67.1		63.5	71.1	71.5
Medium Trucks: 6	5.4 63	3.4	59.1		58.4	65.8	66.0
Heavy Trucks: 7	2.0 69	9.1	68.1		67.0	73.7	74.0
Vehicle Noise: 7	5.0 72	2.5	70.9		69.0	76.0	76.4
Centerline Distance to Noise C	ontour (in feet)						
			dBA	65	dBA	60 dBA	55 dBA
	Lo		111		240	516	1,112
	CNE	L:	117		253	544	1,173

ednesday, September 28, 2022

	FHWA-R	D-77-108 HIGH	WAY	NOISE	PREDIC	CTION N	IODEL	(9/12/2	021)		
Road Na	ario: OYC nme: Trautwein nent: n/o Van Bu							West (Campus Up	oper Plat	e
	SPECIFIC II	NPUT DATA			0:: 0				L INPUT	s	
Highway Data					Site Cor	aitions	(Hara				
Average Dail	ly Traffic (Adt):	33,567 vehicle	es					Autos:	15		
Peak Hou	ur Percentage:	9.80%			Me	edium Tr	ucks (2	Axles):	15		
Peak	Hour Volume:	3,290 vehicles	S		He	eavy Tru	cks (3+	Axles):	15		
\	/ehicle Speed:	50 mph		ŀ	Vehicle	Mix					
Near/Far L	ane Distance:	24 feet		ŀ		icleType		Dav	Evening	Niaht	Dailv
Site Data							Autos:	71.9%		15.9%	. ,
	arrier Height:	0.0 feet			М	ledium T		75.3%		17.7%	
Barrier Type (0-		0.0 feet				Heavy T	rucks:	60.4%	12.0%	27.6%	
** '	Dist. to Barrier:	44.0 feet		L							
	t to Observer:	44.0 feet		L	Noise S			ns (in f	eet)		
Barrier Distanc		0.0 feet				Auto	s: C	0.000			
Observer Heigh		5.0 feet			Mediu	m Truck	s: 2	2.297			
	Pad Elevation:	0.0 feet			Hear	vy Truck	s: 8	3.004	Grade Ad	justment	0.0
	Pad Elevation:	0.0 feet		ŀ	Lane Eq	uivalon	Dieta	aco (in	foot)		
^	Road Grade:	0.0 leet		F	Lane Lq	Auto		2.626	iccij		
	Left View:	-90.0 degree			Modiu	m Truck		2.418			
		90.0 degree				vy Truck		2.438			
	Right View:		28		i ica	vy IIuck	3. 42	430			
FHWA Noise Mo	del Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Di	stance	_	Road	Fres		Barrier Att	_	rm Atten
Autos				0.9		-1.20		-4.61		000	0.000
Medium Trucks				0.9		-1.20		-4.87		000	0.000
Heavy Trucks	s: 85.38	-11.41		0.9	96	-1.20		-5.50	0.0	000	0.000
Unmitigated Noi											
VehicleType	Leq Peak Ho		_	Leq E	vening		Night		Ldn		NEL
Autos			70.4		68.7		65		72.		73.1
Medium Trucks			65.1		60.8		60		67.	-	67.7
Heavy Trucks			70.8		69.8		68		75.4		75.8
Vehicle Noise	e: 76	6.7	74.2		72.6	i	70	.7	77.	7	78.1
Centerline Dista	nce to Noise C	ontour (in feet)								
			l	70	dBA	65	dBA		60 dBA		dBA
			Ldn:		144		31		668		1,440
		C	NEL:		152		32	7	705		1,519

Scenario): HY e: Trautwein R	a.					Name: lumber		Campus Up	per Plat	e
Road Name Road Segmen						JOD IN	iumber:	14064			
Road Segmen	. II/O Vali bul	en bivu.									
	PECIFIC IN	PUT DATA			0				L INPUT	S	
Highway Data					Site Con	aitions	(Hara				
Average Daily T	. ,	39,015 vehicl	es					Autos			
Peak Hour F		9.80%				dium Tr		,			
		3,823 vehicle	S		He	avy Tru	cks (3+	Axles)	15		
	icle Speed:	50 mph		1	Vehicle I	Mix					
Near/Far Lan	e Distance:	24 feet			Veh	icleType	•	Day	Evening	Night	Daily
Site Data							Autos:	71.99	6 12.2%	15.9%	94.089
Barı	ier Heiaht:	0.0 feet			М	edium T	rucks:	75.39	6 7.0%	17.7%	2.20%
Barrier Type (0-Wa	all, 1-Berm):	0.0			-	Heavy T	rucks:	60.49	12.0%	27.6%	3.73%
Centerline Dis		44.0 feet		1	Noise So	ource E	levatio	ns (in f	eet)		
Centerline Dist. to	Observer:	44.0 feet				Auto		0.000	,		
Barrier Distance to	Observer:	0.0 feet			Mediu	m Truck		297			
Observer Height (A	,	5.0 feet				vy Truck		3.004	Grade Ad	iustment	: 0.0
	d Elevation:	0.0 feet				•					
	d Elevation:	0.0 feet		1	Lane Eq				feet)		
R	oad Grade:	0.0%				Auto		2.626			
	Left View:	-90.0 degre				m Truck		2.418			
	Right View:	90.0 degre	es		Heav	y Truck	s: 42	2.438			
FHWA Noise Mode	Calculations	;									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	inel	Barrier Att	en Bei	m Atten
Autos:	70.20	3.26		0.9	4	-1.20		-4.61	0.0	000	0.00
Medium Trucks:	81.00	-13.05		0.9	7	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	85.38	-10.76		0.9	6	-1.20		-5.50	0.0	000	0.00
Unmitigated Noise	Levels (witho	ut Topo and	barri	er atten	uation)						
	Leq Peak Hou			Leq E			Night		Ldn		NEL
Autos:	73.	_	71.1		69.4		65		73.3	-	73.
Medium Trucks:	67.		65.8		61.5		60		68.1		68.
Heavy Trucks:	74.		71.5		70.5		69		76.1		76.
Vehicle Noise:	77.	3	74.9		73.3		71	.3	78.4	1	78.
Centerline Distance	e to Noise Co	ntour (in feet)								
			L	70 c		65	dBA		60 dBA		dBA
			Ldn:		159		34	3	739		1,592
			NEL:		168		36		779		1.679

	FHWA-RI	D-77-108 HIGH	IWAY I	NOISE	PREDIC	тюм мо	DEL (S	9/12/20	121)		
Road Nam	io: OYCP ne: Trautwein I nt: n/o Van Bu					Project N Job Nur			Campus Up	per Plat	е
SITE	SPECIFIC IN	IPUT DATA				NO	ISE N	IODE	L INPUT	S	
Highway Data				S	ite Con	ditions (H	lard =	10, So	ft = 15)		
Average Daily	Traffic (Adt):	33,900 vehicle	es				,	Autos:	15		
Peak Hour	Percentage:	9.80%			Me	dium Truc	ks (2 A	(xles	15		
Peak H	lour Volume:	3,322 vehicle	s		He	avy Truck	s (3+ A	(xles	15		
Ve	hicle Speed:	50 mph		ν	ehicle l	Mix					
Near/Far La	ne Distance:	24 feet		Ė	Veh	icleType		Day	Evening	Night	Daily
Site Data						Au	tos:	71.9%	12.2%	15.9%	94.149
Bai	rrier Height:	0.0 feet			Me	edium Tru	cks:	75.3%	7.0%	17.7%	2.189
Barrier Type (0-W		0.0			F	leavy Tru	cks:	60.4%	12.0%	27.6%	3.699
Centerline Dis		44.0 feet		٨	loise Sc	urce Elev	rations	in fe	et)		
Centerline Dist.		44.0 feet				Autos:	0.0	000			
Barrier Distance		0.0 feet			Mediui	m Trucks:	2.2	297			
Observer Height (,	5.0 feet			Heav	y Trucks:	8.0	004	Grade Ad	ustment	0.0
	ad Elevation:	0.0 feet						- /:- 4	4		
	ad Elevation:	0.0 feet		L	ane Eq	uivalent E Autos:	ustano 42.1		eet)		
,	Road Grade:	0.0%			Modiu	n Trucks:	42.				
	Right View:	-90.0 degre 90.0 degre				y Trucks:	42.4				
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresn	el .	Barrier Att	en Ber	m Atten
Autos:	70.20	2.66		0.94		-1.20		-4.61	0.0	000	0.00
Medium Trucks:	81.00	-13.71		0.97	,	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	85.38	-11.41		0.96	i	-1.20		-5.50	0.0	000	0.00
Unmitigated Noise											
VehicleType	Leq Peak Hou		_	Leq Ev	_	Leq Ni	-		Ldn		NEL
Autos:		2.6	70.5		68.8		65.2		72.7		73. 67.
Medium Trucks:		7.1	65.1		60.8		60.1		67.5		-
Heavy Trucks: Vehicle Noise:		3.7	70.8		69.8 72.6		68.7 70.7		75.4		75. 78.
					12.0		70.7		77.		70
Centerline Distance	e to Noise C	ontour (in feet	,	70 d	BA	65 dE	3A	6	0 dBA	55	dBA
			Ldn:		144		311		670		1.44

Wednesday, September 28, 2022

	FHWA-RD-	77-108 HIGHV	VAY NO	DISE	PREDIC	TION N	IODEL (9	/12/2	021)				
Scenario: Road Name: Road Segment:	Trautwein Ro						Name: \ lumber: 1		Campus Upp	er Plate			
	PECIFIC INF	UT DATA				N	IOISE N	IODE	L INPUTS				
Highway Data				S	ite Con	ditions	(Hard =	10, S	oft = 15)				
Vehi	ercentage: ur Volume: 3 cle Speed:	9,348 vehicles 9.80% 3,856 vehicles 50 mph	3	V		avy Tru	ucks (2 A	/	15				
Near/Far Lane	Distance:	24 feet			Veh	icleType		Day	Evening I	Night Daily			
Barrier Type (0-Wal	. ,	0.0 feet 0.0				edium T Heavy T	rucks:	71.9% 75.3% 60.4%	6 7.0%	15.9% 94.13 17.7% 2.18 27.6% 3.69			
Centerline Dist.		44.0 feet		٨	Noise Source Elevations (in feet)								
Barrier Distance to Observer Height (A Pad	Centerline Dist. to Observer: 44.0 feet				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: Lane Equivalent Distance (in feet)								
	oad Grade: Left View: Right View:	0.0% -90.0 degrees 90.0 degrees				Auto m Truck ry Truck	s: 42.4	118					
FHWA Noise Model	Calculations												
VehicleType	REMEL	Traffic Flow	Distar	псе	Finite	Road	Fresn	e/	Barrier Atter	Berm Atter			
Autos: Medium Trucks: Heavy Trucks:	70.20 81.00 85.38	3.30 -13.05 -10.76		0.94 0.97 0.96		-1.20 -1.20 -1.20		-4.61 -4.87 -5.50	0.00 0.00 0.00	0.00			
Unmitigated Noise I	evels (withou	ut Tono and h	arrier a	atteni	iation)								
	eq Peak Hour	Leq Day		eq Ev		Lea	Night		Ldn	CNEL			
Autos:	73.2		1.1	,	69.4		65.8		73.4	73			
Medium Trucks:	67.7	' 6	5.8		61.5		60.7		68.1	68			
Heavy Trucks:	74.4	7	1.5		70.5		69.3		76.1	76			
Vehicle Noise:	77.4	7	4.9		73.3		71.3		78.4	78			
Centerline Distance	Interline Distance to Noise Contour (in feet)												
		,		70 d	BA	65	dBA		60 dBA	55 dBA			
		L	dn:		159		344		740	1,59			
		Ldn: CNEL:			168		362		781	1,68			

, September 28, 2022 Wednesday, September 28, 2022

	FHWA-RD	-77-108 HIGH	WAY	NOISE	PREDIC	TION N	ODEL (9	/12/20)21)		
Scenario Road Name Road Segmen	e: Barton St.	en Blvd.					Name: \ umber: 1		ampus Up	per Plat	е
	PECIFIC IN	PUT DATA							L INPUTS	S	
Highway Data					Site Con	ditions	(Hard =	10, So	ft = 15)		
Average Daily 1	raffic (Adt):	3,375 vehicle	s				-	Autos:	15		
Peak Hour F	Percentage:	9.80%			Me	dium Tr	ucks (2 A	xles):	15		
Peak Ho	our Volume:	331 vehicles			He	avy Tru	cks (3+ A	xles):	15		
Veh	icle Speed:	30 mph			Vehicle i	Miv					
Near/Far Lan	e Distance:	18 feet		F'		icleType		Dav	Evening	Niaht	Dailv
Site Data								71.9%		15.9%	. ,
Ran	rier Height:	0.0 feet			М	edium T	rucks:	75.3%	7.0%	17.7%	2.20%
Barrier Type (0-Wa		0.0			- 1	Heavy T	rucks:	60.4%	12.0%	27.6%	3.73%
Centerline Dis		33.0 feet		ļ.							
Centerline Dist. t		33.0 feet		1	Noise So		evations	•	et)		
Barrier Distance t	o Observer:	0.0 feet				Auto		000			
Observer Height (A	Above Pad):	5.0 feet				m Truck		297	O	4 4	
	d Elevation:	0.0 feet			Heal	y Truck	s: 8.0	004	Grade Adj	ustment	0.0
Roa	d Elevation:	0.0 feet		1	Lane Eq	uivalent	Distanc	e (in f	eet)		
R	Road Grade:	0.0%				Auto	s: 32.1	140			
	Left View:	-90.0 degree	s		Mediu	m Truck	s: 31.8	364			
	Right View:	90.0 degree	S		Heav	y Truck	s: 31.8	391			
FHWA Noise Mode	l Calculations										
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn		Barrier Atte	en Ber	m Atten
Autos:	61.75	-5.15		2.7		-1.20		-4.52	0.0		0.000
Medium Trucks:	73.48	-21.46		2.8	-	-1.20		-4.86	0.0		0.000
Heavy Trucks:	79.92	-19.17		2.8	3	-1.20		-5.69	0.0	000	0.000
		T	barrio	er atten	uation)					1	
VehicleType I	Leq Peak Hour	Leq Day	_	Leq E			Night		Ldn		NEL
VehicleType Autos:	Leq Peak Hour 58.	Leq Day	56.0	Leq E	54.4		50.7		58.3	3	58.8
VehicleType Autos: Medium Trucks:	Leq Peak Hour 58. 53.	Leq Day	56.0 51.7	Leg E	54.4 47.4		50.7 46.7		58.3 54.1	3	58.8 54.0
Autos:	Leq Peak Hour 58.	Leq Day 2 6	56.0	Leg E	54.4		50.7		58.3	3 	58.8 54.3 64.4
VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	Leq Peak Hour 58. 53. 62. 64.	Leq Day 2 6 4	56.0 51.7 59.5	Leq E	54.4 47.4 58.5		50.7 46.7 57.3		58.3 54.1 64.1	3 	58.8 54.3 64.4
VehicleType Autos: Medium Trucks: Heavy Trucks:	Leq Peak Hour 58. 53. 62. 64.	Leq Day 2 6 4	56.0 51.7 59.5	Leq E	54.4 47.4 58.5 60.1		50.7 46.7 57.3		58.3 54.1 64.1	1	58.8 54.3 64.4 65.8
VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	Leq Peak Hour 58. 53. 62. 64.	Leq Day Leq Da	56.0 51.7 59.5		54.4 47.4 58.5 60.1		50.7 46.7 57.3 58.5		58.3 54.1 64.1 65.4	55	58.8 54.3 64.4 65.8

	FHWA-RD)-77-108 HIGH	IWAY	NOISE	PREDIC	CTION N	IODEL	(9/12/2	021)		
	io: EA ne: Barton St. nt: n/o Van Bur	ren Blvd.					t Name: lumber:		Campus U	oper Plat	е
	SPECIFIC IN	PUT DATA							L INPUT	s	
Highway Data				S	Site Cor	ditions	(Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	3,877 vehicle	es					Autos:			
Peak Hour	Percentage:	9.80%				edium Ti		,			
	lour Volume:	380 vehicle	S		He	eavy Tru	cks (3+	Axles):	15		
	hicle Speed:	30 mph		ν	/ehicle	Mix					
Near/Far La	ne Distance:	18 feet			Veh	icleType	,	Day	Evening	Night	Daily
Site Data							Autos:	71.9%	12.2%	15.9%	94.08%
Bai	rrier Height:	0.0 feet			М	edium 1	rucks:	75.3%	7.0%	17.7%	2.20%
Barrier Type (0-W		0.0				Heavy 7	rucks:	60.4%	12.0%	27.6%	3.73%
Centerline Dis	st. to Barrier:	33.0 feet			loise S	nurce F	levatio	ns (in f	pet)		
Centerline Dist.	to Observer:	33.0 feet		F.	.0.00	Auto		0.000	501)		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		2.297			
Observer Height ('Above Pad):	5.0 feet				vy Truck		3.004	Grade Ad	iustment	0.0
Pa	ad Elevation:	0.0 feet									
	ad Elevation:	0.0 feet		L	ane Eq				feet)		
1	Road Grade:	0.0%				Auto		2.140			
	Left View:	-90.0 degre				m Truck		1.864			
	Right View:	90.0 degre	es		Hea	vy Truck	s: 31	1.891			
FHWA Noise Mode	el Calculations	s		-							
VehicleType	REMEL	Traffic Flow		stance		Road	Fres		Barrier Att		m Atten
Autos:	61.75	-4.54		2.78		-1.20		-4.52		000	0.00
Medium Trucks:	73.48	-20.86		2.83		-1.20		-4.86		000	0.00
Heavy Trucks:	79.92	-18.57		2.83	3	-1.20		-5.69	0.0	000	0.00
Unmitigated Noise											
VehicleType	Leq Peak Hou			Leq Ev			Night	_	Ldn		NEL
Autos:	58		56.6		55.0		51		58.9		59.4
Medium Trucks:	54		52.3		48.0		47		54.		54.
Heavy Trucks: Vehicle Noise:	63.		60.1		59.1 60.7		57 59		64.7		65. 66.
Centerline Distance	e to Noise Co	ntour (in foot	1								
Centernine Distant	.6 10 110/36 00	intour (III leet	,	70 d	IBA	65	dBA		60 dBA	55	dBA
			Ldn:		18		3	9	83		180
		C	NEL:		19		4	1	88		189

Scenari	o: E+D					Project	Name:	Wort C	ampus Up	nor Plat	_
	e: Barton St.						umber:		ampus op	ipei riai	E
	nt: n/o Van Bure	n Blvd.				300 14	uniber.	14004			
	SPECIFIC INF					N	IOISE	MODE	L INPUTS	3	
Highway Data				Si	ite Con	ditions	(Hard =	10, So	ft = 15)		
Average Daily	Traffic (Adt):	4,040 vehicle	:S					Autos:	15		
Peak Hour	Percentage:	9.80%			Ме	dium Tru	ucks (2	Axles):	15		
Peak H	our Volume:	396 vehicles	6		He	avy Truc	cks (3+ .	Axles):	15		
Vel	hicle Speed:	30 mph		V	ehicle l	Miv					
Near/Far Lar	ne Distance:	18 feet		-		icleType		Dav	Evening	Niaht	Daily
Site Data							Autos:	71.9%		15.9%	
Rar	rier Height:	0.0 feet			М	edium Ti	rucks:	75.3%	7.0%	17.7%	1.849
Barrier Type (0-W	-	0.0			- 1	Heavy Ti	rucks:	60.4%	12.0%	27.6%	3.119
Centerline Dis	. ,	33.0 feet		M	nien Sa	ource El	ovation	c (in fo	of)		
Centerline Dist.	to Observer:	33.0 feet		/4	oise sc	Auto:		000	ei)		
Barrier Distance t	to Observer:	0.0 feet			Modiu	m Truck:		297			
Observer Height (Above Pad):	5.0 feet				y Truck		004	Grade Adj	ustment	0.0
Pa	d Elevation:	0.0 feet			11001	y much	3. 0.	004	0/440 / 14)	00111101111	0.0
Roa	d Elevation:	0.0 feet		La	ane Eq	uivalent	Distan	ce (in f	eet)		
F	Road Grade:	0.0%				Auto		.140			
	Left View:	-90.0 degree	es.			m Truck		.864			
	Right View:	90.0 degree	es.		Heav	y Truck	s: 31	.891			
FHWA Noise Mode	l Calculations										
VehicleType		Traffic Flow	Dista	ance	Finite	Road	Fresi		Barrier Atte	_	m Atten
Autos:	61.75	-4.32		2.78		-1.20		-4.52	0.0		0.00
Medium Trucks:	73.48	-21.46		2.83		-1.20		-4.86	0.0		0.00
Heavy Trucks:	79.92	-19.17		2.83		-1.20		-5.69	0.0	100	0.00
Unmitigated Noise	•									1	
, ,	Leq Peak Hour	- 1 - 7		Leq Eve		_	Night		Ldn		VEL
Autos:	59.0		56.9		55.2		51.		59.1		59
Medium Trucks:	53.6		51.7		47.4		46.		54.1		54
Heavy Trucks: _ Vehicle Noise:	62.4		59.5 61.8		58.5 60.4		57. 58.		64.1 65.6		64 65
Centerline Distanc	***							-	20.0		- 50
centernine Distanc	e to Noise Cor	nour (III leet)		70 dE	3A	65	dBA	6	0 dBA	55	dBA
								-			
			Ldn:		17		36	i	78		16

Wednesday, September 28, 2022

FHWA-F	D-77-108 HIGHV	VAY NOIS	E PREDIC	TION MC	DDEL (9/12/2	021)		
Scenario: EAP Road Name: Barton St. Road Segment: n/o Van B	uren Blvd.			Project I Job Nu			Campus U	oper Plat	te
SITE SPECIFIC I Highway Data	NPUT DATA		0:4- 0	No ditions (i			L INPUT	s	
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume:	4,542 vehicles 9.80% 445 vehicles	S	Ме	edium Truck	cks (2)	Autos. Axles).	15 15		
Vehicle Speed: Near/Far Lane Distance:	30 mph 18 feet		Vehicle I						1
	10 1001		Veh	icleType		Day	Evening	Night	Daily
Site Data Barrier Height: Barrier Type (0-Wall, 1-Berm):	0.0 feet 0.0			Al edium Tru Heavy Tru		71.99 75.39 60.49	7.0%	15.9% 17.7% 27.6%	1.88%
Centerline Dist. to Barrier:	33.0 feet		Noise So	ource Ele	vation	s (in f	eet)		
Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad):	33.0 feet 0.0 feet 5.0 feet		Mediu	Autos. m Trucks. vy Trucks.	0.	000 297 004	Grade Ad	justment	t: 0.0
Pad Elevation:	0.0 feet							,	
Road Elevation: Road Grade: Left View: Right View:	0.0 feet 0.0% -90.0 degrees 90.0 degrees		Mediu	Autos. M Trucks. Y Trucks.	32.	.140 .864 .891	reety		
FHWA Noise Model Calculation	15								
VehicleType REMEL	Traffic Flow	Distance	Finite	Road	Fresi	nel	Barrier Att	en Bei	rm Atten
Autos: 61.75	-3.82	2	.78	-1.20		-4.52	0.0	000	0.000
Medium Trucks: 73.44	-20.86	2	.83	-1.20		-4.86	0.0	000	0.000
Heavy Trucks: 79.93	-18.57	2	.83	-1.20		-5.69	0.0	000	0.000
Unmitigated Noise Levels (with	out Topo and b	arrier atte	enuation)						
VehicleType Leq Peak Ho			Evening	Leq N			Ldn	_	NEL
		7.4	55.7		52.		59.		60.1
		2.3	48.0		47.3	-	54.		54.9
		0.1	59.1 60.9		57.9 59.1		64.		65.0 66.5
venicle ivoise.		12.4	00.9		J9.	۷	00		00.0
Centerline Distance to Noise C	ontour (in feet)	7	n dBA	65 d	RΔ	Т.	SO dBA	55	dΒΔ
Centerline Distance to Noise C	, ,	dn:	0 dBA 18	65 d	BA 40		60 dBA 85		dBA 184

Wednesday, September 28, 2022

	FHWA-RI	D-77-108 HIGH	WAY	NOISE	PREDIC	CTION N	IODEL	(9/12/2	021)		
Road Nam	io: OYC ne: Barton St. nt: n/o Van Bu	ren Blvd.					Name: lumber:		Campus U	pper Pla	ite
	SPECIFIC IN	IPUT DATA			a:: a				L INPUT	s	
Highway Data					Site Cor	aitions	(Hard =				
Average Daily	. ,	5,685 vehicle	es					Autos:			
Peak Hour	Percentage:	9.80%				edium Tr					
Peak H	lour Volume:	557 vehicle	S		He	eavy Tru	cks (3+	Axles):	15		
Ve	hicle Speed:	30 mph			Vehicle	Mix					
Near/Far La	ne Distance:	18 feet		F		icleType	,	Dav	Evenina	Niaht	Dailv
Site Data							Autos:	71.9%	12.2%	15.99	6 94.08%
Pa	rrier Height:	0.0 feet			М	edium T	rucks:	75.3%	7.0%	17.79	6 2.20%
Barrier Type (0-W		0.0 1661				Heavy T	rucks:	60.4%	12.0%	27.69	6 3.73%
Centerline Di		33.0 feet									
Centerline Dist.		33.0 feet		ļ.	Noise S			_ •	eet)		
Barrier Distance		0.0 feet				Auto		.000			
Observer Height	(Above Pad):	5.0 feet				m Truck		.297			
	ad Elevation:	0.0 feet			Hea	vy Truck	s: 8	.004	Grade Ad	ijustmer	it: 0.0
	ad Flevation:	0.0 feet			Lane Eq	uivalen	t Distar	ce (in	feet)		
	Road Grade:	0.0%		ı		Auto	s: 32	.140	,		
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 31	.864			
	Right View:	90.0 degre			Hea	vy Truck	s: 31	.891			
FHWA Noise Mod	el Calculation	s		'							
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fres		Barrier At		erm Atten
Autos:	61.75			2.7	-	-1.20		-4.52		000	0.000
Medium Trucks:				2.8	-	-1.20		-4.86		000	0.000
Heavy Trucks:	79.92	-16.90		2.8	3	-1.20		-5.69	0.	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Hou	ur Leq Day	/	Leq E	vening	Leq	Night		Ldn		CNEL
Autos:	60		58.3		56.6		53.	.0	60.	6	61.0
Medium Trucks:		5.9	54.0		49.7		48.	-	56.	-	56.6
Heavy Trucks:		1.6	61.7		60.7		59.	-	66.	4	66.7
Vehicle Noise:	66	6.4	63.8		62.4		60.	.8	67.	7	68.0
Centerline Distance	ce to Noise C	ontour (in feet)								
·				70	dBA	65	dBA	(60 dBA	5	5 dBA
			Ldn:		23		50)	108	3	232
		C	NEL:		24		5	3	113	3	244

Scenari Road Nam Road Segmer	e: Barton St.	ren Blvd.						: West (Campus Up	oper Plat	е
	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data				S	ite Cor	nditions	(Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	6,716 vehic	les					Autos:			
Peak Hour	Percentage:	9.80%				edium Ti		,			
Peak H	our Volume:	658 vehicle	es		He	eavy Tru	icks (3+	· Axles):	15		
Vei	hicle Speed:	30 mph		ν	ehicle	Mix					
Near/Far Lai	ne Distance:	18 feet		F	Ver	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	71.9%	12.2%	15.9%	94.08%
Rar	rier Heiaht:	0.0 feet			M	ledium 7	rucks:	75.3%	7.0%	17.7%	2.20%
Barrier Type (0-W		0.0				Heavy 7	rucks:	60.4%	12.0%	27.6%	3.73%
Centerline Dis	. ,	33.0 feet		-	·-: 0		Y4!-	6- 6	41		
Centerline Dist.	to Observer:	33.0 feet		^	ioise S	ource E		_ •	eet)		
Barrier Distance	to Observer:	0.0 feet				Auto		0.000			
Observer Height (Above Pad):	5.0 feet				m Truck		2.297	0		
	d Elevation:	0.0 feet			Hea	vy Truck	(S: E	3.004	Grade Ad	justment	0.0
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalen	t Dista	nce (in	feet)		
F	Road Grade:	0.0%				Auto	s: 3:	2.140			
	Left View:	-90.0 degre	es		Mediu	m Truck	(s: 3	1.864			
	Right View:	90.0 degre	es		Hea	vy Truck	(S: 3	1.891			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fre	snel	Barrier Att	en Ber	m Atten
Autos:	61.75	-2.16	6	2.78	3	-1.20		-4.52	0.0	000	0.00
Medium Trucks:	73.48	-18.48	3	2.83	3	-1.20		-4.86	0.0	000	0.00
Heavy Trucks:	79.92	-16.18	3	2.83	3	-1.20		-5.69	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er attenu	uation)						
	Leq Peak Hou			Leq Ev			Night		Ldn		NEL
Autos:		.2	59.0		57.4		53		61.3		61.
Medium Trucks:		3.6	54.7		50.4		49		57.		57.
Heavy Trucks:		5.4	62.5		61.5		60		67.		67.4
Vehicle Noise:	67	7.2	64.6		63.1		61	.5	68.4	4	68.
Centerline Distanc	e to Noise C	ontour (in fee	t)								
			L	70 d		65	dBA		60 dBA		dBA
		_	Ldn:		26		_	6	120		259
			:NEL:		27			9	127		273

SITES	t: n/o Van Bur	en Blvd.				Job N	umber:	14064			
	PECIFIC IN	PUT DATA			i4- 0	ditions			L INPUT	3	
Highway Data				3	ite Con	aitions	(Hara -				
Average Daily 1	. ,	6,350 vehicle	es:					Autos:	15		
Peak Hour F		9.80%				dium Tr		,	15		
	our Volume:	622 vehicles	3		He	avy Tru	cks (3+	Axles):	15		
	icle Speed:	30 mph		V	ehicle l	Vix					
Near/Far Lan	e Distance:	18 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	71.9%	12.2%	15.9%	94.70%
Ran	rier Heiaht:	0.0 feet			M	edium T	rucks:	75.3%	7.0%	17.7%	1.97%
Barrier Type (0-Wa		0.0			1	Heavy T	rucks:	60.4%	12.0%	27.6%	3.34%
Centerline Dis	. ,	33.0 feet		-							
Centerline Dist. to		33.0 feet		N	oise Sc	ource El			et)		
Barrier Distance to		0.0 feet				Auto		0.000			
Observer Height (A		5.0 feet				m Truck		2.297			
	d Elevation:	0.0 feet			Heav	y Truck	s: 8	3.004	Grade Adj	ustment.	0.0
	d Elevation:	0.0 feet		L	ane Eq	uivalen	Distar	nce (in t	eet)		
	Road Grade:	0.0%				Auto	s: 32	2.140			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 31	1.864			
	Right View:	90.0 degree			Heav	y Truck	s: 31	1.891			
FHWA Noise Mode	I Calculations										
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	snel	Barrier Att	en Ber	m Atten
Autos:	61.75	-2.37		2.78		-1.20		-4.52		100	0.00
Medium Trucks:	73.48	-19.20		2.83		-1.20		-4.86		100	0.00
Heavy Trucks:	79.92	-16.90		2.83		-1.20		-5.69	0.0	100	0.000
Unmitigated Noise	•							_			
	Leq Peak Hou		_	Leq Eve		Leq	Night		Ldn		VEL
Autos:	61.	-	58.8		57.1		53		61.1		61.
Medium Trucks:	55.	-	54.0		49.7		48		56.3		56.6
Heavy Trucks:	64.		61.7		60.7		59		66.4		66.7
Vehicle Noise:	66.		64.0		62.5		60	.8	67.8	3	68.
	e to Noise Co	ntour (in feet))								
Centerline Distance				70 dl	RΔ	65	dRΔ	6	O dRA	55	dRΔ
Centerline Distanc			Ldn:	70 dl	BA 24	65	dBA 5		0 dBA 109	55	dBA 236

Wednesday, September 28, 2022

	FHWA-RD	-77-108 HIGHV	VAY NOI	SE PREDIC	CTION N	IODEL (9/	12/2021)		
Road Nam	io: HYP ne: Barton St. nt: n/o Van Bur	en Blvd.				Name: W lumber: 14	est Campi 1064	us Uppe	r Plate
	SPECIFIC IN	PUT DATA					ODEL IN		
Highway Data Average Daily	. ,	7,381 vehicles	3			A	0, Soft = 1 utos: 15	;	
Peak F	Percentage: lour Volume:	9.80% 723 vehicles				ucks (2 Ax cks (3+ Ax	,		
	hicle Speed: ne Distance:	30 mph 18 feet		Vehicle Veh	Mix nicleType	. D	ay Ever	ning N	ight Daily
Site Data						Autos: 7	1.9% 12	.2% 1	5.9% 94.61%
Ba. Barrier Type (0-W	rrier Height: /all, 1-Berm):	0.0 feet 0.0			ledium T Heavy T				7.7% 2.00% 7.6% 3.39%
Centerline Di		33.0 feet		Noise S	ource E	evations	(in feet)		
Centerline Dist. Barrier Distance Observer Height	to Observer:	33.0 feet 0.0 feet 5.0 feet 0.0 feet			Auto ım Truck vy Truck	s: 2.29	97	le Adjusi	tment: 0.0
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalen	t Distance	(in feet)		
	Road Grade: Left View: Right View:	0.0% -90.0 degrees 90.0 degrees			Auto im Truck vy Truck	s: 31.86	64		
FHWA Noise Mod	el Calculations								
VehicleType	REMEL	Traffic Flow	Distance	e Finite	Road	Fresne	l Barrie	er Atten	Berm Atten
Autos:	61.75	-1.72	_	2.78	-1.20		1.52	0.000	
Medium Trucks: Heavy Trucks:	73.48 79.92	-18.48 -16.18	_	2.83 2.83	-1.20 -1.20		4.86 5.69	0.000	
Unmitigated Noise	e Levels (witho	ut Topo and b	arrier att	enuation)					
VehicleType	Leq Peak Hou	r Leq Day	Leg	Evening	Leq	Night	Ldn		CNEL
Autos:	61.		9.5	57.8		54.2		61.7	62.2
Medium Trucks:	56.		4.7	50.4		49.7		57.1	57.3
Heavy Trucks:	65.		2.5	61.5		60.3		67.1	67.4
Vehicle Noise:	67.	3 6	4.7	63.2	!	61.6		68.5	68.8
Centerline Distant	ce to Noise Co	ntour (in feet)	7	O dBA	65	dBA	60 dBA	4	55 dBA
		L	dn:	26	1 00	57	20 02/	122	263
		CN	EL:	28		60		128	277

Wednesday, September 28, 2022

FHW	A-RD-	77-108 HIGH	WAY	NOISE	PREDIC	CTION N	/IODEL	(9/12/2	021)		
Scenario: E Road Name: Sycam Road Segment: n/o Co							t Name: lumber:		Campus Up	per Pla	te
SITE SPECIFI	C INP	UT DATA			0:: 0				L INPUT	S	
Highway Data					Site Cor	aitions	(Hara =				
Average Daily Traffic (A		3,087 vehicle	s					Autos:			
Peak Hour Percentag	,	9.80%					rucks (2	,			
Peak Hour Volun		,283 vehicles	•		He	eavy Tru	icks (3+	Axles):	15		
Vehicle Spe		45 mph			Vehicle	Mix					
Near/Far Lane Distan	ce:	68 feet			Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	71.9%	12.2%	15.9%	94.08%
Barrier Heig	ht.	0.0 feet			М	edium 7	rucks:	75.3%	7.0%	17.7%	2.20%
Barrier Type (0-Wall, 1-Ber		0.0				Heavy 7	rucks:	60.4%	12.0%	27.6%	3.73%
Centerline Dist. to Barr	er:	55.0 feet		- 1	Noise S	ource E	levation	s (in f	eet)		
Centerline Dist. to Observ	er:	55.0 feet		F		Auto		.000	,		
Barrier Distance to Observ	er:	0.0 feet			Mediu	m Truck		297			
Observer Height (Above Pa	- /	5.0 feet			Hear	vy Truck	(s: 8	.004	Grade Ad	iustmen	t: 0.0
Pad Elevati		0.0 feet				·					
Road Elevati		0.0 feet		ļ.	Lane Eq				reet)		
Road Gra		0.0%				Auto		.520			
Left Vie		-90.0 degree				m Truck		.316			
Right Vie	·W:	90.0 degree	!S		Hea	vy Truck	(S: 43	.336			
FHWA Noise Model Calcula					_						
VehicleType REME		Traffic Flow	Dis	stance		Road	Fres		Barrier Att		rm Atten
	8.46	-1.02		0.8	-	-1.20		-4.67		000	0.000
	9.45	-17.34		0.8	-	-1.20		-4.87		000	0.000
	4.25	-15.04		0.8	-	-1.20		-5.38	0.0	000	0.000
Unmitigated Noise Levels (_							_	
VehicleType Leq Peak		Leq Day	_	Leq E	vening		Night		Ldn	_	NEL
Autos: Medium Trucks:	67.0 61.7		64.9 59.8		63.2 55.5		59. 54.	-	67.1 62.1	_	67.6 62.4
	68.8		85.9		64.9		63.	-	70.5	-	
Heavy Trucks: Vehicle Noise:	71.5		69.0		67.5		65.	-	70.:		70.9
					07.5		00.		12.	,	12.3
Centerline Distance to Nois	e Con	tour (in feet)		70	dBA	65	dBA	1 6	60 dBA	55	i dBA
			Ldn:		82		177	7	381		820
	CNEL:								865		

<u> </u>	E4								0 11	D.	
Scenario		O Dbd					Name: lumber		Campus Up	per Pla	te
Road Name Road Segmen	e: Sycamore (JOD I	iumber:	14064			
Roau Segmen	t. 11/0 Cottons	WOOD AV.									
	PECIFIC IN	IPUT DATA			a:- a				L INPUT	S	
Highway Data					Site Cor	aitions	(Hara				
Average Daily	. ,	15,033 vehic	les					Autos			
Peak Hour I	-	9.80%				dium Tr		,			
	our Volume:	1,473 vehicle	es		He	avy Tru	cks (3+	Axles)	: 15		
	icle Speed:	45 mph			Vehicle	Mix					
Near/Far Lar	e Distance:	68 feet		İ	Veh	icleType	•	Day	Evening	Night	Daily
Site Data							Autos:	71.99	6 12.2%	15.9%	94.08%
Bar	rier Heiaht:	0.0 feet			М	edium T	rucks:	75.39	6 7.0%	17.7%	2.20%
Barrier Type (0-Wa	all, 1-Berm):	0.0				Heavy T	rucks:	60.49	6 12.0%	27.6%	3.73%
Centerline Dis	t. to Barrier:	55.0 feet			Noise S	ource E	levatio	ns (in t	eet)		
Centerline Dist. t	o Observer:	55.0 feet				Auto		0.000	,		
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Truck		297			
Observer Height (/	Above Pad):	5.0 feet				/y Truck	o. –	3.004	Grade Ad	iustmen	t: 0.0
Pa	d Elevation:	0.0 feet		L		•					
Roa	d Elevation:	0.0 feet			Lane Eq	uivalen	t Distai	ıce (in	feet)		
F	Road Grade:	0.0%				Auto		3.520			
	Left View:	-90.0 degre	ees			m Truck		3.316			
	Right View:	90.0 degre	ees		Hea	y Truck	s: 43	3.336			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	inel	Barrier Att	en Be	rm Atten
Autos:	68.46	-0.4	2	8.0	0	-1.20		-4.67	0.0	000	0.00
Medium Trucks:	79.45	-16.7	4	8.0	3	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-14.4	4	8.0	3	-1.20		-5.38	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	d barri	ier atter	uation)						
VehicleType	Leq Peak Hou	ur Leq Da	ay .	Leq E	vening	Leq	Night		Ldn	С	NEL
Autos:	67	'.6	65.5		63.8		60	.2	67.8	3	68.
Medium Trucks:	62	2.3	60.4		56.1		55	.4	62.8	3	63.0
Heavy Trucks:	69	9.4	66.5		65.5		64	.4	71.	1	71.
Vehicle Noise:	72	2.1	69.6		68.1		66	.2	73.2	2	73.0
Centerline Distanc	e to Noise Co	ontour (in fee	et)								
			I	70	dBA	65	dBA		60 dBA		dBA
			Ldn:		90		19	4	418		900
			CNEL:		95		20		440		

Scenario	. F.D					Drain-4	Name	Moot	Compus II-	nor DI-4	
		Canyon Blvd.					wame: umber:		Campus Up	per Plat	е
Road Segmen						JOD IV	uniber.	14004			
		NPUT DATA					IOISE I	MODE	L INPUT	s	
Highway Data					Site Con						
Average Daily	raffic (Adt):	13,855 vehicle	es					Autos:	15		
Peak Hour I	Percentage:	9.80%			Me	dium Tr	ucks (2)	Axles):	15		
Peak Ho	our Volume:	1,358 vehicle	s		He	avy Truc	cks (3+)	Axles):	15		
Vel	icle Speed:	45 mph		-	Vehicle I	Wix					
Near/Far Lar	e Distance:	68 feet				icleType		Day	Evening	Night	Daily
Site Data							Autos:	71.9%	12.2%	15.9%	93.669
Bar	rier Heiaht:	0.0 feet			M	edium T	rucks:	75.3%	7.0%	17.7%	2.089
Barrier Type (0-Wa		0.0			1	Heavy T	rucks:	60.4%	12.0%	27.6%	4.269
Centerline Dis	t. to Barrier:	55.0 feet		F	Noise So	urce El	evation	e (in f	not)		
Centerline Dist. t	o Observer:	55.0 feet		ř		Auto		000	,,,,		
Barrier Distance t		0.0 feet			Mediu	m Truck		297			
Observer Height (5.0 feet			Heav	v Truck	s: 8.	004	Grade Ad	ustment	0.0
	d Elevation:	0.0 feet		L							
	d Elevation:	0.0 feet		Ŀ	Lane Eq				reet)		
F	Road Grade:	0.0%			A deceller	Auto m Truck		520 316			
	Left View:	-90.0 degre				m Truck vy Truck		336			
	Right View:	90.0 degre	es		rical	ry IIIUCK	3. 40.	330			
FHWA Noise Mode		-									
VehicleType	REMEL	Traffic Flow		tance		Road	Fresi		Barrier Att		m Atten
Autos: Medium Trucks:	68.46 79.45			0.8	-	-1.20 -1.20		-4.67 -4.87	0.0	000	0.00
Heavy Trucks:	84.25			0.0	-	-1.20		-5.38		000	0.00
					-	-1.20		-0.50	0.0	,,,,	0.00
Unmitigated Noise VehicleType	Leveis (with Leg Peak Ho		_		vening	l en	Night	T	Ldn		NFL.
Autos:		7.3	65.1	LUG L	63.5	_	59.1	3	67.4		67
Medium Trucks:	6	1.7	59.8		55.5		54.	3	62.2	2	62
Heavy Trucks:	6	9.7	66.8		65.8		64.0	3	71.4	1	71.
Vehicle Noise:	7:	2.1	69.5		68.0		66.2	2	73.2	2	73.
Centerline Distanc	e to Noise C	ontour (in feet)								
				70	dBA	65	dBA		60 dBA	55	dBA
			Ldn:		90		194		417		899
	CNEL:							95 204 44			

Wednesday, September 28, 2022

	FHWA-RE)-77-108 HIGH\	WAY NO	DISE	PREDIC	TION M	IODEL (9/12/2	2021)		
Road Nan	ne: Sycamore (nt: n/o Cottonw						Name: umber:		Campus Uբ Լ	per Pla	ate
	SPECIFIC IN	PUT DATA							EL INPUT	S	
Highway Data				S	ite Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily Peak Hour	Traffic (Adt): Percentage:	15,801 vehicle 9.80%	S		Ме	dium Tr		Autos Axles)			
Peak H	lour Volume:	1,548 vehicles			He	avy Truc	cks (3+	Axles)	: 15		
Ve	hicle Speed:	45 mph		ν	ehicle l	Mix					
Near/Far La	ne Distance:	68 feet		F	Veh	icleType		Dav	Evening	Night	Daily
Site Data							Autos:	71.99	-	15.99	6 93.72%
P.	rrier Height:	0.0 feet			М	edium Ti	rucks:	75.39	6 7.0%	17.79	% 2.09%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy T	rucks:	60.49	6 12.0%	27.69	% 4.19%
Centerline Di		55.0 feet		N	loise Sc	ource El	evation	s (in t	eet)		
Centerline Dist.		55.0 feet				Auto	s: 0	000			
Barrier Distance		0.0 feet			Mediu	m Truck	s: 2	297			
Observer Height	. ,	5.0 feet			Heav	y Truck	s: 8	004	Grade Adj	iustmer	nt: 0.0
-	ad Elevation:	0.0 feet		,	ono Fa	uivalent	Dieten	oo (in	foot)		
	ad Elevation:	0.0 feet		L	ane Eq				reet)		
	Road Grade:	0.0%			A de elle	Auto m Truck		.520			
	Left View: Right View:	-90.0 degree 90.0 degree				y Truck	- 10	.316 .336			
FHWA Noise Mod	el Calculation:	5									
VehicleType	REMEL	Traffic Flow	Distar	псе	Finite	Road	Fresi	nel	Barrier Atte	en Be	erm Atten
Autos:	68.46	-0.22		0.80		-1.20		-4.67	0.0	000	0.000
Medium Trucks:	79.45	-16.74		0.83		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:		-13.71		0.83		-1.20		-5.38	0.0	000	0.000
Unmitigated Nois											01/5/
VehicleType	Leq Peak Hou			eq Ev		Leq	Night		Ldn		CNEL
Autos: Medium Trucks:	67 62		55.7 60.4		64.0 56.1		60. 55.		68.0 62.8		68.4 63.0
			50.4 57.3		66.3		55. 65.		62.8 71.9		72.2
Heavy Trucks: Vehicle Noise:			0.1		68.6		66.		73.7		74.1
Centerline Distan	ce to Noise Co	ntour (in feet)									
				70 di		65	dBA		60 dBA	_	5 dBA
		-	dn:		97		210		452		975
		CN	IEL:		103		221		477		1,027

Wednesday, September 28, 2022

	FHWA-R	D-77-108 HIGH	IWAY	NOISE	PREDIC	TION N	IODEL (9/12/20	021)		
Road Nan	io: OYC ne: Sycamore nt: n/o Cotton						Name: lumber:		Campus U	per Plat	е
	SPECIFIC II	IPUT DATA							L INPUT	S	
Highway Data					Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	16,647 vehicl	es					Autos:	15		
Peak Hour	Percentage:	9.80%			Me	dium Tr	ucks (2)	4xles):	15		
Peak F	lour Volume:	1,631 vehicle	S		He	avy Tru	cks (3+)	4xles):	15		
Ve	hicle Speed:	45 mph		-	Vehicle i	Mix					
Near/Far La	ne Distance:	68 feet		F		icleType		Day	Evening	Night	Daily
Site Data							Autos:	71.9%	12.2%	15.9%	94.089
Ra	rrier Height:	0.0 feet			М	edium T	rucks:	75.3%	7.0%	17.7%	2.20%
Barrier Type (0-W		0.0				Heavy T	rucks:	60.4%	12.0%	27.6%	3.73%
Centerline Di		55.0 feet		-	Noise So	uroo E	lavation	a (in fe	no.e)		
Centerline Dist.	to Observer:	55.0 feet		H.	WOISE SC	Auto		000	eu		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck		297			
Observer Height	(Above Pad):	5.0 feet				/y Truck		004	Grade Ad	iuetmant	. 0 0
P	ad Elevation:	0.0 feet			rical	ry IIUCK	3. 0.	004	Orauc Au	asancin	. 0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in i	feet)		
	Road Grade:	0.0%				Auto	s: 43.	520			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 43.	316			
	Right View:	90.0 degre	es		Heav	y Truck	s: 43.	336			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atten
Autos:	68.46	0.02		0.8	0	-1.20		-4.67	0.0	000	0.00
Medium Trucks:	79.45	-16.29		0.8	3	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-14.00		0.8	3	-1.20		-5.38	0.0	000	0.00
Unmitigated Nois	e Levels (with	out Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Ho			Leq E	vening		Night		Ldn	_	NEL
Autos:		3.1	65.9		64.3		60.6	-	68.2	-	68.
Medium Trucks:		2.8	60.9		56.5		55.8	-	63.2	-	63.
Heavy Trucks:		9.9	67.0		66.0		64.8		71.6		71.9
Vehicle Noise:		2.6	70.1		68.5		66.6	5	73.0	5	74.
Centerline Distan	ce to Noise C	ontour (in feet)		-						
			L	70	dBA	65	dBA		0 dBA		dBA
			Ldn:		96		207		447		963
		С	NEL:		102		219		471		1,015

								•			
Scenari									Campus U	pper Plat	е
	e: Sycamore (Job N	lumber	14064			
Road Segmer	nt: n/o Cottonv	/OOd AV.									
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data					Site Con	ditions	(Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	19,473 vehicle	es					Autos:	15		
Peak Hour	Percentage:	9.80%			Me	dium Tr	ucks (2	Axles).	15		
Peak H	our Volume:	1,908 vehicle	s		He	avy Tru	cks (3+	Axles).	15		
Ve	hicle Speed:	45 mph		-	Vehicle i	Mix					
Near/Far Lar	ne Distance:	68 feet		f		icleType		Day	Evening	Night	Daily
Site Data							Autos:	71.9%	6 12.2%	15.9%	94.08%
Rar	rier Height:	0.0 feet			М	edium T	rucks:	75.3%	7.0%	17.7%	2.20%
Barrier Type (0-W		0.0				Heavy T	rucks:	60.4%	6 12.0%	27.6%	3.73%
Centerline Dis	. ,	55.0 feet		-	Noise So	FI	lovetio	na (in f	oot)		
Centerline Dist.	to Observer:	55.0 feet		ŀ	Noise 30	Auto			eet)		
Barrier Distance	to Observer:	0.0 feet			A decedio	m Truck	,	0.000 2.297			
Observer Height (Above Pad):	5.0 feet						3.004	Grade Ad	liustmant	. 0.0
Pa	d Elevation:	0.0 feet			неач	y Truck	S: (3.004	Grade Ad	justinent	0.0
Roa	d Elevation:	0.0 feet			Lane Eq	uivalent	t Dista	nce (in	feet)		
F	Road Grade:	0.0%				Auto	s: 4	3.520			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 4	3.316			
	Right View:	90.0 degree	es		Heav	y Truck	s: 4	3.336			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fre	snel	Barrier Att	en Ber	m Atten
Autos:	68.46	0.70		3.0	30	-1.20		-4.67	0.0	000	0.000
Medium Trucks:	79.45	-15.61		8.0	33	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-13.32		8.0	33	-1.20		-5.38	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barri	er attei	nuation)						
VehicleType	Leq Peak Hou	r Leq Day	′	Leq E	vening	Leq	Night		Ldn	CI	VEL
Autos:	68	.8	66.6		65.0		61	.3	68.	9	69.4
Medium Trucks:	63	.5	61.5		57.2		56	i.5	63.	9	64.1
Heavy Trucks:	70		67.7		66.7		65		72.		72.6
Vehicle Noise:	73	.2	70.7		69.2		67	.3	74.	3	74.7
Centerline Distanc	e to Noise Co	ntour (in feet)					,		1	
			L	70	dBA	65	dBA		60 dBA		dBA
			Ldn:		107		23		496		1,069
			NEL:		113		24	3	523	ł .	1.127

	FHWA-RD	-77-108 HIGH	WAY N	OISE P	REDIC	TION M	ODEL (9/12/2	021)		
	io: OYCP ne: Sycamore C	anuan Blud					Name: ' umber:		Campus Up	oper Pla	te
	nt: n/o Cottonw					JOD IVE	uniber.	14004			
SITE	SPECIFIC IN	PUT DATA				N	OISE I	NODE	L INPUT	S	
Highway Data				Si	te Con	ditions (Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	17,415 vehicle	es					Autos:	15		
Peak Hour	Percentage:	9.80%			Me	dium Tru	icks (2 /	Axles):	15		
Peak H	lour Volume:	1,707 vehicles	S		He	avy Truc	ks (3+)	Axles):	15		
Ve	hicle Speed:	45 mph		1//	ehicle	Miv					
Near/Far Lai	ne Distance:	68 feet				icleType		Day	Evening	Night	Daily
Site Data						Α	utos:	71.9%	12.2%	15.9%	93.75%
Rai	rrier Heiaht:	0.0 feet			М	edium Tr	ucks:	75.3%	7.0%	17.7%	2.109
Barrier Type (0-W		0.0				Heavy Tr	ucks:	60.4%	12.0%	27.6%	4.15%
Centerline Dis	st. to Barrier:	55.0 feet		N	nise Si	ource Ele	evation	s (in f	oet)		
Centerline Dist.	to Observer:	55.0 feet		740	0136 01	Autos		000			
Barrier Distance	to Observer:	0.0 feet			Modiu	m Trucks		297			
Observer Height (Above Pad):	5.0 feet				/y Trucks		004	Grade Ad	iustman	t- 0.0
Pa	ad Elevation:	0.0 feet			rica	ry Trucks	. 0.	004	Orauc Au	justinem	. 0.0
Ros	ad Elevation:	0.0 feet		Lá	ne Eq	uivalent	Distan	ce (in	feet)		
F	Road Grade:	0.0%				Autos	: 43.	520			
	Left View:	-90.0 degree	es		Mediu	m Trucks	: 43.	316			
	Right View:	90.0 degree	es		Heav	y Trucks	: 43.	336			
FHWA Noise Mode	el Calculations	;									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresr	nel	Barrier Att	en Be	rm Atten
Autos:	68.46	0.20		0.80		-1.20		-4.67	0.0	000	0.00
Medium Trucks:	79.45	-16.29		0.83		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-13.33		0.83		-1.20		-5.38	0.0	000	0.00
Unmitigated Noise	e Levels (witho	ut Topo and	barrier	attenu	ation)						
	Leq Peak Hou			.eq Eve		Leq I	_		Ldn		NEL
Autos:	68.	-	66.1		64.5		60.8	-	68.4		68.
Medium Trucks:	62.	-	60.9		56.5		55.8	-	63.2	_	63.
Heavy Trucks:	70.	-	67.7		66.6		65.5	_	72.3	-	72.
Vehicle Noise:	73.	0	70.5		69.0		67.	1	74.	1	74.
Centerline Distanc	e to Noise Co	ntour (in feet))	70 45		65.0	/D /		SO dBA	-	i dBA
			Ldn:	70 dE		65.0					
			Lan: NEL:		104		223		481		1,036
		CI	VEL:		109		235		507		1,092

Wednesday, September 28, 2022

FHWA-F	D-77-108 HIGH\	VAY NOI	SE PREDIC	TION M	ODEL (9/1	2/2021)	
Scenario: HYP Road Name: Sycamore Road Segment: n/o Cottor					Name: We umber: 140	st Campus Up 164	per Plate
SITE SPECIFIC I	NPUT DATA					DEL INPUTS	3
Highway Data			Site Con	ditions	(Hard = 10	Soft = 15)	
Average Daily Traffic (Adt): Peak Hour Percentage:	20,241 vehicle 9.80%	S	Me	dium Tr	Aut ucks (2 Axle		
Peak Hour Volume:	1.984 vehicles				cks (3+ Axie	-,	
Vehicle Speed:	45 mph				אארייטן טאנ	.5). 10	
Near/Far Lane Distance:	68 feet		Vehicle				
	00 1001		Veh	icleType		, ,	Night Daily
Site Data						.9% 12.2%	15.9% 93.79%
Barrier Height:	0.0 feet			edium T		.3% 7.0%	17.7% 2.11%
Barrier Type (0-Wall, 1-Berm):	0.0		4	Heavy T	rucks: 60	.4% 12.0%	27.6% 4.09%
Centerline Dist. to Barrier:	55.0 feet		Noise So	ource El	evations (i	n feet)	
Centerline Dist. to Observer:	55.0 feet			Auto			
Barrier Distance to Observer:	0.0 feet		Mediu	m Truck			
Observer Height (Above Pad):	5.0 feet			vy Truck			ustment: 0.0
Pad Elevation:	0.0 feet			•			
Road Elevation:	0.0 feet		Lane Eq		Distance		
Road Grade:	0.0%			Auto.			
Left View:	-90.0 degree			m Truck	- 10.010		
Right View:	90.0 degree	S	Hear	y Truck	s: 43.336	3	
FHWA Noise Model Calculation							
VehicleType REMEL	Traffic Flow	Distanc		Road	Fresnel	Barrier Atte	
Autos: 68.4			0.80	-1.20	-4.		
Medium Trucks: 79.4			0.83	-1.20	-4.		
Heavy Trucks: 84.2			0.83	-1.20	-5.	38 0.0	0.000
VehicleType Leg Peak Ho				10-	Minht	Ldn	CNEL
		6.8	Evening 65.1	,	Night 61.5	Lan 69.1	
		1.5	57.2		56.5	63.9	
		8.2	67.2		66.1	72.8	
		1.1	69.6		67.7	74.7	
Centerline Distance to Noise C	ontour (in feet)						
		7	'0 dBA	65	dBA	60 dBA	55 dBA
	L	.dn:	114		245	528	1,138
		EL:	120		258	557	

Wednesday, September 28, 2022

	A-RD-	77-108 HIGH	WAY	NOISE	PREDIC	TION MO	DDEL (9/12/20	021)		
Scenario: E Road Name: Meridia Road Segment: n/o Val		,				Project I Job Nu			Campus Up	per Plat	е
SITE SPECIFI	CINP	UT DATA							L INPUT	s	
Highway Data					Site Con	ditions (Hard =	10, So	ft = 15)		
Average Daily Traffic (Ad	t): 1	2,903 vehicle	es					Autos:	15		
Peak Hour Percentag	e:	9.80%			Me	dium Tru	cks (2 A	(xles	15		
Peak Hour Volum	e: 1	,264 vehicle	S		He	avy Truci	ks (3+ A	(xles	15		
Vehicle Spee	d:	45 mph		7	Vehicle i	Mix					
Near/Far Lane Distant	e:	50 feet		F		icleType		Day	Evening	Night	Daily
Site Data						A	utos:	71.9%	12.2%	15.9%	94.089
Barrier Heigi	nt:	0.0 feet			М	edium Tru	icks:	75.3%	7.0%	17.7%	2.209
Barrier Type (0-Wall, 1-Berr		0.0			1	Heavy Tru	icks:	60.4%	12.0%	27.6%	3.739
Centerline Dist. to Barri	er:	56.0 feet		-	Noise So	urce Ele	vations	s (in fe	et)		
Centerline Dist. to Observ	er:	56.0 feet		Ī		Autos		000	.,		
Barrier Distance to Observ	er:	0.0 feet			Mediu	m Trucks		297			
Observer Height (Above Pa	d):	5.0 feet				y Trucks		004	Grade Ad	iustment	0.0
Pad Elevation	n:	0.0 feet									
Road Elevation	n:	0.0 feet		1	Lane Eq	uivalent i			eet)		
Road Grad	le:	0.0%				Autos		359			
Left Vie	W:	-90.0 degree				m Trucks		183			
Right Vie	W.	90.0 degree	es		Heav	y Trucks	50.	200			
FHWA Noise Model Calcula											
	- 1 -		Die	stance	Finito						
VehicleType REME	_	Traffic Flow	Dis		-	Road	Fresn	_	Barrier Att		
Autos: 6	3.46	-1.08	Di	-0.1	5	-1.20		-4.67	0.0	000	0.00
Autos: 6 Medium Trucks: 7	3.46 9.45	-1.08 -17.40	Dis	-0.1 -0.1	5 3	-1.20 -1.20		-4.67 -4.87	0.0	000	0.00
Autos: 66 Medium Trucks: 79 Heavy Trucks: 86	3.46 9.45 4.25	-1.08 -17.40 -15.11		-0.1 -0.1 -0.1	5 3 3	-1.20		-4.67	0.0	000	0.00
Autos: 6i Medium Trucks: 7! Heavy Trucks: 8 Unmitigated Noise Levels (i	3.46 9.45 1.25 vithou	-1.08 -17.40 -15.11 It Topo and	barri	-0.1 -0.1 -0.1 er atten	5 3 3 uation)	-1.20 -1.20 -1.20		-4.67 -4.87	0.0 0.0 0.0	000 000 000	0.00 0.00 0.00
Autos: 6i Medium Trucks: 7: Heavy Trucks: 8: Unmitigated Noise Levels (i VehicleType Leq Peak	3.46 9.45 1.25 vitho u Hour	-1.08 -17.40 -15.11 It Topo and Leq Day	barri	-0.1 -0.1 -0.1 er atten	5 3 3 uuation) vening	-1.20 -1.20 -1.20	light	-4.67 -4.87 -5.37	0.0 0.0 0.0	000 000 000	0.00 0.00 0.00
Autos: 6i Medium Trucks: 7! Heavy Trucks: 8: Unmitigated Noise Levels (i VehicleType Leq Peak	3.46 9.45 1.25 vithou Hour 66.0	-1.08 -17.40 -15.11 It Topo and Leq Day	barri , 63.9	-0.1 -0.1 -0.1 er atten	5 3 3 nuation) vening 62.2	-1.20 -1.20 -1.20	light 58.6	-4.67 -4.87 -5.37	0.0 0.0 0.0 <i>Ldn</i>	000 000 000 000	0.00 0.00 VEL 66.
Autos: 6i Medium Trucks: 7: Heavy Trucks: 8: Unmitigated Noise Levels (i VehicleType Leq Peak Autos: Medium Trucks:	3.46 9.45 4.25 withou Hour 66.0 60.7	-1.08 -17.40 -15.11 It Topo and Leq Day	barri 63.9 58.8	-0.1 -0.1 -0.1 er atten	5 3 3 3 vening 62.2 54.5	-1.20 -1.20 -1.20	light 58.6 53.7	-4.67 -4.87 -5.37	0.0 0.0 0.0 <i>Ldn</i> 66.2 61.	000 000 000 000	0.00 0.00 0.00 VEL 66. 61.
Autos: 6i Medium Trucks: 7! Heavy Trucks: 8: Unmitigated Noise Levels (i VehicleType Leq Peak	3.46 9.45 1.25 vithou Hour 66.0	-1.08 -17.40 -15.11 It Topo and Leq Day	barri , 63.9	-0.1 -0.1 -0.1 er atten	5 3 3 nuation) vening 62.2	-1.20 -1.20 -1.20	light 58.6	-4.67 -4.87 -5.37	0.0 0.0 0.0 <i>Ldn</i>	000 000 000 000 CI	0.00 0.00 0.00 VEL 66. 61. 69.
Autos: 6i Medium Trucks: 7: Heavy Trucks: 8: Unmitigated Noise Levels (i VehicleType Leq Peak Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	3.46 3.45 4.25 withou 66.0 60.7 67.8 70.5	-1.08 -17.40 -15.11 It Topo and Leq Day	63.9 58.8 64.9 68.0	-0.1 -0.1 -0.1 er atten	5 3 3 nuation) vening 62.2 54.5 63.9	-1.20 -1.20 -1.20	light 58.6 53.7 62.8	-4.67 -4.87 -5.37	0.0 0.0 0.0 <i>Ldn</i> 66.2 61.7 69.8	000 000 000 000 CI	0.00 0.00 0.00 VEL 66. 61. 69.
Autos: 6i Medium Trucks: 7: Heavy Trucks: 8: Unmitigated Noise Levels (i VehicleType Leq Peak Autos: Medium Trucks: Heavy Trucks:	3.46 3.45 4.25 withou 66.0 60.7 67.8 70.5	-1.08 -17.40 -15.11 It Topo and Leq Day	63.9 58.8 64.9 68.0	-0.1 -0.1 -0.1 -0.1 er atten Leq E	5 3 3 nuation) vening 62.2 54.5 63.9	-1.20 -1.20 -1.20	58.6 53.7 62.8 64.6	-4.67 -4.87 -5.37	0.0 0.0 0.0 <i>Ldn</i> 66.2 61.7 69.8	000 000 000 000 CI	0.00 0.00 0.00
Autos: 6i Medium Trucks: 7: Heavy Trucks: 8 Unmitigated Noise Levels (VehicleType Leq Peak Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	3.46 3.45 4.25 withou 66.0 60.7 67.8 70.5	-1.08 -17.40 -15.11 It Topo and Leq Day	63.9 58.8 64.9 68.0	-0.1 -0.1 -0.1 -0.1 er atten Leq E	5 3 3 wening 62.2 54.5 63.9 66.4	-1.20 -1.20 -1.20 -1.20	58.6 53.7 62.8 64.6	-4.67 -4.87 -5.37	0.0 0.0 0.0 <i>Ldn</i> 66.2 61.1 69.5	000 000 000 000 CI 22 1 5 5	0.000 0.000 0.000 VEL 66.4 69.3 71.4

Scenario									Campus Up	per Plat	e
	: Meridian Pl					Job N	lumber:	14064			
Road Segment	: n/o van Bu	ren Biva.									
	PECIFIC IN	IPUT DATA			0:4- 0				L INPUT	S	
Highway Data					Site Cor	aitions	(Hara				
Average Daily T	. ,	14,821 vehic	les					Autos.			
Peak Hour F		9.80%				dium Tr		,			
	ur Volume:	1,453 vehicle	es		He	avy Tru	cks (3+	Axles)	15		
	icle Speed:	45 mph		ľ	Vehicle	Иiх					
Near/Far Lan	e Distance:	50 feet		ľ	Veh	icleType	•	Day	Evening	Night	Daily
Site Data							Autos:	71.99	6 12.2%	15.9%	94.08%
Barr	ier Heiaht:	0.0 feet			М	edium T	rucks:	75.39	7.0%	17.7%	2.20%
Barrier Type (0-Wa		0.0				Heavy T	rucks:	60.49	12.0%	27.6%	3.73%
Centerline Dist		56.0 feet		ľ	Noise S	ource E	levatio	ns (in f	eet)		
Centerline Dist. to		56.0 feet		ľ		Auto		0.000	,		
Barrier Distance to	Observer:	0.0 feet			Mediu	m Truck		2.297			
Observer Height (A		5.0 feet				/y Truck		3.004	Grade Ad	iustment	: 0.0
	d Elevation:	0.0 feet		-		•					
	d Elevation:	0.0 feet		-	Lane Eq				feet)		
R	oad Grade:	0.0%				Auto		0.359			
	Left View:	-90.0 degre	ees			m Truck	00	0.183			
	Right View:	90.0 degre	ees		Hea	ry Truck	s: 50	0.200			
FHWA Noise Model	Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	snel	Barrier Att	en Bei	m Atten
Autos:	68.46	-0.4	В	-0.1	5	-1.20		-4.67	0.0	000	0.00
Medium Trucks:	79.45	-16.8	0	-0.1	3	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-14.5	0	-0.1	3	-1.20		-5.37	0.0	000	0.00
Unmitigated Noise											
.,	eq Peak Hou		-	Leq E	vening		Night		Ldn		NEL
Autos:	66		64.5		62.8		59		66.8	-	67.
Medium Trucks:	61		59.4		55.1		54		61.7		62.
Heavy Trucks:	68		65.5		64.5		63		70.1		70.
Vehicle Noise:	71	.1	68.6		67.0		65	.2	72.2	2	72.
Centerline Distance	to Noise Co	ontour (in fee	et)								
			Į	70	dBA	65	dBA		60 dBA		dBA
			Ldn:		78		16		364		784
			CNEL:		83		17		383		826

Scenario	v E i D					Drais -	Mam-	Most	Compus III	nor DI-4	
): E+P e: Meridian P	llean e					i ivame: lumber:		Campus Up	oper Plat	е
Road Segmen						JOD I	iuiiibei.	14004			
				1			10105	MODE	L INPUT		
Highway Data	PECIFIC II	NPUT DATA			Site Co	nditions				3	
Average Daily 1	raffic (Adt):	20.093 vehicle	es					Autos:			
Peak Hour I	, ,	9.80%	-		М	edium Tr	ucks (2				
	our Volume:	1.969 vehicle	s			eavy Tru		/			
	icle Speed:	45 mph					(
Near/Far Lar		50 feet			Vehicle	MIX hicleType		Day	Evening	Night	Daily
Site Data					VC		Autos:	71.9%	-	15.9%	,
	ios Hoisk*	0.0 feet		-	٨	леdium Т		75.3%		17.7%	
Barrier Type (0-Wa	rier Height:	0.0 reet				Heavy T	rucks:			27.6%	
Centerline Dis	. ,	56.0 feet									
Centerline Dist. t		56.0 feet			Noise S	ource E			eet)		
Barrier Distance t		0.0 feet				Auto		.000			
Observer Height (A		5.0 feet				um Truck		.297			
	d Elevation:	0.0 feet			Hea	vy Truck	s: 8	1.004	Grade Ad	iustment	0.0
Roa	d Elevation:	0.0 feet			Lane E	quivalen	t Distar	nce (in i	feet)		
F	oad Grade:	0.0%		1		Auto	s: 50).359			
	Left View:	-90.0 degre	es		Media	um Truck	s: 50	.183			
	Right View:	90.0 degre	es		Hea	vy Truck	s: 50	0.200			
FHWA Noise Mode	Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	e Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	68.46	0.89		-0.1	15	-1.20		-4.67	0.0	000	0.00
Medium Trucks:	79.45	-17.40		-0.1	13	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-13.56		-0.	13	-1.20		-5.37	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er attei	nuation)						
VehicleType	Leq Peak Ho	ur Leq Day	/	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	-	B.0	65.9		64.	_	60		68.1		68.
Medium Trucks:	-	0.7	58.8		54.	-	53		61.1		61
Heavy Trucks:		9.4	66.5		65.	-	64		71.1		71
Vehicle Noise:	7:	2.1	69.6		68.	1	66	.1	73.	1	73
Centerline Distanc	e to Noise C	ontour (in feet)			1		,			
			L	70	dBA		dBA		60 dBA		dBA
			Ldn:		91		19 20	-	421 444		90
			NEL:		96						95

Wednesday, September 28, 2022

FHWA-F	RD-77-108 HIGH	WAY NOI	SE PREDIC	CTION MO	ODEL	(9/12/2	021)		
Scenario: EAP Road Name: Meridian Road Segment: n/o Van E				Project i Job Nu			Campus U	pper Pla	te
SITE SPECIFIC I	INPUT DATA		Site Con	Neditions (L INPUT	s	
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume: Vehicle Speed:	9.80% 2,157 vehicles 45 mph		Ме	edium Tru eavy Truc	cks (2	Autos. Axles).	15		
Near/Far Lane Distance:	50 feet		Veh	icleType		Day	Evening	Night	Daily
Site Data Barrier Height: Barrier Type (0-Wall, 1-Berm):				A edium Tri Heavy Tri		71.9% 75.3% 60.4%	6 7.0%		1.48%
Centerline Dist. to Barrier:	56.0 feet		Noise St	ource Ele	vatio	ns (in f	eet)		
Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation:	0.0 feet 5.0 feet		Mediu	Autos m Trucks vy Trucks	: (: 2	0.000 2.297 3.004	Grade Ad	ljustmen	t: 0.0
Road Elevation:	0.0 feet		Lane Eq	uivalent	Distai	nce (in	feet)		
Road Grade: Left View: Right View:	-90.0 degree			Autos m Trucks vy Trucks	: 50).359).183).200			
FHWA Noise Model Calculatio	ns								
VehicleType REMEL	Traffic Flow	Distance	e Finite	Road	Fres	nel	Barrier Att	ten Be	rm Atten
Autos: 68.4	6 1.28	-(0.15	-1.20		-4.67	0.	000	0.000
Medium Trucks: 79.4 Heavy Trucks: 84.2			0.13 0.13	-1.20 -1.20		-4.87 -5.37		000 000	0.000
Unmitigated Noise Levels (wit	hout Topo and I	barrier att	tenuation)						
VehicleType Leq Peak H	our Leq Day	Leg	Evening	Leq N	light		Ldn	С	NEL
Autos:	68.4	66.3	64.6		61	.0	68.	5	69.0
Medium Trucks:		59.4	55.1		54	.3	61.	7	62.0
		66.9	65.9		64		71.	-	71.8
Vehicle Noise:	72.5	70.0	68.5		66	.5	73.	6	73.9
Centerline Distance to Noise	Contour (in feet)					1			
			70 dBA	65 a			60 dBA		dBA
	-	Ldn: IEL:	97 102		20 22	-	450 475		969 1,023

Wednesday, September 28, 2022

	FHWA-RE)-77-108 HIGH	WAY	NOISE	PREDIC	CTION M	ODEL	(9/12/2	021)		
Road Nar	rio: OYC me: Meridian Pk ent: n/o Van Bui	,						: West (Campus Up	per Pla	e
	SPECIFIC IN	PUT DATA			0:4- 0				L INPUT	S	
Highway Data					Site Cor	laitions	Hara				
Average Daily	. ,	15,703 vehicle	es					Autos:	15		
Peak Hou	r Percentage:	9.80%				edium Tru		,			
Peak I	Hour Volume:	1,539 vehicles	3		He	eavy Truc	cks (3+	Axles):	15		
V	ehicle Speed:	45 mph		H	Vehicle	Mix					
Near/Far La	ane Distance:	50 feet		ŀ		icleType	T	Dav	Evening	Niaht	Dailv
Site Data							Autos:	71.9%		15.9%	. ,
D.	arrier Height:	0.0 feet			М	edium Tı	ucks:	75.3%	7.0%	17.7%	2.20%
Barrier Type (0-V		0.0 reet				Heavy Tr	ucks:	60.4%	12.0%	27.6%	
** '	ist to Barrier:	56.0 feet		-							
Centerline Dist		56.0 feet		-	Noise S				eet)		
Barrier Distance		0.0 feet				Autos		0.000			
Observer Height		5.0 feet				m Trucks		2.297			
	Pad Elevation:	0.0 feet			Hea	vy Trucks	s: 8	3.004	Grade Ad	iustmen	: 0.0
	ad Elevation:	0.0 feet		ŀ	Lane Eq	uivalent	Dista	nce (in	feet)		
,,,	Road Grade:	0.0%		ı		Autos		0.359	,		
	Left View:	-90.0 degree	e e		Mediu	m Trucks		0.183			
	Right View:	90.0 degree				vy Trucks		0.200			
			,		7700	, , ,, ao.,,	J. O.	J.200			
FHWA Noise Mod											
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fres		Barrier Att		m Atten
Autos.		-0.23		-0.1	-	-1.20		-4.67		000	0.000
Medium Trucks.		-16.55		-0.1	-	-1.20		-4.87		000	0.000
Heavy Trucks.	84.25	-14.25		-0.1	3	-1.20		-5.37	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	er atter	nuation)						
VehicleType	Leq Peak Hou			Leq E	vening		Night		Ldn		NEL
Autos.			64.7		63.1		59		67.0	-	67.5
Medium Trucks.			59.6		55.3		54		62.0	-	62.2
Heavy Trucks.			65.8		64.8		63		70.4		70.7
Vehicle Noise.	: 71	.4	68.9		67.3		65	.4	72.4	1	72.8
Centerline Distan	ce to Noise Co	ntour (in feet)									
				70	dBA	65 (dBA	6	60 dBA	55	dBA
			Ldn:		81		17	5	378		814
		CI	VEL:		86		18	5	399		859

	FHWA-RI	D-77-108 HIGH	IWAY N	OISE F	PREDIC	TION	MODEL (9	/12/2	021)		
Scenari Road Name Road Segmen	e: Meridian Pl						t Name: \ lumber: 1		Campus Up	per Pl	ate
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				S	ite Cor	ditions	(Hard =	10, S	oft = 15)		
Peak H	Traffic (Adt): Percentage: our Volume: hicle Speed:	19,422 vehicle 9.80% 1,903 vehicle 45 mph			He	avy Tru	rucks (2 A icks (3+ A	,	15		
Near/Far Lar		50 feet		V	ehicle						
	ie Distance.	50 leet			Veh	icleType		Day	Evening	Night	Daily
Site Data Barrier Type (0-W	rier Height: all, 1-Berm):	0.0 feet 0.0				edium 1 Heavy 1	rucks:	71.9% 75.3% 60.4%	7.0%	15.9° 17.7° 27.6°	% 2.20%
Centerline Dis	t. to Barrier:	56.0 feet		N	oise S	ource E	levations	(in f	eet)		
Roa	to Observer:	56.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degree 90.0 degree		Li	Hear ane Eq Mediu	Auto m Truck ry Truck uivalen Auto m Truck ry Truck	(s: 2.2 (s: 8.0 t Distance (s: 50.3 (s: 50.1	297 004 e (in 359	Grade Adj	iustme	nt: 0.0
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Att	en B	erm Atten
Autos:	68.46	0.69		-0.15		-1.20		-4.67	0.0	000	0.000
Medium Trucks: Heavy Trucks:	79.45 84.25			-0.13 -0.13		-1.20 -1.20		-4.87 -5.37		000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier a	attenu	ation)						
	Leg Peak Hou			eq Eve	_	Leq	Night		Ldn		CNEL
Autos:	67		65.7		64.0		60.4		67.9	9	68.4
Medium Trucks:	62	2.5	60.6		56.3		55.5		62.9	9	63.2
Heavy Trucks:	69	0.6	66.7		65.7		64.6		71.3	3	71.6
Vehicle Noise:	72	2.3	69.8		68.2		66.3		73.4	1	73.7
Centerline Distanc	e to Noise Co	ontour (in feet)								
				70 dE	BA	65	dBA	-	60 dBA	5	5 dBA
			Ldn:		94		202		436		938
		С	NEL:		99		213		459		989

FHWA-	RD-77-108 H	HIGHWA	y noise	PREDIC	TION MO	DEL (S	9/12/20	21)		
Scenario: OYCP Road Name: Meridian Road Segment: n/o Van I					Project N Job Nur			ampus Up	per Plat	е
SITE SPECIFIC	INPUT DA	TA						LINPUT	S	
Highway Data				Site Con	ditions (H	lard =	10, So	ft = 15)		
Average Daily Traffic (Adt)	22,893 ve	ehicles				-	Autos:	15		
Peak Hour Percentage	9.80%			Me	dium Truc	ks (2 A	xles):	15		
Peak Hour Volume	2,244 ve	hicles		He	avy Truck	s (3+ A	xles):	15		
Vehicle Speed	45 mp	oh	ŀ	Vehicle I	Лix					
Near/Far Lane Distance	50 fee	et			cleType		Day	Evening	Night	Daily
Site Data					Au	tos:	71.9%	12.2%	15.9%	95.049
Barrier Height	0.0 fe	eet		Me	edium Tru	cks:	75.3%	7.0%	17.7%	1.519
Barrier Type (0-Wall, 1-Berm)				F	leavy Tru	cks:	60.4%	12.0%	27.6%	3.459
Centerline Dist. to Barrier	56.0 fe	eet	1	Noise So	urce Elev	ations	(in fe	et)		
Centerline Dist. to Observer	56.0 fe	eet	ŀ	110,00 00	Autos:		000			
Barrier Distance to Observer	0.0 fe	eet		Mediu	n Trucks:		97			
Observer Height (Above Pad)	5.0 fe	eet		Heav	y Trucks:	8.0	004	Grade Ad	ustment	0.0
Pad Elevation					•					
Road Elevation		eet		Lane Equ	uivalent D			eet)		
Road Grade					Autos:	50.3				
Left View					n Trucks:	50.1				
Right View	90.0 de	egrees		Heav	y Trucks:	50.2	200			
FHWA Noise Model Calculation	ons		· ·							
VehicleType REMEL	Traffic Fi		istance	Finite		Fresn		Barrier Atte		m Atten
Autos: 68.4		1.45	-0.1		-1.20		-4.67		000	0.00
Medium Trucks: 79.4		6.55	-0.		-1.20		-4.87		000	0.00
Heavy Trucks: 84.:		2.95	-0.		-1.20		-5.37	0.0	000	0.00
Unmitigated Noise Levels (wi			_							
VehicleType Leq Peak F		Day		vening	Leq Ni	-		Ldn		NEL
	68.6 61.6	66.4 59.6		64.7 55.3		61.1 54.6		68.7 62.0		69. 62.
	61.6 70.0	67.1		55.3 66.1		64.9		71.7		72.
,	70.0 72.7	70.2		68.7		66.7		73.8		74
			•	00.7		00.7		70.0	,	7-7.
Centerline Distance to Noise	Contour (in	reet)	70	dBA	65 dE	RA	6	0 dBA	55	dBA
		Ldn		100	00 02	215	_	463		997

Wednesday, September 28, 2022

	FHWA-RE	0-77-108 HIGHV	VAY NOI	SE PREDIC	CTION M	ODEL (9/12/2	2021)		
Scenario: Road Name: Road Segment:	: Meridian Pl					Name: umber:		Campus Up I	per Pla	ate
	PECIFIC IN	PUT DATA						EL INPUT	S	
Highway Data				Site Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily Tr Peak Hour P Peak Hot	. ,	26,612 vehicles 9.80% 2,608 vehicles	3		edium Tru eavy Truc	ıcks (2	/	: 15		
Vehi	icle Speed:	45 mph		Vehicle	Miv					
Near/Far Lane	e Distance:	50 feet			icleType		Dav	Evening	Night	Dailv
Site Data				7011		Autos:	71.99	-	15.99	. ,
		0.0 feet		М	edium Tı		75.39		17.79	
Barrier Type (0-Wai	ier Height:	0.0 feet 0.0			Heavy Ti		60.49		27.69	
Centerline Dist.	. ,	56.0 feet								
Centerline Dist. to		56.0 feet		Noise S				'eet)		
Barrier Distance to		0.0 feet			Auto	0.	000			
Observer Height (A		5.0 feet			m Truck		297			
	Elevation:	0.0 feet		Hear	vy Truck	s: 8.	004	Grade Ad	iustmer	nt: 0.0
Road	Elevation:	0.0 feet		Lane Eq	uivalent	Distan	ce (in	feet)		
	oad Grade:	0.0%		·	Auto	s: 50	359	,		
	Left View:	-90.0 degrees		Mediu	m Trucks	s: 50.	183			
F	Right View:	90.0 degrees		Hear	vy Truck:	s: 50	200			
FHWA Noise Model	Calculation	s								
VehicleType	REMEL	Traffic Flow	Distance	e Finite	Road	Fresi	nel	Barrier Att	en Be	erm Atten
Autos:	68.46	2.10	-().15	-1.20		-4.67	0.0	000	0.000
Medium Trucks:	79.45	-15.62	-(0.13	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-12.24	-(0.13	-1.20		-5.37	0.0	000	0.000
Unmitigated Noise I	Levels (with	out Topo and b	arrier att	enuation)						
VehicleType L	eq Peak Hou	r Leq Day	Leg	Evening	Leq	Night		Ldn	(CNEL
Autos:	69	.2 6	7.1	65.4	. —	61.	3	69.4		69.8
Medium Trucks:	62	.5 6	0.6	56.3		55.	5	62.9	9	63.2
Heavy Trucks:	70		7.8	66.8		65.	-	72.4		72.7
Vehicle Noise:	73	.4 7	0.9	69.4		67.	4	74.	5	74.8
Centerline Distance	to Noise Co	entour (in feet)				15. 4			1 -	5 1D 4
		,		'0 dBA	65	dBA		60 dBA	_	5 dBA
		_	dn:			239		515		1,110
		CN	EL.	117		252		544		1,171

inesday, September 28, 2022

Scenario: E Project Name: West Campus Upper Plate Job Number: 14064 Job Number: 14065 Job Number
Auton Auto
Average Daily Traffic (Adt): 9,913 vehicles Peak Hour Percentage: 9,80% Medium Trucks: (2 Axles): 15 Heavy Trucks (3 Axles): 15
Peak Hour Percentage: 9.80% Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15
Peak Hour Volume: Vehicle Speed: 25 mph 36 feet Vehicle Type Day Evening Night Day Stee Data Near/Far Lane Distance: 36 feet Vehicle Mix Vehicle Type Day Evening Night Day Steen Night Day Steen Night Day Steen Night Day Steen Night Night Day Night Ni
Vehicle Speed: Near/Far Lane Distance: 36 feet Vehicle Mix Vehicle Type Day Evening Night Day Site Data Name of the property Night Day Night Day
Near/Far Lane Distance: 36 feet Vehicle Type Day Evening Night Day
Near/Far Lane Distance: 36 feet VehicleType Day Evening Night Day
Autos: 71.9% 12.2% 15.9% 94.
Barrier Type (C-Wall, 1-Berm): 0.0 teet Centerline Dist. to Barrier: 44.0 feet Barrier Dist. to Observer: 44.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Heavy Trucks: 8.04% 12.0% 27.6% 3. Noise Source Elevations (in feet) Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0 Lane Equivalent Distance (in feet) Lane Equivalent Distance (in feet)
Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 44.0 feet Centerline Dist. to Observer: 45.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Grade: 0.00 feet Road Grade: 0.00 feet Autos: 40.460
Centerline Dist. to Observer: 44.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Grade: 0.0% Noise Source Elevations (in reet) Medium Trucks: 0.00 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0 Lane Equivalent Distance (in feet) Autos: 40.460
Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Grade: 0.0% Road Grade: 0.0% Autos: 0.00 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0 Lane Equivalent Distance (in feet) Autos: 40.460
Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Pad Equivalent Distance (in feet) Lane Equivalent Distance (in feet) Autos: 40.460
Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Heavy Trucks: 8.004 Grade Agjustment: 0.0 Lane Equivalent Distance (in feet) Autos: 40.460
Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Autos: 40.460
Road Grade: 0.0% Autos: 40.460
Left View: -90.0 degrees Medium Trucks: 40.241
Right View: 90.0 degrees Heavy Trucks: 40.262
FHWA Noise Model Calculations
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm At
Autos: 58.73 0.32 1.28 -1.20 -4.61 0.000 0
Medium Trucks: 70.80 -15.99 1.31 -1.20 -4.87 0.000 0
Heavy Trucks: 77.97 -13.70 1.31 -1.20 -5.50 0.000 0
Unmitigated Noise Levels (without Topo and barrier attenuation)
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL
Autos: 59.1 57.0 55.3 51.7 59.3
Medium Trucks: 54.9 53.0 48.7 47.9 55.3
Heavy Trucks: 64.4 61.5 60.5 59.3 66.1
Vehicle Noise: 65.9 63.2 61.8 60.3 67.2
Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA
Ldn: 29 62 133
CNEL: 30 65 140

FHWA-F	D-77-108 HIGH	IWAY N	DISE PREDI	CTION N	10DEL (9/12/	2021)						
Scenario: EA Road Name: Day St. Road Segment: n/o Alessa	andro Blvd.		Project Name: West Campus Upper Plate Job Number: 14064									
SITE SPECIFIC I	NPUT DATA		211 2			EL INPUTS						
Highway Data Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume: Vehicle Speed: Near/Far Lane Distance:	11,387 vehicl 9.80% 1,116 vehicle 25 mph 36 feet		М	edium Ti eavy Tru	Auto ucks (2 Axles	s: 15 :): 15 :): 15						
	36 ieet		Ve	hicleType		-	Night Daily					
Site Data Barrier Height: Barrier Type (0-Wall, 1-Berm):	0.0 feet 0.0		٨	Medium 1 Heavy 1		% 7.0%	15.9% 94.08% 17.7% 2.20% 27.6% 3.73%					
Centerline Dist. to Barrier: Centerline Dist. to Observer:	44.0 feet 44.0 feet		Noise S	ource E	levations (in	feet)						
Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation:	0.0 feet 5.0 feet 0.0 feet			um Truck vy Truck	s: 2.297	Grade Adjı	ustment: 0.0					
Road Elevation: Road Grade: Left View: Right View:	0.0 feet 0.0% -90.0 degre 90.0 degre		Media	Autos: 40.460 Medium Trucks: 40.241 Heavy Trucks: 40.262								
FHWA Noise Model Calculation	ns											
VehicleType REMEL Autos: 58.7	Traffic Flow 0.93	Dista	nce Finite	-1.20	Fresnel -4.6	Barrier Atte 0.00						
Medium Trucks: 70.8 Heavy Trucks: 77.9			1.31 1.31	-1.20 -1.20	-4.8 -5.5							
Unmitigated Noise Levels (with	hout Topo and	barrier	attenuation)									
VehicleType Leq Peak Ho	our Leq Day	/ L	eq Evening	Leq	Night	Ldn	CNEL					
	9.7 5.5	57.6 53.6	55.9 49.1	-	52.3 48.5	59.9 55.9	60.3 56.3					
	5.0	62.1	61.	-	48.5 59.9	55.9 66.7	67.					
· · · · · · · · · · · · · · · · · · ·	6.5	63.8	62.5		60.9	67.8	68.					
Centerline Distance to Noise C	Contour (in feet)										
		L	70 dBA		dBA	60 dBA	55 dBA					
	С	Ldn: NEL:	31 33		68 71	146 153	314 331					

Average Daily Traffic (Adt): 10,579 vehicles Peak Hour Percentage: 9.80% Peak Hour Volume: 1,037 vehicles Vehicle Speed: 25 mph Near/Far Lane Distance: 36 feet Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Type Day Evening	Night Daily 15.9% 94.45 17.7% 2.06 27.6% 3.49
SITE SPECIFIC INPUT DATA NOISE MODEL INPUTS	Night Daily 15.9% 94.45 17.7% 2.06
	Night Daily 15.9% 94.45 17.7% 2.06
Average Daily Traffic (Adt): 10,579 vehicles Peak Hour Percentage: 9.80% Medium Trucks (2 Axles): 15	15.9% 94.45 17.7% 2.06
Peak Hour Percentage: 9.80% Peak Hour Volume: 1,037 vehicles Vehicle Speed: 25 mph Near/Far Lane Distance: 36 feet Wehicle Speed: 36 feet Wehicle Mix	15.9% 94.45 17.7% 2.06
Peak Hour Volume: 1,037 vehicles Heavy Trucks (3+ Axles): 15	15.9% 94.45 17.7% 2.06
Vehicle Speed: 25 mph Near/Far Lane Distance: 36 feet Vehicle Mix VehicleType Day Evening 1	15.9% 94.45 17.7% 2.06
Near/Far Lane Distance: 36 feet Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Type Day Evening 1	15.9% 94.45 17.7% 2.06
Near/Far Lane Distance: 36 feet VehicleType Day Evening	15.9% 94.45 17.7% 2.06
Autos: 71.9% 12.2%	15.9% 94.45 17.7% 2.06
Barrier Type (O-Wall, 1-Berm): 0.0 Heavy Trucks: 60.4% 12.0%	
Barrier Type (0-Wall, 1-Berm): 0.0 Heavy Trucks: 60.4% 12.0%	27.6% 3.49
Centerline Dist. to Barrier:	
Centerline Dist. to Observer: 44.0 feet Autos: 0.000 Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297	
Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297	
Observer Height (Above Pad): 5.0 feet Medium Trucks: 2.297	
Pad Elevation: 0.0 feet Heavy Trucks: 8.004 Grade Adju	ustment: 0.0
Road Elevation: 0.0 feet Lane Equivalent Distance (in feet)	
Road Grade: 0.0% Autos: 40.460	
Left View: -90.0 degrees Medium Trucks: 40.241	
Right View: 90.0 degrees Heavy Trucks: 40.262	
FHWA Noise Model Calculations	
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atter	n Berm Atter
Autos: 58.73 0.62 1.28 -1.20 -4.61 0.00	0.00
Medium Trucks: 70.80 -15.99 1.31 -1.20 -4.87 0.00	0.00
Heavy Trucks: 77.97 -13.70 1.31 -1.20 -5.50 0.00	0.00
Unmitigated Noise Levels (without Topo and barrier attenuation)	
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn	CNEL
Autos: 59.4 57.3 55.6 52.0 59.6	60
Medium Trucks: 54.9 53.0 48.7 47.9 55.3	
Heavy Trucks: 64.4 61.5 60.5 59.3 66.1	
Vehicle Noise: 65.9 63.3 61.9 60.3 67.3	67
Centerline Distance to Noise Contour (in feet)	55 104
70 dBA 65 dBA 60 dBA 60 dBA 60 dBA 60 dBA	55 dBA
Ldn: 29 62 134 CNEL: 30 65 141	28
	30

Wednesday, September 28, 2022

	FHWA-RE	0-77-108 HIGH	WAY N	IOISE	PREDIC	TION M	ODEL	(9/12/2	021)				
Road Nam	io: EAP ne: Day St. nt: n/o Alessan	idro Blvd.		Project Name: West Campus Upper Plate Job Number: 14064									
SITE	SPECIFIC IN	PUT DATA				N	OISE	MODE	L INPUT	s			
Highway Data					Site Con	ditions	(Hard	= 10, S	oft = 15)				
Average Daily	Traffic (Adt):	12,053 vehicle	S					Autos.	15				
Peak Hour	Percentage:	9.80%			Me	dium Tro	icks (2	Axles).	15				
Peak F	lour Volume:	1,181 vehicles			He	avy Truc	cks (3+	Axles).	15				
Ve	hicle Speed:	25 mph		,	/ehicle l	Miv							
Near/Far La	ne Distance:	36 feet		F.		icleType	1	Day	Evening	Night	Daily		
Site Data							Autos:	71.99	-	15.9%	,		
	rrier Heiaht:	0.0 feet			Me	edium Tı		75.39		17.7%			
Barrier Type (0-W		0.0 feet			F	Heavy Ti	ucks:	60.49	12.0%	27.6%	3.52%		
Centerline Di	. ,	44.0 feet		L.									
Centerline Dist		44.0 feet		1	Voise Sc			- 1	eet)				
Barrier Distance		0.0 feet				Auto		0.000					
Observer Height		5.0 feet				m Truck		2.297	0	·			
P		Heav	y Truck	s: 8	3.004	Grade Ad	justmen	: 0.0					
Pad Elevation: 0.0 feet Road Elevation: 0.0 feet					ane Eq	uivalent	Dista	nce (in	feet)				
Road Grade: 0.0%						Auto	s: 40	0.460					
	Left View:	-90.0 degree	s		Mediui	m Trucks	s: 40	0.241					
	Right View:	90.0 degree	S		Heav	y Truck	s: 40	0.262					
FHWA Noise Mod	el Calculation:												
VehicleType	REMEL	Traffic Flow	Dista		Finite		Fres		Barrier Att		rm Atten		
Autos:	58.73	1.19		1.2	-	-1.20		-4.61		000	0.000		
Medium Trucks:	70.80	-15.39		1.3		-1.20		-4.87		000	0.000		
Heavy Trucks:	77.97	-13.10		1.3		-1.20		-5.50	0.0	000	0.000		
Unmitigated Noise						100	Nicolat		Ldn		NFL.		
VehicleType Autos:	Leq Peak Hou		57.9	Ley El	ening 56.2		Night 52	6	Lan 60.		NEL 60.6		
Medium Trucks:	55		53.6		49.3			.5	55.5	•	56.3		
Heavy Trucks:	65		32.1		61.1				66.	-	67.0		
Vehicle Noise:										68.2			
Centerline Distan	ce to Noise Co	ntour (in feet)											
		-		70 c	iBA	65	dBA		60 dBA	55	dBA		
			Ldn:		32		6	8	147		316		
	CNEL:					33 72 154				333			

Wednesday, September 28, 2022

	FHWA-RI	D-77-108 HIGH	IWAY	' NOISE	E PREDIC	TION N	ODEL (9/12/2	021)		
Road Nan	rio: OYC ne: Day St. nt: n/o Alessar	ndro Blvd.					t Name: \ lumber:		Campus Up	per Pla	ate
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Cor	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	12,893 vehicle	es					Autos:	15		
Peak Hour	Percentage:	9.80%			Me	dium Tr	rucks (2 /	(xles	15		
Peak F	lour Volume:	1,264 vehicle	S		He	avy Tru	cks (3+ A	(xles	15		
Ve	ehicle Speed:	25 mph			Vehicle	Mix					
Near/Far La	ne Distance:	36 feet				icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	71.9%	12.2%	15.99	6 94.08%
Ba	rrier Height:	0.0 feet			М	edium T	rucks:	75.3%	7.0%	17.79	6 2.20%
Barrier Type (0-W		0.0				Heavy T	rucks:	60.4%	12.0%	27.69	6 3.73%
Centerline Di	ist. to Barrier:	44.0 feet		1	Noise S	urco F	levation	e (in fa	not)		
Centerline Dist.	to Observer:	44.0 feet		1	140/36 01	Auto		000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		297			
Observer Height	(Above Pad):	5.0 feet				/y Truck		004	Grade Ad	iustmer	t- 0.0
Pad Elevation: 0.0 feet										dourror	1. 0.0
Ro		Lane Eq	uivalen	t Distand	e (in :	feet)					
	Road Grade:	0.0%				Auto		460			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 40.	241			
	Right View:	90.0 degre	es		Hea	y Truck	s: 40.	262			
FHWA Noise Mod											
VehicleType	REMEL	Traffic Flow	Di	stance		Road	Fresr	_	Barrier Att		erm Atten
Autos:				1.2		-1.20		-4.61		000	0.000
Medium Trucks:				1.3		-1.20		-4.87		000	0.000
Heavy Trucks:	77.97	-12.56		1.3	31	-1.20		-5.50	0.0	000	0.000
Unmitigated Nois			barri	er atte	nuation)						
VehicleType	Leq Peak Hou			Leq E	vening		Night		Ldn		CNEL
Autos:).3	58.1		56.5		52.8		60.4		60.9
Medium Trucks:		5.1	54.1		49.8		49.1		56.5	-	56.7
Heavy Trucks:		5.5	62.6		61.6		60.5		67.2		67.5
Vehicle Noise:	67	7.0	64.4		63.0		61.4	ŀ	68.3	3	68.7
Centerline Distant	ce to Noise Co	ontour (in feet)				-				
			Į	70	dBA	65	dBA	6	60 dBA		5 dBA
			Ldn:		34		74		158		341
		C	NEL:		36		77		167		359

Scenari	ia: UV					Drainat	Nome	Most C	Campus Up	nor Diet		
Road Nam							wame: lumber:		ampus up	per Piat	е	
	e. Day St. nt: n/o Alessand	dro Blud				JOD IN	umber.	14004				
SITE : Highway Data	SPECIFIC IN	PUT DATA		-	ita Can	ditions			L INPUT	5		
· ·				3	ne con	uitions	•					
Average Daily	. ,	15,094 vehicle	:S					Autos:	15			
	Percentage:	9.80%				dium Tr		,	15			
		1,479 vehicles	•		He	avy Tru	CKS (3+)	Axies):	15			
	hicle Speed:	25 mph		V	ehicle l	Иiх						
Near/Far Lai	ne Distance:	36 feet			Veh	icleType	,	Day	Evening	Night	Daily	
Site Data							Autos:	71.9%	12.2%	15.9%	94.08%	
Bar	rier Height:	0.0 feet			М	edium T	rucks:	75.3%	7.0%	17.7%	2.20%	
Barrier Type (0-W		0.0			- 1	Heavy T	rucks:	60.4%	12.0%	27.6%	3.73%	
Centerline Dis	st. to Barrier:	44.0 feet			oico S	ource E	ovation	c (in fo	nof)			
Centerline Dist.	to Observer:	44.0 feet		74	Uise st	Auto		000	ei)			
Barrier Distance	to Observer:	0.0 feet				m Truck	0.	297				
Observer Height (Above Pad):	5.0 feet				n Truck v Truck		004	Grade Adj	iietmant	. 0.0	
Pa		пеач	ry Truck	s. o.	004	Orace Au	asancin	0.0				
Roa	L	ane Eq	uivalen	Distan	ce (in f	eet)						
F	Road Grade:	0.0%				Auto	s: 40	460				
	Left View:	-90.0 degree	!S		Medium Trucks: 40.241							
	Right View:	90.0 degree	es.		Heav	y Truck	s: 40	262				
FHWA Noise Mode	el Calculations											
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresi	nel	Barrier Atte	en Ber	m Atten	
Autos:	58.73	2.15		1.28		-1.20		-4.61	0.0	000	0.00	
Medium Trucks:	70.80	-14.17		1.31		-1.20		-4.87	0.0	000	0.00	
Heavy Trucks:	77.97	-11.87		1.31		-1.20		-5.50	0.0	000	0.00	
Unmitigated Noise			barriei	r attenu	ıation)							
	Leq Peak Hour		_	Leq Eve			Night		Ldn		VEL	
Autos:	61.	-	58.8		57.1		53.		61.1		61.0	
Medium Trucks:	56.		54.8		50.5		49.	-	57.2	-	57.4	
Heavy Trucks: Vehicle Noise:	66.		63.3 65.1		62.3		61.		67.9		68.	
Venicie Noise:					63.7		62.	1	69.0)	69.4	
	o to Noise Co	ntour (in feet)										
Centerline Distanc	e to 110/30 00/	` '		70 4	DΛ	CE						
Centerline Distanc	e to Noise co.	` '	Ldn:	70 di	BA 38	65	dBA 82		0 dBA 176	55	dBA 379	

0	o: OYCP					Danie of I		Mt-C		DI-4	
Scenario Road Name						Job Nu			ampus Up	per Plat	е
Road Name Road Segmen		odro Blud				JOD IVU	imber:	14064			
				_							
SITE S Highway Data	PECIFIC IN	IPUT DATA		Ci.	to Con	ditions (L INPUT	S	
				311	te Con	uitions (i					
Average Daily 1	. ,	13,559 vehicle	:S					Autos:	15		
Peak Hour I	-	9.80%				dium Tru		,	15		
	our Volume:	1,329 vehicles	3		He	avy Truci	ks (3+ /	Axles):	15		
	icle Speed:	25 mph		Ve	hicle	Vix					
Near/Far Lar	e Distance:	36 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	71.9%	12.2%	15.9%	94.379
Ban	rier Height:	0.0 feet			М	edium Tru	ıcks:	75.3%	7.0%	17.7%	2.099
Barrier Type (0-Wa	-	0.0			1	Heavy Tru	ıcks:	60.4%	12.0%	27.6%	3.549
Centerline Dis	t. to Barrier:	44.0 feet		Ne	sien S	ource Ele	vation	c (in fo	of)		
Centerline Dist. t	o Observer:	44.0 feet		740	//Se 30	Autos		000	ei)		
Barrier Distance t	o Observer:	0.0 feet			Modiu	m Trucks		297			
Observer Height (A	Above Pad):	5.0 feet				ry Trucks		004	Grade Ad	iustmant	. 0 0
Pa	d Elevation:	0.0 feet			rica	y mucho.	. 0.	004	0,440,714,	doumont	. 0.0
Roa	d Elevation:	La	ne Eq	uivalent i	Distan	ce (in f	eet)				
F	Road Grade:	0.0%				Autos		460			
	Left View:	-90.0 degree	es .			m Trucks		241			
	Right View:	90.0 degree	es.		Heav	y Trucks	: 40.	262			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar		Finite	Road	Fresr		Barrier Att		m Atten
Autos:	58.73	1.70		1.28		-1.20		-4.61		000	0.00
Medium Trucks:	70.80			1.31		-1.20		-4.87		000	0.00
Heavy Trucks:	77.97	-12.56		1.31		-1.20		-5.50	0.0	000	0.00
Unmitigated Noise	•		$\overline{}$,			
	Leq Peak Hou		_	eq Eve		Leq N	_		Ldn	_	NEL
Autos:	60		58.4		56.7		53.1		60.7		61.
Medium Trucks:	56		54.1		49.8		49.1		56.5	-	56.
Heavy Trucks:	65		62.6		61.6		60.5		67.2		67.
	67		64.4		63.0		61.5)	68.4	+	68.
Vehicle Noise:											
	e to Noise Co	ontour (in feet)		70 45	24	65.4	RΔ	6	O dRA	55	dRΔ
Centerline Distance	e to Noise Co	, ,	l dn:	70 dB	34	65 d	BA 74	6	0 dBA 159		dBA 343

Wednesday, September 28, 2022

FHW	A-RD-7	7-108 HIGHV	/AY N	IOISE I	PREDIC	TION N	IODEL (9	/12/2	021)	
Scenario: HYP Road Name: Day S Road Segment: n/o Ale		o Blvd.					Name: W lumber: 1		Campus Upp	er Plate
SITE SPECIFI	CINP	UT DATA				N	IOISE M	ODE	L INPUTS	
Highway Data				S	ite Con	ditions	(Hard = 1)	0, S	oft = 15)	
Average Daily Traffic (Ai Peak Hour Percenta Peak Hour Volun Vehicle Spe	ye: 9 ne: 1,	5,759 vehicles 9.80% 544 vehicles 25 mph	i	V		avy Tru	A ucks (2 A cks (3+ A	,	15	
Near/Far Lane Distan	e:	36 feet		F.		icleType		Day	Evening 1	light Daily
Site Data Barrier Heig Barrier Type (0-Wall, 1-Ben		0.0 feet			М		Autos: 7 rucks: 7	1.9% 5.3% 0.4%	12.2% 7.0%	15.9% 94.33% 17.7% 2.10% 27.6% 3.57%
Centerline Dist. to Barr	,	44.0 feet			-: 0	5	evations	/i #	41	
Centerline Dist. to Observ Barrier Distance to Observ Observer Height (Above Pa Pad Elevati Road Elevati Road Gra Left Vie	er: d): on: on: de:	44.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degrees			Mediu Heav ane Eq Mediu	etment: 0.0				
Right Vie	W.	90.0 degrees	•		пеач	y Truck	s: 40.2	02		
FHWA Noise Model Calcula	tions									
VehicleType REME		raffic Flow	Dista		Finite		Fresne		Barrier Atten	
Medium Trucks: 7	8.73 0.80 7.97	2.35 -14.17 -11.87		1.28 1.31 1.31		-1.20 -1.20 -1.20	-	4.61 4.87 5.50	0.00 0.00 0.00	0.000
*						-1.20		0.00	0.00	0.000
Unmitigated Noise Levels (10-	Minht		Ldn	CNEL
VehicleType Leq Peal Autos:	61.2	Leq Day	9.0	Leq Ev	ening 57.3	Leq	Night 53.7		61.3	61.8
Medium Trucks:	56.7	-	9.0 4.8		50.5		49.8		57.2	57.4
Heavy Trucks:	66.2		3.3		62.3		61.2		67.9	68.2
Vehicle Noise:	67.7		5.1		63.7		62.1		69.1	69.4
Centerline Distance to Nois	e Cont	our (in feet)								
		(/1001)		70 d	BA	65	dBA	(60 dBA	55 dBA
		L	dn:		38		82		177	381
		CN	EL:		40		86		186	401

Wednesday, September 28, 2022

	FHWA-R	D-77-108 HIGH	WAY	NOISI	E PREDIC	TION M	ODEL (9/12/20	021)		
	rio: E ne: Frederick s ent: n/o Cactus						Name: \ umber:		Campus Up	per Pla	ite
	SPECIFIC II	IPUT DATA							L INPUT	s	
Highway Data					Site Con	ditions	(Hard =	10, So			
Average Daily	Traffic (Adt):	10,147 vehicle	es					Autos:	15		
Peak Hou	r Percentage:	9.80%				dium Tri	,	,	15		
Peak I	Hour Volume:	994 vehicle	S		He	avy Truc	cks (3+ A	(xles	15		
V	ehicle Speed:	40 mph			Vehicle	Mix					
Near/Far La	ane Distance:	36 feet				icleType		Day	Evening	Night	Daily
Site Data								71.9%	-	15.99	_
Ba	arrier Heiaht:	0.0 feet			М	edium Ti	rucks:	75.3%	7.0%	17.79	6 2.20%
Barrier Type (0-V		0.0			1	Heavy Ti	rucks:	60.4%	12.0%	27.69	6 3.73%
Centerline D	ist. to Barrier:	44.0 feet			Noise So	urce El	ovation	in fo	not)		
Centerline Dist	to Observer:	44.0 feet			140/36 00	Auto:		000	.01)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck:		97			
Observer Height	(Above Pad):				y Truck		004	Grade Ad	iuctmar	t- 0.0	
F		rical	ry ITUCK	3. 0.1	J04	Orauc Au	usunci	12. 0.0			
Ro		Lane Eq	uivalent	Distant	e (in f	feet)					
	Road Grade:	0.0%				Auto	s: 40.	460			
	Left View:	-90.0 degree	es		Medium Trucks: 40.241						
	Right View:	90.0 degree	es		Heav	y Truck	s: 40.	262			
FHWA Noise Mod	lel Calculation	s									
Vehicle Type	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	el	Barrier Att	en Be	erm Atten
Autos.	66.51	-1.62		1.3	28	-1.20		-4.61	0.0	000	0.000
Medium Trucks.	77.72	-17.93		1.3	31	-1.20		-4.87	0.0	000	0.000
Heavy Trucks.	82.99	-15.64		1.3	31	-1.20		-5.50	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	er atte	nuation)						
VehicleType	Leq Peak Ho			Leg E	ening	_	Night		Ldn		CNEL
Autos.			62.8		61.2		57.5		65.1		65.6
Medium Trucks.			58.0		53.6		52.9		60.3	-	60.6
Heavy Trucks.					63.6 62.4 69.2					69.5	
Vehicle Noise	69	9.9	67.3		65.8		64.0		71.0)	71.3
Centerline Distan	ce to Noise C	ontour (in feet)								
			L	70	dBA	65	dBA	6	0 dBA		5 dBA
			Ldn:		51		111		238		513
	CNEL:				54 116 251				541		

FH	IWA-RD	-77-108 HIGH	IWAY	NOISE	PREDIC	CTION	MODEL (9	/12/20)21)			
Scenario: EA Road Name: Fred Road Segment: n/o							t Name: V Number: 1		ampus Upp	er Plate		
SITE SPECI	FIC IN	PUT DATA					NOISE M	ODE	L INPUTS			
Highway Data				5	ite Cor	ditions	(Hard = 1	10, So	ft = 15)			
Average Daily Traffic Peak Hour Percer Peak Hour Vo Vehicle S	tage: lume:	11,656 vehicle 9.80% 1,142 vehicle 40 mph		Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15 Vehicle Mix								
Near/Far Lane Dist	ance:	36 feet		,		icleTyp		Day	Evening	Night Dail		
Site Data							Autos: 7	71.9%	12.2%	15.9% 94.08		
Barrier He	eight:	0.0 feet				edium 1		75.3%		17.7% 2.20		
Barrier Type (0-Wall, 1-B	lerm):	0.0				Heavy 1	rucks: 6	30.4%	12.0%	27.6% 3.73		
Centerline Dist. to Ba	arrier:	44.0 feet			loise Si	nurce F	levations	(in fe	et)			
Centerline Dist. to Obs	erver:	44.0 feet		Ė	.0.00 0	Auto		•				
Barrier Distance to Obs	erver:	0.0 feet			Modiu	m Truck						
Observer Height (Above	Pad):	5.0 feet				vv Truci			Grade Adiu	stment: 0.0		
Pad Elev	ation:	0.0 feet			пеа	vy Truci	15. 0.0	04	Orauc Auju	Sancia. 0.0		
Road Elev	ation:	0.0 feet		L	ane Eq	uivalen	t Distanc	e (in f	eet)			
Road G			Auto	os: 40.4	60							
Left	View:	-90.0 degre	es		Mediu	m Truck	ks: 40.2	41				
Right	View:	90.0 degre	es		Hea	vy Truci	ks: 40.2	62				
FHWA Noise Model Calc												
VehicleType REN		Traffic Flow	Dis	stance		Road	Fresne		Barrier Attei			
Autos:	66.51	-1.01		1.28		-1.20		4.61	0.00			
Medium Trucks:	77.72	-17.33		1.31		-1.20		4.87	0.00			
Heavy Trucks:	82.99	-15.04		1.31		-1.20	-	5.50	0.00	0.0		
Unmitigated Noise Level	s (witho eak Hou		_		_	100	Night		Ldn	CNFL		
VehicleType Leq Pe	ак нои 65		63.4	Leq Ev	ening 61.8		rvignt 58.1		65.7	CNEL 6		
Medium Trucks:	60	-	58.6		54.2		53.5		60.9	6		
Heavy Trucks:	68	-	65.2		64.2		63.0		69.8	7(
Vehicle Noise:	70		67.9		66.4		64.6		71.6	7		
Centerline Distance to N	oise Co	ntour (in feet)									
·				70 a	IBA	65	dBA	6	0 dBA	55 dBA		
			Ldn:		56		121		261	56		
		С	NEL:		59		128		275	59		

	io: E+P								Campus Up	per Plat	е
	e: Frederick St.					Job N	umber:	14064			
Road Segme	nt: n/o Cactus A	V.									
	SPECIFIC INF	UT DATA							L INPUTS	8	
Highway Data				S	ite Con	ditions	(Hard =	= 10, So	ft = 15)		
Average Daily	Traffic (Adt): 1	0,812 vehicle	S					Autos:	15		
Peak Hour	Percentage:	9.80%			Me	dium Tru	ıcks (2	Axles):	15		
Peak H	lour Volume: 1	,060 vehicles	,		He	avy Truc	cks (3+	Axles):	15		
Ve	hicle Speed:	40 mph		v	ehicle l	Miv					
Near/Far La	ne Distance:	36 feet		ř		icleType		Dav	Evening	Niaht	Dailv
Site Data							Autos:	71.9%	-	15.9%	94.449
Ra	rrier Height:	0.0 feet			Me	edium Ti	rucks:	75.3%	7.0%	17.7%	2.06%
Barrier Type (0-W	•	0.0			F	Heavy Ti	rucks:	60.4%	12.0%	27.6%	3.50%
Centerline Di	. ,	44.0 feet			laiaa Ce	ource El	ovetio :	o (in fo	net)		
Centerline Dist.	to Observer:	44.0 feet		N	oise sc	Auto:		.000	ei)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck:		.000			
Observer Height (Above Pad):	5.0 feet				y Truck		.004	Grade Adj	ustment	0.0
Pa	ad Elevation:		ricav	y IIuck	s. 0	.004	Orace Auj	ustriciit.	0.0		
Roa	L	ane Eq	uivalent	Distan	ce (in f	eet)					
	Road Grade:	0.0%				Auto	s: 40	.460			
	Left View:	-90.0 degree	S		Medium Trucks: 40.241						
	Right View:	90.0 degree	S		Heav	y Truck	s: 40	.262			
FHWA Noise Mode	el Calculations										
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier Atte	en Ber	m Atten
Autos:	66.51	-1.32		1.28		-1.20		-4.61	0.0	00	0.00
Medium Trucks:	77.72	-17.93		1.31		-1.20		-4.87	0.0	100	0.00
Heavy Trucks:	82.99	-15.64		1.31		-1.20		-5.50	0.0	100	0.00
Unmitigated Noise	Levels (withou	ut Topo and I	barrie	er attenu	ation)						
VehicleType	Leq Peak Hour	Leq Day		Leg Eve	ening	Leq	Night		Ldn	CI	VEL
Autos:	65.3		33.1		61.5		57.	-	65.4		65.
Medium Trucks:	59.9		58.0		53.6		52.	-	60.3		60.
Heavy Trucks:	67.5		64.6		63.6		62.	_	69.2		69.
Vehicle Noise:	70.0) (37.4		65.9		64.	1	71.1		71.
Centerline Distand	ce to Noise Con	tour (in feet)									
				70 di		65	dBA	_	i0 dBA	55	dBA
		-	Ldn: IFL:		52 55		112	-	241 254		519 547

Wednesday, September 28, 2022

	FHWA-RI	D-77-108 HIGHV	VAY NO	ISE PRE	DICTION	MODEL	(9/12/2	2021)				
Scenari Road Nam Road Segmen	e: Frederick S			Project Name: West Campus Upper Plate Job Number: 14064								
SITE S	SPECIFIC IN	IPUT DATA				NOISE	MODI	EL INPUT	S			
Highway Data				Site C	onditions	(Hard =	= 10, S	oft = 15)				
	Traffic (Adt): Percentage: our Volume:	12,321 vehicles 9.80% 1,207 vehicles	8		Medium Ti Heavy Tru		,	: 15				
Vel	hicle Speed:	40 mph		Vehic	le Mix							
Near/Far Lar	ne Distance:	36 feet		١	ehicleTyp	e	Dav	Evening	Night	Daily		
Site Data						Autos:	71.99	-	15.99	94.40%		
Par	rier Height:	0.0 feet			Medium 1	rucks:	75.39	6 7.0%	17.79	6 2.08%		
Barrier Type (0-W		0.0			Heavy T	rucks:	60.49	6 12.0%	27.69	3.52%		
Centerline Dis		44.0 feet		Noise	Source E	levation	s (in t	eet)				
Centerline Dist.		44.0 feet			Auto	os: O	.000					
Barrier Distance t		0.0 feet		Me	dium Truck		.297					
Observer Height (,	5.0 feet		Н	eavy Truck	rs: 8	.004	Grade Ad	iustmen	t: 0.0		
Pa												
Roa		Lane	Equivalen			feet)						
F	Road Grade:	0.0%			Auto		.460					
	Left View:	-90.0 degrees	8		dium Truci		.241					
	Right View:	90.0 degrees	8	Н	eavy Truci	(s: 40	.262					
FHWA Noise Mode	l Calculation	s										
VehicleType	REMEL	Traffic Flow	Distant	e Fir	ite Road	Fres	nel	Barrier Att	en Be	rm Atten		
Autos:	66.51	-0.76		1.28	-1.20		-4.61	0.0	000	0.000		
Medium Trucks:	77.72	-17.33		1.31	-1.20		-4.87	0.0	000	0.000		
Heavy Trucks:	82.99	-15.04		1.31	-1.20		-5.50	0.0	000	0.000		
Unmitigated Noise	Levels (with	out Topo and b	arrier at	tenuatio	n)							
	Leq Peak Hou			q Evening		Night		Ldn		NEL		
Autos:	65		3.7	-	2.0	58.		66.0		66.4		
Medium Trucks:	60		8.6	-	1.2	53.	-	60.9	-	61.2		
Heavy Trucks:	68		5.2	-	1.2	63.	-	69.8		70.1		
Vehicle Noise:	70).6 6	8.0	6	6.5	64.	7	71.7	7	72.0		
Centerline Distanc	e to Noise Co	ontour (in feet)		70 dBA		dBA		60 dBA	-	5 dBA		
		,	dn:							569		
		CN			57 122		_			599		
		60 129 278				599						

, September 28, 2022 Wednesday, September 28, 2022

	FHWA-RI	D-77-108 HIGH	WAY	NOISE	PREDIC	TION N	IODEL	(9/12/2	021)		
Road Nan	io: OYC ne: Frederick S nt: n/o Cactus						Name: lumber:		Campus U	pper Pla	te
SITE Highway Data	SPECIFIC IN	NPUT DATA			Site Con				L INPUT	S	
					Site Con	uitions	(naru -				
Average Daily	. ,	12,508 vehicle	es					Autos:			
	Percentage:	9.80%				dium Tr					
Peak F	lour Volume:	1,226 vehicle	S		He	avy Tru	cks (3+	Axles):	15		
Ve	hicle Speed:	40 mph		- 1	Vehicle i	Mix					
Near/Far La	ne Distance:	36 feet		F		icleType	,	Dav	Evenina	Niaht	Dailv
Site Data							Autos:	71.9%	12.2%	15.9%	94.08%
Pa	rrier Height:	0.0 feet			М	edium T	rucks:	75.3%	7.0%	17.7%	6 2.20%
Barrier Type (0-V		0.0			1	Heavy T	rucks:	60.4%	12.0%	27.6%	3.73%
Centerline Di		44.0 feet		-	Noise So	uroo E	lovetion	o (in f	2041		
Centerline Dist.	to Observer:	44.0 feet		H.	Noise 30	Auto		.000	et)		
Barrier Distance	to Observer:	0.0 feet									
Observer Height	(Above Pad):	5.0 feet				m Truck		.297			
-	ad Elevation:	0.0 feet			Heal	y Truck	s: 8	.004	Grade Ad	ijustmen	t: 0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%		Ī		Auto	s: 40	.460			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 40	.241			
	Right View:	90.0 degree			Heav	y Truck	s: 40	.262			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier At	ten Be	rm Atten
Autos:	66.51			1.2	-	-1.20		-4.61	0.	000	0.000
Medium Trucks:	77.72	-17.02		1.3	1	-1.20		-4.87	0.	000	0.000
Heavy Trucks:	82.99	-14.73		1.3	1	-1.20		-5.50	0.	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	er atten	nuation)						
VehicleType	Leq Peak Hou	ur Leq Day	/	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	65	5.9	63.7		62.1		58.	4	66.	0	66.5
Medium Trucks:	60	0.8	58.9		54.6		53.	.8	61.	2	61.5
Heavy Trucks:	68	3.4	65.5		64.5		63.	.3	70.	1	70.4
Vehicle Noise:	70	0.8	68.2		66.7		64.	9	71.	9	72.2
Centerline Distan	ce to Noise Co	ontour (in feet)								
				70	dBA	65	dBA	6	60 dBA	55	5 dBA
			Ldn:		59		12	7	274	1	590
		C	NEL:		62		134	4	288	3	621

	FHWA-RI	D-77-108 HIGH	WAY	NOISE	PREDIC	TION	MODEL (9	/12/2	021)		
Scenari Road Nam Road Segmer	e: Frederick S						t Name: \ Number: 1		Campus Up	per Plat	е
SITE	SPECIFIC IN	NPUT DATA					NOISE N	IODE	L INPUTS	;	
Highway Data				S	ite Cor	ditions	(Hard =	10, S	oft = 15)		
Peak H	Traffic (Adt): Percentage: lour Volume: hicle Speed:	14,646 vehicl 9.80% 1,435 vehicle 40 mph				avy Tru	rucks (2 A icks (3+ A	,	15		
Near/Far Lai	ne Distance:	36 feet		ľ		icleType		Dav	Evening	Night	Daily
Site Data							Autos:	71.9% 75.3%	12.2%	15.9%	94.08%
	rrier Height:	0.0 feet				edium 1 Heavy 1		75.3% 80.4%		17.7% 27.6%	
Barrier Type (0-W		0.0			,	неаvy I	rucks:	00.4%	12.0%	27.0%	3.73%
Centerline Dis		44.0 feet		٨	loise S	ource E	levations	(in f	eet)		
Centerline Dist. Barrier Distance		44.0 feet 0.0 feet			Mediu	Auto m Truck					
Observer Height (. Pa	'Above Pad): ad Elevation:	5.0 feet 0.0 feet				y Truck			Grade Adji	ustment	0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distanc	e (in	feet)		
F	Road Grade:	0.0%				Auto	s: 40.4	160			
	Left View: Right View:	-90.0 degre 90.0 degre				m Truck /y Truck					
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	e/	Barrier Atte	n Bei	m Atten
Autos:	66.51	-0.02		1.28	3	-1.20		4.61	0.0	00	0.000
Medium Trucks:	77.72	-16.34		1.31		-1.20		4.87	0.0	00	0.000
Heavy Trucks:	82.99			1.31		-1.20		-5.50	0.0	00	0.000
Unmitigated Noise			_		_						
	Leq Peak Hou		_	Leq Ev		Leq	Night		Ldn	С	NEL
Autos:		3.6	64.4		62.8		59.1		66.7		67.2
Medium Trucks:	-	1.5	59.6		55.2		54.5		61.9		62.2
Heavy Trucks:		9.1	66.2		65.2		64.0		70.8		71.
Vehicle Noise:		1.5	68.9		67.4		65.6		72.6		72.9
Centerline Distanc	e to Noise Co	ontour (in feet)	70 d	'RA	65	dBA		50 dBA	55	dBA
			Ldn:		66	30	141	·	304	- 50	655
		С	NEL:		69		149		320		690

	o: OYCP e: Frederick S t: n/o Cactus							West C 14064	Campus Up	oper Plat	е
SITE S	PECIFIC IN	PUT DATA				N	OISE	MODE	L INPUT	s	
Highway Data				S	ite Con	ditions	(Hard :	= 10, So	ft = 15)		
Average Daily 1	raffic (Adt):	13,173 vehicle	es					Autos:	15		
Peak Hour I	Percentage:	9.80%			Me	dium Tru	ıcks (2	Axles):	15		
Peak Ho	our Volume:	1,291 vehicle	s		He	avy Truc	cks (3+	Axles):	15		
Veh	icle Speed:	40 mph			/ehicle l	Miss					
Near/Far Lar	e Distance:	36 feet		۲		icleType		Dav	Evening	Night	Dailv
Site Data					¥ C//		lutos:	71.9%		15.9%	
	rier Height:	0.0 feet			М	edium Tı		75.3%		17.7%	2.099
Barrier Type (0-Wa	-	0.0 reet				Heavy Tr		60.4%		27.6%	3.54%
Centerline Dis	. ,	44.0 feet									
Centerline Dist. t		44.0 feet		٨	loise So	ource Ele	evatio	ns (in fe	et)		
Barrier Distance t		0.0 feet				Autos		.000			
Observer Height (A		5.0 feet				m Trucks	-	.297			
	d Elevation:	0.0 feet			Heav	y Trucks	s: 8	1.004	Grade Ad	iustment.	0.0
	d Elevation:	0.0 feet		L	ane Eq	uivalent	Distar	nce (in f	eet)		
	Road Grade:	0.0%		- 1		Autos		460	,		
,,	Left View:	-90.0 degre	es		Mediu	m Trucks		.241			
	Right View:	90.0 degre			Heav	y Trucks	s: 40	.262			
						,					
FHWA Noise Mode						1					
VehicleType	REMEL	Traffic Flow		stance		Road	Fres		Barrier Att		m Atten
Autos:	66.51	-0.47		1.28		-1.20		-4.61		000	0.00
Medium Trucks:	77.72	-17.02		1.31		-1.20		-4.87		000	0.00
Heavy Trucks:	82.99	-14.73		1.31		-1.20		-5.50	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er attenu	uation)						
VehicleType	Leq Peak Hοι	r Leq Day	/	Leq Ev	ening	Leq	Night		Ldn	CI	VEL
Autos:	66	.1	64.0		62.3		58	.7	66.3	3	66.
Medium Trucks:	60	.8	58.9		54.6		53	.8	61.2	2	61.
Heavy Trucks:	68		65.5		64.5		63		70.		70.
Vehicle Noise:	70	.9	68.3		66.8		65	.0	72.0)	72.
Centerline Distance	e to Noise Co	ntour (in feet)								
		,		70 d	BA .	65 (dBA	6	i0 dBA	55	dBA
			Ldn:			•	12	0	070		595
			Lan:		60		12	8	276		390

Wednesday, September 28, 2022

1	FHWA-RD-7	77-108 HIGH	NAY NOIS	SE PREDIC	CTION MO	DDEL (9/1	2/2021)		
Scenario: H Road Name: Fi Road Segment: n/	rederick St.	<i>I</i> .				Vame: We mber: 14	est Campus I 064	Upper	Plate
SITE SPE	CIFIC INP	UT DATA			N	DISE MC	DEL INPU	TS	
Highway Data				Site Cor	ditions (Hard = 10), Soft = 15)		
Average Daily Traffi Peak Hour Perc Peak Hour \	entage:	5,311 vehicle 9.80% ,500 vehicles			edium Tru eavy Truci	cks (2 Axi	,		
Vehicle	Speed:	40 mph		Vehicle	Miss				
Near/Far Lane Di	istance:	36 feet			icleType	Di	ay Evening	Nie	ght Daily
Site Data				VO.			.9% 12.2%		5.9% 94.33%
Barrier	Heiaht:	0.0 feet		M	ledium Tru	icks: 75	5.3% 7.0%	6 17	7.7% 2.10%
Barrier Type (0-Wall, 1	-Berm):	0.0			Heavy Tru	icks: 60).4% 12.0%	6 27	7.6% 3.56%
Centerline Dist. to	Barrier:	44.0 feet		Noise S	ource Ele	vations (in feet)		
Centerline Dist. to Ol	bserver:	44.0 feet		110,00	Autos				
Barrier Distance to Ol	bserver:	0.0 feet		Mediu	m Trucks				
Observer Height (Abov	re Pad):	5.0 feet			vy Trucks			diusti	ment: 0.0
	evation:	0.0 feet					-	,	
Road Ele		0.0 feet		Lane Eq	uivalent		, ,		
		0.0%			Autos				
		-90.0 degree			m Trucks				
Rigi	ht View:	90.0 degree	s	Hea	vy Trucks	40.26	2		
FHWA Noise Model Ca	Iculations								
VehicleType Ri	EMEL 7	raffic Flow	Distance	e Finite	Road	Fresnel	Barrier A	tten	Berm Atten
Autos:	66.51	0.18	1	1.28	-1.20	-4	.61 0	0.000	0.000
Medium Trucks:	77.72	-16.34	1	1.31	-1.20	-4	.87 0	0.000	0.000
Heavy Trucks:	82.99	-14.04	1	1.31	-1.20	-5	.50 0	0.000	0.000
Unmitigated Noise Lev		t Topo and I	oarrier att	enuation)					
	Peak Hour	Leq Day		Evening	Leq N		Ldn		CNEL
Autos:	66.8		64.6	63.0		59.3		3.9	67.4
Medium Trucks:	61.5	-	59.6	55.2		54.5		1.9	62.2
Heavy Trucks: Vehicle Noise:	69.1 71.5		66.2 69.0	65.2 67.5		64.0 65.6		0.8 2.6	71.1 73.0
			JJ.U	07.5		00.0	12	0	73.0
Centerline Distance to	Noise Con	tour (in reet)	7	'0 dBA	65 d	BA	60 dBA		55 dBA
		ı	dn:	66		142	30)7	661
		CN	IEL:	70		150	32	23	696

Wednesday, September 28, 2022

	FHWA-RD	-77-108 HIGH	WAY	NOISE	PREDIC	CTION N	MODEL (9/12/20	021)		
	nrio: E me: Alessandro ent: w/o Barton S						t Name: \ lumber:		Campus Up	per Plat	e
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data					Site Cor	ditions	(Hard =	10, So	ft = 15)		
Average Daily	/ Traffic (Adt):	42,275 vehicle	es					Autos:	15		
Peak Hou	r Percentage:	9.80%			Me	edium Tr	rucks (2 A	(xles	15		
Peak	Hour Volume:	4,143 vehicles	3		He	eavy Tru	cks (3+ A	(xles	15		
V	ehicle Speed:	55 mph		,	Vehicle	Miv					
Near/Far L	ane Distance:	42 feet		H		icleType	•	Dav	Evening	Niaht	Dailv
Site Data								71.9%	-	15.9%	. ,
R	arrier Height:	0.0 feet			М	edium T	rucks:	75.3%	7.0%	17.7%	2.20%
Barrier Type (0-1		0.0				Heavy T	rucks:	60.4%	12.0%	27.6%	3.73%
*, .	ist. to Barrier:	60.0 feet		-							
Centerline Dist		60.0 feet		-	Noise S		levations	•	et)		
Barrier Distance	to Observer	0.0 feet				Auto		000			
Observer Height	(Above Pad):	5.0 feet				m Truck		297	0		
	Pad Elevation:	0.0 feet			Hea	vy Truck	:s: 8.0	004	Grade Ad	ustment	: 0.0
Re	oad Elevation:	0.0 feet		1	Lane Eq	uivalen	t Distanc	e (in f	eet)		
	Road Grade:	0.0%				Auto	s: 56.	427			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 56.	270			
	Right View:	90.0 degree	es		Hea	vy Truck	s: 56.	285			
FHWA Noise Mod	del Calculations	1									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	_	Barrier Att	en Bei	m Atten
Autos		3.20		-0.8		-1.20		-4.69		000	0.000
Medium Trucks		-13.12		-0.8		-1.20		-4.88		000	0.000
Heavy Trucks	: 86.40	-10.82		-0.8	7	-1.20		-5.34	0.0	000	0.000
Unmitigated Nois	se Levels (witho	out Topo and I	barri	er atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day		Leq E	vening	Leq	Night		Ldn	С	NEL
Autos	: 72.	9	70.8		69.1		65.4		73.0) _	73.5
Medium Trucks		_	65.3		61.0		60.2	-	67.6	-	67.9
Heavy Trucks			70.6		69.6		68.5		75.2		75.5
Vehicle Noise	: 76.	7	74.3		72.7		70.6	6	77.7	7	78.1
Centerline Distar	ce to Noise Co	ntour (in feet)									
	<u></u>			70 (dBA	65	dBA	6	0 dBA	55	dBA
			Ldn:		196		422		910		1,961
		CI	VEL:		207		446		961		2,069

	FHWA-RI	D-77-108 HIGH	WAY N	OISE	PREDIC	TION	MODEL (9/12	2021)	
	io: EA ne: Alessandro nt: w/o Barton						t Name: Wes lumber: 1406	t Campus Upp 4	oer Plate
SITE	SPECIFIC IN	IPUT DATA						EL INPUTS	i
Highway Data				S	ite Con	ditions	(Hard = 10,	Soft = 15)	
Peak H	Percentage: lour Volume:	48,561 vehicle 9.80% 4,759 vehicle					Auto rucks (2 Axles cks (3+ Axles	s): 15	
	hicle Speed:	55 mph		ν	'ehicle i	Mix			
Near/Far La	ne Distance:	42 feet		F		icleType	e Dav	Evening	Night Daily
Site Data							Autos: 71.9		15.9% 94.08%
Rai	rrier Heiaht:	0.0 feet			М	edium T	rucks: 75.3	% 7.0%	17.7% 2.20%
Barrier Type (0-W		0.0			1	Heavy T	rucks: 60.4	% 12.0%	27.6% 3.73%
Centerline Dis		60.0 feet		٨	loise So	ource E	levations (in	feet)	
Centerline Dist.	to Observer:	60.0 feet				Auto		,	
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck			
Observer Height (,	5.0 feet				/v Truck	-	Grade Adju	stment: 0.0
	ad Elevation:	0.0 feet		_ <u> </u> _		,			
	ad Elevation:	0.0 feet		L	ane Eq		t Distance (i	n feet)	
I	Road Grade:	0.0%				Auto			
	Left View:	-90.0 degree				m Truck	00.270		
	Right View:	90.0 degree	es		Heav	ry Truck	s: 56.285		
FHWA Noise Mode	el Calculation	s		-					
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresnel	Barrier Atte	n Berm Atten
Autos:	71.78	3.80		-0.89	9	-1.20	-4.6	9 0.00	0.000
Medium Trucks:	82.40	-12.52		-0.87	,	-1.20	-4.8	8 0.00	0.000
Heavy Trucks:	86.40	-10.22		-0.87	,	-1.20	-5.3	4 0.00	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	atteni	uation)				
	Leq Peak Hou			.eq Ev			Night	Ldn	CNEL
Autos:			71.4		69.7		66.0	73.6	74.1
Medium Trucks:			65.9		61.6		60.8	68.2	68.5
Heavy Trucks:			71.2		70.2		69.1	75.8	76.1
Vehicle Noise:	77	7.3	74.9		73.3		71.2	78.3	78.7
Centerline Distanc	e to Noise C	ontour (in feet)						
			L	70 d		65	dBA	60 dBA	55 dBA
			Ldn:		215		463	998	2,150
		C	VEL:		227		489	1,054	2,270

								(9/12/20			
Scenan									Campus Up	per Plat	е
	e: Alessandro					Job Ni	ımber:	14064			
Road Segmer	nt: w/o Barton	St.									
	SPECIFIC II	NPUT DATA							L INPUT	S	
Highway Data					Site Con	ditions (Hard =	: 10, So	ft = 15)		
Average Daily	Traffic (Adt):	46,599 vehic	les					Autos:	15		
Peak Hour	Percentage:	9.80%			Me	dium Tru	cks (2	Axles):	15		
Peak H	our Volume:	4,567 vehicle	es		He	avy Truc	ks (3+ .	Axles):	15		
Ve	hicle Speed:	55 mph			Vehicle I	Miv					
Near/Far La	ne Distance:	42 feet		-		icleType		Dav	Evenina	Night	Dailv
Site Data					10		utos:	71.9%		15.9%	
	rier Heiaht:	0.0 feet			М	edium Tr		75.3%		17.7%	
Barrier Type (0-W		0.0 1001			1	Heavy Tr	ucks:	60.4%	12.0%	27.6%	3.389
Centerline Dis	. ,	60.0 feet									
Centerline Dist		60.0 feet			Noise So	ource Ele	evation	s (in fe	et)		
Barrier Distance		0.0 feet				Autos		.000			
Observer Height (5.0 feet				m Trucks		.297			
	ad Elevation:	0.0 feet			Heav	y Trucks	: 8.	.004	Grade Adj	iustment.	: 0.0
	ad Elevation:	0.0 feet		- 1	Lane Eq	uivalent	Distan	ce (in t	eet)		
	Road Grade:	0.0%		T I		Autos	: 56	.427			
	Left View:	-90.0 degre	ees		Mediu	m Trucks	: 56	.270			
	Right View:	90.0 degre			Heav	y Trucks	: 56	.285			
FHWA Noise Mode VehicleType	REMEL	Traffic Flow	Di	stance	Einite	Road	Fresi	nel	Barrier Att	on Por	m Atten
Autos:	71.78			-0.8	-	-1.20	1 1031	-4.69		000	0.00
Medium Trucks:	82.40		-	-0.8		-1.20		-4.88		000	0.00
Heavy Trucks:	86.40		_	-0.8		-1.20		-5.34		000	0.00
Unmitigated Noise	l ovole (with	out Tono and	l harri	or atton	ustion)						
VehicleTvpe	Lea Peak Ho				vening	Leg I	Viaht		Ldn	CI	NEL
Autos:	- 1	3.3	71.2	,	69.5	_	65.	9	73.5		73.
Medium Trucks:		7.2	65.3		61.0		60.		67.6		67.
Heavy Trucks:		3.5	70.6		69.6		68.		75.2		75.
Vehicle Noise:	76	3.9	74.5		72.9		70.	8	77.9)	78.
Centerline Distanc	e to Noise C	ontour (in fee	t)								
				70 (dBA	65 0	lBA	6	i0 dBA	55	dBA
			Ldn:		201		433	3	932		2,009

Wednesday, September 28, 2022

	FHWA-RD	-77-108 HIGH\	VAY NO	ISE PREDI	CTION N	IODEL (9/12	/2021)	
Scenario: Road Name: Road Segment:	Alessandro I					Name: Wes lumber: 1406	t Campus Upp 64	er Plate
	ECIFIC IN	PUT DATA					EL INPUTS	
Highway Data				Site Cor	nditions	(Hard = 10,	Soft = 15)	
Average Daily Tra	affic (Adt):	52,885 vehicle	8			Auto		
Peak Hour Pe	-	9.80%				ucks (2 Axle	,	
		5,183 vehicles		H	eavy Tru	cks (3+ Axle	s): 15	
	ele Speed:	55 mph		Vehicle	Mix			
Near/Far Lane	Distance:	42 feet		Vel	nicleType	Day	Evening	Night Daily
Site Data						Autos: 71.9	9% 12.2%	15.9% 94.56%
Barrie	er Height:	0.0 feet		N	fedium T	rucks: 75.3	3% 7.0%	17.7% 2.02%
Barrier Type (0-Wall	-	0.0			Heavy T	rucks: 60.4	1% 12.0%	27.6% 3.42%
Centerline Dist.	to Barrier:	60.0 feet		Noise S	ource E	evations (in	feet)	
Centerline Dist. to	Observer:	60.0 feet			Auto		,	
Barrier Distance to		0.0 feet		Mediu	ım Truck			
Observer Height (Ab	,	5.0 feet		Hea	vy Truck	s: 8.004	Grade Adju	stment: 0.0
	Elevation:	0.0 feet			•			
	Elevation:	0.0 feet		Lane Ec		t Distance (i	n feet)	
	ad Grade:	0.0%			Auto			
	Left View:	-90.0 degree			ım Truck	00.2.0		
K	Right View:	90.0 degree	S	неа	vy Truck	s: 56.285		
FHWA Noise Model (Calculations							
VehicleType	REMEL	Traffic Flow	Distan		Road	Fresnel	Barrier Atter	
Autos:	71.78	4.19		0.89	-1.20	-4.6		
Medium Trucks:	82.40	-12.52		0.87	-1.20	-4.8		
Heavy Trucks:	86.40	-10.22		0.87	-1.20	-5.3	4 0.00	0.000
Unmitigated Noise L				,		N II In 4	l de	ONE
VehicleType Le	eq Peak Hour 73.		1.7	q Evening 70.1		Night 66.4	Ldn 74.0	CNEL 74.5
Medium Trucks:	67.		5.9	61.6		60.8	68.2	74.5 68.5
Heavy Trucks:	74.	-	1.2	70.2		69.1	75.8	76.1
Vehicle Noise:	77.		5.1	73.4		71.4	78.5	78.8
Centerline Distance	to Noise Co	ntour (in feet)						
				70 dBA	65	dBA	60 dBA	55 dBA
		L	.dn:	220	•	473	1,019	2,196

Wednesday, September 28, 2022

FHW	A-RD-	77-108 HIGH	WAY	NOISE	PREDIC	CTION M	ODEL	(9/12/2	021)		
Scenario: OYC Road Name: Alessa Road Segment: w/o Ba							Name: umber:		Campus U	pper Pl	ate
SITE SPECIFI	C INP	UT DATA							L INPUT	s	
Highway Data				8	ite Cor	ditions (Hard =				
Average Daily Traffic (A	dt): 4	9,805 vehicle	es					Autos:			
Peak Hour Percenta	ge:	9.80%				edium Tru		,			
Peak Hour Volur	ne: 4	,881 vehicle	S		He	eavy Truc	ks (3+	Axles):	15		
Vehicle Spe	ed:	55 mph		١	/ehicle	Mix					
Near/Far Lane Distan	ce:	42 feet			Veh	icleType		Dav	Evening	Niaht	Dailv
Site Data							utos:	71.9%		15.9	% 94.08%
Barrier Heig	ht.	0.0 feet			М	edium Tr	ucks:	75.3%	7.0%	17.7	% 2.20%
Barrier Type (0-Wall, 1-Ber	m):	0.0				Heavy Tr	ucks:	60.4%	12.0%	27.6	% 3.73%
Centerline Dist. to Barr		60.0 feet		1	loise S	ource Ele	evation	ıs (in f	eet)		
Centerline Dist. to Observ	/er:	60.0 feet				Autos	s: 0	.000			
Barrier Distance to Observ	er:	0.0 feet			Mediu	m Trucks		297			
Observer Height (Above Pa	ad):	5.0 feet				vy Trucks		.004	Grade Ad	liustme	nt: 0.0
Pad Elevati	on:	0.0 feet								,	
Road Elevati	on:	0.0 feet		L	ane Eq	uivalent			feet)		
Road Gra	de:	0.0%				Autos		.427			
Left Vi	ew:	-90.0 degree	es			m Trucks		.270			
Right Vi	ew:	90.0 degree	es		Hea	vy Trucks	s: 56	.285			
FHWA Noise Model Calcula				<u>'</u>							
VehicleType REME		raffic Flow	Di	stance		Road	Fres		Barrier At		erm Atten
	1.78	3.91		-0.89		-1.20		-4.69		000	0.000
	2.40	-12.41		-0.87		-1.20		-4.88		000	0.000
	6.40	-10.11		-0.87		-1.20		-5.34	0.	000	0.000
VehicleType Leq Pear						1001	Minds	1	Ldn	т.	CNEL
Autos:	73.6	Leq Day	71.5	Leq Ev	ening 69.8	Leq I	vignt 66	2	73.		74.2
Medium Trucks:	67.9		66.0		61.7		60.	_	68.		68.6
Heavy Trucks:	74.2		71.3		70.3		69.	-	75.	-	76.2
Vehicle Noise:	77.4		75.0		73.4		71.		78.		78.8
Centerline Distance to Nois	se Con	tour (in feet)								
		,,		70 a	IBA	65 0	BA.	(60 dBA	5	5 dBA
			Ldn:		219	•	47	1	1,01	5	2,187
		C	NEL:		231		49	7	1,07	I	2,308

	FHWA-R	D-77-108 HIGH	1 YAWI	NOISE I	PREDIC	TION	MODEL (9	/12/2	021)		
	io: HY ne: Alessandro nt: w/o Barton						t Name: \ Number: 1		Campus Up	per Pla	te
	SPECIFIC II	NPUT DATA							L INPUTS	3	
Highway Data				S	ite Cor	ditions	(Hard =	10, S	oft = 15)		
Peak F	Traffic (Adt): Percentage: four Volume: chicle Speed:	58,590 vehicle 9.80% 5,742 vehicle					rucks (2 A icks (3+ A	,	15		
	ne Distance:	55 mph 42 feet		ν	ehicle !	Иіх					
Neal/Fal La	ne Distance.	42 1661			Veh	icleType	e i	Day	Evening	Night	Daily
Site Data								71.9%		15.9%	
Ва	rrier Height:	0.0 feet				edium 7		75.3%		17.7%	
Barrier Type (0-VI	/all, 1-Berm):	0.0				Heavy 1	rucks:	60.4%	12.0%	27.6%	3.73%
Centerline Di	st. to Barrier:	60.0 feet		A	laisa Si	urce F	levations	(in f	not)		
Centerline Dist.	to Observer:	60.0 feet			0136 01	Auto		•			
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck					
Observer Height	(Above Pad):	5.0 feet				/v Truck			Grade Adj	ustmen	t· 0.0
P	ad Elevation:	0.0 feet			rica	ry IIIucr	13. 0.0	104	Orado riaj	00011011	0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distanc	e (in	feet)		
	Road Grade:	0.0%				Auto		27			
	Left View:	-90.0 degre	es		Mediu	m Truck	ks: 56.2	70			
	Right View:	90.0 degre	es		Hea	y Truck	ks: 56.2	285			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresn	e/	Barrier Atte	en Be	rm Atten
Autos:	71.78	4.62		-0.89		-1.20		4.69	0.0	00	0.00
Medium Trucks:				-0.87		-1.20		4.88	0.0		0.00
Heavy Trucks:	86.40	-9.41		-0.87		-1.20		-5.34	0.0	00	0.00
Unmitigated Nois					_						
VehicleType	Leq Peak Ho			Leq Ev		Leq	Night		Ldn	_	NEL
Autos:		1.3	72.2		70.5		66.9		74.4		74.9
Medium Trucks:		3.6	66.7		62.4		61.6		69.0		69.
Heavy Trucks:		1.9	72.0		71.0		69.9		76.6		76.
Vehicle Noise:		3.1	75.7		74.1		72.1		79.1		79.
Centerline Distan	ce to Noise C	ontour (in feet)	70 d	DΛ	e e	dBA		50 dBA	E 6	dBA
			Ldn:	7 U a	ВА 244	00	ава 525		1.131) 55	2.437
		_	NEL:		257		525 554		1,131		2,437
		C	IVEL.		23/		554		1,194		2,3/2

0	io: OYCP	D-77-108 HIGH					•			Di-4	
		Divid							ampus Up	per Plati	е
	ne: Alessandro nt: w/o Barton					JOD NI	ımber: 1	14064			
Highway Data	SPECIFIC IN	IPUT DATA		S	ite Con	ditions (L INPUTS ft = 15)	5	
Average Daily	Traffic (Adt):	54.129 vehicle	00			,		Autos:	15		
	Percentage:	9.80%	00		Me	dium Tru			15		
	lour Volume:	5.305 vehicle	e			avy Truc		,	15		
	hicle Speed:	55 mph	.5				10 (0 - 7	13.100).			
	ne Distance:	42 feet		ν	ehicle l						
	no Biolarioo.	12 1001			Veh	icleType		Day	Evening	Night	Daily
Site Data								71.9%	12.2%	15.9%	
Bai	rrier Height:	0.0 feet				edium Tr		75.3%	7.0%	17.7%	2.02%
Barrier Type (0-W	/all, 1-Berm):	0.0			- 1	Heavy Tri	ucks:	60.4%	12.0%	27.6%	3.43%
Centerline Dis	st. to Barrier:	60.0 feet		۸	loise So	ource Ele	vations	(in fe	et)		
Centerline Dist.	to Observer:	60.0 feet				Autos		000	- /		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	: 2:	97			
Observer Height ('Above Pad):	5.0 feet			Heav	vy Trucks	: 8.0	004	Grade Adj	ustment.	0.0
	ad Elevation:	0.0 feet				•					
	ad Elevation:	0.0 feet		L	ane Eq	uivalent			eet)		
ı	Road Grade:	0.0%				Autos					
	Left View:	-90.0 degre				m Trucks					
	Right View:	90.0 degre	es		Heav	y Trucks	: 56.2	285			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow		tance		Road	Fresn	_	Barrier Atte	_	m Atten
Autos:	71.78			-0.89		-1.20		-4.69	0.0		0.00
Medium Trucks:	82.40			-0.87		-1.20		-4.88	0.0		0.00
Heavy Trucks:	86.40			-0.87		-1.20		-5.34	0.0	100	0.00
Unmitigated Noise											
VehicleType	Leq Peak Hou		_	Leq Ev		Leq N			Ldn		VEL
Autos:	-	1.0	71.8		70.2		66.5		74.1		74.
Medium Trucks:		7.9	66.0		61.7		60.9		68.3		68.
Heavy Trucks:		1.2	71.3		70.3		69.2		75.9		76.
Vehicle Noise:		7.6	75.2		73.5		71.5	•	78.6	i	78.
		antour (in foot	t)								
	e to Noise C	untour (in reet		70 ~	DΛ	GF ~	IDΛ		0 4D 4	FF	AD A
	ce to Noise C	ontour (in reet	l dn:	70 d		65 a		6	0 dBA	55	dBA
Centerline Distance	ce to Noise C		Ldn:	70 d	223 236	65 a	481 508	6	0 dBA 1,036 1,094	55	dBA 2,23 2.35

Wednesday, September 28, 2022

	FHWA-RD)-77-108 HIGH	WAY NOIS	E PREDIC	TION M	ODEL	(9/12/2	021)		
Road Nan	rio: HYP ne: Alessandro nt: w/o Barton						West (Campus U	oper Plat	te
	SPECIFIC IN	PUT DATA						L INPUT	S	
Highway Data				Site Con	ditions	Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	62,914 vehicle	S				Autos:	15		
Peak Hour	Percentage:	9.80%		Me	dium Tru	icks (2	Axles):	15		
Peak F	lour Volume:	6,166 vehicles		He	avy Truc	ks (3+	Axles):	15		
Ve	hicle Speed:	55 mph		Vehicle I	Mix					
Near/Far La	ne Distance:	42 feet			icleType	T	Day	Evening	Night	Daily
Site Data						utos:	71.9%	-	15.9%	,
P.o.	rrier Heiaht:	0.0 feet		М	edium Tr	ucks:	75.3%	7.0%	17.7%	2.05%
Barrier Type (0-V		0.0 feet		1	Heavy Tr	ucks:	60.4%	12.0%	27.6%	3.47%
	st. to Barrier:	60.0 feet								
Centerline Dist		60.0 feet		Noise So				eet)		
Barrier Distance		0.0 feet			Autos		0.000			
Observer Height		5.0 feet			m Trucks		2.297			
	ad Elevation:	0.0 feet		Heav	y Trucks	:: 8	3.004	Grade Ad	justmeni	. 0.0
	ad Elevation:	0.0 feet		Lane Eq	uivalent	Distar	nce (in	feet)		
	Road Grade:	0.0%			Autos	: 56	3.427			
	Left View:	-90.0 degree	s	Mediu	m Trucks	: 56	3.270			
	Right View:	90.0 degree		Heav	y Trucks	: 56	3.285			
FHWA Noise Mod	el Calculation:									
VehicleType	REMEL	Traffic Flow	Distance		Road	Fres		Barrier Att		rm Atten
Autos:		4.94	-	.89	-1.20		-4.69		000	0.000
Medium Trucks:		-11.70	-	.87	-1.20		-4.88		000	0.000
Heavy Trucks:		-9.41		.87	-1.20		-5.34	0.	000	0.000
Unmitigated Nois VehicleType	e Levels (with Leg Peak Hou			Evening	Leg I	Viaht	1	Ldn		NFL.
Autos:	Ley reak nou		72.5	70.8		vigrit 67	2	74	_	75.2
Medium Trucks:			72.5 36.7	62.4		61		69	-	69.1
Heavy Trucks:			72.0	71.0		69		76.	-	76.9
Vehicle Noise:			75.8	74.2		72		79.	_	79.6
Centerline Distan	ce to Noise Co	ntour (in feet)								
			7	0 dBA	65 0	iBA	(60 dBA	55	dBA
			Ldn:	248		53		1,151		2,480
		CA	IEL:	262		56	4	1.216		2,619

Wednesday, September 28, 2022

	FHWA-R	D-77-108 HIGH	WAY	NOISE	PREDIC	TION	IODEL (9/12/20	021)		
	io: E ne: Alessandro nt: e/o Barton						Name: lumber:		Campus U _l	per Plat	е
	SPECIFIC II	NPUT DATA							L INPUT	s	
Highway Data				5	Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	42,360 vehicle	es					Autos:	15		
Peak Hour	Percentage:	9.80%			Me	dium Tr	ucks (2	Axles):	15		
Peak H	lour Volume:	4,151 vehicle	s		He	avy Tru	cks (3+)	Axles):	15		
Ve	hicle Speed:	55 mph		1	/ehicle	Miv					
Near/Far La	ne Distance:	42 feet		Ľ,		icleType		Dav	Evening	Night	Dailv
Site Data							Autos:	71.9%	-	15.9%	94.089
Ra	rrier Height:	0.0 feet			М	edium T	rucks:	75.3%	7.0%	17.7%	2.209
Barrier Type (0-W		0.0				Heavy T	rucks:	60.4%	12.0%	27.6%	3.739
Centerline Di		60.0 feet		١,	Voise So	urco E	ovation	c (in fe	not)		
Centerline Dist.	to Observer:	60.0 feet		· ·	V0/36 30	Auto		000	eu		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck		297			
Observer Height	(Above Pad):	5.0 feet				ry Truck		004	Grade Ad	iuetmant	. 0.0
P	ad Elevation:	0.0 feet								asancin	. 0.0
Ro	ad Elevation:	0.0 feet		L	Lane Eq	uivalen	Distan	ce (in i	feet)		
	Road Grade:	0.0%				Auto	s: 56	427			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 56	.270			
	Right View:	90.0 degre	es		Heav	y Truck	s: 56	.285			
HWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fresi	_	Barrier Att		m Atten
Autos:	71.78			-0.89	-	-1.20		-4.69		000	0.00
Medium Trucks:				-0.87		-1.20		-4.88		000	0.00
Heavy Trucks:	86.40	-10.81		-0.87	7	-1.20		-5.34	0.0	000	0.00
Inmitigated Noise			barrie	er atten	uation)			_			
VehicleType	Leq Peak Ho			Leg Ev			Night		Ldn	_	NEL
Autos:		2.9	70.8		69.1		65.	-	73.0	-	73.
Medium Trucks:		7.2	65.3		61.0		60.:	_	67.0	-	67.
Heavy Trucks:		3.5	70.6		69.6		68.		75.2		75.
Vehicle Noise:		3.7	74.3		72.7		70.	6	77.	7	78.
Centerline Distan	ce to Noise C	ontour (in feet)							_	
			L	70 c		65	dBA		0 dBA		dBA
		_	Ldn:		196		423		911		1,96
		C	NEL:		207		446		962		2,072

	RD-77-108 H						•			
Scenario: EA								Campus U	pper Plat	e
Road Name: Alessand					Job N	lumber.	14064			
Road Segment: e/o Barto	n St.									
SITE SPECIFIC	INPUT DA	TA						L INPUT	S	
Highway Data			5	Site Con	ditions	(Hard	= 10, S	oft = 15)		
Average Daily Traffic (Adt):	48,659 ve	ehicles					Autos.	15		
Peak Hour Percentage:	9.80%			Me	dium Tr	ucks (2	Axles)	15		
Peak Hour Volume:	4,769 vel	nicles		He	avy Tru	cks (3+	Axles)	15		
Vehicle Speed:	55 mp	h	1	Vehicle I	Mix					
Near/Far Lane Distance:	42 fee	et	F		icleType	,	Day	Evening	Night	Daily
Site Data						Autos:	71.99	6 12.2%	15.9%	94.08%
Barrier Height:	0.0 fe	ot		M	edium T	rucks:	75.39	7.0%	17.7%	2.20%
Barrier Type (0-Wall, 1-Berm):		· CL		1	Heavy T	rucks:	60.49	6 12.0%	27.6%	3.73%
Centerline Dist. to Barrier.			1	Voise Sc	ource E	levatio	ns (in f	eet)		
Centerline Dist. to Observer.					Auto	s: (0.000	<u> </u>		
Barrier Distance to Observer.		et		Mediu	m Truck		2.297			
Observer Height (Above Pad):				Heav	/y Truck	s: 8	3.004	Grade Ad	justment	: 0.0
Pad Elevation:	0.0 10		L.		•					
Road Elevation:		et	- 1	Lane Eq				reet)		
Road Grade:	0.070				Auto		5.427			
Left View:	00.0 4				m Truck		3.270			
Right View:	90.0 de	egrees		Heav	ry Truck	s: 56	5.285			
FHWA Noise Model Calculation				_						
VehicleType REMEL	Traffic FI		stance	Finite		Fres		Barrier Att		m Atten
Autos: 71.7	-	3.81	-0.89	-	-1.20		-4.69		000	0.000
Medium Trucks: 82.4		2.51	-0.87		-1.20		-4.88		000	0.000
Heavy Trucks: 86.4		0.21	-0.87		-1.20		-5.34	0.0	000	0.000
Unmitigated Noise Levels (wi							_			
VehicleType Leq Peak H		Day	Leq E			Night		Ldn		NEL
	73.5	71.4		69.7		66 60		73.		74.
	67.8 74.1	65.9 71.2		61.6 70.2		69		68. 75.		68.5
	77.3	71.2		73.3		71		75.		76.1 78.1
				13.3		/1	.2	78.	ى 	78.
Centerline Distance to Noise	Contour (in	reet)	70 c	iBA	65	dBA		60 dBA	55	dBA
		Ldn:		215		46	4	999	1	2.153
		Lan:		210		40	4		,	

Average Daily Traffic (Adt):			D-77-108 HIGH	IWAY	NOISE	PREDIC		•				
Site Specific Input DATA										Campus Up	per Pla	te
SITE SPECIFIC INPUT DATA NOISE MODEL INPUTS							Job Ni	umber:	14064			
Autos: 15 Auto	Road Segmer	nt: e/o Barton	St.									
Average Daily Traffic (Adt):		SPECIFIC II	IPUT DATA			0:4- 0					S	
Peak Hour Percentage: 9.80% Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15						Site Cor	iaitions (
Peak Hour Volume:		. ,	,	es								
Vehicle Speed: 42 feet Vehicle Mix Vehicle Type Day Evening Night Daily									,			
				S		He	eavy Truc	ks (3+ A	(xles	15		
Site Data Barrier Height: 0.0 feet Barrier Type (0-Wal), 1-Berm): 0.0 feet Centerline Dist. to Barrier: 60.0 feet Centerline Dist. to Observer: 60.0 feet Barrier Distance to Observer: 60.0 feet Centerline Dist. to Observer: 60.0 feet Barrier Distance to Observer: 60.0 feet Centerline Dist. to Observer: 60.0 feet Centerline Dist. to Observer: 60.0 feet Centerline Dist. for Distance to Observer: 60.0 feet Centerline Dist. for Distance to Observer: 60.0 feet Centerline Dist. for Distance to Noise Source Elevations (in feet) Centerline Distance Centerline Distance to Noise Source Elevations (in feet) Centerline Distance Ce						Vehicle	Mix					
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Get Centerline Dist. to Barrier: 60.0 feet Centerline Dist. to Observer: 60.0 feet Centerline Dist. for Observer: 60.0 feet 60.0 f	Near/Far Lai	ne Distance:	42 feet			Veh	icleType		Day	Evening	Night	Daily
Barrier Type (0-Wail, 1-Berm): 0.0 Centerline Dist. to Diserver: 60.0 feet Centerline Dist. to Observer: 60.0 feet Barrier Distance to Observer: 0.0 feet Pad Elevation: 0.0 feet Pad Elevat	Site Data						Α	utos:	71.9%	12.2%	15.9%	94.59%
Barrier Type (0-Wall, 1-Bern): 0.0 Conterline Dist. to Dasrier: 60.0 feet Conterline Dist. to Observer: 60.0 feet Barrier Distance to Observer: 0.0 feet Conterline Dist. to Observer: 60.0 feet Conterline Distance for Search Plant Conterline Distance for Search Plant Plant Conterline Distance for Search Plant Plan	Bar	rier Heiaht:	0.0 feet			M	ledium Tr	ucks:	75.3%	7.0%	17.7%	2.01%
Noise Source Elevations (in feet) Noise Source Elevations (in feet)		-	0.0				Heavy Tr	ucks:	60.4%	12.0%	27.6%	3.41%
Autos: 0.000 Barrier Autos: 0.000 Barri	Centerline Dis	st. to Barrier:	60.0 feet		H	Noice S	ourco Ele	wation	c (in f	not)		
Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0	Centerline Dist.	to Observer:	60.0 feet		H	Noise 3				et)		
Diserver Height (Above Pad):	Barrier Distance	to Observer:	0.0 feet									
Pad Elevation: 0.0 feet	Observer Height (Above Pad):	5.0 feet							Crosdo Ad	iuotmon	t: 0.0
Road Grade: 0.0% Autos: 56.427 Medium Trucks: 56.275	Pa	ad Elevation:	0.0 feet			неа	vy irucks	6. 8.1	JU4	Grade Adj	usunen	. 0.0
Right View: 90.0 degrees	Roa	ad Elevation:	0.0 feet			Lane Eq	uivalent	Distanc	e (in	feet)		
Right View: 90.0 degrees	F	Road Grade:	0.0%				Autos	: 56.	427			
FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten		Left View:	-90.0 degre	es		Mediu	m Trucks	: 56.	270			
VehicleType		Right View:	90.0 degre	es		Hea	vy Trucks	56.	285			
Autos: 71.78 3.62 -0.89 -1.20 -4.69 0.000 0.000 Medium Trucks: 82.40 -13.11 -0.87 -1.20 -4.88 0.000 0.000 Medium Trucks: 86.40 -10.81 -0.87 -1.20 -5.34 0.000 0.000 Medium Trucks: 86.40 -10.81 -0.87 -1.20 -5.34 0.000 0.000 Medium Trucks: 86.40 -10.81 -10.81 -10.81 Medium Trucks: Without Topo and barrier attenuation) Vehicle Type	FHWA Noise Mode	el Calculation	s									
Medium Trucks: 82.40 -13.11 -0.87 -1.20 -4.88 0.000 0.00 Heavy Trucks: 86.40 -10.81 -0.87 -1.20 -5.34 0.000 0.00 Unmitigated Noise Levels (without Topo and barrier attenuation)	VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	iel .	Barrier Att	en Be	rm Atten
Heavy Trucks: 86.40 -10.81 -0.87 -1.20 -5.34 0.000 0.000	Autos:	71.78	3.62		-0.8	19	-1.20		-4.69	0.0	000	0.00
Unmitigated Noise Levels (without Topo and barrier attenuation) Vehicle Type Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL	Medium Trucks:	82.40	-13.11		-0.8	7	-1.20		-4.88	0.0	000	0.00
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL	Heavy Trucks:	86.40	-10.81		-0.8	17	-1.20		-5.34	0.0	000	0.00
Autos: 73.3 71.2 69.5 65.9 73.5 73. Medium Trucks: 67.2 65.3 61.0 60.2 67.6 67. Heavy Trucks: 73.5 70.6 69.6 68.5 75.2 75. Vehicle Noise: 76.9 74.5 72.9 70.8 77.9 78. Centerline Distance to Noise Contour (in feet) Image: Contour (in feet) 65 dBA 60 dBA 55 dBA Ldn: 201 433 932 2,000	Unmitigated Noise	Levels (with	out Topo and	barrie	er atter	nuation)						
Medium Trucks: 67.2 65.3 61.0 60.2 67.6 67. Heavy Trucks: 73.5 70.6 69.6 68.5 75.2 75. Vehicle Noise: 76.9 74.5 72.9 70.8 77.9 78. Centerline Distance to Noise Contour (in Feet) Ldn: 201 433 932 2,000					Leq E							
Heavy Trucks: 73.5 70.6 69.6 68.5 75.2 75. Vehicle Noise: 76.9 74.5 72.9 70.8 77.9 78. Centerline Distance to Noise Contour (in feet)											-	73.9
Vehicle Noise: 76.9 74.5 72.9 70.8 77.9 78. Centerline Distance to Noise Contour (in feet) Image: Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 201 433 932 2,000		-				61.0			-		-	67.9
Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 201 433 932 2,000	Heavy Trucks:	73	3.5	70.6		69.6	i	68.5	5	75.2	2	75.
70 dBA 65 dBA 60 dBA 55 dBA Ldn: 201 433 932 2,00:	Vehicle Noise:	76	5.9	74.5		72.9	1	70.8	3	77.9	9	78.
Ldn: 201 433 932 2,000	Centerline Distance	e to Noise C	ontour (in feet)								
				L	70		65 (
UNEL: 212 457 984 2,12												,
			C	NEL:		212		457		984		2,120

Wednesday, September 28, 2022

	FHWA-RI	D-77-108 HIGH	ON YAWI	ISE PREDI	CTION M	DDEL (9/1	2/2021)	
Road Nan	rio: EAP ne: Alessandro nt: e/o Barton					Vame: We Imber: 14	est Campus Upp 064	er Plate
SITE	SPECIFIC IN	IPUT DATA			N	DISE MO	DEL INPUTS	
Highway Data				Site Co	nditions (Hard = 10	, Soft = 15)	
	Traffic (Adt): Percentage:	52,650 vehicle 9.80% 5,160 vehicle			edium Tru eavy Truc	cks (2 Axl	/	
	hicle Speed:	55 mph	.5			10 (0 - 71511		
	ne Distance:	42 feet		Vehicle				
iveai/i ai La	ine Distance.	42 1661		Vei	hicleType	Da	ay Evening I	Night Daily
Site Data					Α	utos: 71	.9% 12.2%	15.9% 94.53%
Ва	rrier Heiaht:	0.0 feet		٨	1edium Tri	ıcks: 75	7.0%	17.7% 2.03%
Barrier Type (0-V	Vall, 1-Berm):	0.0			Heavy Tri	ıcks: 60	.4% 12.0%	27.6% 3.44%
Centerline Di	ist. to Barrier:	60.0 feet		Noise S	ource Ele	vations (in feet)	
Centerline Dist.	to Observer:	60.0 feet			Autos			
Barrier Distance	to Observer:	0.0 feet		Modii	ım Trucks			
Observer Height	(Above Pad):	5.0 feet			vy Trucks			stment: 0.0
P	ad Elevation:	0.0 feet		1100	vy IIucks	0.00	4 Orado riaja	ourrornt. 0.0
Ro	ad Elevation:	0.0 feet		Lane Ed	quivalent	Distance	(in feet)	
	Road Grade:	0.0%			Autos	56.42	7	
	Left View:	-90.0 degre	es	Media	ım Trucks	56.27	0	
	Right View:	90.0 degre	es	Hea	vy Trucks	56.28	5	
FHWA Noise Mod	el Calculation	s						
VehicleType	REMEL	Traffic Flow	Distant	ce Finite	Road	Fresnel	Barrier Atter	Berm Atten
Autos:	71.78	4.17		0.89	-1.20	-4.	.69 0.00	0.000
Medium Trucks:	82.40	-12.51		0.87	-1.20	-4	.88 0.00	0.000
Heavy Trucks:	86.40	-10.21		0.87	-1.20	-5	.34 0.00	0.000
Unmitigated Nois			barrier a	tenuation)				
VehicleType	Leq Peak Hou			q Evening	Leq N	-	Ldn	CNEL
Autos:		3.9	71.7	70.1		66.4	74.0	74.
Medium Trucks:		7.8	65.9	61.6		60.8	68.2	68.
Heavy Trucks:		l.1	71.2	70.2		69.1	75.8	76.
Vehicle Noise:	77	7.5	75.0	73.4	1	71.4	78.5	78.8
Centerline Distan	ce to Noise Co	ontour (in feet						
				70 dBA	65 a		60 dBA	55 dBA
			Ldn:	220		473	1,019	2,196
		С	NEL:	232		500	1,076	2,319

Wednesday, September 28, 2022 Wednesday, September 28, 2022

	FHWA-RI	D-77-108 HIGH	IWAY	NOISE	PREDIC	CTION N	IODEL	(9/12/2	021)		
Scenari Road Nam Road Segmer	e: Alessandro							West (Campus U	pper Pla	te
	SPECIFIC IN	IPUT DATA			2:4- 0				L INPUT	s	
Highway Data					one Con	ditions	(Hara				
Average Daily		50,399 vehicle	es					Autos:			
	Percentage:	9.80%				edium Tr		,			
	our Volume:	4,939 vehicle	S		He	eavy Tru	CKS (3+	Axies):	15		
	hicle Speed:	55 mph		١	/ehicle	Mix					
Near/Far Lai	ne Distance:	42 feet			Veh	icleType	•	Day	Evening	Night	Daily
Site Data							Autos:	71.9%	12.2%	15.9%	94.08%
Bar	rier Height:	0.0 feet			М	edium T	rucks:	75.3%	7.0%	17.7%	2.20%
Barrier Type (0-W	'all, 1-Berm):	0.0				Heavy T	rucks:	60.4%	12.0%	27.6%	3.73%
Centerline Dis		60.0 feet		1	Voise S	ource E	levatio	ns (in f	eet)		
Centerline Dist.		60.0 feet				Auto	s: 0	0.000	,		
Barrier Distance		0.0 feet			Mediu	m Truck	s: 2	2.297			
Observer Height (Above Pad): ad Elevation:	5.0 feet 0.0 feet			Hea	vy Truck	s: 8	3.004	Grade Ad	ljustmen	t: 0.0
	ad Elevation:	0.0 feet		,	ane Fo	uivalen	t Distar	nce (in	feet)		
	Road Grade:	0.0%		F	-ucq	Auto		3.427	1000		
,	Left View:	-90.0 degree	oe.		Mediu	m Truck		3.270			
	Right View:	90.0 degree				vy Truck		3.285			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	inel	Barrier At	ten Be	rm Atten
Autos:	71.78	3.96		-0.89	9	-1.20		-4.69	0.	000	0.000
Medium Trucks:	82.40	-12.35		-0.87	7	-1.20		-4.88	0.	000	0.000
Heavy Trucks:	86.40	-10.06		-0.87	7	-1.20		-5.34	0.	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	/	Leq Ev	rening	Leq	Night		Ldn	C	NEL
Autos:	73	3.7	71.5		69.8		66	.2	73.	8	74.2
Medium Trucks:	68	3.0	66.0		61.7		61	.0	68.	4	68.6
Heavy Trucks:	74	1.3	71.4		70.4		69	.2	76.	0	76.3
Vehicle Noise:	77	7.5	75.0		73.4		71	.4	78.	5	78.8
Centerline Distanc	e to Noise Co	ontour (in feet)	70 0	(D)	67	dBA		50 dBA	-	5 dBA
			Ldn:	/00		05					
			Lan: NEL:		220		47	-	1,023		2,204
		Ci	IVEL.		233		50	1	1,080	J	2,327

	FHWA-RI	D-77-108 HIGH	WAY NO	ISE I	PREDIC	TION	10DEL (9/12/	2021)	
	io: HY ne: Alessandro nt: e/o Barton						Name: West lumber: 1406	t Campus Upp 4	er Plate
SITE	SPECIFIC IN	IPUT DATA						EL INPUTS	
Highway Data				S	ite Con	ditions	(Hard = 10, S	Soft = 15)	
	Traffic (Adt): Percentage: lour Volume:	59,226 vehicle 9.80% 5,804 vehicle					Auto ucks (2 Axles cks (3+ Axles): 15	
Ve	hicle Speed:	55 mph		V	ehicle i	Miv			
Near/Far La	ne Distance:	42 feet		-		icleType	Dav	Evening	Vight Daily
Site Data							Autos: 71.9		15.9% 94.08%
Rai	rrier Heiaht:	0.0 feet			М	edium T	rucks: 75.3	% 7.0%	17.7% 2.20%
Barrier Type (0-W		0.0			1	Heavy T	rucks: 60.4	% 12.0%	27.6% 3.73%
Centerline Dis		60.0 feet		N	loise So	ource E	levations (in	feet)	
Centerline Dist.	to Observer:	60.0 feet				Auto		,	
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck			
Observer Height ('Above Pad):	5.0 feet				/v Truck		Grade Adju	stment: 0.0
	ad Elevation:	0.0 feet				,			
	ad Elevation:	0.0 feet		L	ane Eq		t Distance (ir	ı feet)	
I	Road Grade:	0.0%				Auto			
	Left View:	-90.0 degree				m Truck	00.210		
	Right View:	90.0 degree	es		Heav	ry Truck	s: 56.285		
FHWA Noise Mode	el Calculation	s							
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresnel	Barrier Atter	Berm Atten
Autos:	71.78	4.66		-0.89	1	-1.20	-4.6	9 0.00	0.000
Medium Trucks:	82.40	-11.65		-0.87		-1.20	-4.8	8 0.00	0.000
Heavy Trucks:	86.40	-9.36		-0.87		-1.20	-5.3	4 0.00	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier a	ttenu	ıation)				
	Leq Peak Hou			eq Ev	ening		Night	Ldn	CNEL
Autos:			72.2		70.5		66.9	74.5	74.9
Medium Trucks:	68		66.7		62.4		61.7	69.1	69.3
Heavy Trucks:	75		72.1		71.1		69.9	76.7	77.0
Vehicle Noise:	78	3.2	75.7		74.1		72.1	79.2	79.5
Centerline Distanc	e to Noise C	ontour (in feet)				,		
				70 d		65	dBA	60 dBA	55 dBA
			Ldn:		245		529	1,139	2,455
		C	VEL:		259		558	1,203	2,591

	FHWA-R	D-77-108 HIGH	TWAY	NOISE	PREDIC	том мо	DEL (S	9/12/20	121)		
Road Nan	rio: OYCP ne: Alessandro nt: e/o Barton					Project N Job Nui			Campus Up	per Plat	е
	SPECIFIC II	NPUT DATA				NC	ISE N	IODE	L INPUT	S	
Highway Data					Site Con	ditions (F	lard =	10, So	ft = 15)		
Average Daily	Traffic (Adt):	54,390 vehicl	es				,	Autos:	15		
Peak Hour	Percentage:	9.80%			Me	dium Truc	ks (2 A	(xles	15		
Peak H	lour Volume:	5,330 vehicle	s		He	avy Truck	s (3+ A	(xles	15		
Ve	hicle Speed:	55 mph		١,	/ehicle l	Mix					
Near/Far La	ne Distance:	42 feet		Ė		icleType		Day	Evening	Night	Daily
Site Data						Au	tos:	71.9%	12.2%	15.9%	94.519
Ba	rrier Height:	0.0 feet			M	edium Tru	cks:	75.3%	7.0%	17.7%	2.049
Barrier Type (0-V		0.0			1	Heavy Tru	cks:	60.4%	12.0%	27.6%	3.459
Centerline Di		60.0 feet		1	Voise So	ource Elev	/ations	in fe	et)		
Centerline Dist.		60.0 feet				Autos:	0.0	000			
Barrier Distance		0.0 feet			Mediu	m Trucks:	2.2	297			
Observer Height	. ,	5.0 feet			Heav	y Trucks:	8.0	004	Grade Adj	ustment	0.0
	ad Elevation:	0.0 feet		-							
	ad Elevation:	0.0 feet		1	_ane Eq	uivalent E			eet)		
	Road Grade:	0.0%				Autos: m Trucks:					
	Left View: Right View:	-90.0 degre 90.0 degre				m Trucks: vy Trucks:					
FHWA Noise Mod	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	el .	Barrier Atte	en Ber	m Atten
Autos:	71.78	4.31		-0.89	9	-1.20		-4.69	0.0	000	0.00
Medium Trucks:	82.40	-12.35	,	-0.8	7	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	86.40	-10.06		-0.8	7	-1.20		-5.34	0.0	000	0.00
Unmitigated Nois			_								
VehicleType	Leq Peak Ho		_	Leq E		Leq N	•		Ldn		VEL
Autos:	-	4.0	71.9		70.2		66.6		74.1		74. 68
Medium Trucks:		8.0	66.0		61.7		61.0		68.4		
Heavy Trucks: Vehicle Noise:		4.3 7.6	71.4		70.4		69.2 71.5		76.0 78.6		76. 79.
					73.0		71.0	,	70.0	,	19.
Centerline Distan	ce to Noise C	ontour (in fee	t)	70 c	iBA	65 dE	3 <i>A</i>	6	0 dBA	55	dBA
										1	
			Ldn:		225		484		1.043		2,24

Wednesday, September 28, 2022

	FHWA-RD	-77-108 HIGH\	WAY NOIS	E PREDIC	CTION MO	DDEL	(9/12/2	021)		
Road Nam	rio: HYP ne: Alessandro nt: e/o Barton S				Project I Job Nu			Campus Up	per Pla	te
	SPECIFIC IN	PUT DATA						L INPUT	5	
Highway Data				Site Con	ditions (Hard =	: 10, S	oft = 15)		
Average Daily	Traffic (Adt):	63,217 vehicle	s				Autos.	15		
Peak Hour	Percentage:	9.80%		Me	dium Tru	cks (2	Axles).	15		
Peak H	lour Volume:	6,195 vehicles		He	avy Truci	ks (3+	Axles).	15		
Ve	hicle Speed:	55 mph		Vehicle	Miv					
Near/Far La	ne Distance:	42 feet			icleType		Dav	Evening	Night	Daily
Site Data						utos:	71.99	-	15.9%	
P.	rrier Heiaht:	0.0 feet		М	edium Tru	ıcks:	75.39	6 7.0%	17.7%	2.06%
Barrier Type (0-W		0.0 feet			Heavy Tru	ıcks:	60.49	6 12.0%	27.6%	3.49%
Centerline Di		60.0 feet								
Centerline Dist		60.0 feet		Noise So	ource Ele			eet)		
Barrier Distance		0.0 feet			Autos		.000			
Observer Height	(Above Pad):	5.0 feet			m Trucks		.297			
	ad Elevation:	0.0 feet		Hear	y Trucks	: 8	.004	Grade Adj	ustmen	r: 0.0
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%			Autos	: 56	.427			
	Left View:	-90.0 degree	s	Mediu	m Trucks	: 56	.270			
	Right View:	90.0 degree	S	Heav	y Trucks	56	.285			
FHWA Noise Mod	el Calculations	3		I.						
VehicleType	REMEL	Traffic Flow	Distance		Road	Fres		Barrier Atte		rm Atten
Autos:		4.96	-0.		-1.20		-4.69	0.0		0.000
Medium Trucks:		-11.65	-0.		-1.20		-4.88	0.0		0.000
Heavy Trucks:	86.40	-9.36	-0.	87	-1.20		-5.34	0.0	100	0.000
Unmitigated Noise										
VehicleType	Leq Peak Hou			Evening	Leg N	-		Ldn		NEL
Autos:	74.		72.5	70.8		67.		74.8		75.2
Medium Trucks:			66.7	62.4		61.		69.1		69.3
Heavy Trucks: Vehicle Noise:			72.1 75.9	71.1 74.3		69. 72.		76.7 79.3		77.0 79.0
Centerline Distan										
Contonine Distant		ou. (III reet)	70) dBA	65 d	BA		60 dBA	55	dBA
		I	dn:	249		537	7	1,158		2,494
			IFL:	263		567		1.223		2.634

Wednesday, September 28, 2022

	FHWA-RE	0-77-108 HIGH	WAY	NOISE	PREDIC	CTION N	/IODEL	(9/12/2	021)		
Scenario Road Name Road Segmen	e: Alessandro						t Name: lumber:		Campus Up	per Plat	e
	SPECIFIC IN	IPUT DATA			a:: a				L INPUT	s	
Highway Data					Site Cor	aitions	(Hara =	: 10, Sc	ort = 15)		
Average Daily 1	. ,	44,072 vehicle	es					Autos:			
Peak Hour F		9.80%					rucks (2	,			
	our Volume:	4,319 vehicles	S		He	eavy Tru	icks (3+	Axles):	15		
	nicle Speed:	45 mph			Vehicle	Mix					
Near/Far Lan	e Distance:	42 feet		ı	Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	71.9%	12.2%	15.9%	94.08%
Barr	rier Heiaht:	0.0 feet			М	edium 7	rucks:	75.3%	7.0%	17.7%	2.20%
Barrier Type (0-Wa		0.0				Heavy 7	rucks:	60.4%	12.0%	27.6%	3.73%
Centerline Dis		60.0 feet			Noise S	ource E	levation	s (in f	eet)		
Centerline Dist. t		60.0 feet				Auto	s: 0	.000			
Barrier Distance t		0.0 feet			Mediu	m Truck	(s: 2	.297			
Observer Height (A	,	5.0 feet			Hea	vy Truck	s: 8	.004	Grade Ad	iustment	: 0.0
	d Elevation:	0.0 feet		-			4 Di-4	/:	£4)		
	d Elevation:	0.0 feet		-	Lane Eq	uivaien Auto		427	reet)		
H	Road Grade:	0.0%			A de elle	m Truck		.427			
	Left View: Right View:	-90.0 degree				m Truck vy Truck		.285			
FHWA Noise Mode	I Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Bei	m Atten
Autos:	68.46	4.25		-0.8		-1.20		-4.69	0.0	000	0.00
Medium Trucks:	79.45	-12.07		-0.8	7	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	84.25	-9.77		-0.8	7	-1.20		-5.34	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	/	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	70		68.5		66.8		63.	_	70.	-	71.
Medium Trucks:	65		63.4		59.1		58.	-	65.		66.0
Heavy Trucks:	72		69.5		68.5		67.	-	74.		74.
Vehicle Noise:	75	.1	72.6		71.0		69.	1	76.2	2	76.
Centerline Distance	e to Noise Co	ntour (in feet))	70 -	dBA	65	dBA		60 dBA	FF	dBA
			Ldn:	/00	155	00	334 334	_	719		1.549
			NEL:		155 163		352		719		1,549
		CI	VLL.		103		354	4	/ 58		1,033

FHWA-R	D-77-108 HIGH	WAY I	NOISE	PREDIC	TION N	IODEL	(9/12/2	2021)		
Scenario: EA								Campus U	pper Pla	te
Road Name: Alessandr					Job N	lumber	14064			
Road Segment: e/o Meridia	an Pkwy.									
SITE SPECIFIC I	NPUT DATA							EL INPUT	S	
Highway Data			5	Site Con	ditions	(Hard	= 10, S	oft = 15)		
Average Daily Traffic (Adt):	50,625 vehicl	es					Autos	: 15		
Peak Hour Percentage:	9.80%				dium Tr		,			
Peak Hour Volume:	4,961 vehicle	es.		He	avy Tru	cks (3+	Axles)	: 15		
Vehicle Speed:	45 mph		١	/ehicle	Mix					
Near/Far Lane Distance:	42 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						Autos:	71.99	6 12.2%	15.9%	94.08%
Barrier Height:	0.0 feet			М	edium T	rucks:	75.39	6 7.0%	17.7%	2.20%
Barrier Type (0-Wall, 1-Berm):	0.0			1	Heavy T	rucks:	60.49	6 12.0%	27.6%	3.73%
Centerline Dist. to Barrier:	60.0 feet		1	loise So	ource E	levatio	ns (in t	eet)		
Centerline Dist. to Observer:	60.0 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	3.004	Grade Ad	ljustmen	t: 0.0
Pad Elevation:	0.0 feet		١.		•			• •		
Road Elevation:	0.0 feet			ane Eq				reet)		
Road Grade:	0.0%				Auto		5.427			
Left View:	-90.0 degre				m Truck	-	3.270			
Right View:	90.0 degre	es		Heav	y Truck	s: 5	5.285			
FHWA Noise Model Calculation				_						
VehicleType REMEL	Traffic Flow		tance		Road	Fre		Barrier At		rm Atten
Autos: 68.46			-0.89		-1.20		-4.69		000	0.000
Medium Trucks: 79.45			-0.87		-1.20		-4.88		000	0.000
Heavy Trucks: 84.25			-0.87		-1.20		-5.34	0.	000	0.000
Unmitigated Noise Levels (with VehicleType Leg Peak Ho						A E le 4	_	Ldn	1 0	NEL
	ur Leq Da	69.1	Leq Ev	ening 67.4		Night 63	0	Lan 71		NEL 71.8
	5.9	64.0		59.7		58		66.		66.6
	3.0	70.1		69.1		68		74.		75.0
,	5.7	73.2		71.6		69		76.		77.1
Centerline Distance to Noise C	ontour (in fee	t)								
	,		70 a	IBA .	65	dBA		60 dBA	55	dBA
		Ldn:		170		36	6	788	3	1,698

		77-108 HIGH	WAYN	IOISE F	REDIC		•			B1 /	
Scenari									ampus Up	per Plat	e
	e: Alessandro E					Job Nu	mber: 1	4064			
	nt: e/o Meridian										
SITE : Highway Data	SPECIFIC INF	UT DATA		S	ite Con	ditions (F			L INPUTS ft = 15)	5	
Average Daily	Traffic (Adt): F	0.059 vehicle	e					Autos:	15		
	Percentage:	9.80%	•		Me	dium Truc			15		
		1.906 vehicles				avy Truck		,	15		
	hicle Speed:	45 mph				-	. (
Near/Far Lar		42 feet		V	ehicle I						
					Veh	icleType		Day	Evening	Night	Daily
Site Data						Au edium Tru		71.9%		15.9%	
	rier Height:	0.0 feet						75.3%		17.7%	
Barrier Type (0-W	. ,	0.0			,	Heavy Tru	CKS:	60.4%	12.0%	27.6%	3.289
Centerline Dis		60.0 feet		N	oise Sc	ource Ele	vations	(in fe	et)		
Centerline Dist.		60.0 feet				Autos:	0.0	000			
Barrier Distance t		0.0 feet			Mediui	m Trucks:	2.2	297			
Observer Height (,	5.0 feet			Heav	y Trucks:	8.0	004	Grade Adj	ustment	0.0
	nd Elevation:	0.0 feet		_							
	d Elevation:	0.0 feet		Li	ane Eq	uivalent L			eet)		
F	Road Grade:	0.0%				Autos:					
	Left View:	-90.0 degree				m Trucks:					
	Right View:	90.0 degree	S		Heav	y Trucks:	56.2	285			
FHWA Noise Mode	el Calculations										
VehicleType		Traffic Flow	Dista			Road	Fresn	_	Barrier Atte		m Atten
Autos:	68.46	4.84		-0.89		-1.20		-4.69	0.0		0.00
Medium Trucks:	79.45	-12.07		-0.87		-1.20		-4.88	0.0		0.00
Heavy Trucks:	84.25	-9.77		-0.87		-1.20		-5.34	0.0	100	0.00
Unmitigated Noise	•										
VehicleType Autos:	Leq Peak Hour 71.2		59.1	Leq Eve	ening 67.4	Leq N	ight 63.8	L	Ldn 71.3		NEL 71.
Autos: Medium Trucks:	71.2 65.3	-	59.1 53.4		59.1		58.3		71.3 65.7		71. 66
	72.4		53.4 59.5		59.1 68.5		58.3 67.4		65.7 74.1		-
Heavy Trucks: Vehicle Noise:	75.3		72.8		71.3		69.3		74.1		74. 76.
Centerline Distanc	e to Noise Cor	tour (in feet)									
	HOISE COI	(111 1001)		70 dl	DΛ	65 dl	R.A	6	0 dBA	55	dBA
Centernine Distanc				70 01	24	00 01					
Genternie Distanc			Ldn:	70 01	159	00 01	343		739	- 55	1,59

Wednesday, September 28, 2022

FHWA-R	D-77-108 HIGHW	AY NOISI	E PREDIC	TION N	IODEL (9/12	/2021)	
Scenario: EAP Road Name: Alessandr Road Segment: e/o Meridia				.,	Name: Wes lumber: 1406	t Campus Upp 64	er Plate
SITE SPECIFIC I	NPUT DATA			N	IOISE MOD	EL INPUTS	
Highway Data			Site Con	ditions	(Hard = 10,	Soft = 15)	
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume: Vehicle Speed:	56,612 vehicles 9.80% 5,548 vehicles 45 mph			avy Tru	Auto ucks (2 Axle: cks (3+ Axle:	s): 15	
Near/Far Lane Distance:	42 feet		Veh	icleType	Day	Evening I	light Daily
Barrier Height: Barrier Type (0-Wall, 1-Berm):	0.0 feet 0.0			edium T Heavy T		7.0%	15.9% 94.70% 17.7% 1.96% 27.6% 3.33%
Centerline Dist. to Barrier: Centerline Dist. to Observer:	60.0 feet		Noise So	ource El	evations (in	feet)	
Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation: Road Elevation:	60.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet		Hear	Auto m Truck yy Truck uivalen	s: 2.297	Grade Adjus	stment: 0.0
Road Grade:	0.0%			Auto	s: 56.427		
Left View: Right View:	-90.0 degrees 90.0 degrees			m Truck /y Truck	00.2.0		
FHWA Noise Model Calculation	15						
VehicleType REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atter	Berm Atten
Autos: 68.46	5.37	-0.	89	-1.20	-4.6	9 0.00	0.000
Medium Trucks: 79.45	-11.46	-0.	87	-1.20	-4.8	8 0.00	0.000
Heavy Trucks: 84.25		-0.		-1.20	-5.3	4 0.00	0.000
Unmitigated Noise Levels (with		_					
VehicleType Leq Peak Ho			Evening		Night	Ldn	CNEL
	1.7 69		67.9		64.3	71.9	72.3
	5.9 64		59.7		58.9	66.3	66.6
	3.0 70 5.9 73		69.1 71.8		68.0 69.9	74.7 76.9	75.0 77.3
Centerline Distance to Noise C	ontour (in feet)						
		70	dBA	65	dBA	60 dBA	55 dBA
	La	In:	174		375	807	1,739
	CNE	L:	183		395	852	1,835

	FHWA-R	D-77-108 HIGH	WAY	NOISE	PREDIC	CTION M	IODEL	(9/12/2	021)		
Road Na	ario: OYC nme: Alessandro nent: e/o Meridia							West (Campus Up	oper Plat	е
	SPECIFIC II	IPUT DATA							L INPUT	s	
Highway Data					Site Cor	aitions	(Hara				
Average Dail	ly Traffic (Adt):	52,834 vehicle	es					Autos:	15		
Peak Hou	ur Percentage:	9.80%			Me	edium Tri	ucks (2	Axles):	15		
Peak	Hour Volume:	5,178 vehicles	S		He	eavy Truc	cks (3+	Axles):	15		
\	/ehicle Speed:	45 mph		ŀ	Vehicle	Mix					
Near/Far L	ane Distance:	42 feet		-		icleType	. 1	Dav	Evening	Niaht	Dailv
Site Data							Autos:	71.9%		15.9%	. ,
	Barrier Height:	0.0 feet			М	edium Ti		75.3%		17.7%	
Barrier Type (0-		0.0 1661				Heavy Ti	rucks:	60.4%	12.0%	27.6%	
** '	Dist to Barrier:	60.0 feet									
	t to Observer:	60.0 feet			Noise S			_ •	eet)		
Barrier Distanc		0.0 feet				Auto		0.000			
Observer Heigh		5.0 feet			Mediu	m Truck	s: 2	2.297			
	Pad Elevation:	0.0 feet			Hea	vy Truck	s: 8	3.004	Grade Ad	justment	0.0
	nad Elevation:	0.0 feet		-	Lane Eq	uivalent	Distar	nce (in	feet)		
	Road Grade:	0.0%		ŀ		Auto		3.427			
	Left View:	-90.0 degree	00		Mediu	m Truck		3.270			
	Right View:	90.0 degree				vy Truck		3.285			
			20		1100	ry Truck	3. 00	7.200			
FHWA Noise Mo		· · · · · · · · · · · · · · · · · · ·									
VehicleType	REMEL	Traffic Flow	Dis	stance	_	Road	Fres		Barrier Att		m Atten
Autos				-0.8	-	-1.20		-4.69		000	0.000
Medium Trucks				-0.8		-1.20		-4.88		000	0.000
Heavy Trucks	s: 84.25	-8.98		-0.8	37	-1.20		-5.34	0.0	000	0.000
Unmitigated Noi											
VehicleType	Leq Peak Ho		_	Leq E	vening		Night		Ldn		NEL
Autos			69.3		67.6		64		71.0	-	72.0
Medium Trucks			64.2		59.9		59		66.	-	66.8
Heavy Trucks			70.3		69.3		68		74.9		75.2
Vehicle Noise	e: 75	5.9	73.4		71.8		69	.9	77.0)	77.3
Centerline Dista	nce to Noise C	ontour (in feet))								
			L	70	dBA	65	dBA		60 dBA		dBA
			Ldn:		175		37		811		1,748
		CI	VEL:		184		39	7	855		1,843

	-110-	77-100 HIGI	IWAY	NOISE	PREDIC	TION N	MODEL	(9/12/20	021)		
Scenario: HY Road Name: Alessar Road Segment: e/o Mer							t Name: lumber:		Campus Up	per Plat	е
SITE SPECIFIC	INF	UT DATA							L INPUT	s	
Highway Data Average Daily Traffic (Adi Peak Hour Percentag Peak Hour Volum Vehicle Spee	e: e: 6	62,393 vehicle 9.80% 6,115 vehicle 45 mph			He	dium Ti avy Tru	rucks (2 licks (3+	Autos: Axles):	15 15		
Near/Far Lane Distanc	e:	42 feet		F	Vehicle I	viix icleType		Dav	Evening	Night	Dailv
Site Data					VEII		Autos:	71.9%		15.9%	. ,
Barrier Heigh Barrier Type (0-Wall, 1-Bern		0.0 feet 0.0				edium 1 Heavy 1		75.3% 60.4%		17.7% 27.6%	
Centerline Dist. to Barrie		60.0 feet		1	Noise So	urce E	levatio	ns (in fe	eet)		
Centerline Dist. to Observe Barrier Distance to Observe Observer Height (Above Pad Pad Elevatio Road Elevatio	r: (): n:	0.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet				Auto m Truck ry Truck uivalen Auto	s: 2 s: 8 t Distar	0.000 0.297 0.004 0.006 (in 1	Grade Adj	iustment	: 0.0
Left Viet Right Viet	v:	-90.0 degre				m Truck ry Truck		3.270 3.285			
FHWA Noise Model Calculat					1						
VehicleType REMEL Autos: 68	46	Traffic Flow 5.76		stance -0.8		Road -1.20	Fres	-4.69	Barrier Att	en Ber 000	m Atten 0.00
Medium Trucks: 79	.45 .25	-10.56 -8.26		-0.8 -0.8	7	-1.20 -1.20 -1.20		-4.88 -5.34	0.0	000	0.00
Unmitigated Noise Levels (v	ritho	ut Topo and	barri	er atten	uation)						
VehicleType Leq Peak	Hour	Leq Day	/	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	72.1		70.0		68.3		64		72.3	-	72.
Medium Trucks:	66.8		64.9		60.6		59		67.2	-	67.
Heavy Trucks:	73.9		71.0		70.0		68		75.6		75.
Vehicle Noise:	76.6		74.1		72.5		70	.1	77.7	1	78.
Centerline Distance to Noise	Cor	itour (in feet)	70.	dBA	65	dBA	-	i0 dBA	E E	dBA
			Ldn:	,,,	195		42		906		1.952

Scenario: OYCP Road Name: Alessar Road Segment: e/o Met									: West	Campus U	oper Plat	е
SITE SPECIFIC	INI	PUT DATA			Sito	Conc				L INPUT	S	
• •	41.	58.821 vehicle	_		Onte	COM	110113	(mara	Autos.			
Average Daily Traffic (Ad	,	,	S				T.					
Peak Hour Percentag		9.80%							Axles).			
Peak Hour Volum		5,764 vehicles				пес	avy IIu	CKS (3	Axles).	. 15		
Vehicle Spee		45 mph			Vehi	cle N	lix					
Near/Far Lane Distanc	e:	42 feet				Vehic	сіеТуре		Day	Evening	Night	Daily
ite Data								Autos:	71.9%	6 12.2%	15.9%	94.689
Barrier Heigh	nt:	0.0 feet				Me	dium T	rucks:	75.3%	6 7.0%	17.7%	1.979
Barrier Type (0-Wall, 1-Bern		0.0				Н	leavy T	rucks:	60.49	6 12.0%	27.6%	3.359
Centerline Dist. to Barrie		60.0 feet										
Centerline Dist. to Observe		60.0 feet			Nois	e So			ns (in f	eet)		
Barrier Distance to Observe		0.0 feet					Auto		0.000			
Observer Height (Above Page		5.0 feet					n Truck		2.297			
Pad Elevation	,	0.0 feet			F	Heav	y Truck	S.	8.004	Grade Ad	justment	: 0.0
Road Elevation	n:	0.0 feet			Lane	Equ	iivalen	t Dista	nce (in	feet)		
Road Grad	le:	0.0%					Auto	s: 5	6.427	,		
Left Vie	w:	-90.0 degree	s		М	ediun	n Truck	s: 5	6.270			
Right Vie	W.	90.0 degree			F	Heav	y Truck	s: 5	6.285			
HWA Noise Model Calcula	tions											
VehicleType REMEL	.	Traffic Flow	Di	istance	F	inite I	Road	Fre	snel	Barrier Att	en Ber	m Atten
Autos: 68	3.46	5.53		-0.8	89		-1.20		-4.69	0.0	000	0.00
Medium Trucks: 79	9.45	-11.28		-0.8	87		-1.20		-4.88		000	0.00
Heavy Trucks: 84	1.25	-8.98		-0.8	87		-1.20		-5.34	0.0	000	0.00
Unmitigated Noise Levels (v			_	_				N E - lad		Ldn		NEL
, , ,		- 1 - 7	_	_	Evenir		Leq	Night		Lan 72.		NEL 72.
Autos: Medium Trucks:	71.		59.8 54.2			58.1 59.9			1.5 9.1	66.		66
Heavy Trucks:	73.		70.3			69.3			3.2	74.		75
Vehicle Noise:	76.		73.6			72.0			0.1	77.		77.
Centerline Distance to Noise	e Coi	ntour (in feet)										
				70	dBA		65	dBA		60 dBA	55	dBA
			'									4 70
		I.	Ldn:			179		38	35	830)	1,78

Wednesday, September 28, 2022

	FHWA-RI	0-77-108 HIGH	WAY NO	DISE	PREDIC	TION N	IODEL	(9/12/2	(021)		
Road Nan	io: HYP ne: Alessandro nt: e/o Meridia						Name: lumber:		Campus Uր	per Pl	ate
SITE	SPECIFIC IN	PUT DATA				N	IOISE	MODE	L INPUT	s	
Highway Data				S	ite Con	ditions	(Hard =	: 10, S	oft = 15)		
	Traffic (Adt): Percentage: lour Volume:	68,380 vehicle 9.80% 6,701 vehicles				dium Tr		/	: 15		
Ve	hicle Speed:	45 mph		1/	ehicle l	Miv					
Near/Far La	ne Distance:	42 feet		-		icleType		Dav	Evening	Night	Daily
Site Data				-	V C//		Autos:	71.99		15.9	
				\exists	M	edium T		75.39		17.7	
Barrier Type (0-V	. ,	0.0 feet 0.0				Heavy T		60.49		27.6	
	st. to Barrier:	60.0 feet		٨	loise So	ource El	evation	s (in f	eet)		
Centerline Dist.		60.0 feet				Auto	s: 0	.000			
Barrier Distance		0.0 feet			Mediu	m Truck		297			
Observer Height	(Above Pad):	5.0 feet				y Truck		.004	Grade Ad	iustme	nt: 0.0
P	ad Elevation:	0.0 feet				•					
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen			feet)		
	Road Grade:	0.0%				Auto		.427			
	Left View:	-90.0 degree	s		Mediu	m Truck	s: 56	.270			
	Right View:	90.0 degree	S		Heav	y Truck	s: 56	.285			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	псе	Finite	Road	Fres	nel	Barrier Att	en B	erm Atten
Autos:	68.46	6.18		-0.89)	-1.20		-4.69	0.0	000	0.000
Medium Trucks:	79.45	-10.56		-0.87		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-8.26		-0.87		-1.20		-5.34	0.0	000	0.000
Unmitigated Nois											
VehicleType	Leq Peak Hou			eq Ev		Leq	Night		Ldn		CNEL
Autos:	72		70.4		68.7		65.		72.7		73.1
Medium Trucks:	66		34.9		60.6		59.	-	67.2	-	67.5
Heavy Trucks:			71.0		70.0		68.	-	75.6	_	75.9
Vehicle Noise:	76	.8	74.3		72.7		70.	8	77.8	3	78.2
Centerline Distan	ce to Noise Co	ntour (in feet)		70 d	D.A	65	dBA		60 dBA	-	55 dBA
			l dn:	7 U a	<i>BA</i> 199	UO	авя 429		924		1.990
		-	Lan: IEL:		210		423		924		2,100
		Cr	LL.		210		454	-	9/5		2, 100

day, September 28, 2022 Wednesday, September 28, 2022

	FHWA-RD	-77-108 HIGH	WAY	NOISE	PREDIC	CTION M	ODEL ((9/12/2	021)		
	io: E le: Alessandro nt: w/o Day St.	Blvd.					Name: umber:		Campus U	pper Pla	te
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				2	site Cor	ditions (Hara =				
Average Daily	. ,	26,874 vehicle	es					Autos:			
	Percentage:	9.80%				edium Tru		,			
		2,634 vehicles	S		He	eavy Truc	ks (3+	Axles):	15		
	hicle Speed:	45 mph		١	/ehicle	Mix					
Near/Far La	ne Distance:	82 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						- A	utos:	71.9%	12.2%	15.9%	94.08%
Rai	rrier Height:	0.0 feet			М	edium Tr	ucks:	75.3%	7.0%	17.7%	2.20%
Barrier Type (0-W	all, 1-Berm):	0.0				Heavy Tr	ucks:	60.4%	12.0%	27.6%	3.73%
Centerline Dis		67.0 feet		^	loise S	ource Ele	evation	s (in fe	eet)		
Centerline Dist.		67.0 feet				Autos	s: 0	.000			
Barrier Distance		0.0 feet			Mediu	m Trucks	: 2	.297			
Observer Height ('Above Pad):	5.0 feet				vy Trucks		.004	Grade Ad	liustmen	t: 0.0
	ad Elevation:	0.0 feet									
	ad Elevation:	0.0 feet		L	ane Eq	uivalent		_ •	feet)		
1	Road Grade:	0.0%				Autos		.226			
	Left View:	-90.0 degree				m Trucks		.059			
	Right View:	90.0 degree	es		Hea	vy Trucks	s: 53	.076			
FHWA Noise Mode					,					,	
VehicleType	REMEL	Traffic Flow	Di	stance		Road	Fres		Barrier Att		rm Atten
Autos:	68.46	2.10		-0.51		-1.20		-4.71		000	0.000
Medium Trucks:	79.45	-14.21		-0.49		-1.20		-4.88		000	0.000
Heavy Trucks:	84.25	-11.92		-0.49		-1.20		-5.29	0.0	000	0.000
Unmitigated Noise VehicleType	Leg Peak Hou			er atteni Leg Ev		Leq I	Niaht	1	Ldn		NEL
Autos:	68.		66.7		65.0		61.	4	69.		69.4
Medium Trucks:	63.	5	61.6		57.3		56.	6	64.	0	64.2
Heavy Trucks:	70.	6	67.7		66.7		65.	6	72.	4	72.7
Vehicle Noise:	73.		70.8		69.3		67.		74.		74.8
Centerline Distanc	ce to Noise Co	ntour (in feet))			,		,		,	
			L	70 a		65 c			60 dBA		5 dBA
			Ldn:		132		284		612		1,319
		CI	NEL:		139		300)	645	5	1,390

Barrier Height: 0.0 feet	FHWA-RI	D-77-108 HIG	HWAY	NOISE	PREDIC	CTION N	IODEL	(9/12/2	021)			
Average Daily Traffic (Adt): 30,870 vehicles Peak Hour Percentage: 9,80% Peak Hour Volume: 3,025 vehicles Vehicle Speed: 45 mph Near/Far Lane Distance: 82 feet Vehicle Mix Vehicle	Road Nam	e: Alessandro									pper Pla	te
Average Daily Traffic (Adt): 30,870 vehicles Peak Hour Potentage: 9,80% Medium Trucks (2 Axles): 15 Heavy Trucks (3* Axles): 15		SPECIFIC IN	IPUT DATA		9	ite Cor					s	
Autos: 71.9% 12.2% 15.9% 94.08	Average Daily Peak Hour Peak H	Percentage: lour Volume: hicle Speed:	9.80% 3,025 vehicle 45 mph			Me He 'ehicle	edium Tr eavy Tru Mix	ucks (2 cks (3+	Autos: Axles): Axles):	15 15 15	Minht	Doile
Barrier Height: 0.0 feet Site Data					VEI				-			
Noise Model Calculations VehicleType REMEL Traffic Flow Distance Traffic Flow Dist												
Barrier Distance to Observer: 0.00 feet Autos: 0.000					۸	loise S	ource E	levatio	ns (in f	eet)		
Left View:	Barrier Distance Observer Height (Pa Roa	to Observer: (Above Pad): ad Elevation: ad Elevation:	0.0 feet 5.0 feet 0.0 feet 0.0 feet		L	Hea	m Truck vy Truck uivalen	s: 2 s: 8 t Dista	2.297 3.004 nce (in		ljustmen	t: 0.0
VehicleType		Left View: Right View:	-90.0 degre				m Truck	s: 50	3.059			
Autos: 68.46 2.71 -0.51 -1.20 -4.71 0.000 0.000 Medium Trucks: 79.45 -13.61 -0.49 -1.20 -4.88 0.000 0.000 Medium Trucks: 84.25 -11.32 -0.49 -1.20 -5.29 0.000 0.000 Medium Trucks: 84.25 -11.32 -0.49 -1.20 -5.29 0.000 0.000 Medium Trucks: 84.25 -11.32 -0.49 -1.20 -5.29 0.000 0.000 Medium Trucks: Without Topo and barrier attenuation) Vehicle Type									. 1			
Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL	Autos:	68.46	2.71	1	-0.51		-1.20	Fres	-4.71	0.0	000	0.00 0.00
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 69.5 67.3 65.6 62.0 69.6 77.0 Medium Trucks: 64.1 62.2 57.9 57.2 64.6 64 Heavy Trucks: 71.2 68.3 67.3 66.2 73.0 73 Vehicle Noise: 73.9 71.4 69.9 68.0 75.0 75 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 145 312 671 1,44	Heavy Trucks:	84.25	-11.32	2	-0.49)	-1.20		-5.29	0.0	000	0.00
Autos: 69.5 67.3 65.6 62.0 69.6 70 Medium Trucks: 64.1 62.2 57.9 57.2 64.6 64 Heavy Trucks: 71.2 68.3 67.3 66.2 73.0 73 Vehicle Noise: 73.9 71.4 69.9 68.0 75.0 75 Centerline Distance to Noise Contour (in feet)	Unmitigated Noise	e Levels (with	out Topo and	l barri	er attenu	uation)						
Medium Trucks: 64.1 62.2 57.9 57.2 64.6 64 Heavy Trucks: 71.2 68.3 67.3 66.2 73.0 73 Vehicle Noise: 73.9 71.4 69.9 68.0 75.0 75 Centerline Distance to Noise: Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 145 312 671 1,44					Leq Ev							
Heavy Trucks: 71.2 68.3 67.3 66.2 73.0 73 73 74 75.0											-	70.
Vehicle Noise: 73.9 71.4 69.9 68.0 75.0 75 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 145 312 671 1,44		-									-	
70 dBA 65 dBA 60 dBA 55 dBA Ldn: 145 312 671 1,44											-	73.
70 dBA 65 dBA 60 dBA 55 dBA Ldn: 145 312 671 1,44	Centerline Distant	re to Noise C	ontour (in fee	f)								
	Contenine Distant		oour (iii lee	7	70 d	BA	65	dBA		60 dBA	55	5 dBA
CNEL: 152 329 708 1,52				Ldn:		145		31	2	671		1,446
			C	NEL:		152		32	9	708	3	1,525

		D-77-108 HIGHV	·^ ·	VOISE	FREDIC	TION IVI	JDEL (911212	0 2 1)		
	io: E+P								Campus U	per Plat	е
	ne: Alessandro					Job N	ımber:	14064			
Road Segme	nt: w/o Day St	•									
	SPECIFIC IN	IPUT DATA			Site Con				L INPUT	S	
Highway Data					Site Con	uitions (
Average Daily	. ,	28,205 vehicles						Autos:	15		
	Percentage:	9.80%				dium Tru					
	lour Volume:	2,764 vehicles			He	avy Truc	ks (3+	Axles):	15		
	hicle Speed:	45 mph		Ī	Vehicle I	Иiх					
Near/Far La	ne Distance:	82 feet		Ī	Veh	icleType		Day	Evening	Night	Daily
Site Data						Α	utos:	71.9%	12.2%	15.9%	94.36
Ba	rrier Height:	0.0 feet			Me	edium Tr	ucks:	75.3%	7.0%	17.7%	2.09
Barrier Type (0-W	-	0.0			F	Heavy Tr	ucks:	60.4%	12.0%	27.6%	3.55
Centerline Di	. ,	67.0 feet		H	Noise Sc	uraa El	wation	o (in f	n m d l		
Centerline Dist.	to Observer:	67.0 feet		· · ·	Noise Sc	Autos			eet)		
Barrier Distance	to Observer:	0.0 feet			A de eller	Autos m Trucks		.000			
Observer Height	(Above Pad):	5.0 feet					. –	.004	Grade Ad	iuctment	. 0 0
P	ad Elevation:	0.0 feet			neav	y Trucks	. 8	.004	Grade Ad	iusimeni.	. 0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalent	Distan	ce (in i	feet)		
	Road Grade:	0.0%		ſ		Autos	: 53	.226			
	Left View:	-90.0 degrees			Mediui	m Trucks	: 53	.059			
	Right View:	90.0 degrees	;		Heav	y Trucks	: 53	.076			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresi	nel	Barrier Att	en Ber	m Atte
Autos:	68.46	2.33		-0.5	1	-1.20		-4.71	0.0	000	0.0
Medium Trucks:	79.45	-14.21		-0.4	9	-1.20		-4.88	0.0	000	0.0
Heavy Trucks:	84.25	-11.92		-0.4	9	-1.20		-5.29	0.0	000	0.0
Unmitigated Nois	e Levels (with	out Topo and b	arrie	r atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day		Leq E	vening	Leq I	Vight		Ldn	CI	NEL
Autos:			6.9		65.3		61.	-	69.	-	69
Medium Trucks:			1.6		57.3		56.	-	64.0	-	64
Heavy Trucks:			7.7		66.7		65.	-	72.		72
Vehicle Noise:	73	3.4 7	0.9		69.4		67.	4	74.	5	74
Centerline Distan	ce to Noise Co	ontour (in feet)		70							
			. ∟	70 (dBA	65 (0 dBA		dBA
			dn:		133		287		618		1,33
		CN			140		303		652		

Wednesday, September 28, 2022

FHWA-R	D-77-108 HIGHW	AY NOISI	E PREDIC	TION M	IODEL (9/12	(2021)	
Scenario: EAP Road Name: Alessandr Road Segment: w/o Day S				.,	Name: Wes lumber: 1406	t Campus Uppe i4	er Plate
SITE SPECIFIC II	NPUT DATA			N	IOISE MOD	EL INPUTS	
Highway Data			Site Con	ditions	(Hard = 10,	Soft = 15)	
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume: Vehicle Speed:	32,201 vehicles 9.80% 3,156 vehicles 45 mph			avy Tru	Auto ucks (2 Axles cks (3+ Axles	s): 15	
Near/Far Lane Distance:	82 feet			icleType	Day	Evening N	light Daily
Site Data Barrier Height:	0.0 feet		М		Autos: 71.9 rucks: 75.3	1% 12.2% 1% 7.0%	15.9% 94.32% 17.7% 2.11% 27.6% 3.57%
Barrier Type (0-Wall, 1-Berm):	0.0		,	neavy II	rucks. 60.4	170 IZ.U70 A	21.0% 3.31%
Centerline Dist. to Barrier: Centerline Dist. to Observer:	67.0 feet		Noise So	ource El	levations (in	feet)	
Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation: Road Elevation:	67.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet		Heav	Auto m Truck yy Truck uivalent	s: 2.297	Grade Adjus	stment: 0.0
Road Grade: Left View: Right View:	0.0% -90.0 degrees 90.0 degrees			Auto m Truck y Truck	s: 53.059		
7.097.2	50.0 degrees			,	00.070		
FHWA Noise Model Calculation							
VehicleType REMEL		Distance		Road	Fresnel	Barrier Atten	
Autos: 68.46		-0.		-1.20	-4.7		
Medium Trucks: 79.45 Heavy Trucks: 84.25		-0. -0.		-1.20 -1.20	-4.8 -5.2		
Unmitigated Noise Levels (with	out Topo and ba	rrier atte	nuation)				
VehicleType Leq Peak Ho	ur Leq Day	Leq E	Evening	Leq	Night	Ldn	CNEL
Autos: 6	9.6 67	.5	65.8		62.2	69.8	70.2
Medium Trucks: 6	4.1 62	.2	57.9		57.2	64.6	64.8
Heavy Trucks: 7	1.2 68	.3	67.3		66.2	73.0	73.3
Vehicle Noise: 7	4.0 71	.5	69.9		68.0	75.1	75.4
Centerline Distance to Noise C	ontour (in feet)						
			dBA	65	dBA	60 dBA	55 dBA
	La		146		314	677	1,459
	CNE	L:	154		331	714	1,539

	FHWA-R	D-77-108 HIGH	WAY	NOISI	E PREDIC	TION M	ODEL (9	9/12/20	021)		
Road Nar	rio: OYC ne: Alessandro ent: w/o Day St						Name: \ umber: 1		Campus Up	per Pla	ite
	SPECIFIC II	NPUT DATA							L INPUT	S	
Highway Data					Site Cor	ditions	(Hard =	10, So	ft = 15)		
Average Daily	Traffic (Adt):	36,990 vehicle	es				,	Autos:	15		
Peak Hour	Percentage:	9.80%			Me	dium Tri	ucks (2 A	(xles	15		
Peak I	Hour Volume:	3,625 vehicle	S		He	avy Truc	cks (3+ A	(xles	15		
Ve	ehicle Speed:	45 mph			Vehicle	Miv					
Near/Far La	ane Distance:	82 feet				icleType		Dav	Evening	Night	Daily
Site Data								71.9%	-	15.99	
Ba	rrier Heiaht:	0.0 feet			М	edium Ti	rucks:	75.3%	7.0%	17.79	6 2.20%
Barrier Type (0-V		0.0				Heavy Ti	rucks:	60.4%	12.0%	27.69	6 3.73%
Centerline D	ist. to Barrier:	67.0 feet			Noise S	ource Fl	evations	in fe	et)		
Centerline Dist.	to Observer:	67.0 feet				Auto:		000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		97			
Observer Height	(Above Pad):	5.0 feet				vy Truck		004	Grade Ad	iustmen	t: 0.0
P	ad Elevation:	0.0 feet								doumon	. 0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalent			eet)		
	Road Grade:	0.0%				Auto					
	Left View:	-90.0 degre	es			m Truck					
	Right View:	90.0 degre	es		Hea	y Truck	s: 53.0	076			
FHWA Noise Mod	lel Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Di	stance		Road	Fresn	_	Barrier Att	en Be	rm Atten
Autos:				-0.		-1.20		-4.71		000	0.000
Medium Trucks:				-0.		-1.20		-4.88		000	0.000
Heavy Trucks:	84.25	-10.53		-0.4	49	-1.20		-5.29	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	er atte	nuation)						
VehicleType	Leq Peak Ho		_	Leq E	vening		Night		Ldn		NEL
Autos:		0.2	68.1		66.4		62.8		70.4		70.8
Medium Trucks:	-	1.9	63.0		58.7		58.0		65.4		65.6
Heavy Trucks:		2.0	69.1		68.1		67.0		73.7		74.0
Vehicle Noise:		1.7	72.2		70.7		68.8	1	75.8	3	76.1
Centerline Distan	ce to Noise C	ontour (in feet)					_		_	
			L	70	dBA	65	dBA	6	0 dBA		5 dBA
		_	Ldn:		163		352		757		1,632
		C	NEL:		172		371		798		1,720

	FHWA-R	D-77-108 HIGH	WAY N	OISE	PREDIC	TION N	10DEL (9/12/	2021)	
Scenari Road Nam Road Segmei	e: Alessandro						Name: West lumber: 1406	Campus Uppe 4	r Plate
SITE	SPECIFIC II	NPUT DATA						EL INPUTS	
Highway Data				S	ite Con	ditions	(Hard = 10, S	Soft = 15)	
	Traffic (Adt): Percentage: lour Volume:	43,210 vehicle 9.80% 4,235 vehicle					Auto: ucks (2 Axles cks (3+ Axles): 15	
Ve	hicle Speed:	45 mph		ν	'ehicle l	Wix			
Near/Far La	ne Distance:	82 feet		F		icleType	Dav	Evening N	ight Daily
Site Data				\dashv			Autos: 71.9		5.9% 94.08%
Rai	rrier Heiaht:	0.0 feet			M	edium T	rucks: 75.3	% 7.0% 1	7.7% 2.20%
Barrier Type (0-W		0.0			- 1	Heavy T	rucks: 60.4	% 12.0% 2	7.6% 3.73%
Centerline Dis	st. to Barrier:	67.0 feet		٨	loise Sc	ource E	levations (in	feet)	
Centerline Dist.	to Observer:	67.0 feet				Auto		,	
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck			
Observer Height ('Above Pad):	5.0 feet				v Truck		Grade Adjus	tment: 0.0
Pa	ad Elevation:	0.0 feet				,			
	ad Elevation:	0.0 feet		L	ane Eq		t Distance (in	r feet)	
I	Road Grade:	0.0%				Auto			
	Left View:	-90.0 degree				m Truck	00.000		
	Right View:	90.0 degree	es		Heav	ry Truck	s: 53.076		
FHWA Noise Mode	el Calculation	s							
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	4.17		-0.51		-1.20	-4.7	0.000	0.000
Medium Trucks:	79.45	-12.15		-0.49	9	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-9.86		-0.49	9	-1.20	-5.29	0.000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier	attenı	uation)				
VehicleType	Leq Peak Ho	ur Leq Day	/ L	.eq Ev	ening	Leq	Night	Ldn	CNEL
Autos:			68.8		67.1		63.5	71.1	71.5
Medium Trucks:			63.7		59.4		58.6	66.0	66.3
Heavy Trucks:			69.8		68.8		67.7	74.4	74.7
Vehicle Noise:	75	5.4	72.9		71.3		69.4	76.5	76.8
Centerline Distanc	e to Noise C	ontour (in feet)						
				70 d		65	dBA	60 dBA	55 dBA
			Ldn:		181		390	840	1,810
		C	NEL:		191		411	886	1,908

		D-77-108 HIGH		HOIGE				`			
	o: OYCP								Campus Up	per Plat	е
	e: Alessandro					Job Ni	umber:	14064			
Road Segmei	n: w/o Day St										
	SPECIFIC IN	IPUT DATA			0'' 0				L INPUT	5	
Highway Data					Site Con	aitions (
Average Daily	Traffic (Adt):	38,321 vehicle	es					Autos:	15		
Peak Hour	Percentage:	9.80%				dium Tru			15		
Peak H	our Volume:	3,755 vehicle	S		He	avy Truc	ks (3+	Axles):	15		
Ve	hicle Speed:	45 mph			Vehicle I	Wix					
Near/Far La	ne Distance:	82 feet			Veh	icleType		Dav	Evenina	Night	Dailv
Site Data							lutos:	71.9%	12.2%	15.9%	94.28%
Par	rier Heiaht:	0.0 feet			М	edium Tr	ucks:	75.3%	7.0%	17.7%	2.129
Barrier Type (0-W		0.0			1	Heavy Tr	ucks:	60.4%	12.0%	27.6%	3.60%
Centerline Dis	. ,	67.0 feet		L							
Centerline Dist		67.0 feet		Ŀ	Noise So				et)		
Barrier Distance		0.0 feet				Autos		.000			
Observer Height (5.0 feet				m Trucks		.297			
	ad Flevation:	0.0 feet			Heav	y Trucks	s: 8	.004	Grade Adj	ustment.	0.0
Roa	ad Elevation:	0.0 feet			Lane Eq	uivalent	Distan	ce (in f	eet)		
1	Road Grade:	0.0%				Autos	s: 53	.226			
	Left View:	-90.0 degre	es		Mediu	m Trucks	s: 53	.059			
	Right View:	90.0 degre	es		Heav	y Trucks	53	.076			
FHWA Noise Mode	l Calculation										
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresi	nel	Barrier Att	en Ber	m Atten
Autos:	68.46	3.65		-0.5	-	-1.20		-4.71		000	0.00
Medium Trucks:	79.45	-12.83		-0.4	9	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	84.25	-10.53		-0.4	9	-1.20		-5.29	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er atter	uation)						
VehicleType	Leq Peak Hou	ur Leq Day	/	Leq E	vening	Leq I	Night		Ldn	CI	VEL
Autos:	70).4	68.3		66.6		63.	0	70.5	5	71.
Medium Trucks:	64	1.9	63.0		58.7		58.	0	65.4	1	65.
Heavy Trucks:	72	2.0	69.1		68.1		67.	0	73.7	7	74.
Vehicle Noise:	74	1.8	72.3		70.7		68.	8	75.8	3	76.
Centerline Distanc	e to Noise C	ontour (in feet)								
			I	70	dBA	65 0	dBA	6	i0 dBA	55	dBA
			Ldn:		164		354	Į.	763		1,643
			NEL:								

Wednesday, September 28, 2022

	FHWA-RI	D-77-108 HIGH	WAY NOIS	E PREDIC	TION M	ODEL	(9/12/2	021)		
Road Nar	rio: HYP ne: Alessandro ent: w/o Day St.						West 14064	Campus U	pper Pla	te
SITE	SPECIFIC IN	IPUT DATA			N	OISE	MODE	L INPUT	S	
Highway Data				Site Con	ditions	(Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	44,540 vehicle	:S				Autos.	15		
Peak Hou	r Percentage:	9.80%		Me	dium Tru	icks (2	Axles).	15		
Peak i	Hour Volume:	4,365 vehicles	3	He	avy Truc	ks (3+	Axles).	15		
V	ehicle Speed:	45 mph		Vehicle	Mix					
Near/Far La	ane Distance:	82 feet			icleType		Day	Evening	Night	Daily
Site Data						lutos:	71.99	-	15.9%	
D.	arrier Heiaht:	0.0 feet		М	edium Tr	ucks:	75.39	6 7.0%	17.7%	2.13%
Barrier Type (0-V		0.0			Heavy Tr	ucks:	60.49	6 12.0%	27.6%	3.61%
	ist. to Barrier:	67.0 feet								
Centerline Dist		67.0 feet		Noise So			- 1	eet)		
Barrier Distance	to Observer:	0.0 feet			Autos	. ,	0.000			
Observer Height	(Above Pad):	5.0 feet			m Trucks		2.297	Grade Ad	livotmon	t: 0.0
F	Pad Elevation:	0.0 feet		Heav	y Trucks	S.' 8	3.004	Grade Ad	justrieri	. 0.0
Ro	oad Elevation:	0.0 feet		Lane Eq	uivalent	Dista	nce (in	feet)		
	Road Grade:	0.0%			Autos	s: 50	3.226			
	Left View:	-90.0 degree	es.	Mediu	m Trucks	s: 50	3.059			
	Right View:	90.0 degree	es .	Hear	y Trucks	5: 50	3.076			
FHWA Noise Mod	lel Calculation									
VehicleType	REMEL	Traffic Flow	Distance		Road	Fres		Barrier Att		rm Atten
Autos		4.31	-	.51	-1.20		-4.71		000	0.000
Medium Trucks			-	.49	-1.20		-4.88		000	0.000
Heavy Trucks				.49	-1.20		-5.29	0.	000	0.000
Unmitigated Nois						h 15 1- 4		Ldn		NFL
VehicleType Autos	Leq Peak Hou		68.9	Evening 67.2	,	Night 63	6	Lan 71.		NEL 71.6
Medium Trucks			63.7	59.4		58		66.	_	66.3
Heavy Trucks			69.8	68.8		67		74.	-	74.7
Vehicle Noise			72.9	71.4		69		76.		76.9
Centerline Distan	ce to Noise Co	ontour (in feet)								
		-	70) dBA	65 (dΒA		60 dBA	55	dBA
			Ldn:	182		39	2	845	5	1,821
		CN	IFL:	192		41	4	891		1,920

Wednesday, September 28, 2022

	FHWA-RD	77-108 HIGH	WAY	NOISE	PREDIC	CTION M	ODEL	(9/12/2	021)		
	io: E ne: Cactus Av. nt: e/o Meridian	Pkwy.					Name: umber:		Campus U	pper P	late
	SPECIFIC INI	PUT DATA							L INPUT	s	
Highway Data				8	ite Cor	ditions ((Hard =				
Average Daily	Traffic (Adt):	19,011 vehicle	es					Autos:			
Peak Hour	Percentage:	9.80%				edium Tru		,			
		1,863 vehicle	S		He	eavy Truc	cks (3+	Axles):	15		
	hicle Speed:	45 mph		١	/ehicle	Mix					
Near/Far La	ne Distance:	42 feet			Ver	icleType		Dav	Evening	Niah	t Daily
Site Data							Autos:	71.9%		15.9	94.089
Par	rrier Height:	0.0 feet			M	edium Tr	rucks:	75.3%	7.0%	17.7	% 2.209
Barrier Type (0-W	/all, 1-Berm):	0.0				Heavy Tr	rucks:	60.4%	12.0%	27.6	3.739
Centerline Di		60.0 feet		1	loise S	ource Ele	evation	ıs (in f	eet)		
Centerline Dist.	to Observer:	60.0 feet				Autos	s: 0	.000			
Barrier Distance		0.0 feet			Mediu	m Trucks	s: 2	.297			
Observer Height ((Above Pad):	5.0 feet				vy Trucks		.004	Grade Ad	liustme	ent: 0.0
	ad Elevation:	0.0 feet								,	
	ad Elevation:	0.0 feet		L	ane Eq	uivalent			feet)		
1	Road Grade:	0.0%				Autos		.427			
	Left View:	-90.0 degree				m Trucks		.270			
	Right View:	90.0 degree	es		Hea	vy Trucks	s: 56	.285			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fres		Barrier At		Berm Atten
Autos:	68.46	0.60		-0.89		-1.20		-4.69		000	0.00
Medium Trucks:	79.45	-15.72		-0.87		-1.20		-4.88		000	0.00
Heavy Trucks:	84.25	-13.42		-0.87		-1.20		-5.34	0.	000	0.00
Unmitigated Noise							A 17 In 4	1	1 -1-	1	ONE
VehicleType Autos:	Leq Peak Hour		64.8	Leq Ev	ening 63.2		Night 59	_	Ldn 67	4	CNEL 67.
Autos: Medium Trucks:	67.0 61.1		59.7		55.4		59. 54.	-	62.		62.
Heavy Trucks: Vehicle Noise:	68.i 71.		65.9 68.9		64.9		63. 65.		70. 72.		70. 72.
Centerline Distance	re to Noise Co	ntour (in feet)								
Contenine Distant		(III IEEL		70 a	IBA	65 (dBA	-	60 dBA	1	55 dBA
			Ldn:		88		190)	410)	884
		C	NEL:		93		20	1	433	3	932

	FHWA-R	D-77-108 HIGH	IWAY	NOISE	PREDIC	TION N	MODEL (9/12	/2021)		
	io: EA ne: Cactus Av. nt: e/o Meridia						t Name: Wes lumber: 1406		per Plat	е
	SPECIFIC II	NPUT DATA					NOISE MOD		S	
Highway Data				S	ite Cor	ditions	(Hard = 10,	Soft = 15)		
	Traffic (Adt): Percentage: lour Volume:	21,838 vehicle 9.80% 2,140 vehicle					Auto rucks (2 Axle: rcks (3+ Axle:	s): 15		
Ve	hicle Speed:	45 mph		ν	ehicle	Mix				
Near/Far La	ne Distance:	42 feet		-		icleType	e Dav	Evening	Night	Daily
Site Data							Autos: 71.9	9% 12.2%	15.9%	94.08%
Rai	rrier Heiaht:	0.0 feet			М	edium 7	rucks: 75.3	3% 7.0%	17.7%	2.20%
Barrier Type (0-W		0.0				Heavy 7	rucks: 60.4	1% 12.0%	27.6%	3.73%
Centerline Di	st. to Barrier:	60.0 feet			Inisa Si	urce F	levations (in	foot)		
Centerline Dist.	to Observer:	60.0 feet			10/36 01	Auto		1001)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck				
Observer Height ((Above Pad):	5.0 feet				/v Truck		Grade Ad	iustment	0.0
Pa	ad Elevation:	0.0 feet				,				
	ad Elevation:	0.0 feet		L	ane Eq		t Distance (i	n feet)		
1	Road Grade:	0.0%				Auto				
	Left View:	-90.0 degre				m Truck				
	Right View:	90.0 degre	es		Hea	ry Truck	s: 56.285			
FHWA Noise Mode	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresnel	Barrier Att	en Ber	m Atten
Autos:	68.46	1.20		-0.89)	-1.20	-4.6	9 0.0	000	0.00
Medium Trucks:	79.45	-15.12		-0.87	,	-1.20	-4.8	0.0	000	0.00
Heavy Trucks:	84.25	-12.82		-0.87	,	-1.20	-5.3	4 0.0	000	0.00
Unmitigated Noise	e Levels (with	out Topo and	barrie	er attenu	uation)					
VehicleType	Leq Peak Ho			Leq Ev			Night	Ldn		NEL
Autos:		7.6	65.4		63.8		60.1	67.7		68.
Medium Trucks:		2.3	60.3		56.0		55.3	62.7		62.
Heavy Trucks:		9.4	66.5		65.5		64.3	71.1		71.4
Vehicle Noise:	72	2.0	69.5		68.0		66.1	73.	l	73.
Centerline Distanc	ce to Noise C	ontour (in feet)	70.	-	-		00 104		
			L	70 d		65	dBA	60 dBA		dBA
		_	Ldn: NFL:		97 102		209 220	450 475		970
		C	IVEL.		102		220	4/5		1,022

	E-B							101 11		DI I	
Scenario									Campus U	pper Plat	е
	e: Cactus Av.	Dlaw				JOD I	vumbe	r: 14064			
Road Segmen											
SITE S Highway Data	PECIFIC IN	PUT DATA			Site Con				L INPUT	S	
					Site Con	uitions	(riaru				
Average Daily 1	. ,	35,724 vehicles	5					Autos:			
Peak Hour I	-	9.80%						2 Axles):			
		3,501 vehicles			He	avy Tru	icks (3	+ Axles):	15		
	icle Speed:	45 mph			Vehicle I	Vlix					
Near/Far Lan	e Distance:	42 feet			Veh	icleTyp	e	Day	Evening	Night	Daily
Site Data							Autos:	71.9%	12.2%	15.9%	91.96
Ban	rier Height:	0.0 feet			Me	edium 7	rucks:	75.3%	7.0%	17.7%	1.17
Barrier Type (0-Wa	-	0.0			F	leavy 1	rucks:	60.4%	12.0%	27.6%	6.87
Centerline Dis	. ,	60.0 feet		F							
Centerline Dist. t	o Observer:	60.0 feet		ŀ	Noise Sc				eet)		
Barrier Distance t	o Observer:	0.0 feet				Auto		0.000			
Observer Height (A		5.0 feet				m Truck		2.297			
	d Elevation:	0.0 feet			Heav	y Truck	(S.	8.004	Grade Ad	yustment	0.0
	d Elevation:	0.0 feet			Lane Eq	uivalen	t Dista	ance (in	feet)		
F	Road Grade:	0.0%				Auto	os: 5	6.427			
	Left View:	-90.0 degrees	s		Mediui	m Truck	s: f	6.270			
	Right View:	90.0 degrees	8		Heav	y Truck	s: f	6.285			
FHWA Noise Mode	l Calculations	,									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fre	snel	Barrier Att	en Ber	m Atter
Autos:	68.46	3.24		-0.8	19	-1.20		-4.69	0.0	000	0.00
Medium Trucks:	79.45	-15.72		-0.8	7	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	84.25	-8.03		-0.8	17	-1.20		-5.34	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and b	arrie	r atter	nuation)						
VehicleType	Leq Peak Hou	r Leq Day		Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	69.	.6 6	7.5		65.8		6	2.2	69.	8	70
Medium Trucks:	61.	.7 5	9.7		55.4		5	4.7	62.	1	62
Heavy Trucks:	74.	2 7	1.3		70.2		6	9.1	75.9	9	76
Vehicle Noise:	75.	.6 7	3.0		71.7		7	0.0	77.0	0	77
Centerline Distanc	e to Noise Co	ntour (in feet)									
			L	70	dBA	65	dBA	_	60 dBA		dBA
			.dn:		175			76	810		1,74
		CN	EL:		184		3	96	853	2	1.83

Wednesday, September 28, 2022

	FHWA-RD	-77-108 HIGHV	VAY NO	ISE PREDI	CTION N	IODEL (9/12	/2021)	
Scenario Road Namo Road Segmen	e: Cactus Av.	n Pkwy.				Name: Wes	st Campus Upp 64	er Plate
	SPECIFIC IN	PUT DATA					DEL INPUTS	
Highway Data				Site Co.	nditions	(Hard = 10,	Soft = 15)	
Peak He	Percentage:	38,551 vehicles 9.80% 3,778 vehicles 45 mph	3	Н	eavy Tru	Auto ucks (2 Axle cks (3+ Axle	s): 15	
Near/Far Lar		42 feet		Vehicle				
	ic Distance.	42 1001		Ve	hicleType			Night Daily
Site Data Barrier Type (0-Wa	rier Height: all, 1-Berm):	0.0 feet 0.0		^	ledium T Heavy T		3% 7.0%	15.9% 92.12% 17.7% 1.24% 27.6% 6.64%
Centerline Dis	t. to Barrier:	60.0 feet		Noise S	ource E	evations (ir	feet)	
	to Observer:	60.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet		Hea	Auto um Truck vy Truck quivalen	s: 2.297		stment: 0.0
F	Road Grade:	0.0%			Auto	s: 56.427		
	Left View: Right View:	-90.0 degrees			ım Truck vy Truck	00.2.0		
FHWA Noise Mode	l Calculations	;						
VehicleType	REMEL	Traffic Flow	Distan	ce Finite	Road	Fresnel	Barrier Atter	Berm Atten
Autos:	68.46	3.58		-0.89	-1.20	-4.6	9 0.00	0.000
Medium Trucks:	79.45	-15.12		-0.87	-1.20	-4.8		
Heavy Trucks:	84.25	-7.84		-0.87	-1.20	-5.3	84 0.00	0.000
Unmitigated Noise	Levels (withou	out Topo and b	arrier a	ttenuation)				
	Leq Peak Hou			q Evening		Night	Ldn	CNEL
Autos:	69.		7.8	66.		62.5	70.1	70.5
Medium Trucks:	62.		0.3	56.0		55.3	62.7	62.9
Heavy Trucks:	74.	-	1.4	70.4		69.3	76.0	76.4
Vehicle Noise:	75.	.9 7	3.2	71.9	9	70.3	77.2	77.5
Centerline Distanc	e to Noise Co	ntour (in feet)		70 /04	-		00 /04	55 104
		,	dn:	70 dBA		dBA	60 dBA	55 dBA
		CN		181 190		389 410	839 883	1,807 1,903
		CN	EL.	190		410	883	1,903

nesday, September 28, 2022

	FHWA-RD)-77-108 HIGH	WAY	NOISE	PREDIC	CTION M	ODEL	(9/12/2	021)		
Road Nar	rio: OYC ne: Cactus Av. ent: e/o Meridia	n Pkwy.					Name: umber:		Campus U	pper Pla	te
	SPECIFIC IN	PUT DATA							L INPUT	s	
Highway Data				2	site Cor	ditions	(Hard =				
Average Daily	Traffic (Adt):	21,888 vehicle	es					Autos:			
Peak Hou	r Percentage:	9.80%				edium Tru		,			
Peak I	Hour Volume:	2,145 vehicle	S		He	eavy Truc	cks (3+	Axles):	15		
Ve	ehicle Speed:	45 mph		١	/ehicle	Mix					
Near/Far La	ane Distance:	42 feet			Ver	icleType		Dav	Evening	Niaht	Dailv
Site Data							Autos:	71.9%	-	15.99	94.08%
Rs	arrier Height:	0.0 feet			M	edium Ti	rucks:	75.3%	7.0%	17.79	6 2.20%
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy Ti	rucks:	60.4%	12.0%	27.69	3.73%
	ist. to Barrier:	60.0 feet			loise S	ource El	evation	ıs (in f	eet)		
Centerline Dist.	to Observer:	60.0 feet				Autos	s: 0	.000			
Barrier Distance		0.0 feet			Mediu	m Trucks	s: 2	.297			
Observer Height	(Above Pad):	5.0 feet			Hea	vy Trucks	s: 8	004	Grade Ad	liustmen	t: 0.0
F	Pad Elevation:	0.0 feet								,	
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent			feet)		
	Road Grade:	0.0%				Autos		.427			
	Left View:	-90.0 degree	es			m Trucks		.270			
	Right View:	90.0 degree	es		Hea	vy Trucks	s: 56	.285			
FHWA Noise Mod	lel Calculations	S									
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fres		Barrier Att		rm Atten
Autos:		1.21		-0.89		-1.20		-4.69		000	0.000
Medium Trucks:		-15.11		-0.87		-1.20		-4.88		000	0.000
Heavy Trucks:		-12.81		-0.87		-1.20		-5.34	0.	000	0.000
Unmitigated Nois								1			
VehicleType	Leq Peak Hou			Leq Ev			Night	<u> </u>	Ldn	_	NEL
Autos:			65.4		63.8		60.		67.		68.2
Medium Trucks:			60.3		56.0		55.	-	62.		62.9
Heavy Trucks:			66.5		65.5		64.		71.		71.4
Vehicle Noise:			69.6		68.0		66.	.1	73.	1	73.5
Centerline Distan	ce to Noise Co	ntour (in feet)	70 a	IRA	65.4	dBA	,	SO dBA	5	5 dBA
			Ldn:	,,,,	97	1 000	209		451		971
			NEL:		102		20:	-	475		1.024
		C	VLL.		102		22		4/5	,	1,024

	FHWA-R	D-77-108 HIGH	WAY NO	DISE	PREDIC	TION N	ODEL	(9/12/2	021)		
Scenari Road Nam Road Segmen	e: Cactus Av.						Name: umber:		Campus Up	per Pla	te
SITE S	SPECIFIC IN	NPUT DATA							L INPUT	S	
Highway Data				S	ite Con	ditions	(Hard :	= 10, S	oft = 15)		
Peak H	Percentage: our Volume:	28,137 vehicle 9.80% 2,757 vehicle				dium Tr avy Tru		,	15		
	nicle Speed:	45 mph		ν	ehicle l	Viix					
Near/Far Lar	ne Distance:	42 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data Bar	rier Height:	0.0 feet			М	edium T	Autos: rucks:	71.99 75.39		15.9% 17.7%	
Barrier Type (0-W	all, 1-Berm):	0.0			I	Heavy T	rucks:	60.49	6 12.0%	27.6%	3.73%
Centerline Dis	t. to Barrier:	60.0 feet			laisa Sr	urce El	ovatio	ne (in f	oot)		
	o Observer:	60.0 feet 0.0 feet 5.0 feet 0.0 feet			Mediui Heav	Auto m Truck ry Truck uivalent	s: 0 s: 2 s: 8	.000 .297 .004	Grade Ad	iustmen	t: 0.0
	Road Grade:	0.0 leet		F	uc _q	Auto		427	10019		
	Left View: Right View:	-90.0 degree				m Truck ry Truck	-	.270			
FHWA Noise Mode	I Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	псе	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	68.46	2.30		-0.89	1	-1.20		-4.69	0.0	000	0.000
Medium Trucks:	79.45	-14.01		-0.87		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-11.72		-0.87		-1.20		-5.34	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier a	ttenu	iation)						
Vehicle Type	Leg Peak Ho	ur Leq Day	L	eq Ev	ening	Leq	Night		Ldn	С	NEL
Autos:	68	3.7	66.5		64.9		61	.2	68.8	3	69.3
Medium Trucks:	63	3.4	61.4		57.1		56	4	63.8	3	64.0
Heavy Trucks:	70	0.5	67.6		66.6		65	4	72.2	2	72.
Vehicle Noise:	73	3.1	70.6		69.1		67	2	74.2	2	74.6
Centerline Distanc	e to Noise C	ontour (in feet)								
		. ,		70 d	BA	65	dBA		60 dBA	55	dBA
			Ldn:		115		24	7	533		1,148
			VEL:					1			1,211

Scanari											
	o: OYCP								Campus U	oper Plat	e
	e: Cactus Av.					Job Ni	umber:	14064			
Road Segmer	it: e/o Meridia	an Pkwy.									
	SPECIFIC II	NPUT DATA							L INPUT	S	
Highway Data				5	ite Con	ditions (Hara =	= 10, Sc	ort = 15)		
Average Daily	Traffic (Adt):	38,601 vehic	les					Autos:			
Peak Hour	Percentage:	9.80%				dium Tru		,			
	our Volume:	3,783 vehicle	es		He	avy Truc	ks (3+	Axles):	15		
Ve	hicle Speed:	45 mph		ν	/ehicle l	Wix					
Near/Far Lai	ne Distance:	42 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						Α	utos:	71.9%	12.2%	15.9%	92.129
Bar	rier Heiaht:	0.0 feet			M	edium Tr	ucks:	75.3%	7.0%	17.7%	1.259
Barrier Type (0-W		0.0			1	Heavy Tr	ucks:	60.4%	12.0%	27.6%	6.649
Centerline Dis	st. to Barrier:	60.0 feet		٨	loise Sc	ource Ele	evation	ns (in f	oet)		
Centerline Dist.	to Observer:	60.0 feet			.0.00 00	Autos		.000	,,,,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks		297			
Observer Height (Above Pad):	5.0 feet				v Trucks		.004	Grade Ad	iustment	0.0
Pa	ad Elevation:	0.0 feet				,					
	d Elevation:	0.0 feet		L	ane Eq	uivalent			feet)		
F	Road Grade:	0.0%				Autos		.427			
	Left View:	-90.0 degre				m Trucks		.270			
	Right View:	90.0 degre	es		Heav	y Trucks	: 56	.285			
FHWA Noise Mode	el Calculation	ıs		<u> </u>							
VehicleType	REMEL	Traffic Flow		tance		Road	Fres		Barrier Att		m Atten
Autos:	68.46			-0.89		-1.20		-4.69		000	0.00
Medium Trucks:	79.45			-0.87		-1.20		-4.88		000	0.00
Heavy Trucks:	84.25	-7.84	1	-0.87	7	-1.20		-5.34	0.	000	0.00
Unmitigated Noise											
	Leq Peak Ho			Leq Ev		Leq I	_		Ldn		NEL
Autos:		0.0	67.8		66.1		62.	-	70.		70
Medium Trucks:	-	2.3	60.3		56.0		55.	-	62.		62
Heavy Trucks:		4.3	71.4		70.4		69.	-	76.	-	76
Vehicle Noise:		5.9	73.2		71.9		70.	.3	77.	2	77
	e to Noise C	ontour (in fee	t)	70.1	D.4	CF.	IBA		SO dBA		dBA
Centerline Distanc											
Centerline Distanc			I dn:	70 d		00 (
Centerline Distanc			Ldn:	70 a.	181 190	00 0	391 411	0	839 884)	1,80 1,90

Wednesday, September 28, 2022

	FHWA-RI	D-77-108 HIGH	IWAY NOIS	SE PREDIC	CTION MC	DEL (9/12	/2021)	
Road Nan	rio: HYP ne: Cactus Av. nt: e/o Meridia	n Pkwy.				lame: Wes mber: 1406	t Campus Uppe 34	er Plate
SITE	SPECIFIC IN	IPUT DATA					EL INPUTS	
Highway Data				Site Cor	nditions (F	lard = 10,	Soft = 15)	
	Traffic (Adt): Percentage: lour Volume:	44,850 vehicle 9.80% 4,395 vehicle				Auto ks (2 Axles s (3+ Axles	s): 15	
Ve	hicle Speed:	45 mph		Vehicle	Miv			
Near/Far La	ne Distance:	42 feet			nicleType	Day	Evening N	light Daily
Site Data					AL	itos: 71.9	9% 12.2%	15.9% 92.39%
Ва	rrier Height:	0.0 feet			ledium Tru			17.7% 1.38%
Barrier Type (0-V	Vall, 1-Berm):	0.0			Heavy Tru	cks: 60.4	1% 12.0% 2	27.6% 6.23%
	st. to Barrier:	60.0 feet		Noise S	ource Ele	vations (in	feet)	
Centerline Dist.		60.0 feet			Autos:	0.000		
Barrier Distance	to Observer:	0.0 feet		Mediu	m Trucks:			
Observer Height	. ,	5.0 feet		Hea	vy Trucks:	8.004	Grade Adjus	tment: 0.0
-	ad Elevation:	0.0 feet			•			
	ad Elevation:	0.0 feet		Lane Eq		Distance (i	n feet)	
	Road Grade:	0.0%			Autos:			
	Left View:	-90.0 degree	es		ım Trucks:			
	Right View:	90.0 degree	es	Hea	vy Trucks:	56.285		
FHWA Noise Mod	el Calculation	s		1				
VehicleType	REMEL	Traffic Flow	Distance	e Finite	Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	4.25	-0).89	-1.20	-4.6	9 0.000	0.000
Medium Trucks:	79.45	-14.01	-0).87	-1.20	-4.8	8 0.000	0.000
Heavy Trucks:	84.25	-7.46	-0).87	-1.20	-5.3	4 0.000	0.000
Unmitigated Nois								
VehicleType	Leq Peak Hou			Evening	Leq N	•	Ldn	CNEL
Autos:		0.6	68.5	66.8		63.2	70.8	71.2
Medium Trucks:	63		61.4	57.1		56.4	63.8	64.0
Heavy Trucks: Vehicle Noise:		1.7 3.4	71.8 73.7	70.8 72.4		69.7 70.7	76.4 77.6	76.7 78.0
				12.7			11.0	70.0
Centerline Distan	ce to Noise Co	ontour (in feet		0 dBA	65 dl	BA .	60 dBA	55 dBA
			Ldn:	194		418	901	1,941
		C	NEL:	204		440	949	2,044
		0.		_0.			0	_,0

Wednesday, September 28, 2022

	FHWA-RD	-77-108 HIGH	WAY	NOISE	PREDIC	TION N	IODEL	(9/12/20	021)		
	rio: E ne: Cactus Av. ent: w/o Elsworti	n St.					Name: lumber:		Campus U	oper Pla	te
	SPECIFIC IN	PUT DATA			a:. a				L INPUT	s	
Highway Data					Site Cor	ditions	(Hard =				
Average Daily	Traffic (Adt):	26,874 vehicle	es					Autos:	15		
Peak Hour	Percentage:	9.80%				dium Tr	,	,			
Peak F	lour Volume:	2,634 vehicles	3		He	avy Tru	cks (3+	Axles):	15		
Vé	ehicle Speed:	45 mph		1	Vehicle	Mix					
Near/Far La	ne Distance:	82 feet		F	Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	71.9%	-	15.9%	94.08%
Ra	rrier Height:	0.0 feet			М	edium T	rucks:	75.3%	7.0%	17.7%	2.20%
Barrier Type (0-V		0.0				Heavy T	rucks:	60.4%	12.0%	27.6%	3.73%
Centerline Di	ist. to Barrier:	67.0 feet		7	Noise S	ource El	evation	ns (in fe	eet)		
Centerline Dist.	to Observer:	67.0 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	.004	Grade Ad	iustmen	t: 0.0
	ad Elevation:	0.0 feet									
	ad Elevation:	0.0 feet		1	Lane Eq				feet)		
	Road Grade:	0.0%				Auto		3.226			
	Left View:	-90.0 degree				m Truck		1.059			
	Right View:	90.0 degree	es		Hea	y Truck	s: 53	3.076			
FHWA Noise Mod	el Calculations	;									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	68.46	2.10		-0.5	1	-1.20		-4.71	0.0	000	0.000
Medium Trucks:	79.45	-14.21		-0.4	9	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-11.92		-0.4	9	-1.20		-5.29	0.0	000	0.000
Unmitigated Nois	•							_			
VehicleType	Leq Peak Hou			Leq E		_	Night	<u> </u>	Ldn		NEL
Autos:		-	66.7		65.0		61.		69.0	-	69.4
Medium Trucks:		-	61.6		57.3		56.	-	64.0	-	64.2
Heavy Trucks: Vehicle Noise:			67.7 70.8		66.7 69.3		65. 67.	-	72.4 74.4		72.7 74.8
Centerline Distan	ce to Noise Co	ntour (in feet)								
Contonnie Distan	00 10 1.0/36 00	mour (m reet)		70 0	dBA	65	dBA	6	0 dBA	55	dBA
			Ldn:		132		284	4	612	!	1,319
		CI	VEL:		139		300	0	645	,	1,390

	FHWA-R	D-77-108 HIGI	HWAY	NOISE	PREDIC	TION N	MODEL	(9/12/2	021)		
	io: EA ne: Cactus Av. nt: w/o Elswor							: West (Campus U	oper Pla	te
SITE :	SPECIFIC II	NPUT DATA			ita Car				L INPUT	S	
Average Daily Peak Hour Peak H	Traffic (Adt): Percentage: lour Volume: hicle Speed: ne Distance:	30,870 vehice 9.80% 3,025 vehicle 45 mph 82 feet			Me He 'ehicle	edium Tr eavy Tru Mix	rucks (2 icks (3+	Autos: ? Axles): · Axles):	15 15 15		
	no Biotanioo.	02 1001			Veh	icleType		Day	Evening	Night	Daily
Site Data Bai Barrier Type (0-W	rrier Height: /all, 1-Berm):	0.0 feet 0.0				edium T Heavy T		71.9% 75.3% 60.4%	7.0%	15.9% 17.7% 27.6%	2.20%
Centerline Dia	st. to Barrier:	67.0 feet		^	loise S	ource E	levatio	ns (in f	eet)		
Ros	to Observer: (Above Pad): ad Elevation: ad Elevation: Road Grade:	67.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0%		L	Hea ane Eq	Auto m Truck vy Truck uivalen Auto	(s: 8 (s: 8 t Dista (s: 5)	3.226	Grade Ad	justmen	t: 0.0
	Left View: Right View:	-90.0 degre				m Truck vy Truck	-	3.059 3.076			
FHWA Noise Mode			,								
VehicleType	REMEL	Traffic Flow		stance		Road	Fre		Barrier Att		rm Atten
Autos: Medium Trucks: Heavy Trucks:	68.46 79.45 84.25	-13.61	ĺ	-0.51 -0.49 -0.49)	-1.20 -1.20 -1.20		-4.71 -4.88 -5.29	0.0	000 000 000	0.00 0.00 0.00
Unmitigated Noise	e Levels (with	out Topo and	l barri	er attenu	uation)						
VehicleType	Leq Peak Ho			Leq Ev		Leq	Night		Ldn	C	NEL
Autos:	69	9.5	67.3		65.6		62	2.0	69.6	3	70.
Medium Trucks:	64	1.1	62.2		57.9		57		64.6	-	64.
Heavy Trucks:		1.2	68.3		67.3		66		73.0	-	73.
Vehicle Noise:	73	3.9	71.4		69.9	1	68	i.U	75.0	J	75.
Centerline Distanc	ce to Noise C	ontour (in fee	t)	70	-		10.4				
			Ldn:	70 d	BA 145	65	dBA 31		60 dBA 671		dBA
		,	Lan:		145		31	-	708		1,446
			// 4LL.		132		32		100	'	1,020

	e: Cactus Av.							West 0	Campus Up	per Plat	e
Road Segmen											
SITE S Highway Data	PECIFIC IN	PUT DATA		9	ite Con	N ditions			L INPUT	5	
Average Daily 1	Troffio (Adt):	28,932 vehicle		- 0.	ne oon	unions	(mara -	Autos:	15		
Peak Hour I	. ,	9.80%	50		Me	dium Tru	icke (2		15		
	our Volume:	2.835 vehicles				avy Truc					
	nicle Speed:	45 mph	5				, ro (o .	Axico).	10		
Near/Far Lan		82 feet		V	ehicle						
	e Distarice.	02 1001			Veh	icleType		Day	Evening	Night	Daily
Site Data							lutos:	71.9%		15.9%	
Ban	rier Height:	0.0 feet				edium Ti		75.3%		17.7%	
Barrier Type (0-Wa	all, 1-Berm):	0.0				Heavy Ti	rucks:	60.4%	12.0%	27.6%	3.679
Centerline Dis	t. to Barrier:	67.0 feet		N	oise S	ource El	evation	ns (in fe	et)		
Centerline Dist. t	o Observer:	67.0 feet				Auto:		.000			
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Truck:		297			
Observer Height (A	Above Pad):	5.0 feet				vy Trucks		.004	Grade Ad	ustment	: 0.0
Pa	d Elevation:	0.0 feet				•					
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalent			eet)		
F	Road Grade:	0.0%				Auto		3.226			
	Left View:	-90.0 degree	es			m Truck		3.059			
	Right View:	90.0 degree	es		Hear	y Truck	s: 53	3.076			
FHWA Noise Mode	l Calculation:	s									
VehicleType	REMEL	Traffic Flow	Dis	tance		Road	Fres		Barrier Att		m Atten
Autos:	68.46	2.43		-0.51		-1.20		-4.71		000	0.00
Medium Trucks:	79.45	-14.21		-0.49		-1.20		-4.88		000	0.00
Heavy Trucks:	84.25	-11.66		-0.49		-1.20		-5.29	0.0	000	0.00
Unmitigated Noise								_			
	Leq Peak Hou		_	Leg Eve			Night		Ldn		NEL
Autos:	69		67.0		65.4		61.		69.3		69.
Medium Trucks:	63		61.6		57.3		56.		64.0		64.
Heavy Trucks:	70		68.0		67.0		65.		72.6		72.
Vehicle Noise:	73		71.1		69.5		67.	.b	74.7	·	75.
Centerline Distance	e to Noise Co	ntour (in feet,)	70 dl	DΛ	65	dBA	6	i0 dBA	55	dBA
			Ldn:	70 01	137	00 1	29		637		1.372

Wednesday, September 28, 2022

	FHWA-RI	D-77-108 HIGH	WAY NOI	SE PRED	ICTION I	MODEL (9/12/2	021)		
	io: EAP e: Cactus Av. nt: w/o Elswort	th St.				t Name: ' Number:		Campus Up	per Pla	te
SITE	SPECIFIC IN	IPUT DATA				NOISE I	NODE	L INPUTS	3	
Highway Data				Site Co	nditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt): Percentage:	32,928 vehicle 9.80%	S	٨.	ledium Ti		Autos.			
	our Volume:	3.227 vehicles			leavy Tru		/			
	hicle Speed:	45 mph					- '			
Near/Far Lai		82 feet		Vehicle			_	T= - T		
011 0 1				Ve	hicleTyp		Day	Evening	Night	Daily
Site Data						Autos:	71.9%		15.9%	
	rier Height:	0.0 feet		,	Medium 1		75.3%		17.7%	
Barrier Type (0-W	. ,	0.0			Heavy 1	rucks:	60.49	12.0%	27.6%	3.68%
Centerline Dis		67.0 feet		Noise S	Source E	levation	s (in f	eet)		
Centerline Dist.		67.0 feet			Auto	os: 0.	000			
Barrier Distance		0.0 feet		Medi	um Truck	(s: 2.	297			
Observer Height (,	5.0 feet		He	avy Truck	(s: 8.	004	Grade Adj	ustmen	t: 0.0
	ad Elevation:	0.0 feet			•					
	ad Elevation:	0.0 feet		Lane E	quivalen		_	feet)		
F	Road Grade:	0.0%			Auto		226			
	Left View:	-90.0 degree			um Truck	00.	059			
	Right View:	90.0 degree	S	He	avy Truck	(s: 53.	076			
FHWA Noise Mode	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Distanc	e Finit	e Road	Fresr	nel	Barrier Atte	en Be	rm Atten
Autos:	68.46	2.99		0.51	-1.20		-4.71	0.0		0.000
Medium Trucks:	79.45	-13.61		0.49	-1.20		-4.88	0.0		0.000
Heavy Trucks:	84.25	-11.09		0.49	-1.20		-5.29	0.0	100	0.000
Unmitigated Noise			oarrier at	tenuation)					
	Leq Peak Hou			q Evening		Night		Ldn		NEL
Autos:	69		37.6	65.		62.3		69.9		70.3
Medium Trucks:	64		32.2	57.	-	57.2	-	64.6		64.8
Heavy Trucks:	71		88.6	67.	-	66.4		73.2		73.5
Vehicle Noise:	74	.2 7	71.7	70.	1	68.2	2	75.2	!	75.6
Centerline Distance	e to Noise Co	ontour (in feet)		70 dBA		dBA		50 dBA	-	5 dBA
			dn:	70 aBA 151		ава 323		695 aba	58	1.497
		-	_an: IEL:	15		323		695 733		1,497
		CN	IEL:	15	•	340		/33		1,579

Wednesday, September 28, 2022

	FHWA-RI	D-77-108 HIGH	WAY	NOISE	E PREDIC	CTION M	ODEL	(9/12/20	021)		
Road Nar	rio: OYC me: Cactus Av. ent: w/o Elswort	th St.					Name: umber:		Campus U	per Pla	te
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Cor	ditions	(Hard =	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	36,990 vehicle	es					Autos:	15		
Peak Hou	r Percentage:	9.80%				edium Tru		,			
Peak	Hour Volume:	3,625 vehicle	S		He	eavy Truc	cks (3+	Axles):	15		
V	ehicle Speed:	45 mph			Vehicle	Mix					
Near/Far L	ane Distance:	82 feet				icleType		Day	Evening	Night	Daily
Site Data							Autos:	71.9%	12.2%	15.9%	94.08%
R:	arrier Height:	0.0 feet			М	edium Ti	rucks:	75.3%	7.0%	17.7%	2.20%
Barrier Type (0-V		0.0				Heavy Ti	rucks:	60.4%	12.0%	27.6%	3.73%
Centerline D	ist. to Barrier:	67.0 feet		İ	Noise S	ource El	evation	ns (in fe	eet)		
Centerline Dist	to Observer:	67.0 feet		İ		Auto		.000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks		.297			
Observer Height	(Above Pad):	5.0 feet			Hear	vy Trucks		.004	Grade Ad	iustmen	t: 0.0
F	Pad Elevation:	0.0 feet									
Ro	oad Elevation:	0.0 feet			Lane Eq			_ •	feet)		
	Road Grade:	0.0%				Autos		.226			
	Left View:	-90.0 degree	es			m Trucks		.059			
	Right View:	90.0 degree	es		Hea	vy Trucks	s: 53	.076			
FHWA Noise Mod	del Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance		Road	Fres		Barrier Att		rm Atten
Autos		3.49		-0.		-1.20		-4.71		000	0.000
Medium Trucks		-12.83		-0.4		-1.20		-4.88		000	0.000
Heavy Trucks	84.25	-10.53		-0.4	49	-1.20		-5.29	0.0	000	0.000
Unmitigated Nois			barri	ier atte	nuation)						
VehicleType	Leq Peak Hou		_	Leq E	vening		Night		Ldn		NEL
Autos			68.1		66.4		62.	-	70.4		70.8
Medium Trucks			63.0		58.7		58.	-	65.4		65.6
Heavy Trucks Vehicle Noise			69.1 72.2		68.1 70.7		67. 68.		73.7		74.0 76.1
Centerline Distan							50.				
Senterinie Distali	CE TO NOISE CO	mour (mreet)		70	dBA	65 (dBA	6	60 dBA	55	dBA
			Ldn:		163		352	2	757		1,632
		C	NEL:		172		37	1	798		1,720

		D-77-108 HIG	IIWAI	NOISE	FKLDI		NODEL	(3/12/2	JZ 1)		
Scenar									Campus U	oper Plat	e
	e: Cactus Av.					Job N	lumber.	14064			
Road Segme	nt: w/o Elswor	tn St.									
	SPECIFIC II	NPUT DATA							L INPUT	S	
Highway Data				S	ite Cor	nditions	(Hard				
Average Daily	Traffic (Adt):	43,210 vehic	les					Autos:	15		
Peak Hour	Percentage:	9.80%				edium Ti		,			
Peak H	lour Volume:	4,235 vehicle	es		He	eavy Tru	icks (3+	Axles):	15		
	hicle Speed:	45 mph		v	'ehicle	Mix					
Near/Far La	ne Distance:	82 feet		F		nicleType	9	Day	Evening	Night	Daily
Site Data							Autos:	71.9%	12.2%	15.9%	94.08%
Ra	rrier Height:	0.0 feet			N	1edium 7	rucks:	75.3%	7.0%	17.7%	2.20%
Barrier Type (0-W		0.0				Heavy 7	rucks:	60.4%	12.0%	27.6%	3.739
Centerline Di	st. to Barrier:	67.0 feet		^	loise S	ource E	levatio	ns (in fe	eet)		
Centerline Dist.	to Observer:	67.0 feet		F.	.0.00 0	Auto		0.000	,,,,		
Barrier Distance	to Observer:	0.0 feet			Modii	ım Truck		2.297			
Observer Height	(Above Pad):	5.0 feet				vy Truck		3.004	Grade Ad	iustment	- 0.0
P	ad Elevation:	0.0 feet				•				, 4010	. 0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distai	nce (in i	feet)		
	Road Grade:	0.0%				Auto	s: 50	3.226			
	Left View:	-90.0 degre	ees			ım Truck		3.059			
	Right View:	90.0 degre	ees		Hea	vy Truck	(s: 50	3.076			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	snel	Barrier Att	en Bei	m Atten
Autos:	68.46	4.17	7	-0.51		-1.20		-4.71	0.0	000	0.00
Medium Trucks:	79.45	-12.1	5	-0.49)	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	84.25	-9.86	3	-0.49)	-1.20		-5.29	0.0	000	0.00
Unmitigated Noise	e Levels (with	out Topo and	l barri	er atteni	uation)						
VehicleType	Leq Peak Ho		,	Leq Ev			Night		Ldn		NEL
Autos:		0.9	68.8		67.1		63		71.		71.
Medium Trucks:		5.6	63.7		59.4		58		66.0	-	66.
Heavy Trucks:		2.7	69.8		68.8		67		74.4		74.
Vehicle Noise:	75	5.4	72.9		71.3	3	69	.4	76.	5	76.
Centerline Distant	ce to Noise C	ontour (in fee	t)								
			L	70 d		65	dBA		0 dBA		dBA
								-			1,810
		C	Ldn: CNEL:		181 191		39 41	-	840 886		

Scenario	o: OYCP				F	Proiect N	ame: \	Vest C	ampus Up	per Plate	е
	e: Cactus Av.					Job Nur				,	
Road Segmen	t: w/o Elswor	th St.									
	SPECIFIC IN	IPUT DATA		0:	te Condi				L INPUT	S	
Highway Data				31	te Conai	tions (F					
Average Daily	. ,	39,048 vehicle	es			_		Autos:	15		
Peak Hour I		9.80%				um Truc		,	15		
	our Volume:	3,827 vehicle	S		Heav	y Truck	s (3+ A	ixles):	15		
	nicle Speed:	45 mph		Ve	ehicle Mi.	x					
Near/Far Lar	ne Distance:	82 feet			Vehicl	еТуре		Day	Evening	Night	Daily
Site Data						Au	tos:	71.9%	12.2%	15.9%	94.239
Bar	rier Heiaht:	0.0 feet			Med	lium Tru	cks:	75.3%	7.0%	17.7%	2.089
Barrier Type (0-Wa	all, 1-Berm):	0.0			He	avy Tru	cks:	60.4%	12.0%	27.6%	3.699
Centerline Dis	t. to Barrier:	67.0 feet		N	oise Sou	rce Fles	rations	(in fo	of)		
Centerline Dist. t	o Observer:	67.0 feet		/**	J136 00a	Autos:		000	ci)		
Barrier Distance t	o Observer:	0.0 feet			Medium			97			
Observer Height (Above Pad):	5.0 feet				Trucks:		004	Grade Ad	iustment	. 0 0
Pa	d Elevation:	0.0 feet			ricavy	mucho.	0.0	704	0,000,10,	doti//o//t.	. 0.0
Roa	d Elevation:	0.0 feet		Lá	ne Equi	valent D	istanc	e (in f	eet)		
F	Road Grade:	0.0%				Autos:	53.2				
	Left View:	-90.0 degre	es		Medium		53.0				
	Right View:	90.0 degre	es		Heavy	Trucks:	53.0	076			
FHWA Noise Mode		-									
VehicleType	REMEL	Traffic Flow	Distai		Finite R		Fresn	_	Barrier Att		m Atten
Autos:	68.46			-0.51		-1.20		-4.71		000	0.00
Medium Trucks:	79.45			-0.49		-1.20		-4.88		000	0.00
Heavy Trucks:	84.25			-0.49		-1.20		-5.29	0.0	000	0.00
Unmitigated Noise											
VehicleType Autos:	Leq Peak Hou	ır Leq Day	68.3	eq Eve	66.7	Leq Ni	gnt 63.0		Ldn 70.6	-	NEL 71.
Medium Trucks:	64		63.0		58.7		58.0		65.4		65
	-	1.9	69.3		68.3		67.2		73.9		74.
Heavy Trucks		*-	72.4		70.9		69.0		76.0		76
Heavy Trucks:	7/		12.4		10.9		09.0	'	70.0	,	10.
Vehicle Noise:	74										
Vehicle Noise:	-)	70 dE	BA .	65 dE	BA	6	0 dBA	55	dBA
	-) Ldn:	70 dE	3A 168	65 dE	362	6	0 dBA 779		dBA 1.67

Wednesday, September 28, 2022

	FHWA-RD-	77-108 HIGHW	AY NOIS	E PREDIC	TION N	IODEL (9/1	2/2021)	
	o: HYP e: Cactus Av. t: w/o Elsworth	St.				Name: We lumber: 140	st Campus Up 964	per Plate
	SPECIFIC INF	UT DATA			N	IOISE MO	DEL INPUTS	3
Highway Data				Site Con	ditions	(Hard = 10	, Soft = 15)	
Vel	Percentage: our Volume: 4 nicle Speed:	15,267 vehicles 9.80% 1,436 vehicles 45 mph			avy Tru	Aut ucks (2 Axle cks (3+ Axle	es): 15	
Near/Far Lar	ne Distance:	82 feet		Veh	icleType	Da	y Evening	Night Daily
Barrier Type (0-Wa	. ,	0.0 feet 0.0			edium T Heavy T	rucks: 75	.9% 12.2% .3% 7.0% .4% 12.0%	15.9% 94.21% 17.7% 2.10% 27.6% 3.69%
Centerline Dis		67.0 feet		Noise So	ource El	levations (i	n feet)	
	o Observer:	67.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet		Hear	Auto m Truck yy Truck uivalen	s: 2.297	Grade Adj	ustment: 0.0
F	Road Grade:	0.0%			Auto	s: 53.226	3	
	Left View: Right View:	-90.0 degrees 90.0 degrees			m Truck /y Truck	00.000		
FHWA Noise Mode	l Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	en Berm Atten
Autos:	68.46	4.37	-0	.51	-1.20	-4.	71 0.0	0.000
Medium Trucks:	79.45	-12.15	-	.49	-1.20	-4.		
Heavy Trucks:	84.25	-9.69		.49	-1.20	-5.	29 0.0	0.000
Unmitigated Noise								
	Leq Peak Hour			Evening		Night	Ldn	CNEL
Autos:	71.1		9.0	67.3		63.7	71.3	
Medium Trucks:	65.6		3.7	59.4		58.6	66.0	
Heavy Trucks:	72.9		0.0	69.0		67.8	74.6	
Vehicle Noise:	75.6		3.1	71.5		69.6	76.6	77.0
Centerline Distanc	e to Noise Cor	ntour (in feet)	7	0 dBA	65	dBA	60 dBA	55 dBA
			dn:	186	00	400	861	33 dBA 1.855
		CNE		196		400 421	908	1,855
		CIVE	-L.	190		421	900	1,950

	FHWA-R	D-77-108 HIGH	IWAY	NOISE	PREDIC	CTION N	IODEL	(9/12/20	021)		
Scenario Road Name Road Segment	: Orange Te						t Name: lumber:		Campus U	pper Pla	te
	PECIFIC II	NPUT DATA			a:: a				L INPUT	S	
Highway Data					Site Cor	aitions	(Hara =				
Average Daily T	. ,	8,884 vehicl	es					Autos:	15		
Peak Hour F		9.80%				edium Tr		,			
	our Volume:	871 vehicle	!S		He	eavy Tru	cks (3+	Axles):	15		
	icle Speed:	45 mph			Vehicle	Mix					
Near/Far Lan	e Distance:	68 feet			Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	71.9%	12.2%	15.9%	94.08%
Rarı	ier Height:	0.0 feet			M	edium T	rucks:	75.3%	7.0%	17.7%	2.20%
Barrier Type (0-Wa	all, 1-Berm):	0.0				Heavy T	rucks:	60.4%	12.0%	27.6%	3.73%
Centerline Dist		55.0 feet			Noise S	ource E	levation	ıs (in fe	eet)		
Centerline Dist. to		55.0 feet				Auto	s: 0	.000			
Barrier Distance to		0.0 feet			Mediu	m Truck	s: 2	.297			
Observer Height (A		5.0 feet			Hea	vy Truck	s: 8	.004	Grade Ad	justmen	t: 0.0
	d Elevation:	0.0 feet		-							
	d Elevation:	0.0 feet		ļ.	Lane Eq			_ •	reet)		
R	oad Grade:	0.0%				Auto		.520			
	Left View:	-90.0 degre				m Truck		.316			
	Right View:	90.0 degre	es		Heavy Trucks: 43.336						
FHWA Noise Model											
VehicleType	REMEL	Traffic Flow		stance		Road	Fres		Barrier Att		rm Atten
Autos:	68.46			0.8		-1.20		-4.67		000	0.000
Medium Trucks:	79.45			0.8	-	-1.20		-4.87		000	0.000
Heavy Trucks:	84.25			0.8		-1.20		-5.38	0.	000	0.000
Unmitigated Noise											
, , ,	Leq Peak Ho			Leq E	vening		Night		Ldn		NEL
Autos:		5.4	63.2		61.5		57.		65.		65.9
Medium Trucks:		0.1	58.1		53.8		53.		60.	-	60.7
Heavy Trucks:		7.2	64.3		63.3		62.		68.	-	69.2 71.3
Vehicle Noise:		9.8	67.3		65.8		63.	9	70.	9	/1.3
Centerline Distance	to Noise C	ontour (in fee	r)	70	dBA	65	dBA	-	0 dBA	56	dBA
			Ldn:	701	63 63	03	UDA 136		294		634
			NEL:		67		144	-	310		668
		C	IVEL.		67		144	+	310	,	800

	FHWA-RI	D-77-108 HIGH	WAY NO	DISE P	REDIC	TION	10DEL (9/1	2/2021)			
Scenario Road Name Road Segmen	e: Orange Te						t Name: We lumber: 140		ous Uppe	er Plate	1
	PECIFIC IN	IPUT DATA					NOISE MO				
Highway Data				Sit	te Con	ditions	(Hard = 10	, Soft =	15)		
	. ,	10,205 vehicle 9.80% 1,000 vehicle 45 mph		Va		avy Tru	Aut rucks (2 Axie cks (3+ Axie	es): 1	5 5 5		
Near/Far Lar	e Distance:	68 feet		ve		icleType	e Da		ning N	light	Daily
Site Data							Autos: 71	.9% 1	2.2%	15.9%	94.08%
Bar	rier Height:	0.0 feet				edium 7				17.7%	2.20%
Barrier Type (0-Wa	all, 1-Berm):	0.0			I	Heavy 7	rucks: 60	.4% 1	2.0%	27.6%	3.73%
Centerline Dis	t. to Barrier:	55.0 feet		No	ise Sc	urce F	levations (i	n feet)			
Centerline Dist. t	o Observer:	55.0 feet			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Auto					
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Truck					
Observer Height (/	Above Pad):	5.0 feet				v Truck			de Adjus	stment:	0.0
Pa	d Elevation:	0.0 feet				,		•	, ,		
Roa	d Elevation:	0.0 feet		La	ne Eq		t Distance	_			
F	Road Grade:	0.0%				Auto)			
	Left View:	-90.0 degre				m Truck					
	Right View:	90.0 degre	es		Heav	y Truck	s: 43.336	5			
FHWA Noise Mode	l Calculation										
VehicleType	REMEL	Traffic Flow	Distar		Finite	Road	Fresnel		ier Atten		n Atten
Autos:	68.46	-2.10		0.80		-1.20	-4.		0.000		0.000
Medium Trucks:	79.45			0.83		-1.20		87	0.000		0.000
Heavy Trucks:	84.25			0.83		-1.20	-5.	38	0.000	0	0.000
Unmitigated Noise					_				-		
	Leq Peak Hou			eq Eve		Leq	Night	Ldr		CN	
Autos: Medium Trucks:	66		63.8 58.7		62.1 54.4		58.5 53.7		66.1 61.1		66.5 61.3
Heavy Trucks:		7.8	64.9 67.9		63.9		62.7		69.5 71.5		69.8 71.9
					ზნ.4		64.5		/1.5		71.9
Centerline Distanc	e to Noise Co	ontour (in feet)	70 dB	Α	65	dBA	60 dE	BA .	55 c	iBA
			Ldn:		69		150		323		695

Scenari	o: E+D					Project	Name:	Wort C	ampus Up	nor Plat	^
	o. ETF e: Orange Terra	oo Pkuu					umber:		ampus op	ipei riai	е
	e. Orange rena t: e/o Trautweir					JOD IV	umber.	14004			
	SPECIFIC INP					N	OISE	MODE	L INPUT	6	
Highway Data				Sit	te Con	ditions	(Hard =	10, So	ft = 15)		
Average Daily	Traffic (Adt):	8,884 vehicles	6					Autos:	15		
Peak Hour	Percentage:	9.80%			Ме	dium Tru	icks (2	Axles):	15		
Peak H	our Volume:	871 vehicles			He	avy Truc	cks (3+	Axles):	15		
Vel	hicle Speed:	45 mph		Vo	hicle	Miv					
Near/Far Lar	ne Distance:	68 feet		Ve		icleType		Dav	Evening	Niaht	Dailv
Site Data							Autos:	71.9%	-	15.9%	94.08%
Rar	rier Height:	0.0 feet			М	edium Ti	rucks:	75.3%	7.0%	17.7%	2.20%
Barrier Type (0-W	-	0.0			- 1	Heavy Ti	rucks:	60.4%	12.0%	27.6%	3.73%
Centerline Dis		55.0 feet		No	sies Se	ource El	ovation	c (in fo	of)		
Centerline Dist. 1	to Observer:	55.0 feet		740	//SE 30	Auto:		000	ei)		
Barrier Distance t	to Observer:	0.0 feet			Modiu	m Truck:		297			
Observer Height (Above Pad):	5.0 feet				y Truck			Grade Ad	ustment	. 0 0
Pa	d Elevation:	0.0 feet			77001	y much	J. U.	004	0,000,10,	00111101111	. 0.0
Roa	d Elevation:	0.0 feet		La	ne Eq	uivalent	Distan	ce (in f	eet)		
F	Road Grade:	0.0%				Auto	s: 43	.520			
	Left View:	-90.0 degrees	S			m Truck		.316			
	Right View:	90.0 degrees	3		Heav	y Truck	s: 43	.336			
FHWA Noise Mode	l Calculations			- 1							
VehicleType		Traffic Flow	Distan		Finite	Road	Fresi		Barrier Att	_	m Atten
Autos:	68.46	-2.70		0.80		-1.20		-4.67	0.0		0.000
Medium Trucks:	79.45	-19.02		0.83		-1.20		-4.87	0.0		0.000
Heavy Trucks:	84.25	-16.73		0.83		-1.20		-5.38	0.0	100	0.000
Unmitigated Noise	•		$\overline{}$							1	
	Leq Peak Hour	Leq Day	_	eq Eve		Leq	Night		Ldn		NEL
Autos:	65.4	-	3.2		61.5		57.	-	65.5		65.9
Medium Trucks:	60.1	-	8.1		53.8		53.		60.5		60.7
Heavy Trucks:_ Vehicle Noise:	67.2		7.3		63.3		62.		68.9 70.9		69.: 71.:
					55.0		00.		70.0		, , , ,
Centerline Distanc	e to Noise Con	tour (in feet)		70 dB	BA .	65	dBA	6	0 dBA	55	dBA
	e to Noise Con	, ,	.dn:	70 dB	8A 63	65	dBA 136		0 dBA 294	55	dBA 634

Wednesday, September 28, 2022

Average Daily Traffic (Adt): 10,205 vehicles Peak Hour Percentage: 9,80% Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15 Wehicle Speed: 45 mph Near/Far Lane Distance: 68 feet Wehicle Mix Vehicle Type Day Evening Night Daily Vehicle Mix Vehicle Type Day Evening Night Daily Vehicle Mix Vehicle		FHWA-RD)-77-108 HIGH\	NAY NOI	SE PREDIC	CTION N	IODEL (9/1:	2/2021)			
Average Daily Traffic (Adt):	Road Name	e: Orange Ter							per Plate		
Average Daily Traffic (Adt): 10,205 vehicles Peak Hour Potencentage: 9,80% Medium Trucks (2 Axles): 15		PECIFIC IN	PUT DATA						3		
Peak Hour Volume: 1,000 vehicles Peak Hour Volume: 1,000 vehicles Peak Hour Volume: 1,000 vehicles Vehicle Speed: 45 mph Rear/Far Lane Distance: 68 feet Vehicle Mix Vehicle Type Day Evening Night Daily Vehicle Mix Vehicle Type Day Evening Night Daily Vehicle Mix Vehicle Dix Vehicle Mix Vehicle M	Highway Data				Site Cor	ditions	(Hard = 10,	Soft = 15)			
Peak Hour Volume: 1,000 vehicles Vehicle Speed: 45 mph Vehicle Mix Vehicle Speed: 45 mph Vehicle Mix Vehicle Mix Vehicle Type Day Evening Night Daily Evening Night Daily Vehicle Mix Vehicle Type Day Evening Night Daily Vehicle Mix Vehicle Type Day Evening Night Daily Vehicle Mix Vehicle Vehi	Average Daily 1	raffic (Adt):	10,205 vehicle	s			Aut	os: 15			
Vehicle Speed: 45 mph Near/Far Lane Distance: 68 feet Vehicle Mix Vehicle Type Day Evening Night Daily Daily Night Daily Near/Far Lane Distance: 15 most	Peak Hour I	Percentage:	9.80%		Me	edium Tr	ucks (2 Axle	s): 15			
Near/Far Lane Distance: 68 feet Near N	Peak Ho	our Volume:	1,000 vehicles		He	eavy Tru	cks (3+ Axle	s): 15			
Near/Far Lane Distance: 68 feet VehicleType Day Evening Night Dally	Veh	icle Speed:	45 mph		Vehicle	Mix					
Barrier Height: 0.0 feet	Near/Far Lar	e Distance:	68 feet				Da	y Evening	Night Daily		
Barrier Type (0-Wall, 1-Berm): 0.0 Teet	Site Data						Autos: 71.	9% 12.2%	15.9% 94.08%		
Barrier Type (0-Wall, 1-Berm):	Ban	rier Heiaht:	0.0 feet		М	ledium T	rucks: 75.	3% 7.0%	17.7% 2.20%		
Centerline Dist. to Observer: 55.0 feet Autos: 0.000		-				Heavy T	rucks: 60.	4% 12.0%	27.6% 3.73%		
Barrier Distance to Observer: 0.0 feet Autos: 0.000 Medium Trucks: 2.297 Autos: 0.000 Medium Trucks: 0.297 Autos: 4.3520 Autos: 4.3336 Autos:					Noise S	ource El	evations (ii	n feet)			
Diserver Height (Above Pad):						Auto	s: 0.000				
Pad Elevation:					Mediu	m Truck	s: 2.297				
Road Elevation:		,			Hea	vy Truck	s: 8.004	Grade Adj	ustment: 0.0		
Road Grade:							. Di-4	·· f 4)			
Left View:					Lane Eq						
	h				Madiu						
VehicleType											
Autos: 68.46	FHWA Noise Mode	I Calculations	5								
Medium Trucks: 79,45 -18,42 0.83 -1.20 -4.87 0.000 0.000 Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 66.0 63.8 62.1 58.5 66.1 66.5 Medium Trucks: 60.7 58.7 54.4 53.7 61.1 61.3 Heavy Trucks: 67.8 64.9 63.9 62.7 69.5 69.8 Vehicle Noise: 70.4 67.9 66.4 64.5 71.5 71.9 Centerline Distance to Noise Contour (in feet) Ldn: 69 150 323 695	VehicleType	REMEL	Traffic Flow	Distance	e Finite	Road	Fresnel	Barrier Atte	en Berm Atten		
Heavy Trucks: 84.25	Autos:	68.46	-2.10	(0.80	-1.20	-4.	67 0.0	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL	Medium Trucks:	79.45	-18.42	(0.83	-1.20	-4.	87 0.0	0.000		
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 66.0 63.8 62.1 58.5 66.1 66.5 Medium Trucks: 60.7 58.7 54.4 53.7 61.1 61.3 Heavy Trucks: 67.8 64.9 63.9 62.7 69.5 69.8 Vehicle Noise: 70.4 67.9 66.4 64.5 71.5 71.9 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 69 150 323 695	Heavy Trucks:	84.25	-16.12	(0.83	-1.20	-5.	38 0.0	0.000		
Autos: 66.0 63.8 62.1 58.5 66.1 66.5 Medium Trucks: 60.7 58.7 54.4 53.7 61.1 61.3 Heavy Trucks: 67.8 64.9 63.9 62.7 69.5 69.5 Vehicle Noise: 70.4 67.9 66.4 64.5 71.5 71.9 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 69 150 323 695											
Medium Trucks: 60.7 58.7 54.4 53.7 61.1 61.3 Heavy Trucks: 67.8 64.9 63.9 62.7 69.5 69.8 Vehicle Noise: 70.4 67.9 66.4 64.5 71.5 71.9 Centerline Distance to Noise: Contour (in feet) To dBA 65 dBA 60 dBA 55 dBA Ldn: 69 150 323 695	.,						-				
Heavy Trucks: 67.8 64.9 63.9 62.7 69.5 69.8 Vehicle Noise: 70.4 67.9 66.4 64.5 71.5 71.9 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 69 150 323 695											
Vehicle Noise: 70.4 67.9 66.4 64.5 71.5 71.9 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 69 150 323 695											
Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 69 150 323 695											
70 dBA 65 dBA 60 dBA 55 dBA Ldn: 69 150 323 695				57.9	66.4		64.5	71.5	71.9		
Ldn: 69 150 323 695	Centerline Distance	e to Noise Co	ntour (in feet)	7	n dBA	65	dΒΔ	60 dBA	55 dBA		
			,			- 03					
CIVEL. 73 158 340 733		Ldn: CNEL:				73 158 340 73					

day, September 28, 2022

	FHWA-RD	0-77-108 HIGH	WAY	NOISE	PREDIC	TION MO	ODEL (9/12/20	021)		
Scenario: Road Name: Road Segment:	Orange Ter					Project I Job Nu			Campus U	per Plat	е
	ECIFIC IN	PUT DATA							L INPUT	s	
Highway Data				S	ite Cor	ditions (
Average Daily Tra	affic (Adt):	10,277 vehicle	es					Autos:	15		
Peak Hour Pe	rcentage:	9.80%				dium Tru		/	15		
Peak Hou		1,007 vehicle	S		He	avy Truci	ks (3+ /	Axles):	15		
	le Speed:	45 mph		V	'ehicle	Mix					
Near/Far Lane	Distance:	68 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	71.9%	12.2%	15.9%	94.08%
Barrie	r Height:	0.0 feet			М	edium Tru	ucks:	75.3%	7.0%	17.7%	2.20%
Barrier Type (0-Wall,	-	0.0				Heavy Tru	ıcks:	60.4%	12.0%	27.6%	3.73%
Centerline Dist. t	to Barrier:	55.0 feet		٨	loise S	ource Ele	vation	s (in fe	et)		
Centerline Dist. to	Observer:	55.0 feet				Autos	: 0.	000	,		
Barrier Distance to		0.0 feet			Mediu	m Trucks.	: 2.	297			
Observer Height (Ab	,	5.0 feet			Hear	y Trucks	: 8.	004	Grade Ad	iustment	0.0
	Elevation:	0.0 feet		-							
	Elevation:	0.0 feet		L	ane Eq	uivalent i			eet)		
	ad Grade:	0.0%				Autos		520			
ı	Left View:	-90.0 degree				m Trucks		316			
R	ight View:	90.0 degree	es		Hea	y Trucks	: 43.	336			
FHWA Noise Model C											
	REMEL	Traffic Flow	Dis	stance		Road	Fresr		Barrier Att		m Atten
Autos:	68.46	-2.07		0.80		-1.20		-4.67		000	0.000
Medium Trucks:	79.45	-18.39		0.83		-1.20		-4.87		000	0.000
Heavy Trucks:	84.25	-16.09		0.83		-1.20		-5.38	0.0	000	0.000
Unmitigated Noise Lo						1001	limbt	1	Ldn		NEL
VehicleType Le	q Peak Hou		63.9	Leq Ev	ening 62.2	Leq N	iignt 58.!		Lan 66.1		VEL 66.€
Medium Trucks:	60		58.8		54.4		53.7	-	61.		61.4
Heavy Trucks:	67		64.9		63.9		62.7		69.		69.8
Vehicle Noise:	70		68.0		66.4		64.5		71.0		71.9
Centerline Distance t	to Noise Co	ntour (in feet)								
				70 d	BA	65 d	BA	6	0 dBA	55	dBA
			Ldn:		70		150	1	324		698
		C	NEL:		74		159		342		736

	FHWA-RI	D-77-108 HIGH	IWAY I	NOISE I	PREDIC	TION	MODEL (9)/12/2	021)		
Scenario Road Name Road Segmen	e: Orange Te						t Name: \ Number: 1		Campus Up	per Pla	te
SITE S	SPECIFIC IN	IPUT DATA					NOISE N	IODE	L INPUTS	;	
Highway Data				S	ite Cor	ditions	(Hard =	10, S	oft = 15)		
Vel	Percentage: our Volume: nicle Speed:	18,352 vehicl 9.80% 1,798 vehicle 45 mph		V		avy Tru	rucks (2 A icks (3+ A	,	15		
Near/Far Lar	ne Distance:	68 feet			Veh	icleType	e .	Day	Evening	Night	Daily
	rier Height:	0.0 feet				edium 7 Heavy 7	rucks:	71.9% 75.3% 60.4%	6 7.0%	15.9% 17.7% 27.6%	2.20%
Barrier Type (0-Wa		0.0				icavy i	ruchs.	00.47	0 12.070	21.070	3.7370
Centerline Dist. t		55.0 feet 55.0 feet		Ν	oise S	ource E	levations	(in f	eet)		
Barrier Distance t Observer Height (/ Pa	o Observer:	0.0 feet 5.0 feet 0.0 feet		,	Hea	Auto m Truck yy Truck	ks: 2.2	000 297 004	Grade Adju	ustmen	t: 0.0
	u ⊑ievalion. Road Grade:	0.0 feet 0.0%		-	une Eq	Auto		_	1001)		
r	Left View: Right View:	-90.0 degre 90.0 degre				m Truck ry Truck	ks: 43.0	316			
FHWA Noise Mode	I Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresn	el	Barrier Atte	n Be	rm Atten
Autos:	68.46	0.45		0.80		-1.20		-4.67	0.0	00	0.00
Medium Trucks:	79.45	-15.87		0.83		-1.20		-4.87	0.0	00	0.00
Heavy Trucks:	84.25	-13.58		0.83		-1.20		-5.38	0.0	00	0.00
Unmitigated Noise	Levels (with	out Topo and	barrie	r attenu	ation)						
VehicleType	Leq Peak Hou	ır Leq Daj	V	Leq Ev	ening	Leq	Night		Ldn	С	NEL
Autos:	68	3.5	66.4		64.7		61.1		68.7		69.1
Medium Trucks:	63	3.2	61.3		57.0		56.2		63.6		63.9
Heavy Trucks:	70).3	67.4		66.4		65.3		72.0		72.
Vehicle Noise:	73	3.0	70.5	,	68.9	,	67.0		74.1	,	74.
Centerline Distanc	e to Noise Co	ontour (in feet)								
				70 d	BA	65	dBA	-	60 dBA	55	dBA
			Ldn:		103		221		477		1,028
	CNEL:				108 233 503					1,083	

Scenari	o: OYCP					Project	Name:	West C	Campus Up	ner Plat	9
	e: Orange Terra	ce Pkwy					umber:		Jampus Op	per r iac	
	nt: e/o Trautweir					00071	u				
	SPECIFIC INP	UT DATA							L INPUT	3	
Highway Data				Si	ite Con	ditions	(Hard =	= 10, So	ft = 15)		
Average Daily	Traffic (Adt): 1	0,277 vehicle	:S					Autos:	15		
Peak Hour	Percentage:	9.80%			Ме	dium Tru	ıcks (2	Axles):	15		
Peak H	our Volume: 1	,007 vehicles	3		He	avy Truc	cks (3+	Axles):	15		
Vel	hicle Speed:	45 mph		V	ehicle l	Mix					
Near/Far Lar	ne Distance:	68 feet		Ė		icleType		Day	Evening	Night	Daily
Site Data							Autos:	71.9%	12.2%	15.9%	94.089
Rar	rier Height:	0.0 feet			М	edium Ti	rucks:	75.3%	7.0%	17.7%	2.20%
Barrier Type (0-W	-	0.0			1	Heavy Ti	rucks:	60.4%	12.0%	27.6%	3.739
Centerline Dis	st. to Barrier:	55.0 feet		N	nise Sr	ource El	evation	s (in fe	et)		
Centerline Dist.	to Observer:	55.0 feet		-	0.00 00	Auto:		.000	,		
Barrier Distance t	to Observer:	0.0 feet			Mediu	m Truck:		.297			
Observer Height (Above Pad):	5.0 feet				y Truck		.004	Grade Adj	ustment	0.0
Pa	ad Elevation:	0.0 feet				•				0001110111	0.0
Roa	ad Elevation:	0.0 feet		La	ane Eq	uivalent	Distan	ce (in f	feet)		
F	Road Grade:	0.0%				Auto		.520			
	Left View:	-90.0 degree	s			m Truck		.316			
	Right View:	90.0 degree	es.		Heav	y Truck	s: 43	.336			
FHWA Noise Mode	el Calculations										
VehicleType		Traffic Flow	Dist	tance		Road	Fres		Barrier Atte		m Atten
Autos:	68.46	-2.07		0.80		-1.20		-4.67	0.0		0.00
Medium Trucks:	79.45	-18.39		0.83		-1.20		-4.87	0.0		0.00
Heavy Trucks:	84.25	-16.09		0.83		-1.20		-5.38	0.0	100	0.00
Unmitigated Noise	•							_			
., .	Leq Peak Hour	Leq Day		Leq Eve		_	Night	_	Ldn		VEL
Autos:	66.0		63.9		62.2		58.	-	66.1		66.
Medium Trucks:	60.7		58.8 64.9		54.4 63.9		53. 62.		61.1 69.5		61.
Heavy Trucks: Vehicle Noise:	67.8 70.5		68.0		66.4		64.		71.6		69. 71.
Centerline Distanc	e to Noise Con	tour (in feet)									
ormio Biotano	2.2.10.00 0011	(1301)		70 dE	BA	65	dBA	6	0 dBA	55	dBA
			Ldn:		70		150)	324		698

Wednesday, September 28, 2022

	FHWA-RI	D-77-108 HIGH	WAY N	OISE	PREDIC	TION N	IODEL	(9/12/2	(021)		
Road Nan	rio: HYP ne: Orange Te ent: e/o Trautwe						Name: lumber:		Campus Up	per Pla	ate
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				S	ite Con	ditions	(Hard =	= 10, S	oft = 15)		
	Traffic (Adt): r Percentage: Hour Volume:	18,352 vehicle 9.80% 1,798 vehicles				edium Tr		,	: 15		
	ehicle Speed:	45 mph						/			
Near/Far La	ane Distance:	68 feet		V	ehicle I			D	F in .	A E m la 4	D-#-
Site Data				_	ven	icleType	Autos:	Day 71.99	Evening 12.2%	Night 15.99	
					4.4	edium T		75.39		17.79	
Barrier Type (0-V	vall, 1-Berm):	0.0 feet 0.0				Heavy T		60.49		27.6	
Centerline D	ist. to Barrier:	55.0 feet			laisa Si	ource El	lovation	e (in t	inati		
Centerline Dist.	to Observer:	55.0 feet		-	ioise sc	Auto		.000	eeij		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck	0	.297			
Observer Height	(Above Pad):	5.0 feet				n Truck vy Truck		.004	Grade Ad	iuetmai	nt: 0.0
P	ad Elevation:	0.0 feet			пеач	ry Truck	s. o	.004	Orade Adj	ustrici	n. 0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 43	.520			
	Left View:	-90.0 degree	s		Mediu	m Truck	s: 43	.316			
	Right View:	90.0 degree	S		Heav	y Truck	s: 43	.336			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fres	nel	Barrier Att	en Be	erm Atten
Autos:	68.46	0.45		0.80)	-1.20		-4.67	0.0	000	0.000
Medium Trucks:	79.45	-15.87		0.83	}	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:				0.83		-1.20		-5.38	0.0	000	0.000
Unmitigated Nois			_								
Vehicle Type	Leq Peak Hou			.eq Ev			Night		Ldn		CNEL
Autos:			66.4		64.7		61.	-	68.7		69.1
Medium Trucks:			31.3		57.0		56.	_	63.6		63.9
Heavy Trucks:			37.4		66.4		65.	-	72.0		72.3
Vehicle Noise:			70.5		68.9		67.	U	74.1	l	74.4
Centerline Distan	ce to Noise Co	ontour (in feet)		70 d	DΛ	65	dBA	1	60 dBA		5 dBA
			l dn:	70 U	103	1 05	22 [.]		477	_	1.028
		-	IEL:	103 221 477 108 233 503			1,026				
		Ci	·		100		200	,	303		1,000

Wednesday, September 28, 2022

	FHWA-RD-	77-108 HIGH	WAY	NOISE	PREDIC	CTION M	ODEL	9/12/2	021)		
	o: E e: Van Buren B t: w/o Wood R						Name: umber:		Campus U	pper Pla	ate
	PECIFIC IN	PUT DATA							L INPUT	s	
Highway Data				5	ite Cor	ditions (Hara =				
Average Daily 1	. ,	32,691 vehicle	es					Autos:			
Peak Hour F		9.80%				edium Tru		,			
		3,204 vehicles	S		He	eavy Truc	ks (3+	Axles):	15		
	icle Speed:	50 mph		ν	ehicle	Mix					
Near/Far Lan	e Distance:	42 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						Α	utos:	71.9%	12.2%	15.99	6 94.08%
Ran	rier Height:	0.0 feet			М	edium Tr	ucks:	75.3%	7.0%	17.79	6 2.20%
Barrier Type (0-Wa	all, 1-Berm):	0.0				Heavy Tr	ucks:	60.4%	12.0%	27.69	% 3.73%
Centerline Dis		60.0 feet		٨	loise S	ource Ele	evation	s (in fe	eet)		
Centerline Dist. t	o Observer:	60.0 feet				Autos	: 0	.000			
Barrier Distance t		0.0 feet			Mediu	m Trucks	: 2	297			
Observer Height (A	,	5.0 feet			Hear	vy Trucks	: 8	.004	Grade Ad	justmer	nt: 0.0
	d Elevation:	0.0 feet									
	d Elevation:	0.0 feet		L	ane Eq	uivalent			feet)		
R	Road Grade:	0.0%				Autos		.427			
	Left View:	-90.0 degree				m Trucks		.270			
	Right View:	90.0 degree	es		Hea	vy Trucks	: 56	.285			
FHWA Noise Mode											
VehicleType		Traffic Flow	Dis	stance		Road	Fres		Barrier At		erm Atten
Autos:	70.20	2.50		-0.89		-1.20		-4.69		000	0.000
Medium Trucks:	81.00	-13.82		-0.87		-1.20		-4.88		000	0.000
Heavy Trucks:	85.38	-11.53		-0.87		-1.20		-5.34	0.	000	0.000
Unmitigated Noise	•					Lond	Violet	1	Ldn	Т,	CNEL
VehicleType Autos:	Leq Peak Hour 70.6		68.5	Leq Ev	ening 66.8	Leq I	vignt 63.	2	70.		71.2
Medium Trucks:	65.1		63.2		58.9		58.	_	65.	-	65.8
Heavy Trucks:	71.8		68.9		67.9		66.		73.	-	73.8
Vehicle Noise:	74.7		72.3		70.7		68.		75.		76.1
Centerline Distance	e to Noise Cor	ntour (in feet)								
		,,		70 d	BA	65 d	iBA	6	60 dBA	5	5 dBA
			Ldn:		146		314	1	676	3	1,455
		CI	VEL:		154		331		713	3	1,535

	FHWA-RI	D-77-108 HIGH	1 YAW	NOISE	PREDIC	TION N	IODEL	(9/12/2	(021)		
	io: EA ne: Van Buren nt: w/o Wood							West 14064	Campus Up	per Plat	e
SITE	SPECIFIC IN	NPUT DATA				N	IOISE	MODE	L INPUT	S	
Highway Data				5	ite Con	ditions	(Hard	= 10, S	oft = 15)		
	Traffic (Adt): Percentage: lour Volume:	37,552 vehicle 9.80% 3,680 vehicle				dium Tr avy Tru		,	: 15		
Ve	hicle Speed:	50 mph		1	/ehicle	Mix					
Near/Far La	ne Distance:	42 feet		F		icleType	,	Dav	Evening	Night	Daily
Site Data							Autos:	71.99	-	15.9%	
Rai	rrier Heiaht:	0.0 feet			М	edium T	rucks:	75.39	6 7.0%	17.7%	2.20%
Barrier Type (0-W		0.0				Heavy T	rucks:	60.49	6 12.0%	27.6%	3.73%
Centerline Di	st. to Barrier:	60.0 feet		,	loise So	urce Fl	levatio	ns (in f	eet)		
Centerline Dist.	to Observer:	60.0 feet		Ě	.0.00 00	Auto		0.000	000		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		2.297			
Observer Height ((Above Pad):	5.0 feet				v Truck		3.004	Grade Adj	iustment.	0.0
	ad Elevation:	0.0 feet		_ L		,					
	ad Elevation:	0.0 feet		L	ane Eq			_	feet)		
	Road Grade:	0.0%				Auto		3.427			
	Left View:	-90.0 degre				m Truck	0	3.270			
	Right View:	90.0 degre	es		Heat	ry Truck	S: 5t	3.285			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance		Road	Fres		Barrier Atte		m Atten
Autos:	70.20			-0.89		-1.20		-4.69		000	0.000
Medium Trucks:	81.00			-0.87		-1.20		-4.88		000	0.000
Heavy Trucks:	85.38	-10.92		-0.87	7	-1.20		-5.34	0.0	000	0.000
Unmitigated Noise			barriei	r atteni	uation)						
VehicleType	Leq Peak Hou			Leq Ev		Leq	Night		Ldn		VEL
Autos:		1.2	69.1		67.4		63		71.4		71.8
Medium Trucks:		5.7	63.8		59.5		58		66.1		66.4
Heavy Trucks:		2.4	69.5		68.5		67		74.1		74.4
Vehicle Noise:	75	5.3	72.9		71.3		69	.3	76.4	1	76.7
Centerline Distanc	ce to Noise Co	ontour (in feet)								
			L	70 a		65	dBA		60 dBA		dBA
		_	Ldn:		160		34		741		1,596
		С	NEL:		168		36	3	782		1,684

	io: E+P								ampus Up	per Plat	е
	ne: Van Buren B					Job N	umber:	14064			
коаа Segme	nt: w/o Wood Ro	1.									
	SPECIFIC INF	UT DATA							LINPUT	S	
Highway Data				S	ite Con	ditions	(Hard =	= 10, So	ft = 15)		
Average Daily	Traffic (Adt): 3	4,686 vehicle	:S					Autos:	15		
Peak Hour	Percentage:	9.80%			Ме	dium Tru	ıcks (2	Axles):	15		
Peak H	lour Volume: 3	3,399 vehicles	3		He	avy Truc	cks (3+	Axles):	15		
Ve	hicle Speed:	50 mph		v	ehicle l	Miv					
Near/Far La	ne Distance:	42 feet				icleType		Day	Evening	Night	Daily
Site Data							lutos:	71.9%	-	15.9%	94.429
Ra	rrier Height:	0.0 feet			М	edium Ti	rucks:	75.3%	7.0%	17.7%	2.079
Barrier Type (0-W	-	0.0			- 1	Heavy Ti	rucks:	60.4%	12.0%	27.6%	3.519
Centerline Di	st. to Barrier:	60.0 feet		A	laica Sa	ource El	ovation	ne (in fo	of)		
Centerline Dist.	to Observer:	60.0 feet		- 1	UISE SC	Auto:		.000	ei)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck:		297			
Observer Height	(Above Pad):	5.0 feet				y Truck	-	.004	Grade Ad	iustment	0.0
P	ad Elevation:	0.0 feet			ricas	y IIuck	s. 0	1.004	Orace Au	usunone	0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distar	nce (in f	eet)		
	Road Grade:	0.0%				Auto	s: 56	6.427			
	Left View:	-90.0 degree	s		Mediu	m Trucks	s: 56	3.270			
	Right View:	90.0 degree	es.		Heav	y Truck	s: 56	3.285			
FHWA Noise Mod	el Calculations										
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	70.20	2.77		-0.89	1	-1.20		-4.69	0.0	000	0.00
Medium Trucks:	81.00	-13.82		-0.87		-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	85.38	-11.53		-0.87		-1.20		-5.34	0.0	000	0.00
Unmitigated Noise	e Levels (withou	ut Topo and I	barrie	r attenu	ıation)						
VehicleType	Leq Peak Hour	Leq Day		Leg Eve	ening	Leq	Night		Ldn		VEL
Autos:	70.9) (68.7		67.1		63.	.4	71.0)	71.
Medium Trucks:	65.1		63.2		58.9		58.		65.5		65.
Heavy Trucks:			68.9		67.9		66.		73.5		73.
Vehicle Noise:	74.9)	72.4		70.8		68.	.8	75.9	9	76.
Centerline Distan	ce to Noise Con	tour (in feet)									
				70 di		65	dBA		0 dBA		dBA
			Ldn: VFL:		148 156		31	-	685 723		1,475

Wednesday, September 28, 2022

FHWA-R	D-77-108 HIGH	NAY NOI	SE PREDIC	CTION N	ODEL (9/12	/2021)	
Scenario: EAP Road Name: Van Buren Road Segment: w/o Wood					Name: Wes umber: 140	t Campus Upp 64	er Plate
SITE SPECIFIC II	NPUT DATA			N	IOISE MOI	EL INPUTS	
Highway Data			Site Cor	ditions	(Hard = 10,	Soft = 15)	
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume: Vehicle Speed:	39,547 vehicle 9.80% 3,876 vehicles 50 mph		He	eavy Tru	Auto ucks (2 Axle cks (3+ Axle	s): 15	
Near/Far Lane Distance:	42 feet		Vehicle				
	42 1001		Veh	icleType			Night Daily
Site Data Barrier Height: Barrier Type (0-Wall, 1-Berm):	0.0 feet 0.0			ledium T Heavy T		3% 7.0%	15.9% 94.38% 17.7% 2.09% 27.6% 3.54%
Centerline Dist. to Barrier:	60.0 feet		Noise S	ource El	evations (in	feet)	
Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation: Road Elevation:	60.0 feet 0.0 feet 5.0 feet 0.0 feet		Hea	Auto m Truck vy Truck	s: 2.297		stment: 0.0
Road Grade:	0.0%		zano zq	Auto			
Left View: Right View:	-90.0 degree 90.0 degree			m Truck vy Truck	s: 56.270		
FHWA Noise Model Calculation	ıs						
VehicleType REMEL	Traffic Flow	Distanc	e Finite	Road	Fresnel	Barrier Atter	n Berm Atten
Autos: 70.20	3.34	-1	0.89	-1.20	-4.6	9 0.00	0.000
Medium Trucks: 81.00	-13.22	-1	0.87	-1.20	-4.8	0.00	0.000
Heavy Trucks: 85.38	-10.92	-1	0.87	-1.20	-5.3	4 0.00	0.000
Unmitigated Noise Levels (with	out Topo and I	arrier at	tenuation)				
VehicleType Leq Peak Ho	ur Leq Day	Lec	Evening	Leq	Night	Ldn	CNEL
Autos: 7	1.4	9.3	67.6		64.0	71.6	72.0
Medium Trucks: 6	5.7	3.8	59.5		58.7	66.1	66.4
		9.5	68.5		67.3	74.1	74.4
Vehicle Noise: 7	5.4	3.0	71.4		69.4	76.5	76.8
Centerline Distance to Noise C	ontour (in feet)						
		7	70 dBA	65	dBA	60 dBA	55 dBA
	I.	dn:	162		348	750	1,615
	CN	IEL:	170		367	791	1,704

day, September 28, 2022 Wednesday, September 28, 2022

	FHWA-	RD-7	7-108 HIGH	WA۱	/ NOIS	E PRED	IC	TION N	IODEL	(9/12/2	021)		
Road Na	ario: OYC me: Van Bure ent: w/o Woo								Name: lumber:		Campus Up	per Pla	te
	SPECIFIC	INP	UT DATA								L INPUT	S	
Highway Data						Site Co	on	ditions	(Hard	= 10, S	oft = 15)		
Average Dail	y Traffic (Adt)	46	3,276 vehicle	es						Autos:			
Peak Ho	ır Percentage		9.80%					dium Tr		,			
Peak	Hour Volume	4,	535 vehicles	3		- 1	Че	avy Tru	cks (3+	Axles).	15		
1	ehicle Speed		50 mph			Vehicle	e A	Лix					
Near/Far L	ane Distance		42 feet			Ve	ehi	cleType		Dav	Evenina	Night	Dailv
Site Data									Autos:	71.9%		15.9%	
	arrier Height		0.0 feet				Me	edium T	rucks:	75.3%	7.0%	17.79	2.20%
Barrier Type (0-			0.0 feet				F	leavy T	rucks:	60.4%	12.0%	27.69	3.73%
** '	vvall, 1-Berril) Dist. to Barrier		60.0 feet										
Centerline Dis			60.0 feet			Noise	So	urce E		_ •	eet)		
Barrier Distanc			0.0 feet					Auto		0.000			
Observer Heigh			5.0 feet					n Truck		2.297			
-	Pad Elevation		0.0 feet			He	av	y Truck	s: 8	3.004	Grade Ad	iustmen	t: 0.0
	oad Elevation		0.0 feet			Lane E	Ξαι	ıivalen	t Distar	nce (in	feet)		
	Road Grade		0.0%					Auto		3.427	,		
	Left View		-90.0 degree	es		Med	liur	n Truck	s: 56	3.270			
	Right View		90.0 degree			He	av	y Truck	s: 56	3.285			
FHWA Noise Mo	del Calculation	ons											
VehicleType	REMEL	T	raffic Flow	D	istance	Fini	ite	Road	Fres	inel	Barrier Att	en Be	rm Atten
Auto		20	4.01		-0.	89		-1.20		-4.69	0.0	000	0.000
Medium Truck	s: 81.0	00	-12.31		-0.	87		-1.20		-4.88	0.0	000	0.000
Heavy Truck	s: 85.3	88	-10.02		-0.	87		-1.20		-5.34	0.0	000	0.000
Unmitigated Noi			•	_			<u></u>						
VehicleType	Leq Peak H		Leq Day			Evening	_	Leq	Night		Ldn		NEL
Auto		72.1		70.0		68			64		72.		72.7
Medium Truck		66.6		64.7		60			59		67.0		67.3
Heavy Truck: Vehicle Noise		73.3 76.3		70.4 73.8		69 72	_		68 70		75.0 77.3		75.3 77.6
Centerline Dista	nce to Noise	Cont	tour (in feet)										
Distu	10 110/36	_ 0.11	(70	dBA	Т	65	dBA		60 dBA	5	5 dBA
				Ldn:		18	3		39	5	852		1,835
	CNEL:					194 417 898				1,936			

Wednesday, September 28, 2022

	FHWA-RI	D-77-108 HIGI	HWAY	NOISE	PREDIC	CTION N	MODEL	(9/12/2	021)		
Scenario. Road Name. Road Segment.	: Van Buren							: West (Campus Up	per Plat	е
	PECIFIC IN	IPUT DATA							L INPUT	S	
Vehi	Percentage: ur Volume: icle Speed:	54,110 vehicle 9.80% 5,303 vehicle 50 mph			Ме	edium Ti eavy Tru	rucks (2	Autos: Axles): Axles):	15		
Near/Far Lane	e Distance:	42 feet			Ver	icleType	е	Day	Evening	Night	Daily
Site Data Barri Barrier Type (0-Wa	ier Height: II, 1-Berm):	0.0 feet 0.0				edium 1 Heavy 1		71.9% 75.3% 60.4%	7.0%	15.9% 17.7% 27.6%	2.20%
Centerline Dist.	to Barrier:	60.0 feet		1	Voise S	ource E	levatio	ns (in f	eet)		
Road Ro	Observer:	60.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degre		1	Hea Lane Eq Mediu	Auto m Truck vy Truck uivalen Auto m Truck vy Truck	ks: 2 ks: 8 t Dista ps: 5 ks: 5	0.000 2.297 3.004 nce (in 6.427 6.270 6.285	Grade Adj	iustment	: 0.0
FHWA Noise Model	Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	snel	Barrier Att	en Ber	m Atten
Autos: Medium Trucks: Heavy Trucks:	70.20 81.00 85.38	4.68 -11.63 -9.34	3	-0.8 -0.8 -0.8	7	-1.20 -1.20 -1.20		-4.69 -4.88 -5.34	0.0	000	0.00 0.00 0.00
Unmitigated Noise I	l ovole (with	out Tono and	l harri	or atton	uation)						
	eq Peak Hou			Leg E		Lea	Night		Ldn	С	NEL
Autos:	72		70.7	.,-	69.0		-	i.4	72.9		73.4
Medium Trucks:	67	.3	65.4		61.0		60	1.3	67.7	7	68.0
Heavy Trucks:	74	.0	71.1		70.1		68	1.9	75.7	7	76.
Vehicle Noise:	76	i.9	74.5		72.9		70	1.9	78.0)	78.3
Centerline Distance	to Noise Co	ontour (in fee	t)								
<u></u>				70 c	iBA	65	dBA	-	60 dBA	55	dBA
			Ldn:		204		43	19	945		2,037
		C	NEL:		215		46	13	997		2,148

Scenario: OYCP Road Name: Van Bu Road Segment: w/o Wo								: West 0 : 14064	Campus U _l	pper Plat	е
SITE SPECIFION Highway Data	CINE	UT DATA			Site Con				L INPUT	S	
Average Daily Traffic (Ad	H)· 4	8,271 vehicles			0.10 00.	u1110110	(,,,,,,	Autos:	15		
Peak Hour Percentage	,	9.80%	,		Me	dium Tr	ucke (2 Axles):			
Peak Hour Volum		1.731 vehicles						Axles):			
Vehicle Spee		50 mph					0,10 (0	7131100).			
Near/Far Lane Distance		42 feet		-	Vehicle						
		12 1001			Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	71.9%		15.9%	
Barrier Heigl	nt:	0.0 feet				edium T		75.3%		17.7%	
Barrier Type (0-Wall, 1-Bern	n):	0.0				Heavy T	rucks:	60.4%	12.0%	27.6%	3.57
Centerline Dist. to Barri	er:	60.0 feet			Noise S	ource E	levatio	ns (in fe	eet)		
Centerline Dist. to Observe	er:	60.0 feet		Ī		Auto		0.000	,		
Barrier Distance to Observe	er:	0.0 feet			Mediu	m Truck		2.297			
Observer Height (Above Pa	d):	5.0 feet				/y Truck		8.004	Grade Ad	liustment	. 0 0
Pad Elevation	n:	0.0 feet				•				juotimom	. 0.0
Road Elevation	n:	0.0 feet		L	Lane Eq	uivalen	t Dista	nce (in i	feet)		
Road Grad	le:	0.0%				Auto	s: 5	6.427			
Left Vie	W.	-90.0 degrees	S		Mediu	m Truck	s: 5	6.270			
Right Vie	W:	90.0 degrees	S		Heav	y Truck	s: 5	6.285			
FHWA Noise Model Calcula	tions										
VehicleType REMEL	- '	Traffic Flow	Dis	stance	Finite	Road	Fre	snel	Barrier Att	en Ber	m Atter
	0.20	4.20		-0.8	19	-1.20		-4.69	0.0	000	0.00
Medium Trucks: 8°	1.00	-12.31		-0.8	17	-1.20		-4.88	0.0	000	0.00
Heavy Trucks: 85	5.38	-10.02		-0.8	17	-1.20		-5.34	0.0	000	0.00
Unmitigated Noise Levels (arri								
VehicleType Leq Peak				Leq E	vening		Night		Ldn	-	NEL
Autos:	72.3		0.2		68.5		-	1.9	72.	-	72
Medium Trucks:	66.6		4.7		60.4			9.6	67.0	-	67
Heavy Trucks: Vehicle Noise:	73.3		3.9		69.4 72.3			3.2	75.0 77.3	-	75 77
Centerline Distance to Nois	a Cor	tour (in feet)	_					-			
Contentine Distance (O NOIS	COL	itour (iii reet)	Т	70	dBA	65	dBA	6	60 dBA	55	dBA
		L	.dn:	,,,	185		39	99	860)	1,85

Wednesday, September 28, 2022

FHWA-R	D-77-108 HIGHW	AY NOISI	E PREDIC	TION M	ODEL (9/12	/2021)				
Scenario: HYP Road Name: Van Burer Road Segment: w/o Wood				.,	Name: Wes umber: 1406	t Campus Upp 64	er Plate			
SITE SPECIFIC I	NPUT DATA			N	IOISE MOD	EL INPUTS				
Highway Data			Site Con	ditions	(Hard = 10,	Soft = 15)				
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume: Vehicle Speed:	56,106 vehicles 9.80% 5,498 vehicles 50 mph			avy Tru	Auto ucks (2 Axle: cks (3+ Axle:	s): 15				
Near/Far Lane Distance:	42 feet		Veh	icleType	Day	Evening	Night Daily			
Site Data Barrier Height: Barrier Type (0-Wall, 1-Berm):	0.0 feet 0.0			edium Ti Heavy Ti		7.0%	15.9% 94.29% 17.7% 2.12% 27.6% 3.59%			
Centerline Dist. to Barrier: Centerline Dist. to Observer:	60.0 feet 60.0 feet		Noise So	ource El	evations (in	feet)				
Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation: Road Elevation:	0.0 feet 5.0 feet 0.0 feet 0.0 feet		Hear	Auto m Truck yy Truck uivalent	s: 2.297	Grade Adju	stment: 0.0			
Road Grade:	0.0%			Auto.	s: 56.427	-				
Left View: Right View:	-90.0 degrees 90.0 degrees			m Truck y Truck	00.2.0					
FHWA Noise Model Calculation	ıs									
VehicleType REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atter	n Berm Atten			
Autos: 70.20	4.85	-0.	89	-1.20	-4.6	9 0.00	0.000			
Medium Trucks: 81.00	-11.63	-0.	87	-1.20	-4.8	8 0.00	0.000			
Heavy Trucks: 85.38		-0.		-1.20	-5.3	4 0.00	0.000			
Unmitigated Noise Levels (with							01/5/			
VehicleType Leq Peak Ho			Evening	,	Night	Ldn	CNEL			
		0.8	69.2		65.5	73.1	73.6			
	7.3 65		61.0 70.1		60.3 68.9	67.7 75.7	68.0 76.0			
	4.0 71 7.0 74	1.5	70.1		71.0	78.0	76.0			
Centerline Distance to Noise C	ontour (in feet)									
	,	70	dBA	65	dBA	60 dBA	55 dBA			
	Lo	in:	205		442	953	2,053			
	Ldn: CNEL:					217 467 1,006 2,1				

	FHWA-R	D-77-108 HIGH	WAY	NOISI	E PREDIC	CTION M	ODEL (9/12/20	021)		
	rio: E ne: Van Buren ent: e/o Wood I						Name: \ umber:		Campus Up	per Pla	ite
	SPECIFIC II	NPUT DATA							L INPUT	S	
Highway Data					Site Con	ditions	(Hard =	10, So	ft = 15)		
Average Daily	Traffic (Adt):	30,101 vehicle	es					Autos:	15		
Peak Hour	Percentage:	9.80%			Me	edium Tri	icks (2 A	(xles	15		
Peak I	Hour Volume:	2,950 vehicle	S		He	eavy Truc	cks (3+ A	(xles	15		
Ve	ehicle Speed:	50 mph			Vehicle	Mix					
Near/Far La	ane Distance:	42 feet				icleType		Dav	Evening	Night	Daily
Site Data							Autos:	71.9%	-	15.99	
Ra	rrier Heiaht:	0.0 feet			М	edium Ti	ucks:	75.3%	7.0%	17.79	6 2.20%
Barrier Type (0-V		0.0				Heavy Ti	rucks:	60.4%	12.0%	27.69	6 3.73%
*, ,	ist. to Barrier:	60.0 feet			Noise So	ourco El	ovation	r (in fo	not)		
Centerline Dist.	to Observer:	60.0 feet			NOISE SC	Auto:		000	ei)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck:		297			
Observer Height	(Above Pad):	5.0 feet				vy Truck		004	Grade Ad	iustmar	t: 0.0
F	ad Elevation:	0.0 feet			rical	vy IIuck	5. 0.1	J04	Orace Au	usunci	1. 0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalent	Distanc	e (in f	eet)		
	Road Grade:	0.0%				Auto	s: 56.	427			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 56.:	270			
	Right View:	90.0 degree	es		Heav	vy Truck	56.	285			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresn	el	Barrier Att	en Be	rm Atten
Autos:	70.20	2.14		-0.	89	-1.20		-4.69	0.0	000	0.000
Medium Trucks:	81.00	-14.18		-0.	87	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-11.88		-0.	87	-1.20		-5.34	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	er atte	nuation)						
VehicleType	Leq Peak Ho			Leq E	vening	-	Night		Ldn		NEL
Autos:			68.1		66.4		62.8		70.4		70.8
Medium Trucks:	-		62.8		58.5		57.8		65.2	-	65.4
Heavy Trucks:			68.5		67.5		66.4		73.1		73.4
Vehicle Noise:	74	1.4	71.9		70.3		68.4	1	75.4	1	75.8
Centerline Distan	ce to Noise C	ontour (in feet)							_	
			L	70	dBA	65	dBA	6	0 dBA		5 dBA
			Ldn:		138		297		639		1,377
		C	NEL:		145		313		675		1,453

	THWA-K	D-77-108 HIG	HWAY	MOISE	PREDIC	HON W	ODEL	(9) 12/2	02 1)		
Scenario									Campus Up	pper Plat	е
	e: Van Buren					Job N	umber:	14064			
Road Segmen	t: e/o Wood	Rd.									
	SPECIFIC II	NPUT DATA	L		Site Con				L INPUT	S	
Highway Data					Site Con	uitions	паги -				
Average Daily	. ,	34,577 vehic	cles					Autos			
	Percentage:	9.80%				dium Tru		,			
	our Volume:	3,389 vehicl	es		He	avy Truc	cks (3+	Axles)	15		
	nicle Speed:	50 mph			Vehicle I	Mix					
Near/Far Lar	e Distance:	42 feet		l	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	lutos:	71.99	12.2%	15.9%	94.08%
Bar	rier Heiaht:	0.0 feet			M	edium Tı	ucks:	75.39	6 7.0%	17.7%	2.20%
Barrier Type (0-Wa		0.0			I	Heavy Ti	rucks:	60.49	12.0%	27.6%	3.73%
Centerline Dis		60.0 feet			Noise Sc	urce El	evatio	ns (in f	eet)		
Centerline Dist. t		60.0 feet		ı		Autos	s: (0.000			
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Trucks		297			
Observer Height (,	5.0 feet				y Trucks		3.004	Grade Ad	justment	0.0
	d Elevation:	0.0 feet		-			D : (,,			
	d Elevation:	0.0 feet			Lane Eq				reet)		
F	Road Grade:	0.0%				Auto		5.427			
	Left View:	-90.0 degr				m Trucks	00	3.270			
	Right View:	90.0 degr	ees		Heav	y Trucks	s: 56	3.285			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow		stance	Finite		Fres		Barrier Att		m Atten
Autos:	70.20			-0.8		-1.20		-4.69		000	0.000
Medium Trucks:	81.00		-	-0.8		-1.20		-4.88		000	0.000
Heavy Trucks:	85.38			-0.8		-1.20		-5.34	0.0	000	0.000
Unmitigated Noise								_			
	Leq Peak Ho		-	Leq E	vening	Leq	Night		Ldn		NEL
Autos:		0.9	68.7		67.0		63		71.0	-	71.4
Medium Trucks:	-	5.4	63.4		59.1		58		65.8	-	66.0
Heavy Trucks:		2.0	69.1		68.1		67		73.		74.0
Vehicle Noise:		5.0	72.5		70.9		69	.0	76.0	U	76.4
Contarlina Dietana	e to Noise C	ontour (in fee	et)	70	dBA	65.4	dBA		60 dBA	55	dBA
Centernine Distanc											
centenine Distanc			I dn					6	701		
centerine Distanc			Ldn:		151 159		32		701 740		1,511

		D-77-108 HIGH	IWAT	NUISE	PREDIC		•				
Scenan									ampus Up	per Plat	е
	e: Van Buren					Job Nu	ımber: 1	14064			
Road Segmen	nt: e/o Wood F	₹d.									
	SPECIFIC IN	IPUT DATA			Di4- O				LINPUT	S	
Highway Data				2	Site Con	ditions (
Average Daily	Traffic (Adt):	32,762 vehicle	es				,	Autos:	15		
Peak Hour	Percentage:	9.80%			Me	dium Tru	cks (2 A	(xles	15		
Peak H	our Volume:	3,211 vehicle	s		He	avy Truc	ks (3+ A	(xles	15		
Ve	hicle Speed:	50 mph		1	/ehicle	Mix					
Near/Far La	ne Distance:	42 feet		F		icleType		Dav	Evening	Night	Dailv
Site Data							utos:	71.9%	12.2%	15.9%	94.56%
Rai	rier Heiaht:	0.0 feet			М	edium Tr	ucks:	75.3%	7.0%	17.7%	2.02%
Barrier Type (0-W		0.0				Heavy Tri	ucks:	60.4%	12.0%	27.6%	3.42%
Centerline Dis	. ,	60.0 feet		-	v-: 0				-41		
Centerline Dist	to Observer:	60.0 feet		- '	voise S	ource Ele		•	et)		
Barrier Distance	to Observer:	0.0 feet				Autos		000			
Observer Height (Ahove Pad):	5.0 feet				m Trucks		297			
	ad Flevation:	0.0 feet			Heav	y Trucks	: 8.0	004	Grade Adj	ustment.	0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distanc	e (in f	eet)		
1	Road Grade:	0.0%				Autos	: 56.4	127			
	Left View:	-90.0 degre	es		Mediu	m Trucks	: 56.2	270			
	Right View:	90.0 degre	es		Hear	y Trucks	: 56.2	285			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	el .	Barrier Atte	en Ber	m Atten
Autos:	70.20	2.53		-0.89	9	-1.20		-4.69	0.0	000	0.000
Medium Trucks:	81.00	-14.18		-0.87	7	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-11.88		-0.87	7	-1.20		-5.34	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Hou			Leq Ev		Leq N			Ldn		VEL
Autos:	70		68.5		66.8		63.2		70.8		71.2
Medium Trucks:	64		62.8		58.5		57.8		65.2	-	65.4
Heavy Trucks:	71		68.5		67.5		66.4		73.1		73.4
Vehicle Noise:	74	1.5	72.1		70.5		68.5	i	75.5	5	75.9
Centerline Distance	e to Noise Co	ontour (in feet	!)	70	1D.4		/D.4		0 -(0.4		-10.4
				70 a	IBA	65 a	ВA	6	0 dBA	55	dBA
		_	Ldn:		140	•	303		652		1,405
		С	Ldn: NEL:		140 148		303 319		652 688		1,405 1,482

Wednesday, September 28, 2022

	FHWA-RI	D-77-108 HIGH	WAY NOI	SE PREDI	CTION N	IODEL (9	/12/20	21)		
Road Nam	io: EAP ne: Van Buren nt: e/o Wood F					Name: W lumber: 1		ampus Up	per Plat	e
SITE	SPECIFIC IN	IPUT DATA			ı	NOISE M	ODE	LINPUTS	3	
Highway Data				Site Cor	nditions	(Hard = 1	10, So	ft = 15)		
	Traffic (Adt): Percentage: Hour Volume:	37,237 vehicle 9.80% 3,649 vehicles				A ucks (2 A: cks (3+ A:	/	15 15 15		
Ve	hicle Speed:	50 mph		Vehicle	Miss					
Near/Far La	ne Distance:	42 feet			nicleType		Dav	Evening	Night	Dailv
Site Data				707			71.9%	12.2%	15.9%	. ,
		0.0 feet			1edium T		75.3%		17.7%	
Barrier Type (0-W	. ,	0.0			Heavy T	rucks: 6	60.4%	12.0%	27.6%	
Centerline Di		60.0 feet		Noise S	ource El	levations	(in fe	et)		
Centerline Dist.		60.0 feet			Auto	s: 0.0	00			
Barrier Distance	to Observer:	0.0 feet		Mediu	ım Truck					
Observer Height	(Above Pad):	5.0 feet			vy Truck			Grade Adj	ustment	: 0.0
P	ad Elevation:	0.0 feet			•					
	ad Elevation:	0.0 feet		Lane Ec		t Distance		eet)		
	Road Grade:	0.0%			Auto					
	Left View:	-90.0 degree	S		ım Truck	00.2				
	Right View:	90.0 degree	S	Hea	vy Truck	s: 56.2	85			
FHWA Noise Mod	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Distanc	e Finite	Road	Fresne	el l	Barrier Atte	en Ber	m Atten
Autos:	70.20	3.08	-	0.89	-1.20		4.69	0.0	00	0.000
Medium Trucks:	81.00	-13.58	-	0.87	-1.20	-	4.88	0.0	00	0.000
Heavy Trucks:		-11.28		0.87	-1.20	-	5.34	0.0	00	0.000
Unmitigated Noise										
VehicleType	Leq Peak Hou			g Evening		Night		Ldn		NEL
Autos:	71		9.1	67.4		63.8		71.3		71.8
Medium Trucks:	65		3.4	59.1		58.4		65.8		66.0
Heavy Trucks:			9.1	68.1		67.0		73.7		74.0
Vehicle Noise:	-		2.7	71.1	l	69.1		76.1		76.5
Centerline Distant	ce to Noise Co	ontour (in feet)	- 1	70 dBA	65	dBA	6	0 dBA	55	dBA
			dn:	154		331	- 0	713	- 55	1.537
		-	IEL:	162		349		753		1,622
		Ch		102		343		100		1,022

Wednesday, September 28, 2022

	FHWA-RI	D-77-108 HIGH	IWAY	NOISE	PREDIC	TION N	IODEL (9/12/2	021)			
Scenario: OYC Road Name: Van Buren Blvd. Road Segment: elo Wood Rd. SITE SPECIFIC INPUT DATA				Project Name: West Campus Upper Plate Job Number: 14064								
					NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15)							
Highway Data					Site Con	aitions						
Average Daily	Traffic (Adt):	44,791 vehicl	es					Autos:				
Peak Hour Percentage:		9.80%					ucks (2)	,				
Peak Hour Volume:		4,389 vehicles			He	avy Tru	cks (3+)	4xles):	15			
Ve	hicle Speed:	50 mph			Vehicle i	Mix						
Near/Far La	ne Distance:	42 feet		İ	Veh	icleType		Day	Evening	Night	Daily	
Site Data							Autos:	71.9%	12.2%	15.9%	94.08%	
Ra	rrier Height:	0.0 feet			М	edium T	rucks:	75.3%	7.0%	17.7%	2.20%	
Barrier Type (0-W		0.0			1	Heavy T	rucks:	60.4%	12.0%	27.6%	3.73%	
Centerline Di	st. to Barrier:	60.0 feet			Noise So	ource F	levation	s (in fe	oet)			
Centerline Dist. to Observer:		60.0 feet		i i		Auto		000	,,,,			
Barrier Distance to Observer:		0.0 feet			Mediu	m Truck		297				
Observer Height (Above Pad):		5.0 feet				ry Truck		004	Grade Ad	iustmen	t· 0.0	
Pad Elevation:		0.0 feet								,		
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in :	feet)			
	Road Grade:	0.0%				Auto		427				
Left View:		-90.0 degrees			Medium Trucks: 56.270							
	Right View:	90.0 degre	es		Heav	y Truck	s: 56.	285				
FHWA Noise Mode	el Calculation	ıs		- 1								
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresr	nel	Barrier Att	en Be	rm Atten	
Autos:	70.20			-0.8	-	-1.20		-4.69		000	0.000	
Medium Trucks:				-0.8		-1.20		-4.88		000	0.000	
Heavy Trucks:	85.38	-10.16		-0.8	37	-1.20		-5.34	0.0	000	0.000	
Unmitigated Noise			barri	er atter	nuation)					,		
VehicleType	Leq Peak Hou			Leq E	vening		Night		Ldn	_	NEL	
Autos:		2.0	69.8		68.2		64.	-	72.		72.6	
	Medium Trucks: 66.5 64.5			60.2 59.5 66.9			-	67.1				
Heavy Trucks:				69.2 68.1 74.9				75.2				
Vehicle Noise:	76	3.1	73.6		72.0		70.	1	77.	1	77.5	
Centerline Distand	ce to Noise Co	ontour (in feet)					,		,		
			L	70	dBA	65	dBA	4 - 7	60 dBA		dBA	
			Ldn:		180		387		833		1,795	
	С	NEL:		189		408		879	1	1,894		

Scenario: HY					Project Name: West Campus Upper Plate								
	e: Van Buren					Job N	umber	14064					
Road Segmer	nt: e/o Wood F	ka.											
SITE SPECIFIC INPUT DATA									L INPUT	S			
Highway Data					Site Con	ditions	(Hard	= 10, Sc	oft = 15)				
Average Daily Traffic (Adt): 52,492 vehicles				Autos: 15									
Peak Hour Percentage: 9.80%				Me	dium Tri	ucks (2	Axles):	15					
Peak H	our Volume:	5,144 vehicles	3		He	avy Truc	cks (3+	Axles):	15				
Vei	hicle Speed:	50 mph		ŀ	Vehicle i	Mix							
Near/Far Lar	ne Distance:	42 feet		ŀ	VehicleType Day Evening Night Daily								
Site Data							Autos:	71.9%	12.2%	15.9%	94.08%		
Rar	rier Height:	0.0 feet			М	edium Ti	rucks:	75.3%	7.0%	17.7%	2.20%		
Barrier Type (0-W		0.0				Heavy Ti	rucks:	60.4%	12.0%	27.6%	3.73%		
Centerline Dis	60.0 feet		-	Noise So				41					
Centerline Dist.	60.0 feet		ŀ	Noise 30	Auto:			eet)					
Barrier Distance	to Observer:	0.0 feet					,	2.297					
Observer Height (5.0 feet				m Truck	٠		Grade Ad	liustmant	. 0.0			
Pa	0.0 feet			Heat	y Truck	S: (3.004	Grade Ad	justinent	0.0			
Road Elevation: 0.0 feet				Lane Equivalent Distance (in feet)									
F	0.0%				Auto	s: 5	5.427						
	-90.0 degrees			Medium Trucks: 56.270									
	90.0 degrees			Heavy Trucks: 56.285									
FHWA Noise Mode	el Calculation:	s											
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fre	snel	Barrier Att	en Ber	m Atten		
Autos:	70.20	4.55		-0.8	39	-1.20		-4.69	0.0	000	0.000		
Medium Trucks:	81.00	-11.76		-0.8	37	-1.20		-4.88	0.0	000	0.000		
Heavy Trucks:	85.38	-9.47		-0.8	37	-1.20	-5.34		0.0	000	0.000		
Unmitigated Noise	Levels (with	out Topo and	barrie	er attei	nuation)								
VehicleType	Leq Peak Hou	r Leq Day	'	Leq E	vening	Leq	Night		Ldn	CI	VEL		
Autos:	72	.7	70.5				65	.2			73.3		
Medium Trucks:	67	7.2 65.2			60.9 60				6	67.8			
Heavy Trucks: 73.8		.8	70.9		69.9		68	68.8		75.5			
Vehicle Noise:	76	.8	74.3		72.7		70	.8	77.	8	78.2		
Centerline Distanc	e to Noise Co	ntour (in feet))							1			
			L	70	dBA	65	dBA		60 dBA		dBA		
			Ldn:		200		43	-	926		1,996		
		CI	VEL:		211		45	1	977	,	2.105		

Scenario: OYCP	-108 HIGHWA	Y NOIS	E PREDIC	CM NOIT	DEL (9	9/12/20)21)			
Road Name: Van Buren Blvd Road Segment: e/o Wood Rd.	Project Name: West Campus Upper Plate Job Number: 14064									
SITE SPECIFIC INPU	0:4- 0				L INPUT	S				
Highway Data			Site Con	ditions (H						
	451 vehicles					Autos:	15			
Peak Hour Percentage: 9.	Medium Trucks (2 Axles): 15									
	50 vehicles 50 mph		He	avy Truck	s (3+ A	xles):	15			
'	Vehicle I	Mix								
Near/Far Lane Distance:	42 feet		Veh	icleType		Day	Evening	Night	Daily	
Site Data				Au	tos:	71.9%	12.2%	15.9%	94.419	
Barrier Height:	0.0 feet		М	edium Tru	cks:	75.3%	7.0%	17.7%	2.079	
•	0.0		1	Heavy Tru	cks:	60.4%	12.0%	27.6%	3.529	
Centerline Dist. to Barrier: 6	0.0 feet		Noise Source Elevations (in feet)							
Centerline Dist. to Observer: 6	0.0 feet			Autos:		000	/			
Barrier Distance to Observer:	0.0 feet		Mediu	m Trucks:		97				
Observer Height (Above Pad):	5.0 feet			y Trucks:		004	Grade Ad	iustmen	. 00	
Pad Elevation:	0.0 feet		77001	y maono.	0.0					
Road Elevation:		Lane Equivalent Distance (in feet)								
Road Grade: 0.			Autos:	56.4	127					
Left View: -9	0.0 degrees			m Trucks:	56.2	270				
Right View: 9	0.0 degrees		Heavy Trucks: 56.285							
FHWA Noise Model Calculations										
VehicleType REMEL Tra		Distance		Road	Fresn		Barrier Att		rm Atten	
	4.13		89	-1.20		-4.69		000	0.00	
Autos: 70.20			87							
Autos: 70.20 Medium Trucks: 81.00	-12.45	-		-1.20		-4.88		000		
Autos: 70.20 Medium Trucks: 81.00 Heavy Trucks: 85.38	-10.16	-0.	87	-1.20 -1.20		-4.88 -5.34		000		
Autos: 70.20 Medium Trucks: 81.00 Heavy Trucks: 85.38 Unmitigated Noise Levels (without	-10.16	-0.	87 enuation)	-1.20			0.0	000	0.00	
Autos: 70.20 Medium Trucks: 81.00 Heavy Trucks: 85.38 Unmitigated Noise Levels (without VehicleType Leq Peak Hour	-10.16 Topo and bar Leq Day	-0. rier atte	87 enuation) Evening	-1.20 Leq Ni	ght	-5.34	0.0	000 C	0.00 NEL	
Autos: 70.20 Medium Trucks: 81.00 Heavy Trucks: 85.38 Unmitigated Noise Levels (without VehicleType Leq Peak Hour Autos: 72.2	-10.16 Topo and bar Leq Day 70.	-0. rier atte Leq	87 enuation) Evening 68.4	-1.20 Leq Ni	ght 64.8	-5.34	0.0 Ldn 72.4) C	72.	
Autos: 70.20 Medium Trucks: 81.00 Heavy Trucks: 85.38 Unmitigated Noise Levels (without VehicleType Leap Peak Hour Autos: 72.2 Medium Trucks: 66.5	-10.16 Topo and bar Leq Day 70.6	-0.	87 enuation) Evening 68.4 60.2	-1.20 Leq Ni	ght 64.8 59.5	-5.34	0.0 Ldn 72.4 66.9	000 C	0.00 NEL 72. 67.	
Autos: 70.20 Medium Trucks: 81.00 Heavy Trucks: 85.38 Unmitigated Noise Levels (without VehicleType Leq Peak Hour Autos: 72.2 Medium Trucks: 66.5 Heavy Trucks: 73.1	-10.16 Topo and bar Leq Day 70.	-0.	87 enuation) Evening 68.4	-1.20 Leq Ni	ght 64.8 59.5 68.1	-5.34	0.0 Ldn 72.4 66.9 74.9	C 4 9 9 9	0.00 NEL 72. 67. 75.	
Autos: 70.20 Medium Trucks: 81.00 Heavy Trucks: 85.38 Unmitigated Noise Levels (without VehicleType Leq Peak Hour Autos: 72.2 Medium Trucks: 66.5 Heavy Trucks: 73.1 Vehicle Noise: 76.2	-10.16 Topo and ban Leq Day 70.: 64.: 70.:	-0.	87 enuation) Evening 68.4 60.2 69.2	-1.20 Leq Ni	ght 64.8 59.5	-5.34	0.0 Ldn 72.4 66.9	C 4 9 9 9	0.00 NEL 72. 67. 75.	
Autos: 70.20 Medium Trucks: 81.00 Heavy Trucks: 85.38 Unmitigated Noise Levels (without VehicleType Leq Peak Hour Autos: 72.2 Medium Trucks: 66.5 Heavy Trucks: 73.1	-10.16 Topo and ban Leq Day 70.: 64.: 70.:	-0.	87 enuation) Evening 68.4 60.2 69.2	-1.20 Leq Ni	ght 64.8 59.5 68.1 70.2	-5.34	0.0 Ldn 72.4 66.9 74.9	0000 C	0.00 NEL	
Autos: 70.20 Medium Trucks: 81.00 Heavy Trucks: 85.38 Unmitigated Noise Levels (without VehicleType Leq Peak Hour Autos: 72.2 Medium Trucks: 66.5 Heavy Trucks: 73.1 Vehicle Noise: 76.2	-10.16 Topo and ban Leq Day 70.: 64.: 70.:	-0.	87 enuation) Evening 68.4 60.2 69.2 72.2	-1.20 Leq Ni	ght 64.8 59.5 68.1 70.2	-5.34	0.0 Ldn 72.4 66.9 74.9	C 4 9 9 9 2 55	0.00 NEL 72. 67. 75. 77.	

Wednesday, September 28, 2022

F	HWA-RD-7	7-108 HIGHW	AY NOIS	E PREDIC	TION M	ODEL (9/12	/2021)				
Scenario: HY Road Name: Va Road Segment: e/o	n Buren Blv					Name: Wes umber: 140	st Campus Upp 64	er Plate			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS							
Highway Data				Site Con	ditions	(Hard = 10,	Soft = 15)				
Average Daily Traffic Peak Hour Perce Peak Hour Vo	ntage: 9 olume: 5,	55,153 vehicles 9.80% 5,405 vehicles 50 mph		Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15							
Vehicle Speed:				Vehicle	Mix						
Near/Far Lane Dis	tance:	42 feet		Veh	icleType	Day	Evening I	Night Daily			
Site Data					/	Autos: 71.9	9% 12.2%	15.9% 94.36%			
Barrier H	leiaht:	0.0 feet		М	edium T	rucks: 75.3	3% 7.0%	17.7% 2.09%			
Barrier Type (0-Wall, 1-		0.0		1	Heavy T	rucks: 60.4	4% 12.0%	27.6% 3.55%			
Centerline Dist. to E	Barrier:	60.0 feet		Noise S	ource El	evations (in	feet)				
Centerline Dist. to Obs	server:	60.0 feet			Auto	-	,				
Barrier Distance to Observer:		0.0 feet		Mediu	m Truck						
Observer Height (Above Pad):		5.0 feet			vy Truck		Grade Adju	stment: 0.0			
Pad Ele	vation:	0.0 feet			•						
Road Elevation:		0.0 feet		Lane Eq		Distance (i	n feet)				
Road Grade:		0.0%			Auto						
Left View:		-90.0 degrees		Medium Trucks: 56.270							
Right	t View:	90.0 degrees		Hear	y Truck	s: 56.285					
FHWA Noise Model Cale											
,,, .		raffic Flow	Distance		Road	Fresnel	Barrier Atter				
Autos:	70.20	4.78		.89	-1.20	-4.6					
Medium Trucks:	81.00	-11.76	-	.87	-1.20	-4.8					
Heavy Trucks:	85.38	-9.47	-0	.87	-1.20	-5.3	34 0.00	0.000			
Unmitigated Noise Leve	els (withou	t Topo and ba	arrier atte	enuation)							
	Peak Hour	Leq Day		Evening	,	Night	Ldn	CNEL			
Autos:	72.9		0.8	69.1		65.5	73.0	73.5			
Medium Trucks:	67.2					60.2	67.6	67.8			
Heavy Trucks: 73						68.8	75.5	75.9			
Vehicle Noise:	76.9	74	1.4	72.8		70.8	77.9	78.3			
Centerline Distance to N	Voise Cont	tour (in feet)	-				00 104				
) dBA	65	dBA	60 dBA	55 dBA			
			dn:	202		435	937	2,018			
		CNE	L.	213		459	989	2,130			

Vednesday, September 28, 2022

	FHWA-RI	D-77-108 HIGH	HWAY	' NOISE	PREDIC	TION N	IODEL (9/12/2	021)		
	e: Van Buren	Blvd. Terrace Pkwy	<i>/</i> .				Name: lumber:		Campus Up	oper Pla	te
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Cor	aitions	•				
Average Daily	Traffic (Adt):	30,048 vehicl	les					Autos:			
Peak Hour	Percentage:	9.80%					ucks (2 /	/			
Peak H	lour Volume:	2,945 vehicle	es		He	avy Tru	cks (3+)	Axles):	15		
Ve	hicle Speed:	50 mph			Vehicle	Mix					
Near/Far La	ne Distance:	42 feet		İ	Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	71.9%	12.2%	15.9%	94.08%
Ra	rrier Height:	0.0 feet			М	edium T	rucks:	75.3%	7.0%	17.7%	2.20%
Barrier Type (0-W		0.0				Heavy T	rucks:	60.4%	12.0%	27.6%	3.73%
Centerline Di	st. to Barrier:	60.0 feet		H	Noise S	urce F	evation	e (in fa	not)		
Centerline Dist.	to Observer:	60.0 feet		H	140/36 01	Auto		000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		297			
Observer Height	(Above Pad):	5.0 feet				vy Truck		004	Grade Ad	iustmen	- 00
P	ad Elevation:	0.0 feet								, ao amon	0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	Distan	ce (in i	feet)		
	Road Grade:	0.0%				Auto		427			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 56.	270			
	Right View:	90.0 degre	es		Hea	ry Truck	s: 56.	285			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	_	stance		Road	Fresr	_	Barrier Att		rm Atten
Autos:	70.20			-0.8	-	-1.20		-4.69		000	0.000
Medium Trucks:				-0.8		-1.20		-4.88		000	0.000
Heavy Trucks:	85.38	-11.89)	-0.8	7	-1.20		-5.34	0.0	000	0.000
Unmitigated Noise			barri	er atter	nuation)			,		,	
VehicleType	Leq Peak Hou		_	Leq E	vening		Night		Ldn	_	NEL
Autos:).2	68.1		66.4		62.8	-	70.4	•	70.8
Medium Trucks:	-	1.7	62.8		58.5		57.8	-	65.2	_	65.4
Heavy Trucks:		.4	68.5		67.5		66.4		73.		73.4
Vehicle Noise:	74	1.4	71.9		70.3		68.3	3	75.4	4	75.8
Centerline Distand	ce to Noise Co	ontour (in fee	t)							,	
			I	70	dBA	65	dBA		60 dBA		dBA
			Ldn:		138		296		639		1,376
		С	NEL:		145		313		674		1,452

	FHWA-RD-	77-108 HIGH\	VAY N	OISE	PREDIC	TION M	ODEL	(9/12/2	2021)		
Scenario	: EA					Project	Name	: West	Campus U	oper Pla	te
	e: Van Buren B					Job N	umber	14064			
Road Segmen	t: e/o Orange T	Ferrace Pkwy.									
	PECIFIC IN	PUT DATA			Ni4- 0				EL INPUT oft = 15)	S	
Highway Data				3	nte Con	aitions	Hara				
Average Daily T	. ,	34,516 vehicles	3					Autos			
Peak Hour F		9.80%				dium Tru		,			
		3,383 vehicles			He	avy Truc	:ks (3+	- Axles)	: 15		
	icle Speed:	50 mph		ν	/ehicle l	Mix					
Near/Far Lan	e Distance:	42 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	lutos:	71.99	6 12.2%	15.9%	94.08%
Barı	ier Heiaht:	0.0 feet			M	edium Tr	ucks:	75.39	6 7.0%	17.7%	2.20%
Barrier Type (0-Wa	all, 1-Berm):	0.0			1	Heavy Tr	ucks:	60.49	6 12.0%	27.6%	3.73%
Centerline Dis		60.0 feet		٨	loise Sc	ource Ele	evatio	ns (in f	eet)		
Centerline Dist. to		60.0 feet				Autos	s: (0.000			
Barrier Distance to		0.0 feet			Mediu	m Trucks	3: 2	2.297			
Observer Height (A	,	5.0 feet			Heav	y Trucks	s: 8	3.004	Grade Ad	justmen	t: 0.0
	d Elevation:	0.0 feet		١.		•					
	d Elevation:	0.0 feet		L	ane Eq	uivalent			feet)		
R	oad Grade:	0.0%				Autos		6.427			
	Left View:	-90.0 degrees				m Trucks		6.270			
	Right View:	90.0 degrees	3		Heav	y Trucks	s: 5i	6.285			
FHWA Noise Mode											
VehicleType		Traffic Flow	Dista			Road	Fre		Barrier Att		rm Atten
Autos:	70.20	2.73		-0.89		-1.20		-4.69		000	0.000
Medium Trucks:	81.00	-13.58		-0.87		-1.20		-4.88		000	0.000
Heavy Trucks:	85.38	-11.29		-0.87		-1.20		-5.34	0.0	000	0.000
Inmitigated Noise											
	Leq Peak Hour		_	eq Ev	ening	Leq			Ldn	_	NEL
Autos:	70.8		8.7		67.0		63		71.	-	71.4
Medium Trucks:	65.3		3.4		59.1		58		65.	-	66.0
Heavy Trucks:	72.0		9.1		68.1		67		73.		74.0
Vehicle Noise:	75.0		2.5		70.9		69	1.0	76.	J	76.4
Centerline Distance	e to Noise Cor	ntour (in feet)		70 d	IBA .	65.0	iBA		60 dBA	55	i dBA
				, o u				-1			
		1	dn:		151		32	5	700	1	1.509

	FHWA-RI			NOIDE	-KEDIC		,				
Scenari									ampus Up	per Plat	е
	e: Van Buren					Job Nu	ımber:	14064			
Road Segmer	nt: e/o Orange	Terrace Pkwy									
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				8	Site Con	ditions (Hard =	10, So	ft = 15)		
Average Daily	Traffic (Adt):	34,704 vehicle	es					Autos:	15		
Peak Hour	Percentage:	9.80%			Me	dium Tru	cks (2 /	Axles):	15		
Peak H	our Volume:	3,401 vehicle	S		He	avy Truc	ks (3+ /	Axles):	15		
Ve	hicle Speed:	50 mph		1	/ehicle l	Mix					
Near/Far Lai	ne Distance:	42 feet		-		icleType		Dav	Evenina	Night	Dailv
Site Data							utos:	71.9%	12.2%	15.9%	94.879
	rier Heiaht:	0.0 feet			М	edium Tri	ucks:	75.3%		17.7%	
Barrier Type (0-W		0.0			1	Heavy Tri	ucks:	60.4%	12.0%	27.6%	3.239
Centerline Dis	. ,	60.0 feet									
Centerline Dist		60.0 feet		٨	Voise So	ource Ele			et)		
Barrier Distance		0.0 feet				Autos		000			
Observer Height (5.0 feet				m Trucks		297			
	d Flevation:	0.0 feet			Heav	y Trucks	: 8.	004	Grade Adj	ustment.	0.0
Ros	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in f	eet)		
ŀ	Road Grade:	0.0%				Autos	: 56.	427			
	Left View:	-90.0 degree	es		Mediu	m Trucks	: 56.	270			
	Right View:	90.0 degree	es		Heav	y Trucks	: 56.	285			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresr	nel .	Barrier Atte	en Ber	m Atten
Autos:	70.20	2.79		-0.89	9	-1.20		-4.69	0.0	000	0.00
Medium Trucks:	81.00	-14.19		-0.87	7	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	85.38	-11.89		-0.87	7	-1.20		-5.34	0.0	000	0.00
Unmitigated Noise											
,,	Leq Peak Hou			Leq Ev		Leq N	_		Ldn		NEL
Autos:	70		68.8		67.1		63.5		71.0		71.
Medium Trucks:	64		62.8		58.5		57.8		65.2		65.
Heavy Trucks: Vehicle Noise:	71 74		68.5 72.2		67.5 70.6		66.4		73.1 75.6		73. 76.
Centerline Distanc	e to Noise Co	ntour (in feet)								
ouncime Distanc		mour (m reet	, 	70 d	IBA	65 a	IBA	6	0 dBA	55	dBA
								•			
			Ldn:		142		307		661		1,42

Wednesday, September 28, 2022

	FHWA-RI	0-77-108 HIGH	WAY NOI	SE PREDIO	CTION N	IODEL (9/12	2/2021)		
	e: Van Buren	Blvd. Terrace Pkwy.				Name: We: lumber: 140	st Campus Up 64	oper Plate)
SITE S	PECIFIC IN	IPUT DATA					DEL INPUT	s	
Highway Data				Site Cor	nditions	(Hard = 10,	Soft = 15)		
Average Daily 1	raffic (Adt):	39,172 vehicle	es			Auto	os: 15		
Peak Hour I	Percentage:	9.80%		Me	edium Tr	ucks (2 Axle	s): 15		
Peak Ho	our Volume:	3,839 vehicles	3	He	eavy Tru	cks (3+ Axle	s): 15		
Veh	icle Speed:	50 mph		Vehicle	Mix				
Near/Far Lar	e Distance:	42 feet			nicleType	Da	/ Evening	Night	Daily
Site Data						Autos: 71.	9% 12.2%	15.9%	94.78%
Ban	rier Height:	0.0 feet		M	ledium T	rucks: 75.	3% 7.0%	17.7%	1.94%
Barrier Type (0-Wa	-	0.0			Heavy T	rucks: 60.	4% 12.0%	27.6%	3.28%
Centerline Dis	t. to Barrier:	60.0 feet		Noise S	ource El	evations (ii	r feet)		
Centerline Dist. t	o Observer:	60.0 feet			Auto		,		
Barrier Distance t		0.0 feet		Mediu	ım Truck				
Observer Height (A	,	5.0 feet			vy Truck		Grade Adj	iustment:	0.0
	d Elevation:	0.0 feet			•				
	d Elevation:	0.0 feet		Lane Eq		t Distance (
F	Road Grade:	0.0%			Auto				
	Left View:	-90.0 degree			m Truck				
	Right View:	90.0 degree	es	пеа	vy Truck	s: 56.285			
FHWA Noise Mode	l Calculation	s							-
VehicleType	REMEL	Traffic Flow	Distanc		Road	Fresnel	Barrier Atte		m Atten
Autos:	70.20	3.31		0.89	-1.20	-4.0		000	0.000
Medium Trucks:	81.00	-13.58		0.87	-1.20	-4.8		000	0.000
Heavy Trucks:	85.38	-11.29	-	0.87	-1.20	-5.3	34 0.0	000	0.000
Unmitigated Noise									
	Leq Peak Hou			Evening		Night	Ldn		VEL
Autos:	71		69.3	67.6		64.0	71.6		72.0
Medium Trucks:	65		63.4	59.1		58.4	65.8		66.0
Heavy Trucks:	72 75		69.1 72.8	68.1 71.2		67.0 69.1	73.7		74.0 76.6
				/1.2	-	09.1	70.2		70.0
Centerline Distance	e to Noise Co	ontour (in feet)		70 dBA	e e	dBA	60 dBA	55	dBA
			Ldn:	155	00	335	721		1.554
			VFL:	164		353	762		1,641
		Ci		104		555	102		1,041

sday, September 28, 2022

	FHWA-RD-7	77-108 HIGH	WAY	NOISE	PREDIC	CTION N	IODEL	(9/12/20	021)		
Scenario: O Road Name: V Road Segment: e	an Buren Bl						Name: lumber:		Campus U	oper Plat	е
	CIFIC INP	UT DATA							L INPUT	S	
Highway Data				5	ite Cor	ditions	(Hara :				
Average Daily Traff	. , .	1,616 vehicle	es					Autos:	15		
Peak Hour Perd	-	9.80%				edium Tr		,	15		
Peak Hour		,058 vehicles	3		He	eavy Tru	cks (3+	Axles):	15		
	Speed:	50 mph		ν	'ehicle	Mix					
Near/Far Lane D	istance:	42 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	71.9%	12.2%	15.9%	94.08%
Barrier	Height:	0.0 feet			М	edium T	rucks:	75.3%	7.0%	17.7%	2.20%
Barrier Type (0-Wall, 1	-	0.0				Heavy T	rucks:	60.4%	12.0%	27.6%	3.73%
Centerline Dist. to		60.0 feet		٨	loise S	ource E	levatio	ns (in fe	et)		
Centerline Dist. to O	bserver:	60.0 feet				Auto	s: 0	.000	,		
Barrier Distance to O		0.0 feet			Mediu	m Truck	s: 2	.297			
Observer Height (Abov		5.0 feet			Hear	vy Truck	s: 8	.004	Grade Ad	justment	0.0
	levation:	0.0 feet									
Road El		0.0 feet		L	ane Eq	uivalen			eet)		
		0.0%				Auto		.427			
Le	eft View:	-90.0 degree	es			m Truck		3.270			
Rig	ht View:	90.0 degree	es		Hea	vy Truck	s: 56	5.285			
FHWA Noise Model Ca											
		raffic Flow	Dis	stance		Road	Fres		Barrier Att		m Atten
Autos:	70.20	4.48		-0.89		-1.20		-4.69		000	0.000
Medium Trucks:	81.00	-11.84		-0.87		-1.20		-4.88		000	0.000
Heavy Trucks:	85.38	-9.54		-0.87		-1.20		-5.34	0.0	000	0.000
VehicleType Leg	vels (withou Peak Hour	t Topo and Leg Day		e r attenu Leg Ev		Lea	Night		Ldn	0	NEL
Autos:	72.6		70.5	LCG LV	68.8		65	2	72.	_	73.2
Medium Trucks:	67.1		65.2		60.8		60	_	67.		67.8
Heavy Trucks:	73.8		70.9		69.9		68		75.	-	75.8
Vehicle Noise:	76.7		74.2		72.7		70		77.8		78.1
Centerline Distance to	Noise Con	tour (in feet)	1								
				70 d	BA	65	dBA	6	0 dBA	55	dBA
			Ldn:		197		42	5	916	i	1,973
		CI	VEL:		208		44	9	966		2,082

	FHWA-KI	D-77-108 HIGH	IVVAY	NOISE	PREDIC	- HON I	NODEL	(9/12/2	021)		
	e: Van Buren	Blvd. Terrace Pkwy						: West	Campus U _l	oper Pla	ite
	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data				S	ite Cor	nditions	(Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	60,749 vehicle	es					Autos:	15		
Peak Hour	Percentage:	9.80%				edium Ti		,			
	our Volume:	5,953 vehicle	S		He	eavy Tru	icks (3+	Axles).	15		
	hicle Speed:	50 mph		ν	'ehicle	Mix					
Near/Far Lar	ne Distance:	42 feet			Ver	icleType	е	Day	Evening	Night	Daily
Site Data							Autos:	71.9%	12.2%	15.99	6 94.089
Rar	rier Height:	0.0 feet			M	ledium 7	rucks:	75.3%	7.0%	17.79	6 2.20%
Barrier Type (0-W	all, 1-Berm):	0.0				Heavy 7	rucks:	60.4%	12.0%	27.6%	6 3.739
Centerline Dis		60.0 feet		٨	loise S	ource E	levatio	ns (in f	eet)		
Centerline Dist. 1		60.0 feet				Auto	os:	0.000			
Barrier Distance t		0.0 feet			Mediu	m Truck	ks:	2.297			
Observer Height (,	5.0 feet			Hea	vy Truck	ks:	3.004	Grade Ad	justmen	t: 0.0
	d Elevation:	0.0 feet		-			4 D:-4-	//	£4)		
	d Elevation:	0.0 feet			ane Eq	uivalen			reet)		
F	Road Grade:	0.0%			14-40	Auto m Truck		6.427			
	Left View: Right View:	-90.0 degre				m Truck vy Truck	-	6.270 6.285			
FHWA Noise Mode VehicleType	REMEL	Traffic Flow	Dic	tance	Einite	Road	Fre.	cnol	Barrier Att	on Do	rm Atten
Autos:	70.20	5.19		-0.89		-1.20		-4.69		000	0.00
Medium Trucks:	81.00	-11.13		-0.87	,	-1.20		-4.88		000	0.00
Heavy Trucks:	85.38	-8.84		-0.87	,	-1.20		-5.34	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrie	er atteni	uation)						
	Leq Peak Hou		_	Leq Ev			Night		Ldn		CNEL
Autos:	73		71.2		69.5			.9	73.4	•	73.
Medium Trucks:	67		65.9		61.6			1.8	68.2		68.
Heavy Trucks:	74		71.6		70.6			1.4	76.2		76.
Vehicle Noise:	77		75.0		73.4		71	.4	78.	5	78.
Centerline Distanc	e to Noise Co	ontour (in feet)	70.4	DΛ	65	dDA		SO ARA	5	E ADA
			I dn:	70 0		00					2.200
		_							, .		2,200
Cemenne Distanc	e to Moise Co	,	Ldn: NEL:	70 d	BA 220 232	65	dBA 47 50	4	50 dBA 1,021 1,077	1	,

Scenario: OYCP Road Name: Van Bui Road Segment: e/o Orai								: West (: 14064	Campus U	pper Plat	e
SITE SPECIFIC	INP	UT DATA			Site Co.	l nditions			L INPUT	S	
Average Daily Traffic (Adt) - 5	6.272 vehicles			0.10 00.	101110110	(mara	Autos:			
Peak Hour Percentage		9.80%			M	edium Tr	rucks (
Peak Hour Volume		5.515 vehicles				eavy Tru					
Vehicle Speed		50 mph		-							
Near/Far Lane Distance		42 feet		-	Vehicle			_	I= . I		
					Ver	hicleType		Day	Evening	Night	Daily
Site Data							Autos:	71.9%		15.9%	
Barrier Heigh	t:	0.0 feet				1edium T		75.3%		17.7%	
Barrier Type (0-Wall, 1-Berm):	0.0				Heavy T	rucks:	60.4%	12.0%	27.6%	3.42
Centerline Dist. to Barrie		60.0 feet		ı	Noise S	ource E	levatio	ns (in fe	eet)		
Centerline Dist. to Observe	r:	60.0 feet		ı		Auto		0.000	,		
Barrier Distance to Observe	r:	0.0 feet			Media	ım Truck		2.297			
Observer Height (Above Page) <i>:</i>	5.0 feet			Hea	vy Truck	(S:	3.004	Grade Ad	liustment	: 0.0
Pad Elevation	n:	0.0 feet								,	
Road Elevation	n:	0.0 feet			Lane Eq	quivalen	t Dista	nce (in	feet)		
Road Grade	e:	0.0%				Auto		6.427			
Left View	V:	-90.0 degrees	S		Mediu	ım Truck	(s: 5	6.270			
Right View	V.	90.0 degrees	8		Hea	vy Truck	(s: 5	6.285			
FHWA Noise Model Calculat	ions										
VehicleType REMEL		Traffic Flow	Dis	tance	Finite	Road	Fre	snel	Barrier Att	en Ber	m Atter
Autos: 70	.20	4.88		-0.8	19	-1.20		-4.69	0.	000	0.00
	.00	-11.84		-0.8		-1.20		-4.88		000	0.00
Heavy Trucks: 85	.38	-9.54		-0.8	17	-1.20		-5.34	0.	000	0.00
Unmitigated Noise Levels (w			arrie							_	
VehicleType Leq Peak				Leq E	vening		Night		Ldn	_	NEL
Autos:	73.0		0.9		69.2	-		5.5	73.		73
Medium Trucks:	67.1	-	5.2		60.8	-).1	67.	-	67
Heavy Trucks:	73.8		0.9		69.9			3.7	75.	-	75
Vehicle Noise:	76.9	-	4.4		72.8	5	70	0.8	77.	9	78
Centerline Distance to Noise	Con	tour (in feet)		70	dBA	65	dBA	1	60 dBA	55	dBA
		1	dn:	70	201		43	_	934		2.01

Wednesday, September 28, 2022

	FHWA-RD	-77-108 HIGHV	VAY NOI	SE PREDIC	TION N	IODEL (9/12	/2021)	
Scenario Road Name Road Segmen	e: Van Buren B					Name: Wes lumber: 1406	t Campus Upp 34	er Plate
SITE S	PECIFIC IN	PUT DATA			N	IOISE MOD	EL INPUTS	
Highway Data				Site Con	ditions	(Hard = 10,	Soft = 15)	
Average Daily 1	raffic (Adt):	65,405 vehicles	3			Auto	s: 15	
Peak Hour I	Percentage:	9.80%				ucks (2 Axle:	,	
Peak Ho	our Volume:	6,410 vehicles		He	avy Tru	cks (3+ Axle	s): 15	
	icle Speed:	50 mph		Vehicle	Mix			
Near/Far Lan	e Distance:	42 feet		Veh	icleType	Day	Evening	Night Daily
Site Data						Autos: 71.9	9% 12.2%	15.9% 94.50%
Ban	rier Height:	0.0 feet		М	edium T	rucks: 75.3	3% 7.0%	17.7% 2.04%
Barrier Type (0-Wa	-	0.0		1	Heavy T	rucks: 60.4	1% 12.0%	27.6% 3.46%
Centerline Dis		60.0 feet		Noise Se	ource El	evations (in	feet)	
Centerline Dist. t		60.0 feet			Auto		,	
Barrier Distance t		0.0 feet		Mediu	m Truck			
Observer Height (A	,	5.0 feet		Hear	vy Truck	s: 8.004	Grade Adju	stment: 0.0
	d Elevation:	0.0 feet			•			
	d Elevation:	0.0 feet		Lane Eq		t Distance (i	n feet)	
F	Road Grade:	0.0%			Auto			
	Left View:	-90.0 degrees			m Truck	00.2.0		
	Right View:	90.0 degrees	3	Hear	y Truck	s: 56.285		
FHWA Noise Mode	l Calculations							
VehicleType	REMEL	Traffic Flow	Distance		Road	Fresnel	Barrier Atte	
Autos:	70.20	5.53		0.89	-1.20	-4.6		
Medium Trucks:	81.00	-11.13		0.87	-1.20	-4.8		
Heavy Trucks:	85.38	-8.84		0.87	-1.20	-5.3	4 0.00	0.000
VehicleType	Levels (without Leg Peak Hou		_	enuation) Evening	100	Night	Ldn	CNEL
Autos:	Leq Реак нои 73.		1.5	Evening 69.8		66.2	73.8	74.2
Medium Trucks:	67.		5.9	61.6		60.8	68.2	68.5
Heavy Trucks:	74	-	1.6	70.6		69.4	76.2	76.5
Vehicle Noise:	77.	-	5.1	73.5		71.5	78.6	78.9
Centerline Distance	e to Noise Co	ntour (in feet)						
			7	'0 dBA	65	dBA	60 dBA	55 dBA
		L	dn:	224		482	1,038	2,237
		CN		236		509	1.096	2.361

Wednesday, September 28, 2022

Wednesday, September 28, 2022

	FHWA-R	D-77-108 HIGH	łWAY	NOISE	PREDIC	TION N	IODEL	(9/12/2	021)		
	rio: E ne: Van Buren ent: e/o Meridia						t Name: lumber:		Campus Up	per Pla	te
	SPECIFIC II	NPUT DATA			a:. a				L INPUT	S	
Highway Data					Site Con	aitions	(Hara =				
Average Daily	Traffic (Adt):	33,413 vehicl	es					Autos:			
Peak Hou	r Percentage:	9.80%					ucks (2	,			
Peak	Hour Volume:	3,274 vehicle	S		He	avy Tru	cks (3+	Axles).	15		
V	ehicle Speed:	50 mph			Vehicle I	Wix					
Near/Far L	ane Distance:	41 feet		İ	Veh	icleType	,	Day	Evening	Night	Daily
Site Data							Autos:	71.9%	-	15.9%	94.08%
R:	arrier Height:	0.0 feet			M	edium T	rucks:	75.3%	6 7.0%	17.7%	2.20%
Barrier Type (0-V		0.0			- 1	Heavy T	rucks:	60.4%	12.0%	27.6%	3.73%
,,,,	ist. to Barrier:	60.0 feet		ŀ	Noise Sc			- /:- #	41		
Centerline Dist	to Observer:	60.0 feet		+	Noise 30	Auto		.000	eet)		
Barrier Distance	to Observer:	0.0 feet			A de eller	Auto m Truck		.000			
Observer Height	(Above Pad):	5.0 feet				m Truck v Truck		.004	Grade Ad	tmon	t. 0.0
F	Pad Elevation:	0.0 feet			neav	ry Iruck	s: 8	.004	Grade Adj	usunen	i. 0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 56	.611			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 56	.454			
	Right View:	90.0 degre	es		Heav	y Truck	s: 56	.469			
FHWA Noise Mod	lel Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite		Fres	nel	Barrier Att	en Be	rm Atten
Autos				-0.9		-1.20		-4.69		000	0.000
Medium Trucks				-0.8		-1.20		-4.88		000	0.000
Heavy Trucks	85.38	-11.43		-0.9	0	-1.20		-5.34	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	er atter	nuation)						
VehicleType	Leq Peak Ho	ur Leq Daj	<i>y</i>	Leq E	vening	Leq	Night		Ldn	С	NEL
Autos		0.7	68.5		66.9		63.	2	70.8	3	71.3
Medium Trucks		5.2	63.2		58.9		58.	_	65.6		65.8
Heavy Trucks	71	1.9	69.0		67.9		66.	8	73.6	6	73.9
Vehicle Noise	74	4.8	72.3		70.7		68.	8	75.8	3	76.2
Centerline Distan	ce to Noise C	ontour (in feet)								
				70	dBA	65	dBA		60 dBA	55	dBA
			Ldn:		147		31	7	683		1,472
		С	NEL:		155		33	5	721		1,553

		D-77-108 HIGH						•			
Scenari									Campus U	pper Plat	е
	e: Van Buren					Job N	lumber	14064			
Road Segmer	nt: e/o Meridia	in Pkwy.									
	SPECIFIC II	NPUT DATA							L INPUT	S	
Highway Data					Site Con	ditions	(Hard	= 10, S			
Average Daily	Traffic (Adt):	38,381 vehicle	es					Autos.			
Peak Hour	Percentage:	9.80%				dium Tr		,			
Peak H	our Volume:	3,761 vehicles	S		He	avy Tru	cks (3+	Axles)	: 15		
Ve	hicle Speed:	50 mph		h	Vehicle I	Vlix					
Near/Far La	ne Distance:	41 feet				icleType	,	Day	Evening	Night	Daily
Site Data							Autos:	71.99	6 12.2%	15.9%	94.08%
Rai	rier Height:	0.0 feet			M	edium T	rucks:	75.39	6 7.0%	17.7%	2.20%
Barrier Type (0-W	'all, 1-Berm):	0.0			1	Heavy T	rucks:	60.49	6 12.0%	27.6%	3.73%
Centerline Dis		60.0 feet		1	Voise Sc	urce E	levatio	ns (in f	eet)		
Centerline Dist.		60.0 feet				Auto	s: (0.000			
Barrier Distance		0.0 feet			Mediu	m Truck	s: 2	2.297			
Observer Height (,	5.0 feet			Heav	y Truck	:s: {	3.004	Grade Ad	ljustment	0.0
	ad Elevation:	0.0 feet		L						-	
	ad Elevation:	0.0 feet		-	Lane Eq				feet)		
I	Road Grade:	0.0%				Auto		3.611			
	Left View:	-90.0 degree				m Truck	-	3.454			
	Right View:	90.0 degree	es		Heav	ry Truck	s: 5	5.469			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite		Fre		Barrier At		m Atten
Autos:	70.20			-0.9		-1.20		-4.69		000	0.00
Medium Trucks:	81.00			-0.8	-	-1.20		-4.88		000	0.000
Heavy Trucks:	85.38			-0.9		-1.20		-5.34	0.	000	0.000
Unmitigated Noise											
	Leq Peak Ho			Leq E		Leq	Night		Ldn		NEL
Autos:			69.1		67.5		63		71.		71.9
Medium Trucks:			63.8		59.5		58		66.	-	66.4
Heavy Trucks:			69.6		68.5		67	• •	74.		74.
Vehicle Noise:	75	5.4	72.9		71.4		69	.4	76.	4	76.8
Centerline Distanc	e to Noise C	ontour (in feet))		·0.4	0.5					10.4
			L	70 (65	dBA		60 dBA		dBA
			Ldn:		161		34		749		1,614
		CI	NEL:		170		36	7	791		1.703

	FHWA-RD-	77-108 HIGH	WAY N	IOISE P	PREDIC	CTION MO	ODEL (9/12/20	021)		
Scenari									Campus Up	oper Pla	te
	e: Van Buren B					Job Nu	ımber:	14064			
Road Segmer	nt: e/o Meridian	Pkwy.									
	SPECIFIC IN	PUT DATA		0:	4- 0				L INPUT	S	
Highway Data				31	te Con	ditions (
Average Daily	. ,	35,281 vehicle	es				-	Autos:	15		
	Percentage:	9.80%				dium Tru	,	,			
		3,458 vehicles	3		He	avy Truci	ks (3+ A	(xies	15		
Ve	hicle Speed:	50 mph		Ve	ehicle	Mix					
Near/Far Lai	ne Distance:	41 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	71.9%	12.2%	15.9%	93.819
Bar	rrier Heiaht:	0.0 feet			М	edium Tru	ucks:	75.3%	7.0%	17.7%	2.089
Barrier Type (0-W		0.0				Heavy Tru	ucks:	60.4%	12.0%	27.6%	4.119
Centerline Dis	. ,	60.0 feet		A/	nien S	ource Ele	wation	r (in f	not)		
Centerline Dist.	to Observer:	60.0 feet		740	DISE SI	Autos		000	et)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Trucks		297			
Observer Height (Above Pad):	5.0 feet						004	Grade Ad	iuotmon	t- 0.0
Pa	ad Elevation:	0.0 feet			пеа	y Trucks	. 0.1	004	Grade Au	justinen	. 0.0
Roa	ad Elevation:	0.0 feet		Lá	ne Eq	uivalent	Distand	e (in i	feet)		
F	Road Grade:	0.0%				Autos	: 56.	611			
	Left View:	-90.0 degree	es		Mediu	m Trucks	: 56.	454			
	Right View:	90.0 degree	es		Heav	y Trucks	: 56.	469			
FHWA Noise Mode	el Calculations										
VehicleType		Traffic Flow	Dista		Finite	Road	Fresn		Barrier Att		rm Atten
Autos:	70.20	2.82		-0.91		-1.20		-4.69	0.0	000	0.00
Medium Trucks:	81.00	-13.73		-0.89		-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	85.38	-10.77		-0.90		-1.20		-5.34	0.0	000	0.00
Unmitigated Noise	•										
	Leq Peak Hour			Leq Eve		Leq N	_		Ldn		NEL
Autos:	70.9	-	68.8		67.1		63.5		71.0	-	71.
Medium Trucks:	65.2	=	63.2		58.9		58.2	-	65.6		65.
Heavy Trucks:	72.		69.6		68.6		67.5		74.2		74.
Vehicle Noise:	75.2	2	72.7		71.2		69.3	3	76.3	3	76.
Centerline Distanc	e to Noise Cor	ntour (in feet))	70.15		CF.	(D.4		20 404		-104
				70 dE		65 d			0 dBA		dBA
			Ldn: VEL:		158		341		734		1,582
		CI	VEL:		167		359		774		1,668

Wednesday, September 28, 2022

	FHWA-RD-	77-108 HIGHV	VAY NOI	SE PREDIC	CTION N	IODEL (9/12	2/2021)	
Scenario. Road Name. Road Segment	Van Buren B					Name: Wes	st Campus Upp 64	er Plate
	PECIFIC INF	UT DATA			N	IOISE MOI	DEL INPUTS	
Highway Data				Site Cor	ditions	(Hard = 10,	Soft = 15)	
	ercentage: ur Volume: 3 cle Speed:	0,249 vehicles 9.80% 3,944 vehicles 50 mph	•		eavy Tru	Auto ucks (2 Axle cks (3+ Axle	s): 15	
Near/Far Lane	Distance:	41 feet		Veh	icleType	Day	/ Evening	Night Daily
Barrier Type (0-Wa Centerline Dist. Centerline Dist. to Barrier Distance to Observer Height (A Pac Road	to Barrier: Observer: Observer:	0.0 feet 0.0 60.0 feet 60.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0 feet	•	Noise Si Mediu Hea	ledium T Heavy T ource El Auto m Truck vy Truck	rucks: 60. levations (ir s: 0.000 s: 2.297 s: 8.004 t Distance (ir s: 56.611	3% 7.0% 4% 12.0% n feet) Grade Adju	15.9% 93.84% 17.7% 2.09% 27.6% 4.06% stment: 0.0
ı	Right View:	90.0 degrees		Hea	vy Truck	s: 56.469		
FHWA Noise Model	Calculations							
VehicleType	REMEL	Traffic Flow	Distance	e Finite	Road	Fresnel	Barrier Atter	n Berm Atten
Autos: Medium Trucks: Heavy Trucks:	70.20 81.00 85.38	3.39 -13.12 -10.25	-().91).89).90	-1.20 -1.20 -1.20	-4.6 -4.8 -5.3	38 0.00	0.000
Unmitigated Noise	Levels (witho	ut Topo and b	arrier att	enuation)				
VehicleType L	eq Peak Hour	Leq Day	Leg	Evening	Leq	Night	Ldn	CNEL
Autos:	71.5	6	9.3	67.7		64.0	71.6	72.1
Medium Trucks:	65.8	6	3.8	59.5		58.8	66.2	66.4
Heavy Trucks:	73.0	7	0.1	69.1		68.0	74.7	75.1
Vehicle Noise:	75.8	7	3.3	71.7		69.8	76.9	77.2
Centerline Distance	to Noise Cor	tour (in feet)						
				0 dBA	65	dBA	60 dBA	55 dBA
		_	dn:	172		370	798	1,720
		CN	EL:	181		391	842	1,814

Wednesday, September 28, 2022 Wednesday, September 28, 2022

	FHWA-RD	-77-108 HIGH	WAY	NOISE	PREDIC	CTION M	ODEL	(9/12/2	021)		
	o: OYC e: Van Buren E nt: e/o Meridian							West (Campus U	pper Pl	ate
	SPECIFIC IN	PUT DATA							L INPUT	s	
Highway Data				S	ite Cor	ditions ((Hard :				
Average Daily	Traffic (Adt):	81,701 vehicle	es					Autos:			
Peak Hour	Percentage:	9.80%				edium Tru		/			
		8,007 vehicle	S		He	eavy Truc	cks (3+	Axles):	15		
	hicle Speed:	50 mph		V	'ehicle	Mix					
Near/Far Lar	ne Distance:	41 feet		F	Ver	icleType		Dav	Evening	Niaht	Dailv
Site Data							Autos:	71.9%	-	15.9	% 94.08%
Par	rier Height:	0.0 feet			M	edium Tr	rucks:	75.3%	7.0%	17.7	% 2.20%
Barrier Type (0-W	all, 1-Berm):	0.0				Heavy Tr	rucks:	60.4%	12.0%	27.6	% 3.73%
Centerline Dis		60.0 feet		٨	loise S	ource Ele	evatio	ns (in f	eet)		
Centerline Dist. t	to Observer:	60.0 feet				Autos		.000	,		
Barrier Distance t		0.0 feet			Mediu	m Trucks	s: 2	.297			
Observer Height (Above Pad):	5.0 feet				vy Trucks		.004	Grade Ad	liustme	nt: 0.0
	d Elevation:	0.0 feet		-							
	d Elevation:	0.0 feet		L	ane Eq	uivalent		_ •	feet)		
F	Road Grade:	0.0%				Autos		6.611			
	Left View:	-90.0 degree				m Trucks		.454			
	Right View:	90.0 degree	es		Hea	vy Trucks	s: 56	3.469			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fres		Barrier At		erm Atten
Autos:	70.20	6.47		-0.91		-1.20		-4.69		000	0.000
Medium Trucks:	81.00	-9.84		-0.89		-1.20		-4.88		000	0.000
Heavy Trucks:	85.38	-7.55		-0.90		-1.20		-5.34	0.	000	0.000
VehicleType	Levels (witho Leg Peak Hour			e r atten ı Leq Ev		Log	Night		Ldn	1	CNEL
Autos:	Ley reak noui		72.4	Ley EV	70.8		rvigrit 67	1	74.		75.2
Medium Trucks:	69.	-	67.1		62.8		62		69.		69.7
Heavy Trucks:	75.		72.8		71.8		70		77.	-	77.8
Vehicle Noise:	78.		76.2		74.6		72		79.		80.1
Centerline Distanc	e to Noise Co	ntour (in feet)								
				70 d	BA	65 0	dBA	(60 dBA	5	i5 dBA
			Ldn:		267		57	6	1,240)	2,672
		C	NEL:		282		60	7	1,308	3	2,818

	FHWA-RI	D-77-108 HIGH	IWAY I	NOISE	PREDIC	CTION N	MODEL (9/	12/20)21)		
	io: HY ne: Van Buren nt: e/o Meridia						t Name: W Number: 14		ampus Up	per Plat	е
	SPECIFIC IN	NPUT DATA							L INPUTS	;	
Highway Data				S	ite Cor	ditions	(Hard = 1	0, So	ft = 15)		
Peak H	Traffic (Adt): Percentage: lour Volume: chicle Speed:	95,267 vehicle 9.80% 9,336 vehicle 50 mph			He	eavy Tru	Airucks (2 Ax icks (3+ Ax	,	15 15 15		
	ne Distance:	41 feet		ν	ehicle!						
	ne Distance.	41 1661			Veh	icleType		ay		Night	Daily
Site Data								1.9%	12.2%	15.9%	
Bai	rrier Height:	0.0 feet				edium 7		5.3%		17.7%	
Barrier Type (0-W	/all, 1-Berm):	0.0				Heavy 1	rucks: 6	0.4%	12.0%	27.6%	3.73%
Centerline Dis	st. to Barrier:	60.0 feet			loise Si	nurce F	levations	(in fe	et)		
Centerline Dist.	to Observer:	60.0 feet		F.	.0.00 0	Auto		_	0.0		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck		-			
Observer Height ((Above Pad):	5.0 feet				vv Truck			Grade Adju	ıstment	. 0.0
Pa	ad Elevation:	0.0 feet				,					
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distance	(in f	eet)		
i i	Road Grade:	0.0%				Auto		11			
	Left View:	-90.0 degre	es		Mediu	m Truck	ks: 56.4	54			
	Right View:	90.0 degre	es		Hea	vy Truck	ks: 56.46	69			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresne	1 .	Barrier Atte	n Ber	m Atten
Autos:	70.20	7.14		-0.91		-1.20	-4	1.69	0.0	00	0.00
Medium Trucks:	81.00	-9.18		-0.89	9	-1.20		1.88	0.0	00	0.00
Heavy Trucks:	85.38	-6.88		-0.90)	-1.20		5.34	0.0	00	0.00
Unmitigated Noise			barrie	r attenı	uation)						
VehicleType	Leq Peak Hou			Leq Ev			Night		Ldn	C	NEL
Autos:		5.2	73.1		71.4		67.8		75.4		75.
Medium Trucks:		9.7	67.8		63.5		62.7		70.2		70.4
Heavy Trucks:		6.4	73.5		72.5		71.4		78.1		78.4
Vehicle Noise:	79	9.4	76.9		75.3		73.3		80.4		80.
Centerline Distance	ce to Noise Co	ontour (in feet)	70 .		-	-104	_	0.404		-10.4
			L -d	70 d		65	dBA	ь	0 dBA	55	dBA
			Ldn: NFL:		296		638		1,374		2,960
		C	NEL:		312		673		1,449		3,122

Road Name	o: OYCP e: Van Buren B t: e/o Meridian						Name: umber:		ampus Up	per Plat	е
SITE S	SPECIFIC IN	PUT DATA			ita Can	ditions			L INPUT	3	
				3	ne con	uitions	(naru -				
Average Daily	. ,	33,569 vehicle	es					Autos:	15		
	Percentage:	9.80%				dium Tr			15		
		3,190 vehicles	3		не	avy Tru	CKS (3+	Axies):	15		
	nicle Speed:	50 mph		V	ehicle l	Mix					
Near/Far Lar	ne Distance:	41 feet			Veh	icleType	!	Day	Evening	Night	Daily
Site Data						-	Autos:	71.9%	12.2%	15.9%	93.96%
Bar	rier Height:	0.0 feet			M	edium T	rucks:	75.3%	7.0%	17.7%	2.15%
Barrier Type (0-Wa	-	0.0			1	Heavy Ti	rucks:	60.4%	12.0%	27.6%	3.89%
Centerline Dis	. ,	60.0 feet		-			4.5				
Centerline Dist. t		60.0 feet		N	oise Sc	ource El			et)		
Barrier Distance t	o Observer:	0.0 feet				Auto		.000			
Observer Height (/		5.0 feet				m Truck		.297			
Pa	d Elevation:	0.0 feet			Heav	y Truck	s: 8	1.004	Grade Adj	ustment.	0.0
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalent	Distar	nce (in f	eet)		
F	Road Grade:	0.0%				Auto	s: 56	6.611			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 56	3.454			
	Right View:	90.0 degree	es		Heav	y Truck	s: 56	3.469			
FHWA Noise Mode	l Calculations										
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	70.20	6.57		-0.91		-1.20		-4.69	0.0	100	0.000
Medium Trucks:	81.00	-9.84		-0.89		-1.20		-4.88		100	0.000
Heavy Trucks:	85.38	-7.26		-0.90		-1.20		-5.34	0.0	100	0.000
Unmitigated Noise								_			
	Leq Peak Hour		_	Leq Eve		Leq	Night		Ldn		NEL
Autos:	74.7		72.5		70.8		67.	-	74.8		75.2
Medium Trucks:	69.		67.1		62.8		62.		69.5		69.7
Heavy Trucks:_ Vehicle Noise:	76.0 78.9		73.1 76.4		72.1 74.8		71. 72.		77.7 79.9		78.0 80.3
Centerline Distanc								-			
	e to moise coi	itour (III leet)		70 dl	DΛ	65	dBA	6	0 dBA	55	dBA
			- 1	70 U	JA	00					
			Ldn:	70 01	275	0.5	59:		1,278	- 00	2,754

Wednesday, September 28, 2022

FHWA-	RD-77-108 HIGH	IWAY N	OISE I	PREDIC	TION N	IODEL (9/12/2	(021)		
Scenario: HYP Road Name: Van Bure Road Segment: e/o Merio						Name: lumber:		Campus Up	per Pla	te
SITE SPECIFIC	INPUT DATA				N	OISE	MODE	EL INPUTS	3	
Highway Data			S	ite Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily Traffic (Adt). Peak Hour Percentage.		es				ucks (2	,	: 15		
Peak Hour Volume.	9,519 vehicle	s		He	avy Tru	cks (3+ .	4xles)	: 15		
Vehicle Speed:	,		ν	ehicle l	Wix					
Near/Far Lane Distance.	41 feet			Veh	icleType	,	Day	Evening	Night	Daily
Site Data						Autos:	71.99	6 12.2%	15.9%	93.98%
Barrier Height.	0.0 feet			M	edium T	rucks:	75.39	6 7.0%	17.7%	2.15%
Barrier Type (0-Wall, 1-Berm)	0.0			1	Heavy T	rucks:	60.49	6 12.0%	27.6%	3.87%
Centerline Dist. to Barrier			٨	loise Sc	ource El	levation	s (in f	eet)		
Centerline Dist. to Observer					Auto	s: 0.	000			
Barrier Distance to Observer				Mediu	m Truck	s: 2.	297			
Observer Height (Above Pad)				Heav	y Truck	s: 8.	004	Grade Adj	ustmen	t: 0.0
Pad Elevation	0.0 1001		,	ono Fa	ui ralan	t Distan	aa (in	foot)		
Road Elevation Road Grade				ane Eq	Auto		611	reet)		
	0.070			Modiu	m Truck		454			
Left View Right View					y Truck	- 00	454 469			
FHWA Noise Model Calculation	ins									
VehicleType REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresi	nel	Barrier Atte	en Be	rm Atten
Autos: 70.2	20 7.22		-0.91		-1.20		-4.69	0.0	00	0.000
Medium Trucks: 81.0	0 -9.18		-0.89)	-1.20		-4.88	0.0	00	0.000
Heavy Trucks: 85.0			-0.90		-1.20		-5.34	0.0	00	0.000
Unmitigated Noise Levels (wi										
VehicleType Leq Peak H			Leq Ev		Leq	Night		Ldn		NEL
	75.3	73.2		71.5		67.		75.5		75.9
	69.7	67.8		63.5		62.		70.2		70.4
	76.6	73.8		72.7		71.	_	78.4		78.7
	79.5	77.0		75.5		73.	5	80.6		80.9
Centerline Distance to Noise	Contour (in feet	t)	70 d	BA	65	dBA		60 dBA	55	dBA
		Ldn:		304		655	-	1,410		3,038
	С	NEL:		320		690		1,488		3,205

Wednesday, September 28, 2022

Wednesday, September 28, 2022

APPENDIX 9.1:

CADNAA OPERATIONAL NOISE MODEL INPUTS



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14064 - West Campus Upper Plateau CadnaA Noise Prediction Model: 14064_12.cna

Date: 14.12.22 Analyst: B. Lawson

Calculation Configuration

Parameter Value	Configurat	ion
Max. Error (dB) 0.00 Max. Search Radius (#(Unit,LEN)) 2000.01 Min. Dist Src to Rcvr 0.00 Partition 0.50 Max. Length of Section (#(Unit,LEN)) 999.99 Min. Length of Section (#(Unit,LEN)) 1.01 Min. Length of Section (#(Unit,LEN)) 0.00 Proj. Line Sources 0n Proj. Area Sources 0n Ref. Time 0.00 Reference Time Day (min) 960.00 Reference Time Night (min) 480.00 Daytime Penalty (dB) 0.00 Recr. Time Penalty (dB) 10.00 Dinth 10.00 DTM 5 Standard Height (m) 0.00 Model of Terrain Triangulation Reflection max. Order of Reflection 2		
Max. Search Radius (#(Unit,LEN)) Min. Dist Src to Rcvr Partition Raster Factor Max. Length of Section (#(Unit,LEN)) Min. Length of Section (#(Unit,LEN)) Min. Length of Section (#(Unit,LEN)) Min. Length of Section (%) Do Proj. Line Sources On Proj. Area Sources On Ref. Time Reference Time Day (min) Reference Time Night (min) Daytime Penalty (dB) Scool Night-time Penalty (dB) DTM Standard Height (m) Model of Terrain Reflection max. Order of Reflection 2	General	
Min. Dist Src to Rcvr 0.00 Partition 0.50 Raster Factor 0.50 Max. Length of Section (#(Unit,LEN)) 999.99 Min. Length of Section (#(Unit,LEN)) 1.01 Min. Length of Section (%) 0.00 Proj. Line Sources On Proj. Area Sources On Ref. Time Reference Time Day (min) 960.00 Reference Time Night (min) 480.00 Daytime Penalty (dB) 0.00 Recr. Time Penalty (dB) 5.00 Night-time Penalty (dB) 10.00 DTM Standard Height (m) 0.00 Model of Terrain Triangulation Reflection max. Order of Reflection 2	Max. Error (dB)	0.00
Partition Raster Factor 0.50 Max. Length of Section (#(Unit,LEN)) 999.99 Min. Length of Section (#(Unit,LEN)) 1.01 Min. Length of Section (%) 0.00 Proj. Line Sources On Proj. Area Sources On Ref. Time Reference Time Day (min) 960.00 Reference Time Night (min) 480.00 Daytime Penalty (dB) 0.00 Recr. Time Penalty (dB) 5.00 Night-time Penalty (dB) 10.00 DTM Standard Height (m) 0.00 Model of Terrain Triangulation Reflection max. Order of Reflection 2	Max. Search Radius (#(Unit,LEN))	2000.01
Raster Factor 0.50 Max. Length of Section (#(Unit,LEN)) 999.99 Min. Length of Section (#(Unit,LEN)) 1.01 Min. Length of Section (%) 0.00 Proj. Line Sources On Proj. Area Sources On Ref. Time Reference Time Day (min) 960.00 Reference Time Night (min) 480.00 Daytime Penalty (dB) 0.00 Recr. Time Penalty (dB) 5.00 Night-time Penalty (dB) 10.00 DTM Standard Height (m) Model of Terrain Triangulation Reflection max. Order of Reflection 2	Min. Dist Src to Rcvr	0.00
Max. Length of Section (#(Unit,LEN)) 999.99 Min. Length of Section (#(Unit,LEN)) 1.01 Min. Length of Section (%) 0.00 Proj. Line Sources On Proj. Area Sources On Ref. Time 86.00 Reference Time Day (min) 480.00 Daytime Penalty (dB) 0.00 Recr. Time Penalty (dB) 5.00 Night-time Penalty (dB) 10.00 DTM 5tandard Height (m) Model of Terrain Triangulation Reflection max. Order of Reflection 2	Partition	
Min. Length of Section (#(Unit, LEN)) 1.01 Min. Length of Section (%) 0.00 Proj. Line Sources On Proj. Area Sources On Ref. Time Reference Time Day (min) 480.00 Daytime Penalty (dB) 0.00 Recr. Time Penalty (dB) 5.00 Night-time Penalty (dB) 10.00 DTM 5tandard Height (m) 0.00 Model of Terrain Triangulation Reflection max. Order of Reflection 2	Raster Factor	0.50
Min. Length of Section (%) 0.00 Proj. Line Sources On Proj. Area Sources On Ref. Time Seference Time Day (min) 960.00 Reference Time Night (min) 480.00 Daytime Penalty (dB) 0.00 Recr. Time Penalty (dB) 5.00 Night-time Penalty (dB) 10.00 DTM 5tandard Height (m) 0.00 Model of Terrain Triangulation Reflection max. Order of Reflection 2	Max. Length of Section (#(Unit,LEN))	999.99
Proj. Line Sources On Proj. Area Sources On Ref. Time 960.00 Reference Time Day (min) 480.00 Beference Time Night (min) 480.00 Daytime Penalty (dB) 0.00 Recr. Time Penalty (dB) 5.00 Night-time Penalty (dB) 10.00 DTM 5tandard Height (m) Standard Height (m) 0.00 Model of Terrain Triangulation Reflection max. Order of Reflection 2	Min. Length of Section (#(Unit,LEN))	1.01
Proj. Area Sources On Ref. Time 960.00 Reference Time Day (min) 480.00 Reference Time Night (min) 480.00 Daytime Penalty (dB) 0.00 Recr. Time Penalty (dB) 5.00 Night-time Penalty (dB) 10.00 DTM 5tandard Height (m) Standard Height (m) 0.00 Model of Terrain Triangulation Reflection max. Order of Reflection	Min. Length of Section (%)	0.00
Ref. Time 960.00 Reference Time Day (min) 960.00 Reference Time Night (min) 480.00 Daytime Penalty (dB) 0.00 Recr. Time Penalty (dB) 5.00 Night-time Penalty (dB) 10.00 DTM 5tandard Height (m) Standard Height (m) 0.00 Model of Terrain Triangulation Reflection max. Order of Reflection	Proj. Line Sources	On
Reference Time Day (min) 960.00 Reference Time Night (min) 480.00 Daytime Penalty (dB) 0.00 Recr. Time Penalty (dB) 5.00 Night-time Penalty (dB) 10.00 DTM Standard Height (m) Model of Terrain Triangulation Reflection max. Order of Reflection	Proj. Area Sources	On
Reference Time Night (min) 480.00 Daytime Penalty (dB) 0.00 Recr. Time Penalty (dB) 5.00 Night-time Penalty (dB) 10.00 DTM 5tandard Height (m) Model of Terrain Triangulation Reflection max. Order of Reflection	Ref. Time	
Daytime Penalty (dB) 0.00 Recr. Time Penalty (dB) 5.00 Night-time Penalty (dB) 10.00 DSTAND 0.00 Standard Height (m) 0.00 Model of Terrain Triangulation Reflection max. Order of Reflection	Reference Time Day (min)	960.00
Recr. Time Penalty (dB) 5.00 Night-time Penalty (dB) 10.00 DTM Standard Height (m) 0.00 Model of Terrain Triangulation Reflection max. Order of Reflection 2	Reference Time Night (min)	480.00
Night-time Penalty (dB) 10.00 DTM 0.00 Standard Height (m) 0.00 Model of Terrain Triangulation Reflection 2	Daytime Penalty (dB)	0.00
DTM Standard Height (m) Model of Terrain Reflection max. Order of Reflection 2	Recr. Time Penalty (dB)	5.00
Standard Height (m) 0.00 Model of Terrain Triangulation Reflection max. Order of Reflection 2	Night-time Penalty (dB)	10.00
Model of Terrain Triangulation Reflection max. Order of Reflection 2	DTM	
Reflection 2 2	Standard Height (m)	0.00
max. Order of Reflection 2	Model of Terrain	Triangulation
	Reflection	
C	max. Order of Reflection	2
Search Radius Src 100.00	Search Radius Src	100.00
Search Radius Rcvr 100.00	Search Radius Rcvr	100.00
Max. Distance Source - Rcvr 1000.00 1000.00	Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rvcr - Reflector 1.00 1.00	Min. Distance Rvcr - Reflector	1.00 1.00
Min. Distance Source - Reflector 0.10	Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	Industrial (ISO 9613)	
Lateral Diffraction some Obj	Lateral Diffraction	some Obj
Obst. within Area Src do not shield On	Obst. within Area Src do not shield	On
Screening Incl. Ground Att. over Barrier	Screening	Incl. Ground Att. over Barrier
Dz with limit (20/25)		Dz with limit (20/25)
Barrier Coefficients C1,2,3 3.0 20.0 0.0	Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP)) 10	Temperature (#(Unit,TEMP))	10
rel. Humidity (%) 70	rel. Humidity (%)	70
Ground Absorption G 0.50	Ground Absorption G	0.50
Wind Speed for Dir. (#(Unit,SPEED)) 3.0	Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	Roads (TNM)	
Railways (FTA/FRA)	Railways (FTA/FRA)	
Aircraft (???)	Aircraft (???)	
Strictly acc. to AzB	Strictly acc. to AzB	

Receiver Noise Levels

Name	M.	ID		Level Lr		Lir	nit. Valı	ue		Land	l Use	Height		Co	oordinates	
			Day	Night	CNEL	Day	Night	CNEL	Туре	Auto	Noise Type			Х	Υ	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
RECEIVERS		R1	47.7	45.9	52.8	55.0	45.0	0.0				5.00	r	6239395.68	2277518.39	1655.67
RECEIVERS		R2	44.3	42.8	49.6	55.0	45.0	0.0				5.00	r	6240840.00	2277494.60	1651.48
RECEIVERS		R3	40.3	38.0	44.9	55.0	45.0	0.0				5.00	r	6242300.90	2277400.66	1634.81
RECEIVERS		R4	43.4	38.9	46.3	55.0	45.0	0.0				5.00	r	6244773.77	2274154.49	1645.02
RECEIVERS		R5	34.0	31.0	38.0	55.0	45.0	0.0				5.00	r	6243135.43	2273499.44	1712.25
RECEIVERS		R6	46.7	44.1	51.1	55.0	45.0	0.0				5.00	r	6241549.82	2272804.45	1773.00
RECEIVERS		R7	41.5	40.1	46.9	55.0	45.0	0.0				5.00	r	6240610.52	2272148.50	1776.64
RECEIVERS		R8	47.4	43.7	50.9	55.0	45.0	0.0				5.00	r	6238684.09	2273020.65	1696.99
RECEIVERS		R9	38.5	35.1	42.2	55.0	45.0	0.0				5.00	r	6237166.99	2274522.15	1657.00
RECEIVERS		R10	40.5	38.0	44.9	55.0	45.0	0.0				5.00	r	6238570.92	2277016.29	1641.37

Point Source(s)

Name	M.	ID	R	esult. PW	'L		Lw/L	i	Op	erating Ti	ime	Height	:	Co	oordinates	
			Day	Evening	Night	Туре	Value	norm.	Day	Special	Night			Х	Υ	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
POINTSOURCE		AC00	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6241832.21	2276036.91	1749.06
POINTSOURCE		AC01	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6242245.92	2275780.68	1749.06
POINTSOURCE		AC01	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6241881.06	2274721.43	1821.17
POINTSOURCE		AC02	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6242248.59	2276026.24	1749.06
POINTSOURCE		AC02	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6241960.31	2274837.65	1821.17
POINTSOURCE		AC03	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6242256.60	2276279.80	1749.06
POINTSOURCE		AC03	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6241807.11	2274832.37	1821.17
POINTSOURCE		AC04	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6240932.71	2275852.74	1759.70

Performance Performance	Name	M.	ID	R	esult. PW	'L		Lw/L	i	Оре	erating Ti	me	Height		Co	oordinates	
DOINTSOURCE ACM				-	Evening	Night	Туре	Value	norm.	Day	Special	Night					Z
Dennisounce Acco				` '	. ,	, ,			dB(A)								· ' /
Dennisounce A.C.														_			
DONITSOUNCE				_													_
Dentify Dent													- '	_			
Dennisounce ACT							_							\neg			
DIATIONICINGE ACOR	POINTSOURCE		AC07	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00		\neg	6240585.73	2276095.64	1748.44
POMPONICHIC COOP	POINTSOURCE		AC07	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6241020.66	2273761.17	1741.52
DIATION CINTER ACCORD 88 88 88 88 88 88 88	POINTSOURCE		AC08	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00 į	g	6240217.39	2275844.74	1737.68
POMPS							Lw							g			
NONTOLINEE ACID 88.9 8								_						\neg			_
DOMINSOUNCE CACI																	_
DIATE DIATE CALL S. S. S. S. S. S. S. S. S. S. S. S. S.														_			-
POINTSOURCE ACT				_				_						\neg			
POINTSUMER ACT														_			
PONTSUNECE AC13							_							\neg			-
POINTSUMER AC14	POINTSOURCE		AC12	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6239065.17	2276426.47	1702.47
POINTSQUIRGE AC14	POINTSOURCE		AC13	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00 į	g	6240372.20	2275767.33	1741.88
DINTSOURCE AC15	POINTSOURCE		AC13	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6239011.94		
POINTSQUIRCE AC15	POINTSOURCE		AC14		88.9		Lw	88.9		585.00	0.00	252.00		g	6240759.22		_
Pointsource Ac16							_							_			_
POINTSOURCE AC16														_			
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POINTSOURCE AC19 88.9 88.9 88.9 1.0 88.9 88.9 1.0 88.9 88.5 88				_				_						\neg			
POINTSOURCE AC20	POINTSOURCE		AC18	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00			6238902.81	2275808.94	1723.41
POINTSOURCE AC20	POINTSOURCE		AC19	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6240372.20	2275964.85	1748.43
POINTSOURCE AC21 88.9	POINTSOURCE		AC19	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00 (g	6238929.42	2275713.12	1723.41
POINTSOURCE AC21	POINTSOURCE		AC20	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6240759.22	2275970.19	1748.30
POINTSOURCE AC21							Lw							g			
POINTSOURCE AC22														_			
POINTSOURCE								_						\neg			_
POINTSOURCE AC23																	_
POINTSOURCE AC24														_			-
POINTSOURCE							_	_						\neg			
POINTSOURCE AC24																	_
POINTSOURCE	POINTSOURCE		AC24	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00		\neg	6238748.42	2274994.43	1735.18
POINTSOURCE	POINTSOURCE		AC25	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6241837.55	2276861.67	1724.16
POINTSOURCE	POINTSOURCE		AC25	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00 [g	6238889.50	2274989.11	1735.18
POINTSOURCE							Lw							g			_
POINTSOURCE														-			-
POINTSOURCE														_			_
POINTSOURCE AC28 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6238785.69 2274603.15 1751.06 POINTSOURCE AC29 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6241941.64 2276792.28 1724.16 POINTSOURCE AC30 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6238910.79 2274555.24 1751.06 POINTSOURCE AC30 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6238910.79 2274555.24 1751.06 POINTSOURCE AC30 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6238910.79 2274453.37 1751.06 POINTSOURCE AC31 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6238979.00 2274483.37 1751.06 POINTSOURCE AC31 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6238979.00 2274483.37 1751.06 POINTSOURCE AC31 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6238974.10 2274416.31 1751.06 POINTSOURCE AC31 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6242366.03 2276931.07 1724.16 POINTSOURCE AC32 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6242366.03 2276932.28 1724.16 POINTSOURCE AC32 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6242366.03 2276936.41 1751.06 POINTSOURCE AC33 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6242366.03 2276936.41 1751.06 POINTSOURCE AC33 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 624366.03 2276936.41 1751.06 POINTSOURCE AC34 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6241736.12 2276891.10 1765.77 POINTSOURCE AC34 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6241736.12 2276891.10 1765.77 POINTSOURCE AC34 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6241736.12 2276859.01 1739.99 POINTSOURCE AC34 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 624104.44 2276859.01 1739.99 POINTSOURCE AC36 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 624104.44 2276859.01 1739.99 POINTSOURCE AC36 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 624104.44 2276859.01 1739.99 POINTSOURCE AC36 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 624104.44 2276859.01 1739.99 POINTSOURCE AC36 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239570.20 2273755.61 1765.77 POINTSOURCE AC38 88.9 88.9 88.9 Lw														-			
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POINTSOURCE AC39 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 624167.60 2276920.40 1739.99 POINTSOURCE AC39 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239572.50 2273830.05 1765.77 POINTSOURCE AC40 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240927.37 2276925.73 1739.99 POINTSOURCE AC40 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240927.37 2276925.73 1739.99 POINTSOURCE AC41 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240500.31 2276904.38 1717.10 POINTSOURCE AC41 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240500.31 2276904.38 1717.10 POINTSOURCE AC41 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240500.31 2276904.38 1717.10 POINTSOURCE AC42 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240601.43 2273235.47 1801.24 POINTSOURCE AC42 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240609.75 2276971.11 1717.10														\neg			_
POINTSOURCE AC39 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239572.50 2273830.05 1765.77 POINTSOURCE AC40 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240927.37 2276925.73 1739.99 POINTSOURCE AC40 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239641.25 2273911.54 1765.77 POINTSOURCE AC41 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240500.31 2276904.38 1717.10 POINTSOURCE AC41 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240611.43 2273235.47 1801.24 POINTSOURCE AC42 88.9 88.9 Lw 88.9 585.00 0.00														_			
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POINTSOURCE AC40 88.9 88.9 Lw 88.9 RW														\neg			
POINTSOURCE AC41 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240500.31 2276904.38 1717.10 POINTSOURCE AC41 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240611.43 2273235.47 1801.24 POINTSOURCE AC42 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240609.75 2276971.11 1717.10														_			
POINTSOURCE AC41 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240611.43 2273235.47 1801.24 POINTSOURCE AC42 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240609.75 2276971.11 1717.10														_			_
POINTSOURCE AC42 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240609.75 2276971.11 1717.10														\neg			
POINTSOURCE AC42 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240768.03 2273236.74 1801.24	POINTSOURCE		AC42	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6240609.75	2276971.11	1717.10
	POINTSOURCE		AC42	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6240768.03	2273236.74	1801.24

March Marc	Name	M.	ID	R	esult. PW	'L		Lw/L	i	Оре	erating Ti	me	Height		Co	pordinates	
DOMINTOLINGE C.4.1				-		Night	Туре	Value		Day	Special	Night					
Dentification California				` '	. ,	` '			dB(A)					4			
Dentify Company														_			_
DOMITSOUNCE AC44				-							_			\neg			_
MATERIAN NEW PROPERTY														\neg			
POINTSUINCE AC66	POINTSOURCE				88.9	88.9	Lw							\neg	6240270.77	2276904.38	1717.10
POMINDOLINGE AC67	POINTSOURCE		AC45	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6240616.52	2273389.53	1801.24
PONTSOURCE AC47 88,9 8							_							g			
PONTSOURCE AC48														\neg			
PONTSUMER AC88 88.9 88														_			
PONTSOURCE CAC69														\neg			
DIATE CA69														\neg			
POINTSCURCE AC30														_			
POINTSUINCE AC51	POINTSOURCE		AC49	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6240696.74	2273646.71	1801.24
POINTSURCE AC51 88.9 8	POINTSOURCE		AC50	88.9	88.9		Lw	88.9		585.00	0.00	252.00		g	6239624.84	2276957.76	1701.08
POINTSURECT AC51														\neg			
POINTSOURCE AC52														-			
POINTSOURCE AC53														\neg			
POINTSOURCE AC53														\neg			
POINTSOURCE ACS4														\neg			
POINTSOURCE AC54							_							\neg			
POINTSOURCE	POINTSOURCE		AC54	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00		\neg	6239008.32	2275832.31	1723.41
POINTSOURCE	POINTSOURCE		AC54	88.9	88.9	88.9	Lw	88.9		585.00	0.00			g		2273262.21	1810.17
POINTSOURCE														-			
POINTSOURCE														_			_
POINTSOURCE														_			
POINTSOURCE AC57														\neg			
POINTSOURCE ACS8														\neg			
POINTSOURCE AC59				-										\neg			
POINTSOURCE	POINTSOURCE		AC58	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6240158.17	2273432.82	1810.17
POINTSOURCE AC66	POINTSOURCE		AC59	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6239499.56	2273912.51	1765.77
POINTSOURCE AC60	POINTSOURCE		AC59	88.9	88.9		Lw	88.9		585.00		252.00		g	6240055.04	2273510.48	1810.17
POINTSOURCE AC61														\neg			
POINTSOURCE AC61														\neg			
POINTSOURCE														\neg			
POINTSOURCE AC62 88.9											_			_			
POINTSOURCE AC63				88.9	88.9	88.9	Lw	88.9			0.00			\neg			
POINTSOURCE	POINTSOURCE		AC63	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6241798.50	2275082.78	1821.17
POINTSOURCE	POINTSOURCE		AC63	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6239978.65	2273756.21	1810.17
POINTSOURCE AC65														\neg			
POINTSOURCE														\neg			
POINTSOURCE														\neg			
POINTSOURCE AC66 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239971.01 2273893.72 810.17 POINTSOURCE AC67 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239587.47 227587.58 1753.32 POINTSOURCE AC68 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239587.47 2274587.58 1753.32 POINTSOURCE AC68 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239923.78 2274587.58 1753.32 POINTSOURCE AC68 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239923.78 2274587.58 1753.32 POINTSOURCE AC69 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 623997.87 2276837.38 1701.08 POINTSOURCE AC69 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 623997.87 2274587.38 1753.32 POINTSOURCE AC69 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239937.78 2276837.38 1701.08 POINTSOURCE AC70 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239937.79 2274558.22 1753.32 POINTSOURCE AC70 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240260.09 2274558.22 1753.32 POINTSOURCE AC71 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240647.12 2274563.56 1753.32 POINTSOURCE AC71 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6241055.49 2274568.90 1762.28 POINTSOURCE AC71 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6241055.49 2274568.90 1762.28 POINTSOURCE AC72 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6241055.49 2274568.90 1762.28 POINTSOURCE AC72 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240647.12 2274852.40 1753.32 POINTSOURCE AC72 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239073.71 2276195.74 12 1753.32 POINTSOURCE AC72 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239073.71 2276195.74 12 1753.32 POINTSOURCE AC73 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239073.71 2276195.74 12 1753.32 POINTSOURCE AC73 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239073.71 2276195.74 173.68 POINTSOURCE AC74 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239499.15 2274411.73 1753.32 POINTSOURCE AC76 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239499.15 2274411.73 1753.32 POINTSOURCE AC76 88.9 88.9							_							\neg			
POINTSOURCE AC67	POINTSOURCE		AC66	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00		\rightarrow	6239971.01	2273893.72	1810.17
POINTSOURCE AC68 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240154.55 2276843.03 1717.10 POINTSOURCE AC68 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239923.78 2274587.58 1753.32 POINTSOURCE AC69 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239877.87 2276837.38 1701.08 POINTSOURCE AC69 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240260.09 2274558.22 1753.32 POINTSOURCE AC70 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240260.09 2274558.22 1753.32 POINTSOURCE AC70 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240260.09 2274558.22 1753.32 POINTSOURCE AC71 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240260.09 2274558.20 1753.32 POINTSOURCE AC71 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240260.09 2274558.20 1760.56 POINTSOURCE AC71 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6241078.66 2273850.00 1743.26 POINTSOURCE AC71 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6241080.54 2275740.12 1760.56 POINTSOURCE AC72 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6241080.54 2275740.12 1760.56 POINTSOURCE AC72 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240647.12 2274822.46 1753.32 POINTSOURCE AC73 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240647.12 2774822.46 1753.32 POINTSOURCE AC73 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240276.11 2274817.12 1753.32 POINTSOURCE AC73 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239499.15 2274411.73 1753.32 POINTSOURCE AC73 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239497.51 2276817.12 1753.32 POINTSOURCE AC76 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239497.51 2276817.12 1753.32 POINTSOURCE AC76 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239475.71 227695.74 1737.68 POINTSOURCE AC76 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239475.71 227691.69 1753.32 POINTSOURCE AC76 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239475.71 227691.69 1753.32 POINTSOURCE AC76 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239488.71 2274697.01 1753.32 POINTSOURCE AC76 88.9 88.9 88.9 L	POINTSOURCE		AC67	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00		\neg			
POINTSOURCE AC68 88.9 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239923.78 2274587.58 1753.32 POINTSOURCE AC69 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239877.87 2276837.38 1701.08 POINTSOURCE AC70 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240260.09 2274558.22 1753.32 POINTSOURCE AC70 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240260.09 2274558.22 1753.32 POINTSOURCE AC70 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240260.09 2274558.22 1753.32 POINTSOURCE AC71 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240647.12 2274563.66 1753.32 POINTSOURCE AC71 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6241078.66 2273850.00 1743.26 POINTSOURCE AC71 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 624108.65 2273750.00 1743.26 POINTSOURCE AC72 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6241080.54 2275740.12 1760.56 POINTSOURCE AC72 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6241080.54 2275740.12 1760.56 POINTSOURCE AC73 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240647.12 2274822.46 1753.32 POINTSOURCE AC73 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240647.12 2274822.46 1753.32 POINTSOURCE AC73 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240647.12 2274822.46 1753.32 POINTSOURCE AC73 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239993.71 2276195.74 1737.68 POINTSOURCE AC73 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239499.15 2274411.73 1753.32 POINTSOURCE AC73 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239497.57 1275010.69 1753.32 POINTSOURCE AC76 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239475.71 2276195.74 1737.68 POINTSOURCE AC76 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239475.71 2275010.69 1753.32 POINTSOURCE AC76 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239475.71 2275010.69 1753.32 POINTSOURCE AC76 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239475.71 227609.01 1753.32 POINTSOURCE AC76 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239488.71 2274697.01 1753.32 POINTSOURCE AC76 88.9 88.9	POINTSOURCE		AC67	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6239587.47	2274587.58	1753.32
POINTSOURCE AC69 88.9 88.9 88.9 Lw 88.9 S85.00 0.00 252.00 5.00 g 6239877.87 2276837.38 1701.08 POINTSOURCE AC69 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240260.09 2274558.22 1753.32 POINTSOURCE AC70 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239397.92 2276830.33 1701.08 POINTSOURCE AC70 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240477.12 2274563.56 1753.32 POINTSOURCE AC71 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6241078.66 2273850.00 1743.26 POINTSOURCE AC71 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6241055.49 2274568.90 1762.28 POINTSOURCE AC72 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6241080.54 2275740.12 1760.56 POINTSOURCE AC72 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240647.12 2274822.46 1753.32 POINTSOURCE AC73 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240647.12 2274822.46 1753.32 POINTSOURCE AC73 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240647.12 2274822.46 1753.32 POINTSOURCE AC73 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240647.12 2274822.46 1753.32 POINTSOURCE AC73 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240676.11 2274817.12 1753.32 POINTSOURCE AC74 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6239703.71 2276195.74 1737.68 POINTSOURCE AC74 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 623942.47 2274825.13 1753.32 POINTSOURCE AC75 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 623942.47 2274825.13 1753.32 POINTSOURCE AC76 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 623945.71 2275010.69 1753.32 POINTSOURCE AC76 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 623945.71 2275010.69 1753.32 POINTSOURCE AC76 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240102.61 2274697.01 1753.32 POINTSOURCE AC76 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240404.60 2274697.01 1753.32 POINTSOURCE AC76 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240404.60 2274697.01 1753.32 POINTSOURCE AC76 88.9 88.9 88.9 Lw 88.9 585.00 0.00 252.00 5.00 g 6240404.60 2274699.68 1753.32 POINTSOURCE AC78 88.9 88.9 88.9 Lw														g			
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POINTSOURCE AC83 88.9 88.9 88.9 1.W 88.9 585.00 0.00 252.00 5.00 g 6240865 98 2274945 24 1753 41														\neg			
	POINTSOURCE		AC83	88.9	88.9	88.9	Lw	88.9		585.00	0.00			g	6240865.98		
POINTSOURCE AC84 88.9 88.9 Lw 88.9 Lw 585.00 0.00 252.00 5.00 g 6240452.27 2274945.24 1753.32	POINTSOURCE		AC84	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6240452.27	2274945.24	1753.32

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Name	M. ID	R	esult. PW	/L		Lw / L	i	Opr	erating Ti	me	Height	t	Cr	oordinates	
		Day	Evening	Night	Туре	Value	norm.	Day	Special	Night			Х	Υ	Z
		(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
POINTSOURCE	AC85	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6240078.59	2274939.90	
POINTSOURCE	AC86	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6239744.95	2274929.23	_
POINTSOURCE POINTSOURCE	AC87 AC88	88.9 88.9	88.9 88.9	88.9 88.9	Lw	88.9 88.9		585.00 585.00	0.00	252.00 252.00	5.00	g	6239760.97 6240067.92	2274464.80 2274459.46	
POINTSOURCE	AC89	88.9	88.9	88.9	LW	88.9		585.00	0.00	252.00	5.00	g	6240441.59		
POINTSOURCE	AC90	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6240855.31		_
POINTSOURCE	AC91	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6241215.64	2274454.12	1753.32
POINTSOURCE	AC92	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6241212.97	2274982.61	1763.44
POINTSOURCE	AC93	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6241957.66	2275086.71	1821.17
POINTSOURCE	AC94	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6241882.45	2274963.09	
POINTSOURCE	AC95	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6242048.41	2276167.70	
POINTSOURCE	AC96	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6242048.41	2275922.14	_
POINTSOURCE POINTSOURCE	AC97 AC98	88.9 88.9	88.9 88.9	88.9 88.9	Lw	88.9 88.9		585.00 585.00	0.00	252.00 252.00	5.00	g	6242061.75 6241848.22	2275649.89 2275521.77	
POINTSOURCE	AC98	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6241850.89	2275778.01	
POINTSOURCE	CAR00	87.8	87.8	87.8	Lw	87.8		303.00	0.00	232.00	5.00	r	6241869.52	2276466.13	
POINTSOURCE	CAR01	87.8	87.8	87.8	Lw	87.8					5.00	r	6241721.09	2276471.34	
POINTSOURCE	CAR01	87.8	87.8	87.8	Lw	87.8					5.00	r	6241302.59	2273946.43	1748.83
POINTSOURCE	CAR02	87.8	87.8	87.8	Lw	87.8					5.00	r	6241222.05	2273991.06	1748.02
POINTSOURCE	CAR03	87.8	87.8	87.8	Lw	87.8					5.00	r	6241113.20	2273987.79	1745.44
POINTSOURCE	CAR04	87.8	87.8	87.8	Lw	87.8	<u> </u>				5.00	r	6241019.59	2273986.70	
POINTSOURCE	CAR05	87.8	87.8	87.8	Lw	87.8					5.00	r	6238485.54	2274205.09	
POINTSOURCE POINTSOURCE	CAR06 CAR07	87.8 87.8	87.8 87.8	87.8 87.8	Lw	87.8 87.8					5.00 5.00	r	6238451.82 6238423.72	2274269.72 2274337.16	
POINTSOURCE	CAR07	87.8	87.8	87.8	Lw	87.8					5.00	r	6238423.72		
POINTSOURCE	CAR09	87.8	87.8	87.8	Lw	87.8					5.00	r	6238395.62	2275025.63	
POINTSOURCE	CAR10	87.8	87.8	87.8	Lw	87.8					5.00	r	6238415.29	2275090.26	
POINTSOURCE	CAR11	87.8	87.8	87.8	Lw	87.8					5.00	r	6242206.99	2276603.36	1687.05
POINTSOURCE	CAR12	87.8	87.8	87.8	Lw	87.8					5.00	r	6242050.89	2276603.36	1695.36
POINTSOURCE	CAR13	87.8	87.8	87.8	Lw	87.8					5.00	r	6241880.33	2276603.36	1694.00
POINTSOURCE	CAR14	87.8	87.8	87.8	Lw	87.8					5.00	r	6241611.48	2276768.14	
POINTSOURCE	CAR15	87.8	87.8	87.8	Lw	87.8					5.00	r	6241608.58		
POINTSOURCE POINTSOURCE	CAR16 CAR17	87.8 87.8	87.8 87.8	87.8 87.8	Lw	87.8 87.8					5.00	r	6241290.59 6241177.85	2276603.36 2276606.25	_
POINTSOURCE	CAR17	87.8	87.8	87.8	LW	87.8					5.00	r	6241059.32	2276609.14	
POINTSOURCE	CAR19	87.8	87.8	87.8	Lw	87.8					5.00	r	6240553.42	2276614.92	_
POINTSOURCE	CAR20	87.8	87.8	87.8	Lw	87.8					5.00	r	6240423.33	2276614.92	1692.96
POINTSOURCE	CAR21	87.8	87.8	87.8	Lw	87.8					5.00	r	6240275.90	2276614.92	1687.74
POINTSOURCE	CAR22	87.8	87.8	87.8	Lw	87.8					5.00	r	6239775.78	2276609.14	1679.93
POINTSOURCE	CAR23	87.8	87.8	87.8	Lw	87.8					5.00	r	6239637.02	2276606.25	
POINTSOURCE	CAR24	87.8	87.8	87.8	Lw	87.8					5.00	r	6239483.80	2276609.14	
POINTSOURCE	CAR25 CAR26	87.8 87.8	87.8 87.8	87.8 87.8	Lw	87.8 87.8					5.00	r	6239191.82 6239212.06	2276496.40 2276320.05	
POINTSOURCE	CAR27	87.8	87.8	87.8	Lw	87.8					5.00	r	6239238.08	2276123.48	
POINTSOURCE	CAR28	87.8	87.8	87.8	Lw	87.8					5.00	r	6239041.50	2275990.50	
POINTSOURCE	CAR29	87.8	87.8	87.8	Lw	87.8					5.00	r	6239139.79	2275924.01	1683.88
POINTSOURCE	CAR30	87.8	87.8	87.8	Lw	87.8					5.00	r	6239055.95	2275678.28	1688.87
POINTSOURCE	CAR31	87.8	87.8	87.8	Lw	87.8					5.00	r		2275565.54	
POINTSOURCE	CAR32	87.8	87.8	87.8	Lw	87.8					5.00	r	6238804.45	2275447.01	
POINTSOURCE	CAR33	87.8	87.8	87.8	Lw	87.8					5.00	r	6238975.01	2275409.43	
POINTSOURCE POINTSOURCE	CAR34 CAR35	87.8 87.8	87.8 87.8	87.8 87.8	Lw	87.8 87.8			\vdash		5.00	r	6242056.67 6241883.22	2275039.40 2275192.62	
POINTSOURCE	CAR36	87.8	87.8	87.8	Lw	87.8					5.00	r	6241709.76	2275195.51	_
POINTSOURCE	CAR37	87.8	87.8	87.8	Lw	87.8					5.00	r		2274981.58	
POINTSOURCE	CAR38	87.8	87.8	87.8	Lw	87.8					5.00		6241625.93	2274828.37	
POINTSOURCE	CAR39	87.8	87.8	87.8	Lw	87.8					5.00	r	6241628.82	2274692.50	1773.16
POINTSOURCE	CAR40	87.8	87.8	87.8	Lw	87.8					5.00	r	6241649.06	2274487.25	
POINTSOURCE	CAR41	87.8	87.8	87.8	Lw	87.8	<u> </u>				5.00	r	6240773.12	2273987.13	
POINTSOURCE	CAR42	87.8	87.8	87.8	Lw	87.8					5.00	r	6240619.91	2273990.02	
POINTSOURCE	CAR43	87.8	87.8	87.8	Lw	87.8					5.00	r	6240469.58 6240443.57	2273995.80 2273854.15	
POINTSOURCE POINTSOURCE	CAR44 CAR45	87.8 87.8	87.8 87.8	87.8 87.8	Lw	87.8 87.8					5.00	r	6240443.57	2273854.15	
POINTSOURCE	CAR45	87.8	87.8	87.8	Lw	87.8					5.00	r	6240316.37	2273990.02	+
POINTSOURCE	CAR47	87.8	87.8	87.8	Lw	87.8					5.00	r	6240076.43	2273992.91	
POINTSOURCE	CAR48	87.8	87.8	87.8	Lw	87.8					5.00	r	6239949.23		
POINTSOURCE	CAR49	87.8	87.8	87.8	Lw	87.8					5.00	r	6239637.02	2273241.28	1719.13
POINTSOURCE	CAR50	87.8	87.8	87.8	Lw	87.8					5.00	r	6239556.07	2273351.14	_
POINTSOURCE	CAR51	87.8	87.8	87.8	Lw	87.8	<u> </u>				5.00	r	6239437.55	2273591.08	
POINTSOURCE	CAR52	87.8	87.8	87.8	Lw	87.8					5.00	r	6239376.84	2273677.80	
POINTSOURCE	CAR53	87.8	87.8	87.8	Lw	87.8					5.00		6239408.64	2273796.33	_
POINTSOURCE POINTSOURCE	CAR54 CAR55	87.8 87.8	87.8 87.8	87.8 87.8	Lw	87.8 87.8					5.00 5.00	r	6238920.08 6238995.24	2274024.71 2274073.85	
POINTSOURCE	CAR56	87.8	87.8	87.8	Lw	87.8					5.00	r	6238896.95	2274143.23	
POINTSOURCE	CAR57	87.8	87.8	87.8	Lw	87.8					5.00	r	6239024.15	2274380.28	I
POINTSOURCE	CAR58	87.8	87.8	87.8	Lw	87.8					5.00	r	6239018.37	2274495.92	
POINTSOURCE			07.0	87.8	Lw	87.8					5.00	r	6239018.37	2274605.77	1710.17
POINTSOURCE	CAR59 CAR60	87.8 87.8	87.8 87.8	87.8	LVV	87.8			\vdash		5.00	r	6239024.15	2274825.48	

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Name	M.	ID	R	esult. PW	'L		Lw/L	i	Оре	erating Ti	me	Heigh	:	Co	pordinates	
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night			Х	Υ	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
POINTSOURCE	_	CAR61	87.8	87.8	87.8	Lw	87.8					5.00	r	6239024.15	2274929.55	
POINTSOURCE POINTSOURCE	-	CAR62 CAR63	87.8 87.8	87.8 87.8	87.8 87.8	Lw	87.8 87.8					5.00	r r	6239018.37 6238896.95	2275050.96 2275212.85	1696.85
POINTSOURCE	-	CAR64	87.8	87.8	87.8	Lw	87.8					5.00	r	6238714.83	2275212.85	
POINTSOURCE	-	CAR65	87.8	87.8	87.8	Lw	87.8					5.00	r	6239537.34	2275726.10	
POINTSOURCE		CAR66	87.8	87.8	87.8	Lw	87.8					5.00	r	6239442.03	2275727.83	1702.73
POINTSOURCE		CAR67	87.8	87.8	87.8	Lw	87.8					5.00	r	6239325.92	2275731.30	1694.20
POINTSOURCE		CAR68	87.8	87.8	87.8	Lw	87.8					5.00	r	6239523.48	2275882.07	
POINTSOURCE	-	CAR69	87.8	87.8	87.8	Lw	87.8					5.00	r	6239393.50	2275878.60	
POINTSOURCE	-	CAR70	87.8	87.8	87.8	Lw	87.8					5.00	r r	6239537.34	2276044.97	
POINTSOURCE		CAR71 CAR72	87.8 87.8	87.8 87.8	87.8 87.8	Lw	87.8 87.8					5.00	r	6239412.57 6239539.07	2276039.77 2276204.40	1688.64
POINTSOURCE		CAR73	87.8	87.8	87.8	Lw	87.8					5.00	r	6239438.56		1680.86
POINTSOURCE	-	CAR74	87.8	87.8	87.8	Lw	87.8					5.00	r	6241398.57	2275710.50	_
POINTSOURCE		CAR75	87.8	87.8	87.8	Lw	87.8					5.00	r	6241258.20	2275713.97	1743.88
POINTSOURCE		CAR76	87.8	87.8	87.8	Lw	87.8					5.00	r	6241395.11	2275889.00	1728.40
POINTSOURCE	-	CAR77	87.8	87.8	87.8	Lw	87.8					5.00	r	6241265.13	2275890.73	
POINTSOURCE	+	CAR78	87.8	87.8	87.8	Lw	87.8					5.00	r	6241386.44	2276064.03	
POINTSOURCE	_	CAR79 CAR80	87.8	87.8 87.8	87.8 87.8	Lw	87.8 87.8					5.00	r	6241258.20 6241376.04	2276069.23	
POINTSOURCE POINTSOURCE	+	CAR81	87.8 87.8	87.8	87.8	Lw	87.8					5.00	r	6241253.00	2276242.53 2276239.06	
POINTSOURCE	-	CAR82	87.8	87.8	87.8	Lw	87.8					5.00	r	6239285.61	2274192.98	
POINTSOURCE	-	CAR83	87.8	87.8	87.8	Lw	87.8					5.00	r	6239228.32	2274269.80	
POINTSOURCE	+	CAR84	87.8	87.8	87.8	Lw	87.8					5.00	r	6239288.21	2274359.65	
POINTSOURCE		CAR85	87.8	87.8	87.8	Lw	87.8					5.00	r	6239227.01	2274426.05	1719.34
POINTSOURCE		CAR86	87.8	87.8	87.8	Lw	87.8					5.00	r	6239289.51	2274562.77	1715.13
POINTSOURCE	-	CAR87	87.8	87.8	87.8	Lw	87.8					5.00	r	6239227.01	2274676.05	
POINTSOURCE	-	CAR88	87.8	87.8	87.8	Lw	87.8					5.00	r	6239292.12	2274772.41	
POINTSOURCE POINTSOURCE	-	CAR89 CAR90	87.8 87.8	87.8 87.8	87.8 87.8	Lw	87.8 87.8					5.00	r r	6239225.71 6239290.82	2274937.77 2275039.34	
POINTSOURCE	-	CAR91	87.8	87.8	87.8	Lw	87.8					5.00	r	6239228.32	2275105.74	
POINTSOURCE	+	CAR92	87.8	87.8	87.8	Lw	87.8					5.00	r	6242262.75	2275385.40	
POINTSOURCE		CAR93	87.8	87.8	87.8	Lw	87.8					5.00	r	6242132.54	2275393.22	1739.71
POINTSOURCE		CAR94	87.8	87.8	87.8	Lw	87.8					5.00	r	6242007.54	2275395.82	1752.80
POINTSOURCE		CAR95	87.8	87.8	87.8	Lw	87.8					5.00	r	6241887.75	2275401.03	1762.92
POINTSOURCE		CAR96	87.8	87.8	87.8	Lw	87.8					5.00	r	6241770.57	2275401.03	
POINTSOURCE	-	CAR97	87.8	87.8	87.8	Lw	87.8					5.00	r	6242374.73	2276466.13	
POINTSOURCE	-	CAR98 CAR99	87.8 87.8	87.8 87.8	87.8 87.8	Lw	87.8 87.8					5.00	r r	6242208.07 6242017.96	2276463.53	
POINTSOURCE POINTSOURCE	-	SPORTS01	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6238394.63	2276466.13 2275269.77	
POINTSOURCE		SPORTS02	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6238287.25	2275203.77	
POINTSOURCE	-	SPORTS03	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6238184.16		1693.00
POINTSOURCE		SPORTS04	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6238102.56	2275085.08	1686.23
POINTSOURCE		SPORTS05	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6238257.18	2274934.75	1692.09
POINTSOURCE	+	SPORTS06	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6238192.75	2274758.65	1686.22
POINTSOURCE	-	SPORTS07	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6238003.77	2274904.68	
POINTSOURCE		SPORTS08	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6238029.54	2274646.97	
POINTSOURCE POINTSOURCE		SPORTS09 SPORTS10	81.1 81.1	81.1 81.1	81.1 81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6238343.09	2274655.56 2274518.12	
POINTSOURCE	-	SPORTS11	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6238003.77	2274318.12	
POINTSOURCE	-	SPORTS12	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6238205.64	2274333.43	
POINTSOURCE		SPORTS13	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6238519.19	2274092.90	
POINTSOURCE		SPORTS14	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6238338.79	2274114.37	1671.09
POINTSOURCE		SPORTS15	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6238085.38	2274148.73	1670.56
POINTSOURCE	_	SPORTS16	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6237887.80	2274299.07	_
POINTSOURCE	-	SPORTS17	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6237840.55	2274535.30	
POINTSOURCE		SPORTS18	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6237827.67	2274797.30	
POINTSOURCE POINTSOURCE	-	SPORTS19 SPORTS20	81.1 81.1	81.1 81.1	81.1 81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6237857.73 6237947.93	2275020.65 2275192.46	
POINTSOURCE		SPORTS21	81.1	81.1	81.1	LW	81.1		900.00	0.00	0.00	5.00	r	6237947.93	2275432.99	
POINTSOURCE	-	SPORTS22	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6238111.15	2275407.22	
POINTSOURCE	-	SPORTS23	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6238317.31	2275415.81	
POINTSOURCE		SPORTS24	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6238583.62	2275574.73	1670.38
POINTSOURCE	-	SPORTS25	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6238544.96	2275428.69	
POINTSOURCE	-	SPORTS26	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6238420.40	2275566.14	
POINTSOURCE		SPORTS27	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6238527.78	2275699.29	
POINTSOURCE		SPORTS28	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6238660.93	2275793.78	
POINTSOURCE POINTSOURCE	-	SPORTS29 SPORTS30	81.1 81.1	81.1 81.1	81.1 81.1	Lw	81.1		900.00	0.00	0.00	5.00	r r	6238733.95 6238742.54	2276060.08 2276249.07	
POINTSOURCE	-	SPORTS31	81.1	81.1	81.1	LW	81.1		900.00	0.00	0.00	5.00	r	6238824.14	2276249.07	
POINTSOURCE	-	SPORTS32	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6238682.40	2276390.81	
POINTSOURCE	-	SPORTS33	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6238764.01	2276498.19	
POINTSOURCE	-	SPORTS34	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6239778.15	2273943.70	
POINTSOURCE		SPORTS35	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6239772.09	2273755.79	1737.21
POINTSOURCE		SPORTS36	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6239776.13	2273577.98	
POINTSOURCE		SPORTS37	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6239774.11	2273392.10	
POINTSOURCE		SPORTS38	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00	r	6239770.07	2273222.37	1/21.82

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Name	M.	ID	R	esult. PW	/L		Lw/L	i	Оре	erating T	ime	Height	С	oordinates	
			Day	Evening	Night	Туре	Value	norm.	Day	Special	Night		Х	Υ	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)	(ft)	(ft)	(ft)
POINTSOURCE		SPORTS39	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6237884.19	2274129.21	1679.32
POINTSOURCE		SPORTS40	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6237808.32	2275320.68	_
POINTSOURCE		SPORTS41	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6237684.67	2275750.62	1656.04
POINTSOURCE		SPORTS42	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6237577.89	2275621.36	1653.62
POINTSOURCE		SPORTS43	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6237709.96	2275494.91	
POINTSOURCE		SPORTS44	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6237704.34	2275166.13	1664.86
POINTSOURCE		SPORTS45	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r		2275309.44	
POINTSOURCE		SPORTS46	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6238836.80	2276607.69	
POINTSOURCE		SPORTS47	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r		2276155.27	_
POINTSOURCE		SPORTS48	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6238241.07	2275576.40	_
POINTSOURCE		SPORTS49	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6237982.54	2275570.78	
POINTSOURCE		SPORTS50	81.1	81.1	81.1 81.1	Lw	81.1		900.00	0.00	0.00	5.00 r 5.00 r	6237836.42	2275705.66	-
POINTSOURCE POINTSOURCE		SPORTS51 SPORTS52	81.1 81.1	81.1 81.1	81.1	Lw	81.1 81.1		900.00	0.00	0.00	5.00 r 5.00 r	6238718.78 6238612.00	2273845.40 2273985.90	_
POINTSOURCE		SPORTS53	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6238527.69	2273859.45	
POINTSOURCE		SPORTS54	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6238361.90	2273980.28	-
POINTSOURCE		SPORTS55	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6238269.17	2273853.83	
POINTSOURCE		SPORTS56	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6238125.85	2273974.66	
POINTSOURCE		SPORTS57	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6237990.97	2273865.07	
POINTSOURCE		SPORTS58	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6237850.47	2273991.52	
POINTSOURCE		SPORTS59	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r		2273865.07	
POINTSOURCE		SPORTS60	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r		2273991.52	_
POINTSOURCE		SPORTS61	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6237718.39	2274137.64	1687.19
POINTSOURCE		SPORTS62	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6237569.46	2274233.19	1683.64
POINTSOURCE		SPORTS63	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6237707.15	2274407.41	1669.04
POINTSOURCE		SPORTS64	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6237575.08	2274500.14	1664.28
POINTSOURCE		SPORTS65	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6237707.15	2274657.51	1654.57
POINTSOURCE		SPORTS66	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6237566.65	2274767.10	1648.13
POINTSOURCE		SPORTS67	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6237701.53	2274935.70	1657.17
POINTSOURCE		SPORTS68	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6237575.08	2275036.87	1650.55
POINTSOURCE		SPORTS69	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r		2275705.66	
POINTSOURCE		SPORTS70	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6238297.27	2275708.47	
POINTSOURCE		SPORTS71	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r		2275926.90	
POINTSOURCE		SPORTS72	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6238580.41	2276317.71	_
POINTSOURCE		SPORTS73	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6238676.20	2276595.13	_
POINTSOURCE		SPORTS74	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6238448.87	2275819.93	
POINTSOURCE POINTSOURCE		SPORTS75	81.1 81.1	81.1 81.1	81.1 81.1	Lw	81.1 81.1		900.00	0.00	0.00	5.00 r 5.00 r	6238469.11 6238460.43	2276051.20 2276236.22	-
POINTSOURCE		SPORTS76 SPORTS77	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6238457.54	2276421.23	
POINTSOURCE		SPORTS78	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6238567.09	2276496.66	
POINTSOURCE		SPORTS79	81.1	81.1	81.1	Lw	81.1		900.00	0.00	0.00	5.00 r	6238457.54	2276612.03	_
POINTSOURCE		TRASH01	89.0	89.0	89.0	Lw	89.0		150.00	0.00	90.00	5.00 r	6236480.19	2275238.87	-
POINTSOURCE		TRASH02	89.0	89.0	89.0	Lw	89.0		150.00	0.00	90.00	5.00 r	6239651.47	2273388.72	
POINTSOURCE		TRASH03	89.0	89.0	89.0	Lw	89.0		150.00	0.00	90.00	5.00 r	6238972.12	2274186.60	1711.78
POINTSOURCE		TRASH04	89.0	89.0	89.0	Lw	89.0		150.00	0.00	90.00	5.00 r	6238905.63	2275394.98	_
POINTSOURCE		TRASH05	89.0	89.0	89.0	Lw	89.0		150.00	0.00	90.00	5.00 r	6239151.35	2276626.49	1663.54
POINTSOURCE		TRASH06	89.0	89.0	89.0	Lw	89.0		150.00	0.00	90.00	5.00 r	6239848.05	2275493.27	1713.58
POINTSOURCE		TRASH07	89.0	89.0	89.0	Lw	89.0		150.00	0.00	90.00	5.00 r	6239671.71	2275198.40	1717.24
POINTSOURCE		TRASH08	89.0	89.0	89.0	Lw	89.0		150.00	0.00	90.00	5.00 r	6240492.71	2273197.92	1728.69
POINTSOURCE		TRASH09	89.0	89.0	89.0	Lw	89.0		150.00	0.00	90.00	5.00 r	6240273.01	2273200.81	1725.48
POINTSOURCE		TRASH10	89.0	89.0	89.0	Lw	89.0		150.00	0.00	90.00	5.00 r			
POINTSOURCE		TRASH11	89.0	89.0	89.0	Lw	89.0		150.00	0.00	90.00	5.00 r			_
POINTSOURCE		TRASH12	89.0	89.0	89.0	Lw	89.0		150.00	0.00	90.00	5.00 r			
POINTSOURCE	<u> </u>	TRASH13	89.0	89.0	89.0	Lw	89.0		150.00	0.00	90.00	5.00 r			-
POINTSOURCE		TRASH14	89.0	89.0	89.0	Lw	89.0		150.00	0.00	90.00	5.00 r			_
POINTSOURCE		TRASH15	89.0	89.0	89.0	Lw	89.0		150.00	0.00	90.00	5.00 r			_
POINTSOURCE		TRASH16	89.0	89.0	89.0	Lw	89.0		150.00	0.00	90.00	5.00 r		2274002.18	_
POINTSOURCE		TRASH17	89.0	89.0	89.0	Lw	89.0		150.00	0.00	90.00	5.00 r			_
POINTSOURCE		TRASH18	89.0	89.0	89.0	Lw	89.0		150.00	0.00	90.00	5.00 r			
POINTSOURCE	Щ	TRASH19	89.0	89.0	89.0	Lw	89.0		150.00	0.00	90.00	5.00 r	6241612.38	2275660.67	1/42.47

Line Source(s)

		- (- /																		
Name	M.	ID	R	esult. PW	'L	R	esult. PW	L'		Lw / Li		Ор	erating Ti	ime		Moving	Pt. Src		Heigh	nt
			Day	Evening	Night	Day	Evening	Night	Туре	Value	norm.	Day	Special	Night		Number		Speed		
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	Day	Evening	Night	(mph)	(ft)	Γ
LINESOURCE		TRUCK01	106.2	91.1	97.2	85.7	70.6	76.7	PWL-Pt	93.2					1777.0	55.0	222.0	6.2	8	r
LINESOURCE		TRUCK02	105.4	90.3	96.3	85.7	70.6	76.7	PWL-Pt	93.2					1777.0	55.0	222.0	6.2	8	r
LINESOURCE		TRUCK03	109.9	94.8	100.9	85.7	70.6	76.7	PWL-Pt	93.2					1777.0	55.0	222.0	6.2	8	r
LINESOURCE		TRUCK04	103.8	88.8	94.8	85.7	70.6	76.7	PWL-Pt	93.2					1777.0	55.0	222.0	6.2	8	r
LINESOURCE		TRUCK05	100.7	85.6	91.7	85.7	70.6	76.7	PWL-Pt	93.2					1777.0	55.0	222.0	6.2	8	r
LINESOURCE		TRUCK06	106.3	91.2	97.2	85.7	70.6	76.7	PWL-Pt	93.2					1777.0	55.0	222.0	6.2	8	r
LINESOURCE		TRUCK07	105.7	90.6	96.6	85.7	70.6	76.7	PWL-Pt	93.2					1777.0	55.0	222.0	6.2	8	r
LINESOURCE		TRUCK08	107.7	92.7	98.7	85.7	70.6	76.7	PWL-Pt	93.2					1777.0	55.0	222.0	6.2	8	r
LINESOURCE		TRUCK09	108.3	93.2	99.3	85.7	70.6	76.7	PWL-Pt	93.2					1777.0	55.0	222.0	6.2	8	r
LINESOURCE		TRUCK10	107.3	92.2	98.3	85.7	70.6	76.7	PWL-Pt	93.2					1777.0	55.0	222.0	6.2	8	r
LINESOURCE		TRUCK11	108.7	93.6	99.6	85.7	70.6	76.7	PWL-Pt	93.2					1777.0	55.0	222.0	6.2	8	r

Name	M.	ID	R	esult. PW	'L	Re	esult. PW	L'		Lw / Li		Op	erating Ti	me		Moving	Pt. Src		Heigh	ht
			Day	Evening	Night	Day	Evening	Night	Туре	Value	norm.	Day	Special	Night		Number		Speed		
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	Day	Evening	Night	(mph)	(ft)	
LINESOURCE		TRUCK12	104.5	89.4	95.5	85.7	70.6	76.7	PWL-Pt	93.2					1777.0	55.0	222.0	6.2	8	r
LINESOURCE		TRUCK13	118.5	103.4	109.5	85.7	70.6	76.7	PWL-Pt	93.2					1777.0	55.0	222.0	6.2	8	r
LINESOURCE		TRUCK14	120.3	105.2	111.2	85.7	70.6	76.7	PWL-Pt	93.2					1777.0	55.0	222.0	6.2	8	r
LINESOURCE		TRUCK15	102.3	87.2	93.2	85.7	70.6	76.7	PWL-Pt	93.2					1777.0	55.0	222.0	6.2	8	r

Name	ID	ŀ	lei	ght		Coordinat	es	
		Begin		End	х	у	z	Ground
		(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
LINESOURCE	TRUCK01	8.00	r	,	6242442.37	2275605.20		1708.61
EII TESO OTTOE	mocnor	0.00	Ė		6242447.65	2275421.86		1719.43
					6242391.35	2275244.31		1733.03
LINESOURCE	TRUCK02	8.00	r		6241624.56	2275601.96		1742.03
EIIIESGGIIGE	THO CHOZ	0.00	Ė		6241625.14	2275298.49		1755.05
LINESOURCE	TRUCKOS	8.00	r		6242369.67	2276494.22	1706.29	1698.29
EII TESO OTTOE	1110 01105	0.00	Ė		6241499.65	2276499.68		1696.71
LINESOURCE	TRUCKOA	8.00	r		6241645.52	2276277.47	1711.44	1703.44
LINESCONCE	TROCKOT	0.00	Ė		6241647.10			1690.27
LINESOURCE	TRUCKOS	8.00	r		6241346.81	2275195.83	1770.03	1762.03
LINESCORCE	TROCKOS	8.00	÷		6241351.03	2275299.76		1758.00
LINESOLIDCE	TRUCUNG	8.00	r		6239619.09	2274281.60	1732.35	1724.35
LINESOURCE	TRUCKUU	8.00	Ė		6239461.39	2274281.60	1733.00	1725.00
						2274277.02		
					6239443.16			1724.87
					6239435.35	2274255.48		1724.59
			_		6239430.14	2274229.44		1723.94
LINECOURCE	TDUICYC	0.00	l-		6239427.62	2274075.45	1725.07	1717.07
LINESOURCE	TRUCK07	8.00	r	-	6239617.40	2275166.68		1710.49
					6239434.05	2275170.85	1716.91	1708.91
					6239430.06			1714.12
					6239422.25	2275311.27	1723.32	1715.31
LINESOURCE	TRUCK08	8.00	r		6240976.24	2276330.07		
					6241502.00	2276329.19		1701.73
LINESOURCE	TRUCK09	8.00	r		6241021.83	2275562.96		1766.15
					6241351.78	2275564.93	1748.12	1740.12
					6241351.03	2275299.76	1766.00	1758.00
LINESOURCE	TRUCK10	8.00	r		6239829.54	2276329.76	1697.73	1689.73
					6239356.00	2276320.90	1679.54	1671.54
LINESOURCE	TRUCK11	8.00	r		6239806.70	2275557.97	1713.88	1705.88
					6239157.93	2275561.08	1696.15	1688.15
LINESOURCE	TRUCK12	8.00	r		6239433.38	2275559.06	1706.07	1698.07
					6239425.70	2275308.68	1723.56	1715.56
LINESOURCE	TRUCK13	8.00	r		6245311.50	2275489.15	1609.78	1601.78
					6244654.37	2275259.39	1623.01	1615.01
					6244493.54	2275222.62	1617.21	1609.21
					6244102.94	2275176.67	1649.11	1641.11
					6243091.97	2275107.74	1704.97	1696.97
					6242885.18	2275112.34	1716.88	1708.88
					6242352.13	2275254.79	1743.22	1735.22
			Ĺ		6242131.56	2275296.15	1747.27	1739.27
					6239153.81	2275309.93	1696.77	1688.77
LINESOURCE	TRUCK14	8.00	r		6241502.02	2275299.06	1758.16	1750.16
					6241499.65	2276499.68	1704.71	1696.71
					6239346.81	2276504.71	1678.61	1670.61
					6239356.00	2276320.90	1679.54	1671.54
					6239356.00	2276160.06	1681.30	1673.30
					6239282.48	2275930.30	1692.80	1684.79
					6239163.00	2275627.01	1693.10	1685.10
					6239153.81	2275507.53	1698.69	1690.69
						2275309.93		
					6239144.62			
			Т		6241506.60			
			Т			2275299.06		
LINESOURCE	TRUCK15	8.00	r		6242369.67			
			Т		6242425.06			
					6242439.20			1700.80
			H		6242435.16			1706.17
	$\overline{}$		_		02.2433.10	0000.02	2,27.27	1,00.17

Area Source(s)

Name	M.	ID	R	esult. PW	'L	Re	esult. PW	L"		Lw/L	i	Op	erating Ti	ime	Height	i
			Day	Evening	Night	Day	Evening	Night	Туре	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		Г
AREASOURCE		DOCK01	111.5	111.5	111.5	70.2	70.2	70.2	Lw	111.5					8	r
AREASOURCE		DOCK02	111.5	111.5	111.5	71.0	71.0	71.0	Lw	111.5					8	r
AREASOURCE		DOCK03	111.5	111.5	111.5	62.5	62.5	62.5	Lw	111.5					8	r
AREASOURCE		DOCK04	111.5	111.5	111.5	69.2	69.2	69.2	Lw	111.5					8	r
AREASOURCE		DOCK05	111.5	111.5	111.5	66.8	66.8	66.8	Lw	111.5					8	r
AREASOURCE		DOCK06	111.5	111.5	111.5	76.7	76.7	76.7	Lw	111.5					8	r

Name	M.	ID	R	esult. PW	L	Re	esult. PW	L"		Lw/L	i	Op	erating Ti	me	Height	t
			Day	Evening	Night	Day	Evening	Night	Туре	Value	norm.	Day	Special	Night	(ft)	П
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		П
AREASOURCE		DOCK07	111.5	111.5	111.5	76.7	76.7	76.7	Lw	111.5					8	r
AREASOURCE		DOCK08	111.5	111.5	111.5	77.4	77.4	77.4	Lw	111.5					8	r
AREASOURCE		DOCK09	111.5	111.5	111.5	74.6	74.6	74.6	Lw	111.5					8	r
AREASOURCE		DOCK10	111.5	111.5	111.5	76.7	76.7	76.7	Lw	111.5					8	r
AREASOURCE		DOCK11	111.5	111.5	111.5	77.1	77.1	77.1	Lw	111.5					8	r
AREASOURCE		DOCK12	111.5	111.5	111.5	77.8	77.8	77.8	Lw	111.5					8	r
AREASOURCE		DOCK13	111.5	111.5	111.5	80.1	80.1	80.1	Lw	111.5					8	r
AREASOURCE		DOCK14	111.5	111.5	111.5	81.6	81.6	81.6	Lw	111.5					8	r
AREASOURCE		DOCK15	111.5	111.5	111.5	80.2	80.2	80.2	Lw	111.5					8	r
AREASOURCE		DOCK16	111.5	111.5	111.5	80.1	80.1	80.1	Lw	111.5					8	r
AREASOURCE		DOCK17	111.5	111.5	111.5	77.7	77.7	77.7	Lw	111.5					8	r

AREASOURCE	DOC	K17 111	5	111.5	1	11.5 77.7	77.7	7.7 Lw	111.5
Nama	ID		lai	abt	\neg		Coordina	tos	
Name	ID			ght End	+			1	Ground
		Begin (ft)	Γ	(ft)	+	(ft)	y (ft)	(ft)	(ft)
AREASOURCE	DOCK01	8.00	r	(10)	+	6242523.17	2276395.82		
ANEASOONEE	DOCKOI	0.00	Ė		\forall	6242523.17	2275606.76		
					7	6242387.75	2275604.15		
					7	6242343.48	2275601.55		
					1	6242342.22	2276395.82		1703.75
AREASOURCE	DOCK02	8.00	r		7	6241744.52		 	
					T	6241697.65	2275596.34	1758.16	1750.16
						6241562.23	2275606.76	1745.52	1737.52
					T	6241560.27	2276275.40	1709.80	1701.80
						6241738.08	2276275.40	1713.38	1705.38
AREASOURCE	DOCK03	8.00	r			6239614.28	2275247.35	1724.81	1716.81
						6241290.20	2275247.35	1769.56	1761.56
					_	6241290.20	2275195.83	1771.09	1763.09
					4	6241441.53	2275195.83	1765.71	
					4	6241443.59	2274196.67		1752.32
					4	6241390.43	2274139.16		
			L		+	6239617.64	2274135.69		1727.00
					\dashv	6239619.52	2274325.51		1722.94
					+		2274380.19	 	
			H		+	6241314.84	2274377.59 2275067.69		
					\dashv	6241307.02			
			-		+	6239619.52 6239619.52	2275057.28 2275111.97		1704.97
AREASOURCE	DOCK04	8.00	r		+	6239830.54	2276312.32	_	1690.71
7.11.27.150011.02	Воско.	0.00	Ė		1	6239831.67	2276402.33	_	
					7	6240970.20	2276403.84	 	1711.20
					1	6240972.08	2276319.85		1717.39
					1	6240977.46	2276242.53	1730.32	1722.32
					T	6239826.75	2276245.99	1701.63	1693.63
AREASOURCE	DOCK05	8.00	r			6239804.22	2275719.17	1713.00	1705.00
						6241017.31	2275719.17	1770.25	1762.25
					_	6241019.05	2275632.41		1764.00
					4	6241025.98	2275459.22		
					4	6239807.69			
					4	6239805.96	2275635.61		1704.95
AREASOURCE	DOCK06	8.00	r		+	6239445.01	2276763.44		
					\dashv	6239828.98	2276761.88		1669.58
					\dashv	6239827.42 6239446.56	2276676.38 2276681.05		1673.41 1673.52
AREASOURCE	DOCK07	8.00	r		+	6240222.28	2276761.88		
AREASOURCE	Воскол	0.00	Ė		\forall	6240604.69	2276763.44		1695.73
					+	6240606.25	2276681.05		
			Т		T	6240217.61	2276676.38	_	
AREASOURCE	DOCK08	8.00	r		1	6240997.99	2276755.66	1697.55	
					_	6241327.55	2276757.22	 	
					J	6241329.10	2276673.27	1700.26	1692.26
						6240994.88	2276674.83	1702.70	1694.70
AREASOURCE	DOCK09	8.00	r		_[6241801.68	2276758.77	1690.63	
					4	6242407.95	2276761.88	1675.80	1667.80
					4	6242407.95			
					4		2276673.27		
AREASOURCE	DOCK10	8.00	r		+		2273928.74		
					+	6240258.89			
					+	6240250.47			
ADEASOURCE	DOCV11	8.00	-		+	6240194.87	2273370.80		
AREASOURCE	POCKII	8.00	ſ		+	6240516.01 6240568.05	2273938.55 2273935.66		
					\dashv	6240570.94			
			H		\forall	6240518.90			
AREASOURCE	DOCK12	8.00	r		+		2275058.57		
					+		2275053.38		
					+	6241742.38	2274659.63		
			_		_				

Name	ID	ŀ	lei	ght		Coordinat	es	
		Begin		End	х	у	z	Ground
		(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
					6241680.15	2274657.23	1778.32	1770.32
AREASOURCE	DOCK13	8.00	r		6239150.79	2276591.79	1667.08	1659.08
					6239187.55	2276588.06	1669.44	1661.44
					6239183.32	2276184.67	1676.62	1668.62
					6239147.42	2276182.56	1675.23	1667.23
AREASOURCE	DOCK14	8.00	r		6239062.73	2275754.63	1695.62	1687.62
					6238970.27	2275539.24	1684.14	1676.14
					6238933.55	2275554.70	1679.55	1671.55
					6239014.72	2275771.16	1693.02	1685.02
AREASOURCE	DOCK15	8.00	r		6238996.59	2275097.39	1698.37	1690.37
					6238999.59	2274799.33	1704.43	1696.43
					6238950.88	2274795.72	1703.83	1695.83
					6238948.28	2275096.99	1704.78	1696.78
AREASOURCE	DOCK16	8.00	r		6239002.54	2274337.16	1713.17	1705.17
					6238955.76	2274337.16	1712.78	1704.78
					6238953.55	2274644.53	1709.33	1701.33
					6239003.36	2274641.26	1710.15	1702.15
AREASOURCE	DOCK17	8.00	r		6239681.14	2273945.65	1735.13	1727.13
					6239742.87	2273945.65	1738.86	1730.86
					6239742.87	2273528.93	1735.00	1727.00
					6239681.14	2273528.93	1731.22	1723.22

Barrier(s)															
Name	Sel.	M.	ID	Abso	rption	Z-Ext.	Cant	ilever	Н	lei	ght		Coordinat	es	
				left	right		horz.	vert.	Begin		End	х	У	Z	Ground
						(ft)	(ft)	(ft)	(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
BARRIERTEMP			0						12.00	r		6241619.28	2276276.70	1715.25	1703.25
												6241560.27	2276275.40	1713.80	1701.80
												6241562.23	2275606.76	1749.52	1737.52
										П		6241607.61	2275603.27	1752.51	1740.51
BARRIERTEMP			0						12.00	r		6242466.84	2275605.67	1718.81	1706.81
										П		6242523.17	2275606.76	1716.23	1704.23
												6242523.17	2276395.82	1715.66	1703.66
BARRIERTEMP			0						12.00	r		6239618.82	2274254.19	1737.21	1725.21
										П		6239617.64	2274135.69	1739.00	1727.00
										П		6241390.43	2274139.16	1764.31	1752.31
										П		6241443.59	2274196.67	1764.32	1752.32
										П		6241441.53	2275195.83	1769.71	1757.71
										П		6241370.24	2275195.83	1773.42	1761.42
BARRIERTEMP			0						12.00	r		6241320.76	2275195.83	1774.81	1762.81
										П		6241290.20	2275195.83	1775.09	1763.09
										П		6241290.20	2275247.35	1773.56	1761.56
										П		6239614.28	2275247.35	1728.81	1716.81
										П		6239616.39	2275192.88	1725.34	1713.34
BARRIERTEMP			0						12.00	r		6241023.21	2275528.36	1779.23	1767.23
										П		6241025.98	2275459.22	1779.22	1767.22
										П		6239807.69	2275454.02	1721.84	1709.84
										П		6239807.06	2275519.85	1719.16	1707.16
BARRIERTEMP			0						12.00	r		6239827.11	2276339.88	1701.13	1689.13
										П		6239827.95	2276405.44	1697.68	1685.67
										П		6240973.00	2276407.47	1723.12	1711.12
										П		6240974.89	2276345.91	1727.72	1715.72
BARRIEREXISTING			0						5.00	r		6238882.07	2277628.11	1643.70	1638.70
										П		6238877.20	2276996.83	1661.81	1656.81
										П		6238066.37	2276991.15	1631.36	1626.36
										П		6238064.75	2277022.83	1634.82	1629.82
BARRIEREXISTING			0						5.00	r		6238066.37	2276991.15	1631.36	1626.36
										П		6238064.75	2277022.83	1634.82	1629.82
										П		6238046.87	2277032.58	1635.01	1630.01
										П		6238045.25	2276933.46	1634.03	1629.03
BARRIEREXISTING			0						5.00	r		6238024.12	2276854.66	1635.69	1630.69
										П		6238063.12	2276844.91	1632.56	1627.56
										П		6238059.87	2276151.07	1653.37	1648.37
										П		6237201.11	2276149.45	1627.50	1622.50
										П		6237179.17	2273931.45	1649.43	1644.43
BARRIEREXISTING			0						5.00	r		6238855.26	2272183.86	1716.82	1711.82
										П		6241018.82	2272183.86	1792.84	1787.84
										П		6241019.64	2271965.31	1797.08	1792.08
BARRIEREXISTING			0						5.00	r		6241511.98	2272187.93	1801.43	1796.43
										П		6241521.73	2272850.07	1768.60	1763.60
										П		6242187.13	2272849.26	1727.00	1722.00
										Ħ		6242193.56	2273514.55	1769.86	1764.86
										Н		6244189.22	2273519.76	1664.00	1659.00
			T							H		6244196.17	2274177.75	1665.80	1660.80
		\vdash								H		6245306.41	2274176.01	1625.64	1620.64
BARRIEREXISTING			0						12.00	r		6239006.35	2274325.60	1717.56	1705.56

Name	Sel.	M.	ID	Abso	rption	Z-Ext.	Canti	ilever	Н	ei	ght		Coordinat	es	
				left	right		horz.	vert.	Begin		End	х	У	z	Ground
						(ft)	(ft)	(ft)	(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
												6239007.70	2274651.88	1713.56	1701.56
BARRIEREXISTING			0						12.00	r		6240534.88	2273207.16	1736.05	1724.05
												6240240.89	2273202.04	1732.21	1720.21

Building(s)

Name Sel. M. ID RB Residents Absorption Height Coordinates Coordinates Coordinates Region X Y Z Growth Coordinates Coordin	Buildin	ıg(s	;)										
BUILDING BUILDINGOODOI				ID	RB	Residents	Absorption	Height	:		Coordinat	es	
BUILDING BUILDINGO0001 x 0 45.00 6247367.57 2275685.81 774.06 179.								Begin		х	У	Z	Ground
								(ft)		(ft)	(ft)	(ft)	(ft)
	BUILDING			BUILDING00001	х	0		45.00	r	6241705.75	2276386.53	1744.06	1699.06
										6242342.22	2276395.82	1744.06	1703.75
BUILDING BUILDINGOOOQ BUILDINGOO										6242343.48	2275601.55	1744.06	1719.32
										6242387.75	2275604.15	1744.06	1714.46
										6242392.96	2275453.11	1744.06	1721.14
BUILDING BUILDINGO0002 x 0 0 45.00 r 6239392.96 275193.91 7143.01 7140.61 1704 BUILDING BUILDINGO0002 x 0 0 45.00 r 6239392.96 275193.96 71744.06 1704 BUILDING BUILDINGO0002 x 0 0 45.00 r 6239392.96 275193.96 71744.93 1704 C239519.52 275057.96 1748.32 1704 C239519.52 275057.96 1748.32 1704 C239519.52 275057.96 1748.32 1704 C239519.52 275057.96 1748.32 1704 C239519.52 2775057.96 1748.32 1704 C239519.52 2775057.96 1748.32 1704 C239519.52 277405.96 1704.32 1704 C239519.52 277405.96 1704.32 1704 C239519.52 277405.96 1704.32 1704 C239519.52 277405.96 1704.32 1704 C239519.52 277405.96 1704.32 1704 C239519.52 277405.96 1704.32 1704 C239519.52 277405.96 1704.32 1704 C239519.52 277405.96 1704.32 1704 C239519.52 277405.96 1704.32 1704 C239519.52 277405.96 1704.32 1704 C239519.52 277405.96 1704.32 1704 C239519.52 277405.96 1704.32 1704.30 1704 C239519.53 27504.59 1704.32 1704.30 1704 C239519.54 1704.06 1704.32 1704.30 1704 C239519.54 1704.06 1704.30 1704.									L	6241692.44	2275450.51	1744.06	1760.00
BUILDING BUILDINGO0002 x 0 45.00 7 6239329.5 227517.40 1744.06 1708 BUILDING BUILDINGO0002 x 0 45.00 7 6239329.5 2275103.6 1748.32 1708 CARREST CONTROL OF CARREST CONTROL OF CASASS CARREST CONTROL OF CASASS CARREST CONTROL OF CASASS CARREST CARRE										6241697.65	2275596.34	1744.06	1750.16
BUILDING BUILDINGO0002 x 0 0 45.00 r 623993.96 27257.40 1748.02 1708 G239619.52 275510.70 1748.32 1708 G239619.52 275507.78 1748.32 1708 G239619.52 275507.78 1748.32 1708 G239619.52 275507.78 1748.32 1708 G239619.52 27507.78 1748.32 1708 G239619.52 273657.79 1748.32 1728 G23114.84 27247.75 1748.32 1728 G23114.84 27247.75 1748.32 1728 G2399.56 272433.33 1748.32 1728 BUILDING BUILDINGO0003 x 0 45.00 r 623995.65 272433.33 1748.32 1728 BUILDING BUILDINGO0003 x 0 45.00 r 623995.65 272433.33 1748.32 1728 BUILDING G239619.52 273613.81 1732.68 1708 G239619.52 273613.81 1732.68 1708 G239619.52 273613.81 1732.68 1708 G240977.76 272642.53 1732.68 1708 G240977.76 272642.53 1732.68 1708 G240977.76 272642.53 1732.68 1708 G240977.71 6272642.53 1732.68 1708 G240977.71 6272642.53 1732.68 1708 G240977.71 6272642.53 1732.68 1708 G240977.71 6272642.53 1732.68 1708 G240977.72 277631.78 1732.68 1708 G240977.71 6272642.53 1732.68 1708 G240977.72 277631.78 1732.68 1708 G240977.72 277631.78 1732.68 1708 G240977.72 277631.78 1732.68 1708 G240977.72 277631.78 1732.68 1708 G240977.72 277631.78 1732.68 1708 G239941.28 277675.91 1732.68 1708 G239941.28 277675.91 1732.68 1708 G239941.28 277675.91 1732.68 1708 G239941.29 277675.90 1696.08 1658 G239941.29 277675.90 1696.08 1658 G239941.29 2776675.91 1696.08 1658 G239941.29 2776675.91 1696.08 1658 G239941.29 2776675.91 1696.08 1658 G239941.29 2776675.91 1712.10 1658 G240077.55 2726675.81 1732.10 1658 G240077.55 2726675.81 1732.10 1658 G240077.55 2726675.81 1732.10 1658 G240077.55 2726675.81 1732.10 1658 G240077.55 2726675.81 1734.99 1658 G240077.55 2726675.81 1734.99 1658 G240077.55 2726675.81 1734.99 1658 G240078.75 2776678.29 1734.99 1658 G240078.75 2776678.29 1734.99 1658 G240078.76 277678.75 1771.10 1658 G240078.76 277678.75 1771.10 1658 G240078.76 277678.75 1771.10 1658 G240078.76 277678.75 1771.10 1658 G240078.76 277678.75 1771.10 1658 G240078.76 277678.75 1771.10 1658 G240078.76 277678.75 1771.10 1658 G240078.76 277678.75 1771.10 1658 G240078.76 277678.75 1771.10 1658 G240078.76 277678.7									L	6241744.52	2275596.34	1744.06	1757.34
BUILDING BUILDINGO0002 x 0 45.00 r 623939.9.6 2275109.36 1748.32 1703 6239619.52 2275107.19 71748.32 1703 6239619.52 2275107.19 71748.32 1703 6239619.52 2275367.28 1748.32 1703 6239619.52 2274380.19 1748.32 1703 6239619.52 2274380.19 1748.32 1703 6239619.52 2274385.51 1748.32 1703 6239619.52 2274385.51 1748.32 1703 62399619.52 2274385.51 1748.32 1703 62399619.52 2274385.51 1748.32 1703 8UILDING BUILDINGO0003 x 0 45.00 r 623996.75 227645.99 1732.68 1603 6240977.46 227642.33 1732.68 1703 6240977.46 227642.33 1732.68 1703 6240977.40 227643.23 1732.68 1703 6240977.40 227643.23 1732.68 1703 6240977.40 227643.33 1732.68 1703 6240171.31 227519.17 1732.68 1703 6240171.31 227519.17 1732.68 1703 6240171.31 227519.17 1732.68 1703 623984.82 2275032.03 1732.68 1703 8UILDING BUILDINGO0004 x 0 45.00 r 623984.75 227634.88 1732.68 1703 8UILDING BUILDINGO0005 x 0 45.00 r 623983.75 2277618.81 1732.68 1703 8UILDING BUILDINGO0004 x 0 45.00 r 623984.82 2277519.75 1732.68 1703 8UILDING BUILDINGO0005 x 0 45.00 r 623984.82 2277519.75 1732.68 1703 8UILDING BUILDINGO0005 x 0 45.00 r 623984.82 2277616.91 1696.08 1654 623984.82 2277616.91 1696.08 1654 623984.82 227766.93 1696.08 1674 623984.82 2277616.91 1696.08 1654 623984.82 227766.91 1696.08 1654 623984.82 227766.91 1696.08 1674 6240079.72 227763.00 1712.10 1676 6240079.72 227766.83 11712.10 1696 8UILDING BUILDINGO0005 x 0 45.00 r 624143.75 2276662.81 1712.10 1696 8UILDING BUILDINGO0006 x 0 45.00 r 624143.75 2276662.81 1712.10 1696 8UILDING BUILDINGO0007 x 0 45.00 r 624143.75 2276662.81 1712.10 1696 8UILDING BUILDINGO0007 x 0 45.00 r 624143.76 2276662.81 1712.10 1696 8UILDING BUILDINGO0007 x 0 45.00 r 624143.76 2276662.81 1712.10 1696 8UILDING BUILDINGO0008 x 0 45.00 r 624143.76 2276662.81 1712.10 1696 8UILDING BUILDINGO0007 x 0 45.00 r 624143.76 2276662.81 1712.10 1696 8UILDING BUILDINGO0008 x 0 45.00 r 624164.82 227666.81 1712.10 1696 8UILDING BUILDINGO0008 x 0 45.00 r 624146.84 2276662.81 1712.10 1696 8UILDING BUILDINGO0008 x									L	6241738.08		1744.06	1705.38
									L	6241699.69	2276275.40	1744.06	1704.65
	BUILDING			BUILDING00002	х	0		45.00	r		2275109.36	1748.32	1703.32
									L				1704.97
BUILDING BUILDINGO0003 x 0													1702.29
BUILDING BUILDINGO0003 x 0 45.00 f 6239915.2 2274380.19 1748.32 1722 BUILDING BUILDINGO0003 x 0 45.00 f 623998.26 2274333.21 1748.32 1722 BUILDING BUILDINGO0003 x 0 45.00 f 6239826.75 2276311.85 1732.68 1680 6239826.75 2276311.85 1732.68 1680 6239826.75 2276342.59 1732.68 1680 6240977.46 227642.53 1732.68 1732 6240977.46 227642.53 1732.68 1722 6240977.46 227642.53 1732.68 1732 6240977.46 227642.53 1732.68 1732 6240977.46 227642.53 1732.68 1732 6240977.46 227642.53 1732.68 1732 6240977.46 227642.53 1732.68 1732 6240977.46 227642.53 1732.68 1732 6241165.98 2275632.03 1732.68 1732 6241165.98 2275632.03 1732.68 1732 6241165.98 2275632.03 1732.68 1732 6241165.98 2275632.03 1732.68 1732 6241165.98 2275632.03 1732.68 1732 6241165.98 2275632.03 1732.68 1732 6241165.98 2275632.03 1732.68 1732 6241165.98 2275632.03 1732.68 1732 6241165.98 2275632.03 1732.68 1732 6241165.98 2275632.03 1732.68 1732 6241165.98 2275632.03 1732.68 1732 6243980.59 6 2275635.61 1732.68 1732 6243980.59 6 2275635.61 1732.68 1732 623984.82 2277716.59 1656.08 1657 623984.82 2277716.59 1656.08 1657 623984.82 2277716.59 1656.08 1657 623984.82 2276766.88 1656.08 1657 6239843.59 2276680.59 1696.08 1657 6239843.59 2276680.59 1696.08 1657 6239843.59 2276680.59 1696.08 1657 6239843.59 2276680.59 1696.08 1659 6239843.59 2276680.59 1696.08 1659 6239843.59 2276680.59 1696.08 1659 6239843.59 2276680.59 1696.08 1659 6239843.59 2276680.59 1696.08 1659 6240075.75 6 227666.88 16596.08 1659 6240075.75 6 227666.88 16596.08 1659 6240075.75 6 227666.88 16596.08 1659 6240075.75 6 227666.89 16596.08 1672 624008.77 2276680.59 1712.10 1698 624008.77 2276680.59 1712.10 1698 624008.77 2276682.09 1712.10 1698 624008.77 2276682.09 1712.10 1698 624008.77 2276682.09 1712.10 1698 624008.77 2276682.09 1712.10 1698 624008.77 2276682.09 1712.10 1698 624008.77 2276682.09 1712.10 1698 624008.77 2276682.09 1712.10 1698 624008.77 2276682.09 1712.10 1698 624008.77 2276682.09 1712.10 1698 624008.77 2276682.09 1712.10 1698 624008.77 2276682.09 1712.10 1698 624008.77 2276682.09 1712.10 16					_				L				1762.89
BUILDING BUILDINGO0003 x 0 0 45.00 r 623995.60 2274313.81 1748.32 1722 BUILDING BUILDINGO0003 x 0 0 45.00 r 623996.60 2276311.85 1732.68 1873 623982.75 2276311.85 1732.68 1873 6240977.76 227631.87 1732.68 1873 6240977.72 2276318.78 1732.68 1873 6240977.72 2276318.78 1732.68 1873 6241171.55 2276320.51 1732.68 1732 6241171.55 2276320.51 1732.68 1732 6241171.55 2276320.51 1732.68 1732 6241171.55 2276320.51 1732.68 1732 6241171.55 2276320.51 1732.68 1732 6241171.55 2276320.51 1732.68 1732 6241171.55 2276320.51 1732.68 1732 6241171.55 2276320.51 1732.68 1732 6241171.55 2276320.51 1732.68 1732 6241171.55 2276320.51 1732.68 1732 6241171.55 2276320.51 1732.68 1732 6241171.55 2276320.51 1732.68 1732 6241171.55 2276320.51 1732.68 1732 6241171.55 2276320.51 1732.68 1732 6241171.55 2276320.51 1732.68 1732 623980.59 62 2275635.61 1732.68 1732 623980.59 62 2275635.61 1732.68 1732 623980.59 62 2275635.61 1732.68 1732 623980.59 62 2275635.61 1732.68 1732 623980.59 62 2275675.50 1732.68 1732 623980.59 62 2275675.50 1732.68 1732 623980.50 627565.90 1696.08 1653 623980.50 627565.90 1696.08 1653 623980.50 627565.90 1696.08 1653 623980.50 627565.90 1696.08 1653 623980.50 627565.90 1696.08 1653 623980.50 627565.90 1696.08 1653 623980.50 627565.90 1696.08 1653 623980.50 76 624010.44 227703.90 1712.10 1658 624000.50 72 227667.55 1712.10 1658 624000.50 72 227667.55 1712.10 1658 624000.50 72 227667.53 1712.10 1658 624000.50 72 227667.53 1712.10 1658 624000.50 72 227667.53 1712.10 1658 624000.50 72 227667.54 1712.10 1658 624000.50 72 227667.54 1712.10 1658 624000.50 72 227667.54 1712.10 1658 624000.50 72 227667.54 1712.10 1658 624000.50 72 227667.54 1712.10 1658 624000.50 72 227667.54 1712.10 1658 624000.50 72 227667.54 1712.10 1658 624000.50 72 227667.54 1712.10 1658 624186.01 72 227667.54 1712.10 1658 624186.01 72 227667.54 1712.10 1658 624186.01 72 227667.54 1712.10 1658 624186.01 72 227667.54 1712.10 1658 624186.01 72 227667.54 1712.10 1658 624186.01 72 227667.54 1712.10 1658 62					_				L				1748.65
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	BUILDING			BUILDING00009	х	0		45.00	r	6240574.65	2273939.95	1796.24	1751.24

Name	Sel.	M.	ID	RB	Residents	Absorption	Height			Coordinat	es	
							Begin		х	У	Z	Ground
							(ft)	Г	(ft)	(ft)	(ft)	(ft)
								Г	6240803.01	2273940.99	1796.24	1748.02
								H	6240794.67	2273205.84	1796.24	1734.35
								H	6240519.66	2273211.83	1796.24	1724.00
								H	6240519.66	2273364.65	1796.24	1730.65
								H	6240579.55	2273363.22	1796.24	1728.30
BUILDING			BUILDING00010	х	0		45.00	r	6240192.99	2273938.90	1805.17	1760.17
								Ė	6240188.03	2273357.67	1805.17	1731.62
								H	6240256.08	2273357.64	1805.17	1731.13
								H	6240253.28	2273204.82	1805.17	1720.58
								H	6239921.87	2273207.92	1805.17	1719.36
								H	6239922.92	2273937.86	1805.17	1739.82
BUILDING			BUILDING00011	х	0		45.00	r	6238911.66	2275920.40	1718.41	1673.41
2.220			,	Ë			.5.00	ŕ	6239092.54	2275846.82	1718.41	1683.82
								H	6239061.11	2275757.63	1718.41	1687.52
								H	6239014.72	2275771.16	1718.41	1685.02
								H	6238933.55	2275554.70	1718.41	1671.55
								H	6238970.27	2275539.24	1718.41	1676.14
								H	6238936.19	2275454.41	1718.41	1672.20
								H	6238752.25	2275518.79	1718.41	1666.25
BUILDING			BUILDING00012	х	0		45.00	r	6238972.98	2276591.79	1697.47	1652.47
DOILDING			DOILDINGGOODIZ	^			43.00	ŀ.	6239150.79	2276591.79	1697.47	1659.08
								H	6239147.42	2276182.56	1697.47	1667.23
								\vdash	6239183.32	2276184.67	1697.47	1668.62
								H	6239184.51	2276067.55	1697.47	1670.26
								H	6238976.04	2276064.49	1697.47	1664.79
BUILDING			BUILDING00013	х	0		45.00	r	6238993.46	2275168.17	1730.18	1685.18
DOILDING			DOILDINGGOODIS	<u> </u>	-		45.00	ŀ.	6239000.99	2275104.20	1730.18	1689.29
								H	6238945.87	2275104.20	1730.18	1696.51
								H	6238948.08	2274793.32	1730.18	1695.76
								H	6238998.79	2274793.32	1730.18	1696.69
								H	6238995.40	2274729.46	1730.18	1698.40
								H	6238664.91	2274731.39	1730.18	1690.15
								\vdash	6238661.05	2275164.31	1730.18	1700.16
BUILDING			BUILDING00014	х	0		45.00	r	6238950.28	2274647.80	1746.06	1701.06
- 5.25.110			_ 5.25000014	Ĥ	0		.5.00	ŕ	6238952.49	2274334.71	1746.06	1704.91
								\vdash	6239005.40	2274334.71	1746.06	1705.30
								\vdash	6238997.33	2274223.10	1746.06	1706.82
								\vdash	6238794.40	2274228.90	1746.06	1709.09
								\vdash	6238691.97	2274541.99	1746.06	1691.83
								\vdash	6238697.77	2274646.35	1746.06	1689.71
BUILDING			BUILDING00015	х	0		45.00	r	6239415.04	2273953.95	1760.77	1715.77
DOILDING			DOILDINGOOD13	<u> </u>	0		45.00	l '	6239675.99	2273959.59	1760.77	1728.33
								\vdash	6239675.99	2273430.64	1760.77	1722.07
								\vdash	6239477.24	2273430.64	1760.77	1713.05
								\vdash	6239477.24	2273849.64	1760.77	1719.90
				\vdash				\vdash				
				_				L	6239415.50	2273849.64	1760.77	1715.53

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APPENDIX 10.1:

CADNAA CONSTRUCTION NOISE MODEL INPUTS



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14064 - West Campus Upper Plateau

CadnaA Noise Prediction Model: 14064_04_Construction.cna

Date: 09.03.22 Analyst: S. Shami

Calculation Configuration

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

Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Туре	Auto	Noise Type			Х	Υ	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
RECEIVERS		R1	47.2	47.2	53.9	55.0	45.0	0.0				5.00	а	6239395.68	2277518.39	5.00
RECEIVERS		R2	48.0	48.0	54.7	55.0	45.0	0.0				5.00	а	6240840.00	2277494.60	5.00
RECEIVERS		R3	46.8	46.8	53.5	55.0	45.0	0.0				5.00	а	6242300.90	2277400.66	5.00
RECEIVERS		R4	39.7	39.7	46.4	55.0	45.0	0.0				5.00	а	6244773.77	2274154.49	5.00
RECEIVERS		R5	42.3	42.3	49.0	55.0	45.0	0.0				5.00	а	6243135.43	2273499.44	5.00
RECEIVERS		R6	44.7	44.7	51.3	55.0	45.0	0.0				5.00	а	6241549.82	2272804.45	5.00
RECEIVERS		R7	43.5	43.5	50.2	55.0	45.0	0.0				5.00	а	6240610.52	2272148.50	5.00
RECEIVERS		R8	46.0	46.0	52.7	55.0	45.0	0.0				5.00	а	6238684.09	2273020.65	5.00
RECEIVERS		R9	47.2	47.2	53.9	55.0	45.0	0.0				5.00	а	6237166.99	2274522.15	5.00
RECEIVERS		R10	47.8	47.8	54.4	55.0	45.0	0.0				5.00	а	6238570.92	2277016.29	5.00

Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL"			Lw / Li			Operating Time			Height	
			Day	Evening	Night	Day	Evening	Night	Туре	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
CONSTRUCTION		0	115.0	115.0	115.0	53.3	53.3	53.3	Lw	115					8	а

Name	H	lei	ght		Coordinates						
	Begin		End		х	У	z	Ground			
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)			
CONSTRUCTION	8.00	а			6238887.91	2276997.73	8.00	0.00			
					6238893.11	2277472.99	8.00	0.00			

Name	He	ight	Coordinates							
	Begin	End	x	у	z	Ground				
	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)				
			6238946.30	2277471.91	8.00	0.00				
			6238946.30	2276698.26	8.00	0.00				
			6239196.25	2276704.21	8.00	0.00				
			6239202.20	2277174.36	8.00	0.00				
			6241261.30	2277186.26	8.00	0.00				
			6241267.25	2277096.99	8.00	0.00				
			6242552.70	2277096.99	8.00	0.00				
			6242546.75	2275281.89	8.00	0.00				
			6242522.94	2275246.18	8.00	0.00				
			6242683.63	2275216.43	8.00	0.00				
			6242975.23	2275156.91	8.00	0.00				
			6243177.57	2275168.82	8.00	0.00				
			6244129.76	2275234.28	8.00	0.00				
			6244165.46	2275293.79	8.00	0.00				
			6244147.61	2276162.66	8.00	0.00				
			6244230.93	2276162.66	8.00	0.00				
			6244236.88	2275305.69	8.00	0.00				
			6244260.68	2275234.28	8.00	0.00				
			6244409.46	2275246.18	8.00	0.00				
			6244516.58	2275281.89	8.00	0.00				
			6245308.09	2275531.84	8.00	0.00				
			6245319.99	2275442.57	8.00	0.00				
			6244522.53	2275180.72	8.00	0.00				
			6244349.95	2275145.01	8.00	0.00				
			6243219.23	2275055.74	8.00	0.00				
			6242880.01	2275067.65	8.00	0.00				
			6242433.68	2275180.72	8.00	0.00				
			6240820.91	2273145.42	8.00	0.00				
			6239541.41	2273133.52	8.00	0.00				
			6239184.34	2273764.34	8.00	0.00				
			6238803.47	2273704.83	8.00	0.00				
			6238767.76	2273806.00	8.00	0.00				
			6237488.27	2273788.15	8.00	0.00				
			6237506.12	2275847.25	8.00	0.00				
			6238351.18	2275859.15	8.00	0.00				
			6238369.04	2276692.31	8.00	0.00				
			6238880.84	2276698.26	8.00	0.00				