Appendix L-1

Noise Impact Analysis Report



Meridian D-1 Gateway Aviation Center

NOISE IMPACT ANALYSIS MARCH JOINT POWERS AUTHORITY

PREPARED BY:

Bill Lawson, PE, INCE blawson@urbanxroads.com (949) 584-3148

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LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
ANSI	American National Standards Institute
Calveno	California Vehicle Noise
CEQA	California Environmental Quality Act
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
INCE	Institute of Noise Control Engineering
L _{eq}	Equivalent continuous (average) sound level
L _{max}	Maximum level measured over the time interval
L _{min}	Minimum level measured over the time interval
MARB/IPA	March Air Reserve Base/Inland Port Airport
MJPA	March Joint Powers Authority
mph	Miles per hour
OPR	Office of Planning and Research
PPV	Peak Particle Velocity
Project	Meridian D-1 Gateway Aviation Center
REMEL	Reference Energy Mean Emission Level
RMS	Root-mean-square
VdB	Vibration Decibels



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EXECUTIVE SUMMARY

Urban Crossroads, Inc. has prepared this noise study to determine the potential noise impacts and the necessary noise mitigation measures, if any, for the proposed Meridian D-1 Gateway Aviation Center development ("Project"). The Project site is in the southeastern portion of the March Air Reserve Base, west of Heacock Street and south of Krameria Avenue in the March Joint Powers Authority (March JPA) jurisdiction. The Project is proposed to consist of construction of a 180,800 square foot industrial warehouse with 9 at-grade (ground level) loading doors and 31 dock-high door positions.

This Noise Impact Analysis has been prepared to focus solely on the transportation truck-related operations at the Project site. It is our understanding that a separate aircraft-related noise study is being prepared for the Project. Therefore, no analysis of aircraft-related operational activity (e.g., aircraft overflights, taxiing, or ground support equipment) is included in this report.

The results of this Meridian D-1 Gateway Aviation Center Noise Impact Analysis are summarized below based on the significance criteria in Section 4 of this report consistent with Appendix G of the California Environmental Quality Act (CEQA) Guidelines (1). Table ES-1 shows the findings of significance for each potential noise and/or vibration impact under CEQA. All impacts are considered less than significant without mitigation.

Analysia	Report	Significance Findings			
Analysis	Section	Unmitigated	Mitigated		
Off-Site Traffic Noise	7	Less Than Significant	-		
Operational Noise	9	Less Than Significant	-		
Construction Noise		Less Than Significant	-		
Construction Vibration	10	Less Than Significant	-		
Nighttime Concrete Pour		Less Than Significant	-		

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS



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1 INTRODUCTION

This noise analysis has been completed to determine the noise impacts associated with the development of the proposed Meridian D-1 Gateway Aviation Center ("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 traffic noise analysis, and evaluates the future exterior noise environment. In addition, this study includes an analysis of the potential Project-related long-term operational and short-term construction noise impacts.

1.1 SITE LOCATION

The proposed Project site is in the southeastern portion of the March Air Reserve Base, west of Heacock Street and south of Krameria Avenue in the March Joint Powers Authority (March JPA) jurisdiction as shown on Exhibit 1-A.

1.2 PROJECT OVERVIEW

The proposed Project consists of two components: Air Cargo Center Component and the Off-Site Component. The Air Cargo Center Component would be constructed within approximately 34-acres under the March JPA's jurisdiction of the overall 46-acre site. The Off-Site Component would be constructed within approximately 12-acres and would include taxiway construction/realignment, storm drain extensions, and access roadway construction within the March Air Reserve Base (March ARB).

The Air Cargo Center Component of the Project includes the development of a gateway air freight cargo center, which consists of construction of a 180,800 square foot cargo building with 9 atgrade (ground level) loading doors, 31 dock-high door positions, and 37 trailer storage positions. The cargo building would contain approximately 9,000 square feet of office space. The cargo building would be constructed to a maximum height of 45-feet. The Project would also construct a tarmac and parking apron sized to accommodate commercial cargo airplanes, allowing for aircraft to access 4 proposed parking gates along the northern side of the cargo building (see Exhibit 1-B). The tarmac/parking apron would be paved to meet Federal Aviation Administration (FAA) standards. The construction of a new taxilane (Taxilane J) would provide aircraft access to the existing Taxiway A within March ARB. In addition, the existing Taxiway G is proposed to be expanded with the construction of a parking apron adjacent to the western boundary of the cargo building, within the March JPA and would allow for aircraft to access 3 proposed aircraft parking gates along the western side of the cargo building. The proposed tarmac expansion, Taxilane J, and parking aprons would be sized to accommodate commercial cargo airplanes and would be paved to meet FAA standards. Parking aprons would connect with existing Taxiways A and G, which would be used by aircraft to access the March Inland Port Airport runway. Construction and development activities within the public right-of-way along Heacock Street would include construction of a 225-foot right-turn pocket into the project site along the southbound side of Heacock Street, and installation of a traffic signal at the existing access roadway (Access Road).



The Off-site Component of the Project would include construction of Project features on land owned by March ARB. Development occurring on March ARB would require easements from the United States Air Force within 5 work areas as identified below:

- Work Area 1: Construction of a 50-foot-wide perimeter patrol road running along the northern and northwestern boundaries of the Project site that would connect with the existing patrol road on the eastern and western ends of the constructed patrol road; replacement of an existing chain-link fence with a security fence.
- Work Area 2: Construction of a headwall and inlet apron for a storm drain culvert; extension of a dual 36-inch-diameter storm drain backbone via jack and bore under Taxiway A to replace the existing silt-filled culvert; connection of the culvert to the storm drain extension.
- Work Area 3: Reconfiguration of the Taxiway A to Taxilane J transition to allow for aircraft access to the proposed cargo building. Portions of Taxiway A would be demolished and reconstructed to allow for the taxiway to connect with the proposed Taxilane J within the proposed Project.
- Work Area 4: Removal of an existing inverted culvert apron outlet; cleaning of the existing 36inch-diameter culvert; extension of the existing single 36-inch diameter storm drain under Taxiway A via jack and bore to connect the culvert.
- Wort Area 5: Reconstruction and realignment of the intersection of Taxiway A and taxiway G. This would result in widened entryway for aircraft to turn from Taxiway A to Taxiway G, and to accommodate aircraft access to the aircraft parking stations along the western boundary of the cargo building.

The on-site Project-related noise sources are expected to include: loading dock activity, entry gate and truck movements, roof-top air conditioning, and trash enclosure activity. This noise analysis is intended to describe noise level impacts associated with the expected typical operational activities at the Project site. This report assumes the Project will operate 24-hours daily for seven days per week.





EXHIBIT 1-A: LOCATION MAP

LEGEND: N . Project Action/Project Location







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.

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			
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft) 70		LOUD	SPEECH INTERFERENCE	
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft) 60				
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	CLEED	
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40		DISTURBANCE	
QUIET SUBURBAN NIGHTTIME	LIBRARY	30			
QUIET RURAL NIGHTTIME	BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND)	20	FAINT		
	BROADCAST/RECORDING STUDIO	10		NO EFFECT	
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0			

EXHIBIT 2-A: TYPICAL NOISE LEVELS

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

2.1 RANGE OF NOISE

Since the range of intensities that the human ear can detect is so large, the scale frequently used to measure intensity is a scale based on multiples of 10, the logarithmic scale. The scale for measuring intensity is the decibel scale. Each interval of 10 decibels indicates a sound energy ten times greater than before, which is perceived by the human ear as being roughly twice as loud. (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 A-weighted decibels (dBA). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period and is commonly used to describe the "average" noise levels within the environment.

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. To account for this, the 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)







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.



Human/Structural Response		Veloci Level	ty *	Typical Sources (50 ft from source)
Threshold, minor cosmetic damage fragile buildings		100	-	Blasting from construction projects
Difficulty with tasks such as reading a VDT screen	→	90	•	Bulldozers and other heavy tracked construction equipment
,			-	Commuter rail, upper range
Residential annoyance, infrequent events (e.g. commuter rail)		80	-	Rapid transit, upper range
			-	Commuter rail, typical
Residential annoyance, frequent			-	Bus or truck over bump
events (e.g. rapid transit)		70	-	Rapid transit, typical
Limit for vibration sensitive equipment. Approx. threshold for human perception of vibration		60	•	Bus or truck, typical
		50	•	Typical background vibration
		\bigcirc		

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. (9) 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 L_{eq} 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). (10) The purpose of the Noise Element is to *limit the exposure of the community to excessive noise levels*. OPR identifies suggested land use noise compatibility levels as part of its General Plan Guidelines as shown on Exhibit 3-A. These suggested guidelines provide planners with a tool to gauge the compatibility of land uses relative to existing and future noise levels. The guidelines identify normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable noise levels for various land uses.



The land use compatibility guidelines are intended to be an advisory resource when considering changes in land use and policies, such as zoning modifications. The Project industrial land use is considered *normally acceptable* unmitigated exterior noise levels of less than 75 dBA CNEL. In addition, the California Environmental Quality Act (CEQA) requires that all known environmental effects of a Project be analyzed, including environmental noise impacts.

Land Use Category		Con	nmunity No L _{dn} or CN				
	55	60	65	70	75	80	INTERPRETATION:
Residential - Low Density Single Family, Duplex, Mobile Homes				'n			Normally Acceptable
Residential - Multi. Family				'n			based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation
Transient Lodging - Motels, Hotels			T	÷.		4	requirements.
Schools, Libraries, Churches, Hospitals, Nursing Homes				h			Conditionally Acceptable New construction or development should be undertaken only after a detailed analysis of the noise reduction
Auditoriums, Concert Halls, Amphitheaters				÷			noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning
Sports Arena, Outdoor Spectator Sports				P			will normally suffice.
Playgrounds, Neighborhood Parks				T			Normally Unacceptable New construction or development should generally be discouraged. If new construction or development does
Golf Courses, Riding Stables, Water Recreation, Cemeteries				Ē			proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
Office Buildings, Business Commercial and Professional							Clearly Unacceptable
Industrial, Manufacturing, Utilities, Agriculture							New construction or development should generally not be undertaken.

EXHIBIT 3-A: LAND USE NOISE COMPATIBILITY CRITERIA

Source: OPR General Plan Guidelines, Appendix D: Noise Element Guidelines, Figure 2.



3.3 STATE OF CALIFORNIA GREEN BUILDING STANDARDS CODE

The State of California's Green Building Standards Code contains mandatory measures for nonresidential building construction in Section 5.507 on Environmental Comfort. (11) These noise standards are applied to new construction in California for controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when non-residential structures are developed in areas where the exterior noise levels exceed 65 dBA CNEL, such as within a noise contour of an airport, freeway, railroad, and other areas where noise contours are not readily available. If the development falls within an airport or freeway 65 dBA CNEL noise contour, the combined sound transmission class (STC) rating of the wall and roof-ceiling assemblies must be at least 50. For those developments in areas where noise contours are not readily available and the noise level exceeds 65 dBA L_{eq} for any hour of operation, a wall and roof-ceiling combined STC rating of 45, and exterior windows with a minimum STC rating of 40 are required (Section 5.507.4.1.1).

3.4 MARCH JPA NOISE/AIR QUALITY ELEMENT

The 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 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.
- 2 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.
- *3* 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.

3.5 OPERATIONAL NOISE STANDARDS

To analyze noise impacts originating from a designated fixed location or private property such as the Meridian D-1 Gateway Aviation Center Project, stationary-source (operational) noise such as the expected loading dock activity, entry gate and truck movements, roof-top air conditioning, and trash enclosure activity are typically evaluated against standards established under a jurisdiction's Municipal Code. Although the Project site is located within the March JPA, noisesensitive receivers potentially impacted by operational noise activities are also located in the City of Moreno Valley. Therefore, to accurately describe the potential Project-related operational noise level contributions, this analysis presents the appropriate operational noise standards for both jurisdictions. The March JPA and the City of Moreno Valley operational noise level standards are shown on Table 3-1.

3.5.1 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 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. (14) The March JPA Development Code is included in Appendix 3.1.



3.5.2 CITY OF MORENO VALLEY OPERATIONAL NOISE STANDARDS

The City of Moreno Valley Municipal Code, Chapter 11.80 *Noise Regulation*, provides performance standards and noise control guidelines for determining and mitigating non-transportation or stationary-source noise impacts from operations at private properties. The City of Moreno Valley Municipal Code defines *Maximum Sound Levels (in dB(A)) for Source Land Uses* in Table 11.80.030-2 for *Residential* and *Commercial* land uses. As defined by the Municipal Code, Section 11.80.020 *Definitions, Commercial* land use *means all uses of land not otherwise classified as residential*, and *Residential* land use *means all uses of land primarily for dwelling units, as well as hospitals, schools, colleges and universities, and places of religious assembly.* (15) For the purpose of this analysis, the Meridian D-1 Gateway Aviation Center Project is considered *Commercial* land use since it is not classified as residential. Based on this standard, the operational noise level limits for commercial land use, from Table 11.80.030-2, of 65 dBA L_{eq} during the daytime (8:00 a.m. to 10:00 p.m.) hours and 60 dBA L_{eq} during the nighttime (10:01 p.m. to 7:59 a.m.) hours shall apply to the operational noise source activities from the Project.

Further, Section 11.80.030(C) Prohibited Acts, Nonimpulsive Sound Decibel Limits, states: No person shall maintain, create, operate or cause to be operated on private property any source of sound in such a manner as to create any nonimpulsive sound which exceeds the limits set forth for the source land use category (as defined in Section 11.80.020) in Table 11.80.030-2 when measured at a distance of two hundred (200) feet or more from the real property line of the source of the sound, if the sound occurs on a privately owned property... (15) Therefore, at a distance of 200 feet from the property line, the Project's operational noise levels shall not exceed the 65 dBA L_{eq} daytime and 60 dBA L_{eq} nighttime noise level standards for commercial land uses, as shown on Table 3-1.

Iurisdiction	Landuca	Noise Level Standards (dBA L _{eq}) ¹			
Jurisdiction	Land use	Daytime	Nighttime		
March JPA ²	Commercial & Industrial	55			
Moreno Valley ³	Commercial	65	60		

TABLE 3-1: OPERATIONAL NOISE STANDARDS

¹L_{eq} represents a steady state sound level containing the same total energy as a time varying signal over a given period. "Daytime" = 8:00 a.m. to 10:00 p.m.; "Nighttime" = 10:01 p.m. to 7:59 a.m.

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

³ City of Moreno Valley Municipal Code, Chapter 11.80 Noise Regulation, Table 11.80.030-2 Maximum Sound Levels (in dB(A)) for Source Land Uses when measured at 200 feet from the property line of the source land use (Appendix 3.2).

3.6 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 City of Moreno Valley. 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.

3.6.1 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 does not identify a specific noise level standard for construction activity. The March JPA Development Code construction noise standards are shown on Table 3-2 and included in Appendix 3.1.

3.6.2 CITY OF MORENO VALLEY CONSTRUCTION NOISE STANDARDS

The Municipal Code noise standards for construction are described below for the City of Moreno Valley to determine the potential noise impacts at the nearest sensitive receiver locations. As a subset of its stationary-source noise regulations, the City Municipal Code establishes permitted hours of construction activity. More specifically, Municipal Code Section 11.80.030(D)(7), *Construction and Demolition*, provides the following:

No person shall operate, or cause operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work between the hours of eight p.m. and seven a.m. the following day such that the sound there from creates a noise disturbance, except for emergency work by public service utilities or for other work approved by the city manager or designee.

Therefore, based on the Section 11.80.030(D)(7) construction regulations, a construction-related *noise disturbance* occurs if Project construction activity occurs outside of the permitted hours. However, for this analysis, the stationary-source noise level limits of 65 dBA L_{eq} during the daytime hours and 60 dBA L_{eq} during the nighttime hours are used as appropriate thresholds for the nearest sensitive land uses (e.g. residential homes) in the Project study area. The City of Moreno Valley construction noise standards are shown on Table 3-2 and included in Appendix 3.2.



Jurisdiction	Permitted Hours of	Construction Noise Level Standard (dBA L _{eq}) ¹		
	construction Activity	Daytime	Nighttime	
March JPA ²	7:00 a.m. to 7:00 p.m.	n/a		
Moreno Valley ³	General Activity: 7:00 a.m. to 8:00 p.m. on any day. Grading is limited to 7:00 a.m. to 7:00 p.m. Monday to Friday, excluding holidays; 8:00 a.m. to 4:00 p.m. on Saturdays.	65	60 ⁴	

TABLE 3-2: CONSTRUCTION NOISE STANDARDS

¹ "Daytime" = 8:00 a.m. to 10:00 p.m.; "Nighttime" = 10:01 p.m. to 7:59 a.m.

² March Joint Powers Authority, Development Code, Chapter 9.10 Performance Standards, Section 9.10.040 (Appendix 3.1).

³ City of Moreno Valley Municipal Code, Section 11.80.030(D)(7) and 8.21.050(O) as shown in Appendix 3.2.

⁴ Any nighttime construction activity requires an exemption from the City of Moreno Valley Municipal Code as indicated in Section 11.80.030(E)(8) for a special event permit (Section 11.80.040). The special event permit application shall be submitted to the City of Moreno Valley Planning Department for approval and meet the requirements of Municipal Code Section 11.80.040.

3.7 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. 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. (8) To analyze vibration impacts originating from the operation and construction of the Meridian D-1 Gateway Aviation Center, vibration-generating activities are appropriately evaluated against standards established under a City's Municipal Code, if such standards exist. However, the March JPA and City of Moreno Valley do not identify specific vibration level limits. Therefore, for analysis purposes, the Caltrans *Transportation and Construction Vibration Guidance Manual*, (16 p. 38) Table 19, vibration damage are used in this noise study to assess potential temporary construction-related impacts at adjacent building locations. The nearest noise sensitive buildings adjacent to the Project site can best be described as "older residential structures" with a maximum acceptable continuous vibration threshold of 0.3 PPV (in/sec).



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4 SIGNIFICANCE CRITERIA

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

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

While the CEQA Guidelines and the March JPA and Moreno Valley General Plans provide direction on noise compatibility and establish noise standards by land use type that are sufficient to assess the significance of noise impacts, they do not define the levels at which increases are considered substantial for use under CEQA Significance Criteria A.

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 just north of the Project site. As previously stated in the Executive Summary, this noise study does not include an analysis of aircraft-related noise levels to address CEQA Significance Criteria C since a separate noise analysis is being prepared to address aircraft-related noise levels.

4.1 NOISE LEVEL INCREASES

Noise level increases resulting from the Project are evaluated based on the Appendix G CEQA Guidelines described above at the closest sensitive receiver locations. Under CEQA, consideration must be given to the magnitude of the increase, the existing ambient noise levels, and the location of noise-sensitive receivers to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes *that there is no single noise increase that renders the noise impact significant.* (17) This is primarily because of the wide variation in individual thresholds of annoyance and differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted—the so-called *ambient* environment. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will typically be judged.

4.1.1 NOISE-SENSITIVE RECEIVERS

The Federal Interagency Committee on Noise (FICON) (18) developed guidance to be used for the assessment of project-generated increases in noise levels that consider the ambient noise level. The FICON recommendations are based on studies that relate aircraft noise levels to the percentage of persons highly annoyed by aircraft noise. Although the FICON recommendations



were specifically developed to assess aircraft noise impacts, these recommendations are often used in environmental noise impact assessments involving the use of cumulative noise exposure metrics, such as the average-daily noise level (CNEL) and equivalent continuous noise level (Leq).

As previously stated, the approach used in this noise study recognizes *that there is no single noise increase that renders the noise impact significant*, based on a 2008 California Court of Appeal ruling in *Gray v. County of Madera*, 167 Cal.App.4th 1099. (17) For example, if the ambient noise environment is quiet (<60 dBA) and the new noise source greatly increases the noise levels, an impact may occur if the noise criteria may be exceeded. Therefore, for this analysis, FICON identifies a *readily perceptible* 5 dBA or greater project-related noise level increase is considered a significant impact when the noise criteria for a given land use is exceeded. Per the FICON, in areas where the without project noise levels range from 60 to 65 dBA, a 3 dBA *barely perceptible* noise levels already exceed 65 dBA, any increase in community noise louder than 1.5 dBA or greater is considered a significant impact if the noise criteria for a given land use is exceeded, since it likely contributes to an existing noise exposure exceedance.

The FICON guidance provides an established source of criteria to assess the impacts of substantial temporary or 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 (19 p. 2_48).

4.1.2 NON-NOISE-SENSITIVE RECEIVERS

The OPR land use/noise compatibility standards were used to establish the satisfactory noise levels of significance for non-noise-sensitive land uses in the Project study area. As previously shown on Exhibit 3-A, the *normally acceptable* exterior noise level for non-noise-sensitive land use is 70 dBA CNEL. To determine if Project-related traffic noise level increases are significant at off-site non-noise-sensitive land uses, a *barely perceptible* 3 dBA criteria is used. When the without Project noise levels are greater than the *normally acceptable* 70 dBA CNEL land use compatibility criteria, a *barely perceptible* 3 dBA or greater noise level increase is considered a significant impact since the noise level criteria is already exceeded. The noise level increases used to determine significant impacts for non-noise-sensitive land uses is generally consistent with the FICON noise level increase thresholds for noise-sensitive land uses but instead rely on the OPR land use/noise compatibility standards *normally acceptable* 70 dBA CNEL exterior noise level criteria.



4.2 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.

Amelyaia	Land Use	Jurisdiction	Constitution (c)	Significance Criteria		
Analysis			Condition(s)	Daytime	Nighttime	
Off-Site	Noise- Sensitive ¹	All	If ambient is < 60 dBA CNEL	≥ 5 dBA CNEL Project increase		
			If ambient is 60 - 65 dBA CNEL	≥ 3 dBA CNEL Project increase		
			If ambient is > 65 dBA CNEL	≥ 1.5 dBA CNEL Project increase		
	Non-Noise- Sensitive ²	All	If ambient is < 70 dBA CNEL	≥ 5 dBA CNEL Project increase		
			If ambient is > 70 dBA CNEL	≥ 3 dBA CNEL Project increase		
Operational	Noise- Sensitive	March JPA ³	Noise Level Threshold	55 dBA L _{eq}		
		Moreno Valley	Exterior Noise Standards ⁴	65 dBA L _{eq}	60 dBA L _{eq}	
		All ¹	If ambient is < 60 dBA L _{eq}	≥ 5 dBA CNEL Project increase		
			If ambient is 60 - 65 dBA Leq	≥ 3 dBA CNEL Project increase		
			If ambient is > 65 dBA L_{eq}	≥ 1.5 dBA CNEL Project increase		
Construction	Noise- Sensitive	All	Permitted hours between 7:00 a.m. to 7:00 p.m. ⁵			
			Vibration Level Threshold ⁶	0.3 PPV (in/sec)		

TABLE 4-1: SIGNIFICANCE CRITERIA SUMMARY

¹ FICON, 1992.

² OPR land use/noise compatibility standards.

³ March Joint Powers Authority, Development Code, Chapter 9.10 Performance Standards, Section 9.10.140 (Appendix 3.1).

⁴ City of Moreno Valley Municipal Code, Chapter 11.80 Noise Regulation (Appendix 3.2).

⁵ March Joint Powers Authority, Development Code, Chapter 9.10 Performance Standards, Section 9.10.030 (Appendix 3.1).

⁶ Caltrans Transportation and Construction Vibration Manual, April 2020 Table 19.

"Daytime" = 8:00 a.m. to 10:00 p.m.; "Nighttime" = 10:01 p.m. to 7:59 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 four locations in the Project study area. The receiver locations were selected to describe and document the existing noise environment within the Project study area. Exhibit 5-A provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Wednesday, May 20, 2020. Appendix 5.1 includes study area photos.

5.1 MEASUREMENT PROCEDURE AND CRITERIA

To describe the existing noise environment, the hourly noise levels were measured during typical weekday conditions over a 24-hour period. By collecting individual hourly noise level measurements, it is possible to describe the daytime and nighttime hourly noise levels and calculate the 24-hour CNEL. The long-term noise readings were recorded using Piccolo Type 2 integrating sound level meter and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (20)

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 nearest sensitive receiver locations allows for a comparison of the before and after Project noise levels



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

5.3 NOISE MEASUREMENT RESULTS

The noise measurements presented below focus on the average or equivalent sound levels (L_{eq}). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. Table 5-1 identifies the hourly daytime (8:00 a.m. to 10:00 p.m.) and nighttime (10:01 p.m. to 7:59 a.m.) noise levels at each noise level measurement location.

Location ¹	Description	Energy Average Noise Level (dBA L _{eq}) ²		CNEL
		Daytime	Nighttime	
L1	Located north of the Project site on Iris Avenue near existing single-family residential homes at 24307 Carman Lane.	65.6	62.6	69.7
L2	Located east of the Project site on Indian Street near existing single-family residential home at 16537 Libra Lane.	60.9	58.7	65.9
L3	Located east of the Project site on Indian Street near existing single-family residential home at 16855 Baltic Court.	58.5	53.9	61.7
L4	Located east of the Project site on Heacock Street near F&D Distribution Center.	68.6	67.8	74.4

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

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

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

"Daytime" = 8:00 a.m. to 10:00 p.m.; "Nighttime" = 10:01 p.m. to 7:59 a.m.

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

The background ambient noise levels in the Project study area are dominated by the transportation-related noise associated with surface streets. This includes the auto and heavy truck activities on study area roadway segments near the noise level measurement locations.




EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS

LEGEND: Measurement Locations

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6 METHODS AND PROCEDURES

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

6.1 FHWA TRAFFIC NOISE PREDICTION MODEL

The expected roadway noise level increases from vehicular traffic were calculated by Urban Crossroads, Inc. using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108. (21) 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. (22) 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. (23)

6.2 OFF-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 6-1 presents the roadway parameters used to assess the Project's off-site transportation noise impacts. Table 6-1 identifies the nine study area roadway segments, the distance from the centerline to adjacent receiving land use based on the functional roadway classifications per the City of Moreno Valley, and City of Perris General Plan Circulation Elements, and the posted vehicle speeds. The ADT volumes used in this study are presented on Table 6-2 and obtained from the *Meridian D-1 Gateway Aviation Center Traffic Analysis* prepared by Urban Crossroads, Inc., for the following traffic scenarios:

- Existing
- Existing plus Project (E+P) (Non-Peak) Conditions
- E+P (Peak) Conditions
- Opening Year Cumulative (OYC) (2026) Without Project Conditions
- OYC (2026) With Project (Non-Peak) Conditions
- OYC (2026) With Project (Peak) Conditions
- Horizon Year (HY) (2045) Without Project, Without Heacock Street Extension Conditions
- HY (2045) With Project (Non-Peak), Without Heacock Street Extension Conditions
- HY (2045) With Project (Peak), Without Heacock Street Extension Conditions
- HY (2045) Without Project, With Heacock Street Extension Conditions
- HY (2045) With Project (Non-Peak), With Heacock Street Extension Conditions
- HY (2045) With Project (Peak), With Heacock Street Extension Conditions



Consistent with *Meridian D-1 Gateway Aviation Center Traffic Analysis* prepared by Urban Crossroads, Inc. (24), the off-site traffic noise analysis maintains a peak hour to average daily traffic (peak-to-daily) relationship of approximately 8.08%.

ID	Roadway	Segment	Receiving Land Use ¹	Distance from Centerline to Receiving Land Use (Feet) ²	Posted Vehicle Speed (mph)
1	Heacock St.	n/o Gentian Av.	Sensitive	50'	50
2	Heacock St.	s/o Iris Av.	Non-Sensitive	50'	50
3	Heacock St.	s/o Cardinal Av.	Non-Sensitive	50'	50
4	Heacock St.	s/o Nandina Av.	Non-Sensitive	50'	50
5	Indian Av.	s/o Nandina Av.	Non-Sensitive	44'	45
6	Cactus Av.	w/o Heacock St.	Non-Sensitive	55'	50
7	Cactus Av.	e/o Heacock St.	Sensitive	44'	40
8	Harley Knox Bl.	e/o Patterson Av.	Non-Sensitive	64'	45
9	Harley Knox Bl.	e/o Indian Av.	Non-Sensitive	64'	45

 TABLE 6-1: OFF-SITE ROADWAY PARAMETERS

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

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



			Average Daily Traffic Volumes ¹											
			Existing 2020		Opening Year Cumulative 2026		Horizon Heacock	Year 204 Street Ex	15 w/o tension	Horizon Year 2045 with Heacock Street Extension				
עו	Roadway	Jegment	Without Project	With Project (Non- Peak)	With Project (Peak)	Without Project	With Project (Non- Peak)	With Project (Peak)	Without Project	With Project (Non- Peak)	With Project (Peak)	Without Project	With Project (Non- Peak)	With Project (Peak)
1	Heacock St.	n/o Gentian Av.	23,451	23,851	24,040	30,518	30,918	31,106	33,022	33,422	33,611	33,022	33,422	33,611
2	Heacock St.	s/o Iris Av.	14,212	14,712	14,948	28,359	28,859	29,095	28,473	28,973	29,209	28,473	28,973	29,209
3	Heacock St.	s/o Cardinal Av.	15,260	15,986	16,330	29,218	29,944	30,288	31,784	32,510	32,854	31,784	32,510	32,854
4	Heacock St.	s/o Nandina Av.	0	0	0	0	0	0	0	0	0	14,626	14,626	14,626
5	Indian Av.	s/o Nandina Av.	10,148	10,774	11,071	30,195	30,821	31,119	32,978	33,604	33,901	27,978	28,604	28,901
6	Cactus Av.	w/o Heacock St.	38,888	39,088	39,182	54,347	54,547	54,641	58,874	59,074	59,168	58,874	59,074	59,168
7	Cactus Av.	e/o Heacock St.	23,388	23,518	23,580	36,831	36,961	37,022	39,968	40,098	40,159	39,968	40,098	40,159
8	Harley Knox Bl.	e/o Patterson Av.	17,290	17,866	18,140	31,409	31,985	32,258	34,146	34,722	34,995	34,146	34,722	34,995
9	Harley Knox Bl.	e/o Indian Av.	8,896	8,896	8,896	15,031	15,031	15,031	16,326	16,326	16,326	16,647	16,647	16,647

TABLE 6-2: AVERAGE DAILY TRAFFIC VOLUMES

¹ Meridian D-1 Gateway Aviation Traffic Analysis, Urban Crossroads, Inc., May 2022.



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. Due to the added Project truck trips, the change 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 6-3 provides the time of day (daytime, evening, and nighttime) vehicle splits. The daily Project truck trip-ends were assigned to the individual off-site study area roadway segments based on the Project truck trip distribution percentages documented in the *Traffic Analysis*. Using the Project truck trips in combination with the Project trip distribution, Urban Crossroads, Inc. calculated the number of additional Project truck trips and vehicle mix percentages for each of the study area roadway segments. Table 6-4 shows the traffic flow by vehicle type (vehicle mix) used for all 'without Project' traffic scenarios, and Tables 6-5 to 6-12 show the vehicle mixes used for the 'with Project' traffic scenarios.

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

TABLE 6-3: TIME OF DAY VEHICLE SPLITS

¹ County of Riverside Office of Industrial Hygiene. Values rounded to the nearest one hundredth.

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

Classification			Total	
Classification	Autos	Medium Trucks	Heavy Trucks	rotai
All Segments	86.23%	2.67%	11.10%	100.00%

TABLE 6-4: EXISTING WITHOUT PROJECT VEHICLE MIX

Based on an existing vehicle count taken at Patterson Avenue and Harley Knox Boulevard (Gateway Aviation Traffic Analysis, Urban Crossroads, Inc.). Vehicle mix percentage values rounded to the nearest one-hundredth.



			With Project ¹				
ID	Roadway	Segment	Autos	Medium Trucks	Heavy Trucks	Total ²	
1	Heacock St.	n/o Gentian Av.	87.07%	1.90%	11.02%	100.00%	
2	Heacock St.	s/o Iris Av.	87.30%	1.87%	10.83%	100.00%	
3	Heacock St.	s/o Cardinal Av.	85.72%	2.02%	12.25%	100.00%	
4	Heacock St.	s/o Nandina Av.	86.85%	1.94%	11.21%	100.00%	
5	Indian Av.	s/o Nandina Av.	85.06%	2.08%	12.86%	100.00%	
6	Cactus Av.	w/o Heacock St.	86.92%	1.93%	11.15%	100.00%	
7	Cactus Av.	e/o Heacock St.	86.93%	1.93%	11.15%	100.00%	
8	Harley Knox Bl.	e/o Patterson Av.	85.73%	2.03%	12.24%	100.00%	
9	Harley Knox Bl.	e/o Indian Av.	86.85%	1.94%	11.21%	100.00%	

TABLE 6-5: EXISTING WITH (NON-PEAK) PROJECT VEHICLE MIX

¹ Meridian D-1 Gateway Aviation Traffic Analysis, Urban Crossroads, Inc., May 2022.

² Total of vehicle mix percentage values rounded to the nearest one-hundredth.

			With Project ¹				
ID	Roadway	Segment	Autos	Medium Trucks	Heavy Trucks	Total ²	
1	Heacock St.	n/o Gentian Av.	87.18%	1.89%	10.94%	100.00%	
2	Heacock St.	s/o Iris Av.	87.50%	1.84%	10.66%	100.00%	
3	Heacock St.	s/o Cardinal Av.	85.22%	2.06%	12.72%	100.00%	
4	Heacock St.	s/o Nandina Av.	86.85%	1.94%	11.21%	100.00%	
5	Indian Av.	s/o Nandina Av.	84.26%	2.14%	13.59%	100.00%	
6	Cactus Av.	w/o Heacock St.	86.95%	1.92%	11.13%	100.00%	
7	Cactus Av.	e/o Heacock St.	86.96%	1.92%	11.12%	100.00%	
8	Harley Knox Bl.	e/o Patterson Av.	85.22%	2.07%	12.71%	100.00%	
9	Harley Knox Bl.	e/o Indian Av.	86.85%	1.94%	11.21%	100.00%	

TABLE 6-6: EXISTING WITH (PEAK) PROJECT VEHICLE MIX

¹ Meridian D-1 Gateway Aviation Traffic Analysis, Urban Crossroads, Inc., May 2022.

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



			With Project ¹				
ID	Roadway	Segment	Autos	Medium Trucks	Heavy Trucks	Total ²	
1	Heacock St.	n/o Gentian Av.	87.02%	1.91%	11.06%	100.00%	
2	Heacock St.	s/o Iris Av.	87.08%	1.90%	11.02%	100.00%	
3	Heacock St.	s/o Cardinal Av.	86.25%	1.98%	11.77%	100.00%	
4	Heacock St.	s/o Nandina Av.	86.85%	1.94%	11.21%	100.00%	
5	Indian Av.	s/o Nandina Av.	86.23%	1.99%	11.79%	100.00%	
6	Cactus Av.	w/o Heacock St.	86.90%	1.93%	11.17%	100.00%	
7	Cactus Av.	e/o Heacock St.	86.90%	1.93%	11.17%	100.00%	
8	Harley Knox Bl.	e/o Patterson Av.	86.23%	1.99%	11.78%	100.00%	
9	Harley Knox Bl.	e/o Indian Av.	86.85%	1.94%	11.21%	100.00%	

TABLE 6-7: OYC WITH (NON-PEAK) PROJECT VEHICLE MIX

¹ Meridian D-1 Gateway Aviation Traffic Analysis, Urban Crossroads, Inc., May 2022. ² Total of vehicle mix percentage values rounded to the nearest one-hundredth.

			With Project ¹				
ID	Roadway	Segment	Autos	Medium Trucks	Heavy Trucks	Total ²	
1	Heacock St.	n/o Gentian Av.	87.10%	1.90%	11.00%	100.00%	
2	Heacock St.	s/o Iris Av.	87.19%	1.89%	10.93%	100.00%	
3	Heacock St.	s/o Cardinal Av.	85.97%	2.00%	12.03%	100.00%	
4	Heacock St.	s/o Nandina Av.	86.85%	1.94%	11.21%	100.00%	
5	Indian Av.	s/o Nandina Av.	85.93%	2.01%	12.06%	100.00%	
6	Cactus Av.	w/o Heacock St.	86.92%	1.93%	11.15%	100.00%	
7	Cactus Av.	e/o Heacock St.	86.92%	1.93%	11.15%	100.00%	
8	Harley Knox Bl.	e/o Patterson Av.	85.94%	2.01%	12.05%	100.00%	
9	Harley Knox Bl.	e/o Indian Av.	86.85%	1.94%	11.21%	100.00%	

TABLE 6-8: OYC WITH (PEAK) PROJECT VEHICLE MIX

¹ Meridian D-1 Gateway Aviation Traffic Analysis, Urban Crossroads, Inc., May 2022.

² Total of vehicle mix percentage values rounded to the nearest one-hundredth.



			With Project ¹					
ID	Roadway	Segment	Autos	Medium Trucks	Heavy Trucks	Total ²		
1	Heacock St.	n/o Gentian Av.	87.01%	1.91%	11.08%	100.00%		
2	Heacock St.	s/o Iris Av.	87.08%	1.90%	11.02%	100.00%		
3	Heacock St.	s/o Cardinal Av.	86.30%	1.98%	11.72%	100.00%		
4	Heacock St.	s/o Nandina Av.	86.85%	1.94%	11.21%	100.00%		
5	Indian Av.	s/o Nandina Av.	86.28%	1.98%	11.74%	100.00%		
6	Cactus Av.	w/o Heacock St.	86.90%	1.93%	11.17%	100.00%		
7	Cactus Av.	e/o Heacock St.	86.90%	1.93%	11.17%	100.00%		
8	Harley Knox Bl.	e/o Patterson Av.	86.28%	1.98%	11.74%	100.00%		
9	Harley Knox Bl.	e/o Indian Av.	86.85%	1.94%	11.21%	100.00%		

TABLE 6-9: HY WITH (NON-PEAK) PROJECT VEHICLE MIX W/O HEACOCK STREET EXT.

¹ Meridian D-1 Gateway Aviation Traffic Analysis, Urban Crossroads, Inc., May 2022.

² Total of vehicle mix percentage values rounded to the nearest one-hundredth.

TABLE 6-10: HY WITH (PEAK) PROJECT VEHICLE MIX W/O HEACOCK STREET EXT.

			With Project ¹				
ID	Roadway	Segment	Autos	Medium Trucks	Heavy Trucks	Total ²	
1	Heacock St.	n/o Gentian Av.	87.08%	1.90%	11.01%	100.00%	
2	Heacock St.	s/o Iris Av.	87.19%	1.89%	10.93%	100.00%	
3	Heacock St.	s/o Cardinal Av.	86.04%	2.00%	11.96%	100.00%	
4	Heacock St.	s/o Nandina Av.	86.85%	1.94%	11.21%	100.00%	
5	Indian Av.	s/o Nandina Av.	86.01%	2.00%	11.99%	100.00%	
6	Cactus Av.	w/o Heacock St.	86.92%	1.93%	11.15%	100.00%	
7	Cactus Av.	e/o Heacock St.	86.92%	1.93%	11.16%	100.00%	
8	Harley Knox Bl.	e/o Patterson Av.	86.01%	2.01%	11.99%	100.00%	
9	Harley Knox Bl.	e/o Indian Av.	86.85%	1.94%	11.21%	100.00%	

¹ Meridian D-1 Gateway Aviation Traffic Analysis, Urban Crossroads, Inc., May 2022.

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



			With Project ¹					
ID	Roadway	Segment	Autos	Medium Trucks	Heavy Trucks	Total ²		
1	Heacock St.	n/o Gentian Av.	87.01%	1.91%	11.08%	100.00%		
2	Heacock St.	s/o Iris Av.	87.08%	1.90%	11.02%	100.00%		
3	Heacock St.	s/o Cardinal Av.	86.30%	1.98%	11.72%	100.00%		
4	Heacock St.	s/o Nandina Av.	86.85%	1.94%	11.21%	100.00%		
5	Indian Av.	s/o Nandina Av.	86.18%	1.99%	11.83%	100.00%		
6	Cactus Av.	w/o Heacock St.	86.90%	1.93%	11.17%	100.00%		
7	Cactus Av.	e/o Heacock St.	86.90%	1.93%	11.17%	100.00%		
8	Harley Knox Bl.	e/o Patterson Av.	86.28%	1.98%	11.74%	100.00%		
9	Harley Knox Bl.	e/o Indian Av.	86.85%	1.94%	11.21%	100.00%		

TABLE 6-11: HY WITH (NON-PEAK) PROJECT VEHICLE MIX WITH HEACOCK STREET EXT.

¹ Meridian D-1 Gateway Aviation Traffic Analysis, Urban Crossroads, Inc., May 2022.

² Total of vehicle mix percentage values rounded to the nearest one-hundredth.

TABLE 6-12: HY WITH (PEAK) PROJECT VEHICLE MIX WITH HEACOCK STREET EXT.

			With Project ¹					
ID	Roadway	Segment	Autos	Medium Trucks	Heavy Trucks	Total ²		
1	Heacock St.	n/o Gentian Av.	87.08%	1.90%	11.01%	100.00%		
2	Heacock St.	s/o Iris Av.	87.19%	1.89%	10.93%	100.00%		
3	Heacock St.	s/o Cardinal Av.	86.04%	2.00%	11.96%	100.00%		
4	Heacock St.	s/o Nandina Av.	86.85%	1.94%	11.21%	100.00%		
5	Indian Av.	s/o Nandina Av.	85.86%	2.02%	12.12%	100.00%		
6	Cactus Av.	w/o Heacock St.	86.92%	1.93%	11.15%	100.00%		
7	Cactus Av.	e/o Heacock St.	86.92%	1.93%	11.16%	100.00%		
8	Harley Knox Bl.	e/o Patterson Av.	86.01%	2.01%	11.99%	100.00%		
9	Harley Knox Bl.	e/o Indian Av.	86.85%	1.94%	11.21%	100.00%		

¹ Meridian D-1 Gateway Aviation Traffic Analysis, Urban Crossroads, Inc., May 2022.

² Total of vehicle mix percentage values rounded to the nearest one-hundredth.



7 OFF-SITE OPERATIONAL TRANSPORTATION NOISE IMPACTS

To assess the off-site transportation CNEL noise level impacts associated with the operation of the proposed Project, noise contours were developed based on the *Meridian D-1 Gateway Aviation Center Traffic Analysis*. (24) 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 24-hour dBA CNEL 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 CNEL noise levels. The noise contours do not consider the effect of any existing noise barriers or topography that may attenuate ambient noise levels. In addition, because the noise contours reflect modeling of vehicular noise on area roadways, they appropriately do not reflect noise contributions from the surrounding stationary noise sources within the Project study area.

Tables 7-1 through 7-12 present a summary of the exterior dBA CNEL traffic noise levels without barrier attenuation. Roadway segments are analyzed from the 'without Project' to the 'with Project' conditions in each of the following timeframes:

- Existing
- Existing plus Project (E+P) (Non-Peak) Conditions
- E+P (Peak) Conditions
- Opening Year Cumulative (OYC) (2026) Without Project Conditions
- OYC (2026) With Project (Non-Peak) Conditions
- OYC (2026) With Project (Peak) Conditions
- Horizon Year (HY) (2045) Without Project, Without Heacock Street Extension Conditions
- HY (2045) With Project (Non-Peak), Without Heacock Street Extension Conditions
- HY (2045) With Project (Peak), Without Heacock Street Extension Conditions
- HY (2045) Without Project, With Heacock Street Extension Conditions
- HY (2045) With Project (Non-Peak), With Heacock Street Extension Conditions
- HY (2045) With Project (Peak), With Heacock Street Extension Conditions

Appendix 7.1 includes a summary of the dBA CNEL traffic noise level contours for each of the traffic scenarios.



	Road Segment		Receiving Land Use ¹	CNEL at Receiving Land Use (dBA) ²	Distance to Contour from Centerline (Feet)		
ID		Segment			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Heacock St.	n/o Gentian Av.	Sensitive	77.3	152	328	708
2	Heacock St.	s/o Iris Av.	Non-Sensitive	75.1	109	235	507
3	Heacock St.	s/o Cardinal Av.	Non-Sensitive	75.4	114	247	531
4	Heacock St.	s/o Nandina Av.	Non-Sensitive	33.6	n/a	n/a	n/a
5	Indian Av.	s/o Nandina Av.	Non-Sensitive	73.4	74	160	344
6	Cactus Av.	w/o Heacock St.	Non-Sensitive	79.9	250	539	1162
7	Cactus Av.	e/o Heacock St.	Sensitive	76.8	125	270	581
8	Harley Knox Bl.	e/o Patterson Av.	Non-Sensitive	74.3	124	267	575
9	Harley Knox Bl.	e/o Indian Av.	Non-Sensitive	71.4	79	171	369

TABLE 7-1: EXISTING WITHOUT PROJECT CONTOURS

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

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

"n/a"= Heacock Street Extension not yet built.

	Road	Segment	Receiving	CNEL at Receiving Land Use (dBA) ²	Distance to Contour from Centerline (Feet)			
ID			Land Use ¹		70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	
1	Heacock St.	n/o Gentian Av.	Sensitive	77.3	153	329	709	
2	Heacock St.	s/o Iris Av.	Non-Sensitive	75.1	110	236	509	
3	Heacock St.	s/o Cardinal Av.	Non-Sensitive	75.9	124	266	574	
4	Heacock St.	s/o Nandina Av.	Non-Sensitive	33.6	n/a	n/a	n/a	
5	Indian Av.	s/o Nandina Av.	Non-Sensitive	74.1	83	179	385	
6	Cactus Av.	w/o Heacock St.	Non-Sensitive	79.9	251	540	1163	
7	Cactus Av.	e/o Heacock St.	Sensitive	76.8	125	270	582	
8	Harley Knox Bl.	e/o Patterson Av.	Non-Sensitive	74.7	133	286	615	
9	Harley Knox Bl.	e/o Indian Av.	Non-Sensitive	71.4	79	171	369	

TABLE 7-2: EXISTING WITH (NON-PEAK) PROJECT CONTOURS

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 adjacent land use.

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



	Road Seg		Segment Receiving Land Use ¹	CNEL at Receiving	Distance to Contour from Centerline (Feet)		
ID		Segment		Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Heacock St.	n/o Gentian Av.	Sensitive	77.3	153	330	710
2	Heacock St.	s/o Iris Av.	Non-Sensitive	75.1	110	237	510
3	Heacock St.	s/o Cardinal Av.	Non-Sensitive	76.1	128	275	593
4	Heacock St.	s/o Nandina Av.	Non-Sensitive	33.6	n/a	n/a	n/a
5	Indian Av.	s/o Nandina Av.	Non-Sensitive	74.4	87	188	404
6	Cactus Av.	w/o Heacock St.	Non-Sensitive	79.9	251	540	1163
7	Cactus Av.	e/o Heacock St.	Sensitive	76.8	125	270	582
8	Harley Knox Bl.	e/o Patterson Av.	Non-Sensitive	74.9	137	294	634
9	Harley Knox Bl.	e/o Indian Av.	Non-Sensitive	71.4	79	171	369

TABLE 7-3: EXISTING WITH (PEAK) PROJECT CONTOURS

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

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

"n/a"= Heacock Street Extension not yet built.

	Road	Segment	Receiving Land Use ¹	CNEL at Receiving Land Use (dBA) ²	Distance to Contour from Centerline (Feet)			
ID					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	
1	Heacock St.	n/o Gentian Av.	Sensitive	78.4	182	391	843	
2	Heacock St.	s/o Iris Av.	Non-Sensitive	78.1	173	373	803	
3	Heacock St.	s/o Cardinal Av.	Non-Sensitive	78.2	177	380	819	
4	Heacock St.	s/o Nandina Av.	Non-Sensitive	33.6	n/a	n/a	n/a	
5	Indian Av.	s/o Nandina Av.	Non-Sensitive	78.1	153	330	712	
6	Cactus Av.	w/o Heacock St.	Non-Sensitive	81.3	313	674	1452	
7	Cactus Av.	e/o Heacock St.	Sensitive	78.8	170	365	787	
8	Harley Knox Bl.	e/o Patterson Av.	Non-Sensitive	76.9	184	397	855	
9	Harley Knox Bl.	e/o Indian Av.	Non-Sensitive	73.7	113	243	523	

TABLE 7-4: OYC WITHOUT PROJECT CONTOURS

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 adjacent land use.

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



	Road Segr		Segment Receiving Land Use ¹	CNEL at Receiving	Distance to Contour from Centerline (Feet)		
ID		Segment		Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Heacock St.	n/o Gentian Av.	Sensitive	78.4	182	392	845
2	Heacock St.	s/o Iris Av.	Non-Sensitive	78.1	173	374	805
3	Heacock St.	s/o Cardinal Av.	Non-Sensitive	78.5	184	396	854
4	Heacock St.	s/o Nandina Av.	Non-Sensitive	33.6	n/a	n/a	n/a
5	Indian Av.	s/o Nandina Av.	Non-Sensitive	78.4	160	344	741
6	Cactus Av.	w/o Heacock St.	Non-Sensitive	81.3	313	675	1453
7	Cactus Av.	e/o Heacock St.	Sensitive	78.8	170	365	787
8	Harley Knox Bl.	e/o Patterson Av.	Non-Sensitive	77.1	191	413	889
9	Harley Knox Bl.	e/o Indian Av.	Non-Sensitive	73.7	113	243	523

TABLE 7-5: OYC WITH (NON-PEAK) PROJECT CONTOURS

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

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

"n/a"= Heacock Street Extension not yet built.

	Road Segment	Receiving	CNEL at	Distance to Contour from Centerline (Feet)			
ID		Segment	Land Use ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Heacock St.	n/o Gentian Av.	Sensitive	78.4	182	393	846
2	Heacock St.	s/o Iris Av.	Non-Sensitive	78.1	174	374	806
3	Heacock St.	s/o Cardinal Av.	Non-Sensitive	78.6	187	404	870
4	Heacock St.	s/o Nandina Av.	Non-Sensitive	33.6	n/a	n/a	n/a
5	Indian Av.	s/o Nandina Av.	Non-Sensitive	78.5	163	350	755
6	Cactus Av.	w/o Heacock St.	Non-Sensitive	81.3	313	675	1454
7	Cactus Av.	e/o Heacock St.	Sensitive	78.8	170	366	788
8	Harley Knox Bl.	e/o Patterson Av.	Non-Sensitive	77.3	195	420	905
9	Harley Knox Bl.	e/o Indian Av.	Non-Sensitive	73.7	113	243	523

TABLE 7-6: OYC WITH (PEAK) PROJECT CONTOURS

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 adjacent land use.

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



	Road Segment		Receiving Land Use ¹	CNEL at Receiving Land Use (dBA) ²	Distance to Contour from Centerline (Feet)		
ID		Segment			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Heacock St.	n/o Gentian Av.	Sensitive	78.7	192	413	889
2	Heacock St.	s/o Iris Av.	Non-Sensitive	78.1	173	374	805
3	Heacock St.	s/o Cardinal Av.	Non-Sensitive	78.6	187	402	867
4	Heacock St.	s/o Nandina Av.	Non-Sensitive	33.6	n/a	n/a	n/a
5	Indian Av.	s/o Nandina Av.	Non-Sensitive	78.5	163	350	755
6	Cactus Av.	w/o Heacock St.	Non-Sensitive	81.7	330	711	1532
7	Cactus Av.	e/o Heacock St.	Sensitive	79.1	179	386	831
8	Harley Knox Bl.	e/o Patterson Av.	Non-Sensitive	77.3	195	420	904
9	Harley Knox Bl.	e/o Indian Av.	Non-Sensitive	74.0	119	257	553

TABLE 7-7: HY WITHOUT PROJECT CONTOURS W/O HEACOCK STREET EXT.

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

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

"n/a"= Heacock Street Extension not yet built.

TABLE 7-8: HY WITH (NON-PEAK) PROJECT CONTOURS W/O HEACOCK STREET EXT.

	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	Heacock St.	n/o Gentian Av.	Sensitive	78.8	192	413	890	
2	Heacock St.	s/o Iris Av.	Non-Sensitive	78.1	174	375	807	
3	Heacock St.	s/o Cardinal Av.	Non-Sensitive	78.8	194	418	900	
4	Heacock St.	s/o Nandina Av.	Non-Sensitive	33.6	n/a	n/a	n/a	
5	Indian Av.	s/o Nandina Av.	Non-Sensitive	78.8	169	364	783	
6	Cactus Av.	w/o Heacock St.	Non-Sensitive	81.7	330	711	1533	
7	Cactus Av.	e/o Heacock St.	Sensitive	79.1	179	386	831	
8	Harley Knox Bl.	e/o Patterson Av.	Non-Sensitive	77.5	202	435	937	
9	Harley Knox Bl.	e/o Indian Av.	Non-Sensitive	74.0	119	257	553	

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 adjacent land use.

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



	Road Segment	Receiving	CNEL at Receiving	Distance to Contour from Centerline (Feet)			
ID		Segment	Land Use ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Heacock St.	n/o Gentian Av.	Sensitive	78.8	192	414	891
2	Heacock St.	s/o Iris Av.	Non-Sensitive	78.1	174	375	808
3	Heacock St.	s/o Cardinal Av.	Non-Sensitive	78.9	197	425	916
4	Heacock St.	s/o Nandina Av.	Non-Sensitive	33.6	n/a	n/a	n/a
5	Indian Av.	s/o Nandina Av.	Non-Sensitive	78.9	172	370	797
6	Cactus Av.	w/o Heacock St.	Non-Sensitive	81.7	330	712	1533
7	Cactus Av.	e/o Heacock St.	Sensitive	79.1	179	386	832
8	Harley Knox Bl.	e/o Patterson Av.	Non-Sensitive	77.6	205	442	952
9	Harley Knox Bl.	e/o Indian Av.	Non-Sensitive	74.0	119	257	553

TABLE 7-9: HY WITH (PEAK) PROJECT CONTOURS W/O HEACOCK STREET EXT.

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

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

"n/a"= Heacock Street Extension not yet built.

	Road Segment	Receiving	CNEL at Receiving	Distance to Contour from Centerline (Feet)			
ID		Segment	Land Use ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Heacock St.	n/o Gentian Av.	Sensitive	78.7	192	413	889
2	Heacock St.	s/o Iris Av.	Non-Sensitive	78.1	173	374	805
3	Heacock St.	s/o Cardinal Av.	Non-Sensitive	78.6	187	402	867
4	Heacock St.	s/o Nandina Av.	Non-Sensitive	75.2	111	240	516
5	Indian Av.	s/o Nandina Av.	Non-Sensitive	77.8	146	314	677
6	Cactus Av.	w/o Heacock St.	Non-Sensitive	81.7	330	711	1532
7	Cactus Av.	e/o Heacock St.	Sensitive	79.1	179	386	831
8	Harley Knox Bl.	e/o Patterson Av.	Non-Sensitive	77.3	195	420	904
9	Harley Knox Bl.	e/o Indian Av.	Non-Sensitive	74.1	121	260	560

TABLE 7-10: HY WITHOUT PROJECT CONTOURS WITH HEACOCK STREET EXT.

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 adjacent land use.

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



		Receiving	Receiving	CNEL at Receiving	Distance to Contour from Centerline (Feet)			
ID	Roau	Segment	Land Use ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	
1	Heacock St.	n/o Gentian Av.	Sensitive	78.8	192	413	890	
2	Heacock St.	s/o Iris Av.	Non-Sensitive	78.1	174	375	807	
3	Heacock St.	s/o Cardinal Av.	Non-Sensitive	78.8	194	418	900	
4	Heacock St.	s/o Nandina Av.	Non-Sensitive	75.2	111	240	516	
5	Indian Av.	s/o Nandina Av.	Non-Sensitive	78.1	152	328	706	
6	Cactus Av.	w/o Heacock St.	Non-Sensitive	81.7	330	711	1533	
7	Cactus Av.	e/o Heacock St.	Sensitive	79.1	179	386	831	
8	Harley Knox Bl.	e/o Patterson Av.	Non-Sensitive	77.5	202	435	937	
9	Harley Knox Bl.	e/o Indian Av.	Non-Sensitive	74.1	121	260	560	

TABLE 7-11: HY WITH (NON-PEAK) PROJECT CONTOURS WITH HEACOCK STREET EXT.

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

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

TABLE 7-12: HY WITH (PEAK) PROJECT CONTOURS WITH HEACOCK STREET EXT.

	Road Segment Land L	Receiving	CNEL at Receiving	Distance to Contour from Centerline (Feet)			
ID		Segment	Land Use ¹	Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Heacock St.	n/o Gentian Av.	Sensitive	78.8	192	414	891
2	Heacock St.	s/o Iris Av.	Non-Sensitive	78.1	174	375	808
3	Heacock St.	s/o Cardinal Av.	Non-Sensitive	78.9	197	425	916
4	Heacock St.	s/o Nandina Av.	Non-Sensitive	75.2	111	240	516
5	Indian Av.	s/o Nandina Av.	Non-Sensitive	78.2	155	334	721
6	Cactus Av.	w/o Heacock St.	Non-Sensitive	81.7	330	712	1533
7	Cactus Av.	e/o Heacock St.	Sensitive	79.1	179	386	832
8	Harley Knox Bl.	e/o Patterson Av.	Non-Sensitive	77.6	205	442	952
9	Harley Knox Bl.	e/o Indian Av.	Non-Sensitive	74.1	121	260	560

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 adjacent land use.

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



7.2 EXISTING WITH PROJECT (NON-PEAK) TRAFFIC NOISE INCREASE

An analysis of Existing traffic noise levels plus traffic (Non-Peak) noise generated by the proposed Project has been included in this report for informational purposes and to fully analyze all the traffic scenarios identified in the *Meridian D-1 Gateway Aviation Center Traffic Analysis* prepared by Urban Crossroads, Inc. This condition is provided solely for informational purposes and will not occur, since the Project will not be fully developed and occupied under Existing conditions. Therefore, no mitigation measures are considered to reduce the Existing with Project condition traffic noise level increases. The long-range conditions under Opening Year Cumulative 2026 and Horizon Year 2045 scenarios represent the expected cumulative conditions without and with Project traffic, and are therefore, used to determine the significance of the Project off-site traffic noise level increases on the study area roadway segments.

Table 7-1 shows the Existing without Project noise levels. The Existing without Project exterior noise levels are expected to range from 71.4 to 79.9 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-2 shows that the Existing with Project (Non-Peak) conditions traffic noise levels will also range from 71.4 to 79.9 dBA CNEL. Table 7-13 shows that the Project off-site traffic noise level will experience a noise level increase ranging from 0.0 to 0.7 dBA CNEL on the study area roadway segments.

7.3 EXISTING WITH PROJECT (PEAK) TRAFFIC NOISE INCREASE

An analysis of Existing traffic noise levels plus traffic (Peak) noise generated by the proposed Project has been included in this report for informational purposes and to fully analyze all the traffic scenarios identified in the *Meridian D-1 Gateway Aviation Center Traffic Analysis* prepared by Urban Crossroads, Inc. This condition is provided solely for informational purposes and will not occur, since the Project will not be fully developed and occupied under Existing conditions. Therefore, no mitigation measures are considered to reduce the Existing with Project condition traffic noise level increases. The long-range conditions under Opening Year Cumulative 2026 and Horizon Year 2045 scenarios represent the expected cumulative conditions without and with Project traffic, and are therefore, used to determine the significance of the Project off-site traffic noise level increases on the study area roadway segments.

Table 7-1 shows the Existing without Project noise levels. The Existing without Project exterior noise levels are expected to range from 71.4 to 79.9 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-3 shows that the Existing with Project (Peak) conditions traffic noise levels will also range from 71.4 to 79.9 dBA CNEL. Table 7-14 shows that the Project off-site traffic noise level will experience a noise level increase ranging from 0.0 to 1.0 dBA CNEL on the study area roadway segments.

7.4 OYC WITH PROJECT (NON-PEAK) TRAFFIC NOISE INCREASE

Table 7-4 presents the Opening Year Cumulative 2026 without Project conditions CNEL noise levels. The Opening Year Cumulative 2026 without Project exterior noise levels are expected to range from 73.7 to 81.3 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-5 shows the Opening Year Cumulative 2026 with Project



(Non-Peak) conditions will range from 73.7 to 81.3 dBA CNEL. Table 7-15 shows that the Project off-site traffic noise level increase ranging from 0.0 to 0.3 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to the study area roadway segments would experience *less than significant* noise level impacts due to unmitigated Project-related traffic noise levels.

7.5 OYC WITH PROJECT (PEAK) TRAFFIC NOISE INCREASE

Table 7-4 presents the Opening Year Cumulative 2026 without Project conditions CNEL noise levels. The Opening Year Cumulative 2026 without Project exterior noise levels are expected to range from 73.7 to 81.3 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-6 shows the Opening Year Cumulative 2026 with Project (Peak) conditions will range from 73.7 to 81.3 dBA CNEL. Table 7-16 shows that the Project off-site traffic noise level increase ranging from 0.0 to 0.4 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to the study area roadway segments would experience *less than significant* noise level impacts due to unmitigated Project-related traffic noise levels.

7.6 HY WITH PROJECT W/O HEACOCK STREET EXT. (NON-PEAK) TRAFFIC NOISE INCREASE

Table 7-7 presents the Horizon Year 2045 without Project conditions without Heacock Street Extension CNEL noise levels. The Horizon Year 2045 without Project exterior noise levels are expected to range from 74.0 to 81.7 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography.

Table 7-8 shows the Horizon Year 2045 with Project (Non-Peak) conditions without Heacock Street Conditions will range from 74.0 to 81.7 dBA CNEL. Table 7-17 shows that the Project off-site traffic noise level increase ranging from 0.0 to 0.3 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to the study area roadway segments would experience *less than significant* noise level impacts due to unmitigated Project-related traffic noise levels.

7.7 HY WITH PROJECT W/O HEACOCK STREET EXT. (PEAK) TRAFFIC NOISE INCREASE

Table 7-7 presents the Horizon Year 2045 without Project conditions without Heacock Street Extension CNEL noise levels. The Horizon Year 2045 without Project exterior noise levels are expected to range from 74.0 to 81.7 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography.

Table 7-9 shows the Horizon Year 2045 with Project (Peak) conditions without Heacock Street Conditions will range from 74.0 to 81.7 dBA CNEL. Table 7-18 shows that the Project off-site traffic noise level increase ranging from 0.0 to 0.4 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to the study area roadway segments would experience *less than significant* noise level impacts due to unmitigated Project-related traffic noise levels.



7.8 HY WITH PROJECT WITH HEACOCK STREET EXT. (NON-PEAK) TRAFFIC NOISE INCREASE

Table 7-10 presents the Horizon Year 2045 without Project conditions with Heacock Street Extension CNEL noise levels. The Horizon Year 2045 without Project exterior noise levels are expected to range from 74.1 to 81.7 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography.

Table 7-11 shows the Horizon Year 2045 with Project (Non-Peak) conditions with Heacock Street Conditions will range from 74.1 to 81.7 dBA CNEL. Table 7-19 shows that the Project off-site traffic noise level increase ranging from 0.0 to 0.3 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to the study area roadway segments would experience *less than significant* noise level impacts due to unmitigated Project-related traffic noise levels.

7.9 HY WITH PROJECT WITH HEACOCK STREET EXT. (PEAK) TRAFFIC NOISE INCREASE

Table 7-10 presents the Horizon Year 2045 without Project conditions with Heacock Street Extension CNEL noise levels. The Horizon Year 2045 without Project exterior noise levels are expected to range from 74.1 to 81.7 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography.

Table 7-12 shows the Horizon Year 2045 with Project (Peak) conditions with Heacock Street Conditions will range from 74.1 to 81.7 dBA CNEL. Table 7-20 shows that the Project off-site traffic noise level increase ranging from 0.0 to 0.4 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to the study area roadway segments would experience *less than significant* noise level impacts due to unmitigated Project-related traffic noise levels.



	Road	Segment	Receiving	CNI La	EL at Receiv nd Use (dB/	Threshold ²		
	KUdu	Segment	Land Use ¹	Without Project	With Project	Project Addition	Limit	Exceeded?
1	Heacock St.	n/o Gentian Av.	Sensitive	77.3	77.3	0.0	1.5	No
2	Heacock St.	s/o Iris Av.	Non-Sensitive	75.1	75.1	0.0	3.0	No
3	Heacock St.	s/o Cardinal Av.	Non-Sensitive	75.4	75.9	0.5	3.0	No
4	Heacock St.	s/o Nandina Av.	Non-Sensitive	n/a	n/a	n/a	n/a	No
5	Indian Av.	s/o Nandina Av.	Non-Sensitive	73.4	74.1	0.7	3.0	No
6	Cactus Av.	w/o Heacock St.	Non-Sensitive	79.9	79.9	0.0	3.0	No
7	Cactus Av.	e/o Heacock St.	Sensitive	76.8	76.8	0.0	1.5	No
8	Harley Knox Bl.	e/o Patterson Av.	Non-Sensitive	74.3	74.7	0.4	3.0	No
9	Harley Knox Bl.	e/o Indian Av.	Non-Sensitive	71.4	71.4	0.0	3.0	No

TABLE 7-13: EXISTING PROJECT (NON-PEAK) TRAFFIC NOISE INCREASES

² Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?

	Road Segment	Segment	Receiving			CNEL at Receiving Land Use (dBA) ¹			
	KUdu	Segment	Land Use ¹	Without Project	With Project	Project Addition	Limit	Exceeded?	
1	Heacock St.	n/o Gentian Av.	Sensitive	77.3	77.3	0.0	1.5	No	
2	Heacock St.	s/o Iris Av.	Non-Sensitive	75.1	75.1	0.0	3.0	No	
3	Heacock St.	s/o Cardinal Av.	Non-Sensitive	75.4	76.1	0.7	3.0	No	
4	Heacock St.	s/o Nandina Av.	Non-Sensitive	n/a	n/a	n/a	n/a	No	
5	Indian Av.	s/o Nandina Av.	Non-Sensitive	73.4	74.4	1.0	3.0	No	
6	Cactus Av.	w/o Heacock St.	Non-Sensitive	79.9	79.9	0.0	3.0	No	
7	Cactus Av.	e/o Heacock St.	Sensitive	76.8	76.8	0.0	1.5	No	
8	Harley Knox Bl.	e/o Patterson Av.	Non-Sensitive	74.3	74.9	0.6	3.0	No	
9	Harley Knox Bl.	e/o Indian Av.	Non-Sensitive	71.4	71.4	0.0	3.0	No	

TABLE 7-14: EXISTING PROJECT (PEAK) TRAFFIC NOISE INCREASES

² Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?



	Road Segment	Sogmont	Receiving			CNEL at Receiving Land Use (dBA) ¹			
	KUdu	Segment	Land Use ¹	Without Project	With Project	Project Addition	Limit	Exceeded?	
1	Heacock St.	n/o Gentian Av.	Sensitive	78.4	78.4	0.0	1.5	No	
2	Heacock St.	s/o Iris Av.	Non-Sensitive	78.1	78.1	0.0	3.0	No	
3	Heacock St.	s/o Cardinal Av.	Non-Sensitive	78.2	78.5	0.3	3.0	No	
4	Heacock St.	s/o Nandina Av.	Non-Sensitive	n/a	n/a	n/a	n/a	No	
5	Indian Av.	s/o Nandina Av.	Non-Sensitive	78.1	78.4	0.3	3.0	No	
6	Cactus Av.	w/o Heacock St.	Non-Sensitive	81.3	81.3	0.0	3.0	No	
7	Cactus Av.	e/o Heacock St.	Sensitive	78.8	78.8	0.0	1.5	No	
8	Harley Knox Bl.	e/o Patterson Av.	Non-Sensitive	76.9	77.1	0.2	3.0	No	
9	Harley Knox Bl.	e/o Indian Av.	Non-Sensitive	73.7	73.7	0.0	3.0	No	

TABLE 7-15: OYC PROJECT (NON-PEAK) TRAFFIC NOISE INCREASES

² Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?



	Road	Segment	Receiving	CN La	EL at Receiv nd Use (dB/	Threshold ²		
	KUdu	Segment	Land Use ¹	Without Project	With Project	Project Addition	Limit	Exceeded?
1	Heacock St.	n/o Gentian Av.	Sensitive	78.4	78.4	0.0	1.5	No
2	Heacock St.	s/o Iris Av.	Non-Sensitive	78.1	78.1	0.0	3.0	No
3	Heacock St.	s/o Cardinal Av.	Non-Sensitive	78.2	78.6	0.4	3.0	No
4	Heacock St.	s/o Nandina Av.	Non-Sensitive	n/a	n/a	n/a	n/a	No
5	Indian Av.	s/o Nandina Av.	Non-Sensitive	78.1	78.5	0.4	3.0	No
6	Cactus Av.	w/o Heacock St.	Non-Sensitive	81.3	81.3	0.0	3.0	No
7	Cactus Av.	e/o Heacock St.	Sensitive	78.8	78.8	0.0	1.5	No
8	Harley Knox Bl.	e/o Patterson Av.	Non-Sensitive	76.9	77.3	0.4	3.0	No
9	Harley Knox Bl.	e/o Indian Av.	Non-Sensitive	73.7	73.7	0.0	3.0	No

TABLE 7-16: OYC PROJECT (PEAK) TRAFFIC NOISE INCREASES

² Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?



	Pood	Segment	Receiving	CN La	EL at Receiv nd Use (dB/	ring A) ¹	Threshold ²		
	Road	Segment	Land Use ¹	Without Project	With Project	Project Addition	Limit	Exceeded?	
1	Heacock St.	n/o Gentian Av.	Sensitive	78.7	78.8	0.1	1.5	No	
2	Heacock St.	s/o Iris Av.	Non-Sensitive	78.1	78.1	0.0	3.0	No	
3	Heacock St.	s/o Cardinal Av.	Non-Sensitive	78.6	78.8	0.2	3.0	No	
4	Heacock St.	s/o Nandina Av.	Non-Sensitive	n/a	n/a	n/a	n/a	No	
5	Indian Av.	s/o Nandina Av.	Non-Sensitive	78.5	78.8	0.3	3.0	No	
6	Cactus Av.	w/o Heacock St.	Non-Sensitive	81.7	81.7	0.0	3.0	No	
7	Cactus Av.	e/o Heacock St.	Sensitive	79.1	79.1	0.0	1.5	No	
8	Harley Knox Bl.	e/o Patterson Av.	Non-Sensitive	77.3	77.5	0.2	3.0	No	
9	Harley Knox Bl.	e/o Indian Av.	Non-Sensitive	74.0	74.0	0.0	3.0	No	

TABLE 7-17: HY W/O HEACOCK STREET EXT. (NON-PEAK) PROJECT TRAFFIC NOISE INCREASES

² Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?

ID	Pood	Sogmont	Receiving	CN La	EL at Receiv nd Use (dB/	Threshold ²		
	KUdu	Segment	Land Use ¹	Without Project	With Project	Project Addition	Limit	Exceeded?
1	Heacock St.	n/o Gentian Av.	Sensitive	78.7	78.8	0.1	1.5	No
2	Heacock St.	s/o Iris Av.	Non-Sensitive	78.1	78.1	0.0	3.0	No
3	Heacock St.	s/o Cardinal Av.	Non-Sensitive	78.6	78.9	0.3	3.0	No
4	Heacock St.	s/o Nandina Av.	Non-Sensitive	n/a	n/a	n/a	n/a	No
5	Indian Av.	s/o Nandina Av.	Non-Sensitive	78.5	78.9	0.4	3.0	No
6	Cactus Av.	w/o Heacock St.	Non-Sensitive	81.7	81.7	0.0	3.0	No
7	Cactus Av.	e/o Heacock St.	Sensitive	79.1	79.1	0.0	1.5	No
8	Harley Knox Bl.	e/o Patterson Av.	Non-Sensitive	77.3	77.6	0.3	3.0	No
9	Harley Knox Bl.	e/o Indian Av.	Non-Sensitive	74.0	74.0	0.0	3.0	No

TABLE 7-18: HY W/O HEACOCK STREET EXT. (PEAK) PROJECT TRAFFIC NOISE INCREASES

² Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?



	Road Segment	Sogmont	Receiving	CN La	EL at Receiv nd Use (dB/	Threshold ²		
	KUdu	Segment	Land Use ¹	Without Project	With Project	Project Addition	Limit	Exceeded?
1	Heacock St.	n/o Gentian Av.	Sensitive	78.7	78.8	0.1	1.5	No
2	Heacock St.	s/o Iris Av.	Non-Sensitive	78.1	78.1	0.0	3.0	No
3	Heacock St.	s/o Cardinal Av.	Non-Sensitive	78.6	78.8	0.2	3.0	No
4	Heacock St.	s/o Nandina Av.	Non-Sensitive	75.2	75.2	0.0	3.0	No
5	Indian Av.	s/o Nandina Av.	Non-Sensitive	77.8	78.1	0.3	3.0	No
6	Cactus Av.	w/o Heacock St.	Non-Sensitive	81.7	81.7	0.0	3.0	No
7	Cactus Av.	e/o Heacock St.	Sensitive	79.1	79.1	0.0	1.5	No
8	Harley Knox Bl.	e/o Patterson Av.	Non-Sensitive	77.3	77.5	0.2	3.0	No
9	Harley Knox Bl.	e/o Indian Av.	Non-Sensitive	74.1	74.1	0.0	3.0	No

TABLE 7-19: HY WITH HEACOCK STREET EXT. (NON-PEAK) PROJECT TRAFFIC NOISE INCREASES

² Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?



	Pood	Sogmont	Receiving	CN La	EL at Receiv nd Use (dB/	Threshold ²		
	Road	Segment	Land Use ¹	Without Project	With Project	Project Addition	Limit	Exceeded?
1	Heacock St.	n/o Gentian Av.	Sensitive	78.7	78.8	0.1	1.5	No
2	Heacock St.	s/o Iris Av.	Non-Sensitive	78.1	78.1	0.0	3.0	No
3	Heacock St.	s/o Cardinal Av.	Non-Sensitive	78.6	78.9	0.3	3.0	No
4	Heacock St.	s/o Nandina Av.	Non-Sensitive	75.2	75.2	0.0	3.0	No
5	Indian Av.	s/o Nandina Av.	Non-Sensitive	77.8	78.2	0.4	3.0	No
6	Cactus Av.	w/o Heacock St.	Non-Sensitive	81.7	81.7	0.0	3.0	No
7	Cactus Av.	e/o Heacock St.	Sensitive	79.1	79.1	0.0	1.5	No
8	Harley Knox Bl.	e/o Patterson Av.	Non-Sensitive	77.3	77.6	0.3	3.0	No
9	Harley Knox Bl.	e/o Indian Av.	Non-Sensitive	74.1	74.1	0.0	3.0	No

TABLE 7-20: HY WITH HEACOCK STREET EXT. (PEAK) PROJECT TRAFFIC NOISE INCREASES

² Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?



8 SENSITIVE RECEIVER LOCATIONS

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

To describe the potential off-site Project noise levels, four 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 24307 Carman Lane, approximately 3,140 feet northeast of the Project site. R1 is placed at the private outdoor living area (backyard) facing the Project site behind an existing 6' foot high wall. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment.
- R2: Location R2 represents La Iglesia Misionera Cristiana at 16220 Indian Street, approximately 3,166 feet northeast of the Project site. Receiver R2 is placed at the residential building façade because there are no private outdoor living areas (backyards) 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 16537 Libra Lane, approximately 2,777 feet east of the Project site. R3 is placed at the private outdoor living area (backyard) facing the Project site behind an existing 6' foot high wall. A 24-hour noise measurement near this location, L2, is used to describe the existing ambient noise environment.
- R4: Location R4 represents the existing noise sensitive residence at 16855 Baltic Court, approximately 2,730 feet southeast of the Project site. R4 is placed at the private outdoor living area (backyard) facing the Project site behind an existing 6' foot high wall. A 24-

hour noise measurement near this location, L3, is used to describe the existing ambient noise environment.



EXHIBIT 8-A: RECEIVER LOCATIONS

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 Meridian D-1 Gateway Aviation Center 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 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, entry gate and truck movements, roof-top air conditioning, and trash enclosure activity.

This Noise Impact Analysis has been prepared to focus solely on the transportation truck-related operations at the Project site. It is our understanding that a separate aircraft-related noise study is being prepared for the Project. Therefore, no analysis of aircraft-related operational activity (e.g., aircraft overflights, taxiing, or ground support equipment) is included in this report.

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, entry gate and truck movements, roof-top air conditioning, and trash enclosure activity all operating continuously. These sources of noise activity will likely vary throughout the day.



EXHIBIT 9-A: OPERATIONAL NOISE SOURCE LOCATIONS

Noise Coursel	Noise Source	Min./	Hour ²	Reference Noise	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
Entry Gate & Truck Movements	8'	_4	_4	58.0	89.7
Roof-Top Air Conditioning Units	5'	39	28	57.2	88.9
Trash Enclosure Activity	5'	5	5	57.3	89.0

TABLE 9-1: REFERENCE NOISE LEVEL MEASUREMENTS

¹ As measured by Urban Crossroads, Inc.

² Anticipated duration (minutes within the hour) of noise activity during typical hourly conditions expected at the Project site. "Daytime" = 8:00 a.m. - 10:00 p.m.; "Nighttime" = 10:01 p.m. - 7:59 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. Sound power levels calculated using the CadnaA noise model at the reference distance to the noise source. Numbers may vary due to size differences between point and area noise sources.

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

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. (20)

9.2.2 LOADING DOCK ACTIVITY

To describe the loading dock activities, a reference noise level measurement was collected to represent the truck activities. 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 L_{eq} 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 ENTRY GATE & TRUCK MOVEMENTS

An entry gate and truck movements reference noise level measurement were taken over a 15minute period and represents multiple noise sources producing a reference noise level of 58.0 dBA L_{eq} at 50 feet. The noise sources included at this measurement location account for the rattling and squeaking during normal opening and closing operations, the gate closure equipment, truck engines idling outside the entry gate, truck movements through the entry gate, and background truck court activities and forklift backup alarm noise.

Consistent with the *Gateway Aviation Traffic Analysis*, the Project is expected to generate a total of approximately 1,276 trip-ends per day (actual vehicles) and includes 276 truck trip-ends per day. (24) This noise study relies on the actual Project trips (as opposed to the passenger car equivalents) to accurately account for the effect of individual truck trips on the study area roadway network. Using the estimated number of truck trips in combination with time-of-day vehicle splits, the number of entry gate and truck movements by driveway location were calculated. As shown on Table 9-2, this information is then used to calculate the entry gate and truck movements operational noise source activity based on the number of events by time of day.

TABLE 9-2: ENTRY GATE & TRUCK MOVEMENTS BY LOCATION

Entry Gate	Total	Trip	Dist. ³		Time of	Day Vehicl	e Splits⁵	Truc	k Moveme	ents ⁶
& Truck Movement Location ¹	Project Truck Trips ²	In	Out	Truck Trips by Location ⁴	Day	Evening	Night	Day	Evening	Night
Driveway 1	276	100%	100%	276	86.50%	2.70%	10.80%	239	7	30

¹ Driveway location as shown on Exhibit 9-A.

² Total Project truck trips according to Table 4-3 of the Gateway Aviation Traffic Analysis.

³ Project truck trip distribution according to Exhibit 4-1 of the Gateway Aviation Traffic Analysis.

⁴ Calculated trip trucks per location represents the product of the total (inbound and outbound) project truck trips by and the trip

distribution.

⁵ Heavy truck time of day vehicle splits as shown on Table 6-3.

⁶ Calculated time of day entry gate and truck movements by location.

9.2.4 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_{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 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.

9.2.5 TRASH ENCLOSURE ACTIVITY

The measured reference noise level at the uniform 50-foot reference distance is 57.3 dBA L_{eq} for the trash enclosure activity. The trash enclosure activity noise levels include two metal gates opening and closing, metal scraping against concrete floor sounds, dumpster movement on metal wheels, trash dropping into the metal dumpster, and background parking lot vehicle movements. Noise associated with trash enclosure activities is conservatively expected to occur for 10 minutes per hour.

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 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 protocol, the CadnaA noise prediction model relies on the reference sound power level (L_w) 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 as a result 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 outward in a spherical pattern. A default ground attenuation factor of 0.0 was used in the CadnaA noise analysis to account for hard site conditions. 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, entry gate and truck movements, roof-top air conditioning, and trash enclosure activity, 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. Tables 9-3 shows the Project operational noise levels during the daytime hours of 8:00 a.m. to 10:00 p.m. The daytime hourly noise levels at the off-site receiver locations are expected to range from 25.0 to 36.9 dBA L_{eq}.

Noise Source1	Operational Noise Levels by Receiver Location (dBA Leq)						
Noise Source-	R1	R2	R3	R4			
Loading Dock Activity	23.9	35.9	36.0	36.8			
Entry Gate & Truck Movements	17.8	22.7	20.3	21.0			
Roof-Top Air Conditioning Units	6.6	11.5	8.7	9.3			
Trash Enclosure Activity	4.8	9.8	7.3	8.1			
Total (All Noise Sources)	25.0	36.1	36.1	36.9			

TABLE 9-3: DAYTIME PROJECT OPERATIONAL NOISE LEVELS

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 10:01 p.m. to 7:59 a.m. The nighttime hourly noise levels at the off-site receiver locations are expected to range from 24.1 to 36.8 dBA L_{eq}. The differences between the daytime and nighttime noise levels are largely related to the duration of noise activity (Table 9-1).

	Operational Noise Levels by Receiver Location (dBA Leq)					
Noise Source-	R1	R2	R3	R4		
Loading Dock Activity	23.9	35.9	36.0	36.8		
Entry Gate & Truck Movements	8.7	13.7	11.3	12.0		
Roof-Top Air Conditioning Units	5.6	10.5	7.8	8.4		
Trash Enclosure Activity	3.8	8.8	6.3	7.2		
Total (All Noise Sources)	24.1	35.9	36.0	36.8		

TABLE 9-4: NIGHTTIME PROJECT OPERATIONAL NOISE LEVELS

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 Moreno Valley exterior noise level standards at the nearest noise-sensitive receiver locations. Table 9-5 shows the operational noise levels associated with Meridian D-1 Gateway Aviation Center Project will satisfy the City of Moreno Valley 65 dBA L_{eq} daytime and 60 dBA L_{eq} nighttime exterior noise level standards at all the nearest receiver locations and will satisfy the March JPA 55 dBA L_{eq} daytime and nighttime exterior noise level standards at all the nearest receiver locations.
Receiver	Project Op Noise Level	perational s (dBA Leq) ²	Noise Level Standards (dBA Leq) ³		Noise Level Standards Exceeded? ⁴	
Location	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime
R1	25.0	24.1	55	55	No	No
R2	36.1	35.9	55	55	No	No
R3	36.1	36.0	55	55	No	No
R4	36.9	36.8	55	55	No	No

TABLE 9-5: OPERATIONAL NOISE LEVEL COMPLIANCE

 $^{\rm 1}$ See Exhibit 8-A for the receiver locations.

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

³ March Joint Powers Authority, Development Code, Chapter 9.10 Performance Standards, Section 9.10.140 (Appendix 3.1).

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

"Daytime" = 8:00 a.m. - 10:00 p.m.; "Nighttime" = 10:01 p.m. - 7:59 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:

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

Where "SPL1," "SPL2," etc. are equal to the sound pressure levels being combined, or in this case, the Project-operational and existing ambient noise levels. The difference between the combined Project and ambient noise levels describes the Project noise level increases to the existing ambient noise environment. As indicated on Tables 9-6 and 9-7, the Project is not expected to generate a measurable daytime and nighttime operational noise level increase dBA L_{eq} at the nearest receiver locations. Project-related operational noise level increases will not exceed the operational noise level increase significance criteria presented in Table 4-1. Therefore, the incremental Project operational noise level increase is considered *less than significant* at all receiver locations.

Receiver Location ¹	Total Project Operational Noise Level ²	Measurement Location ³	Reference Ambient Noise Levels ⁴	Combined Project and Ambient⁵	Project Increase ⁶	Increase Criteria ⁷	Increase Criteria Exceeded?
R1	25.0	L1	65.6	65.6	0.0	1.5	No
R2	36.1	L2	60.9	60.9	0.0	3.0	No
R3	36.1	L2	60.9	60.9	0.0	3.0	No
R4	36.9	L3	58.5	58.5	0.0	5.0	No

TABLE 9-6: DAYTIME PROJECT OPERATIONAL NOISE LEVEL INCREASES

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.



Receiver Location ¹	Total Project Operational Noise Level ²	Measurement Location ³	Reference Ambient Noise Levels ⁴	Combined Project and Ambient⁵	Project Increase ⁶	Increase Criteria ⁷	Increase Criteria Exceeded?
R1	24.1	L1	62.6	62.6	0.0	3.0	No
R2	35.9	L2	58.7	58.7	0.0	5.0	No
R3	36.0	L2	58.7	58.7	0.0	5.0	No
R4	36.8	L3	53.9	54.0	0.1	5.0	No

TABLE 9-7: NIGHTTIME OPERATIONAL NOISE LEVEL INCREASES

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 IMPACTS

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

To prevent high levels of construction noise from impacting noise-sensitive land uses, the March JPA Development Code Chapter 9.10 Performance Standards, Section 9.10.040 limits construction to between 7:00 a.m. until 7:00 p.m. only, and the Moreno Valley Municipal Code Section 11.80.030(D)(7) limits general construction activities to between 7:00 a.m. and 8:00 p.m. In addition, Section 8.21.050(O) of the Moreno Valley Municipal Code limits grading operations to the hours of 7:00 a.m. to 7:00 p.m., Monday through Friday, excluding holidays, and 8:00 a.m. to 4:00 p.m. on Saturdays or as approved by the City Engineer.

10.1 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:

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

10.2 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. (25) 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.





EXHIBIT 10-A: TYPICAL CONSTRUCTION NOISE SOURCE LOCATIONS

13445-11 NA



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 32.0 to 42.4 dBA L_{eq} at the nearby receiver locations. Appendix 10.1 includes the detailed CadnaA construction noise model inputs.

Construction Stage	Reference Construction Activity	Reference Noise Level @ 50 Feet (dBA L _{eq}) ¹	Combined Noise Level (dBA L _{eq}) ²	Combined Sound Power Level (PWL) ³	
C 11	Crawler Tractors	78			
Site	Hauling Trucks	72	80	112	
ricparation	Rubber Tired Dozers	75			
	Graders	81			
Grading	Excavators	77	83	115	
	Compactors	76			
	Cranes	73		113	
Building	Tractors	80	81		
construction	Welders	70			
	Pavers	74			
Paving	Paving Equipment	82	83	115	
	Rollers	73			
Architectural	Cranes	73			
	Air Compressors	74	77	109	
coating	Generator Sets	70			

TABLE 10-1: CONSTRUCTION REFERENCE NOISE LEVELS

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.

³ Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings. Sound power levels calibrated using the CadnaA noise model at the reference distance to the noise source.



		Construction Noise Levels (dBA Leq)							
Receiver Location ¹	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Levels ²			
R1	35.0	38.0	36.0	38.0	32.0	38.0			
R2	39.4	42.4	40.4	42.4	36.4	42.4			
R3	36.4	39.4	37.4	39.4	33.4	39.4			
R4	36.6	39.6	37.6	39.6	33.6	39.6			

TABLE 10-2: CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY

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.

10.4 CONSTRUCTION NOISE LEVEL COMPLIANCE

The construction noise analysis shows that the nearest receiver locations will satisfy the Moreno Valley daytime 65 dBA L_{eq} significance threshold during Project construction activities as shown on Table 10-3. Therefore, the noise impacts due to Project construction noise is considered *less than significant* at all receiver locations.

	Construction Noise Levels (dBA Leq)					
Receiver Location ¹	Highest Construction Noise Levels ²	Threshold ³	Threshold Exceeded? ⁴			
R1	38.0	65	No			
R2	42.4	65	No			
R3	39.4	65	No			
R4	39.6	65	No			

TABLE 10-3: TYPICAL CONSTRUCTION NOISE LEVEL COMPLIANCE

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

² Highest construction noise level calculations based on distance from the construction noise source activity to the nearest receiver locations as shown on Table 10-2.

³ Construction noise level thresholds as shown on Table 4-1.

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

10.5 NIGHTTIME CONCRETE POUR NOISE ANALYSIS

It is our understanding that nighttime concrete pouring activities will occur as a part of Project building construction activities. Nighttime concrete pouring activities are often used to support reduced concrete mixer truck transit times and lower air temperatures than during the daytime hours and are generally limited to the actual building area as shown on Exhibit 10-B. Since the nighttime concrete pours may take place outside the permitted March JPA Development Code Chapter 9.10 Performance Standards, Section 9.10.040, the Project Applicant would be required to obtain authorization for nighttime work from the March JPA.





EXHIBIT 10-B: NIGHTTIME CONCRETE POUR NOISE SOURCE AND RECEIVER LOCATIONS

Table 10-4 shows the concrete pour activities (paving) noise will range from 37.6 to 42.4 dBA $L_{eq.}$ at the nearest sensitive receiver locations. Based on the results of this analysis, all nearest noise receiver locations will experience *less than significant* impacts due to the Project related nighttime concrete pour activities. Appendix 10.2 includes the CadnaA nighttime concrete pour noise model inputs.

	Construction Noise Levels (dBA Leq)					
Receiver Location ¹	Concrete Pour Activity ²	Nighttime Threshold ³	Threshold Exceeded? ⁴			
R1	37.6	60	No			
R2	42.4	60	No			
R3	39.6	60	No			
R4	40.1	60	No			

TABLE 10-4: NIGHTTIME CONCRETE POUR NOISE LEVEL COMPLIANCE

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

² Nighttime concrete pour construction noise level calculations based on distance from the building pad to nearby receiver locations.

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

⁴ Do the estimated Project construction noise levels exceed the nighttime construction noise level threshold?

10.6 Typical Construction Vibration Impacts

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods employed. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Ground vibration levels associated with various types of construction equipment are summarized on Table 10-5. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the potential for human response (annoyance) and building damage using the following vibration assessment methods defined by the FTA. To describe the vibration impacts the FTA provides the following equation: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$

TABLE 10-5:	VIBRATION SOL	IRCE LEVELS FOR	CONSTRUCTION	FOUIPMENT
TADLE 10-J.	VIDICATION SOC		CONSTRUCTION	

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



Table 10-6 presents the expected Project related vibration levels at the nearby receiver locations. At distances ranging from 2,730 to 3,166 feet from Project construction activities, construction vibration velocity levels are estimated at 0.000 in/sec PPV. Based on maximum acceptable continuous vibration threshold of 0.3 PPV (in/sec), the typical Project construction vibration levels will fall below the building damage thresholds at all the noise sensitive receiver locations. Therefore, the Project-related vibration impacts are considered *less than significant* during typical construction activities at the Project site. Moreover, the vibration levels reported at the 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.

	Distance	e Typical Construction Vibration Levels t. PPV (in/sec) ³					Thresholds	Thresholds
Receiver ¹	Activity (Feet) ²	Small bulldozer	Jackhammer	Loaded Trucks	Large bulldozer	Highest Vibration Level	PPV (in/sec)⁴	Exceeded? ⁵
R1	3,140'	0.000	0.000	0.000	0.000	0.000	0.3	No
R2	3,166'	0.000	0.000	0.000	0.000	0.000	0.3	No
R3	2,777'	0.000	0.000	0.000	0.000	0.000	0.3	No
R4	2,730'	0.000	0.000	0.000	0.000	0.000	0.3	No

TABLE 10-6: CONSTRUCTION VIBRATION LEVELS

¹Receiver locations are shown on Exhibit 10-A.

² Distance from receiver location to Project construction boundary (Project site boundary).

³ Based on the Vibration Source Levels of Construction Equipment (Table 10-5).

⁴ Caltrans Transportation and Construction Vibration Guidance Manual, April 2020, Table 19, p. 38.

 $^{\rm 5}$ Does the peak vibration exceed the acceptable vibration thresholds?

"PPV" = Peak Particle Velocity



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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. 2018.
- 11. State of California. 2016 California Green Building Standards Code. January 2017.
- 12. March Joint Powers Authority. General Plan Noise/Air Quality Element. 1999.
- 13. —. General Plan Update 2030 Noise/Air Quality Element. March 2010.
- 14. —. Development Code, Chapter 9.10 Performance Standards.
- 15. City of Moreno Valley. Municipal Code, Chapter 11.80 Noise Regulation.
- 16. **California Department of Transportation.** *Transportation and Construction Vibration Guidance Manual.* April 2020.
- 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. American National Standards Institute (ANSI). Specification for Sound Level Meters ANSI S1.4-2014/IEC 61672-1:2013.
- 21. U.S. Department of Transportation, Federal Highway Administration. FHWA Highway Traffic Noise Prediction Model. December 1978. FHWA-RD-77-108.
- 22. 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.



- 23. **California Department of Transportation.** *Traffic Noise Attenuation as a Function of Ground and Vegetation Final Report.* June 1995. FHWA/CA/TL-95/23.
- 24. Urban Crossroads, Inc. Meridian D-1 Gateway Aviation Center Traffic Analysis. August 2022.
- 25. 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 Meridian D-1 Gateway Aviation Center 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.

Bill Lawson, P.E., INCE Principal URBAN CROSSROADS, INC. 1133 Camelback #8329 Newport Beach, CA 92658 (949) 584-3148 blawson@urbanxroads.com



EDUCATION

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

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

PROFESSIONAL REGISTRATIONS

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

PROFESSIONAL AFFILIATIONS

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

PROFESSIONAL CERTIFICATIONS

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





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APPENDIX 3.1:

MARCH JPA DEVELOPMENT CODE



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CHAPTER 9.10

PERFORMANCE STANDARDS

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
- 9.10.150 Odors
- 9.10.160 Outdoor Storage, Trash Areas, and Service Areas
- 9.10.170 Vibration

Section 9.10.010 Purpose and Intent

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.

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. <u>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.</u>

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 MORENO VALLEY MUNICIPAL CODE



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Chapter 11.80 NOISE REGULATION

11.80.010 Legislative findings.

It is found and declared that:

A. Excessive sound within the limits of the city is a condition which has existed for some time, and the amount and intensity of such sound is increasing.

B. Such excessive sound is a detriment to the public health, safety, and welfare and quality of life of the residents of the city.

C. The necessity in the public interest for the provisions and prohibitions hereinafter contained and enacted is declared as a matter of legislative determination and public policy, and it is further declared that the provisions and prohibitions hereinafter contained and enacted are in pursuance of and for the purpose of securing and promoting the public health, safety, welfare and quality of life of the city and its inhabitants. (Ord. 740 § 1.2, 2007)

11.80.020 Definitions.

For purposes of this chapter, certain words and phrases used herein are defined as follows:

"A-weighted sound level" means the sound pressure level in decibels as measured with a sound level meter using the A-weighting network. The unit of measurement is the dB(A).

"Commercial" means all uses of land not otherwise classified as residential, as defined in this section.

"Construction" means any site preparation, and/or any assembly, erection, repair, or alteration, excluding demolition, of any structure, or improvements to real property.

"Continuous airborne sound" means sound that is measured by the slow-response setting of a meter manufactured to the specifications of ANSI Section 1.4-1983 (R2006) "Specification for Sound Level Meters," or its successor.

"Daytime" means eight a.m. to ten p.m. the same day.

"Decibel" (dB) means a unit for measuring the amplitude of sound, equal to twenty (20) times the logarithm to the base ten (10) of the ratio of the pressure of the sound measured to the reference pressure, which is twenty (20) microPascals (twenty (20) microNewtons per square meter.)

"Demolition" means any dismantling, intentional destruction or removal of structures or other improvements to real property.

"Disturb" means to interrupt, interfere with, or hinder the enjoyment of peace or quiet or the normal listening activities or the sleep, rest or mental concentration of the hearer.

"Emergency" means any occurrence or set of circumstances involving actual or imminent physical trauma or significant property damage which necessitates immediate action. Economic loss alone shall not constitute an emergency. It shall be the burden of an alleged violator to prove an "emergency."

"Emergency work" means any work made necessary to restore property to a safe condition following an emergency, or to protect persons or property threatened by an imminent emergency, to the extent such work is, in fact, necessary to protect persons or property from exposure to imminent danger or damage.

"Frequency" means the number of complete oscillation cycles per unit of time.

"Impulsive sound" means sound of short duration, usually less than one second, with an abrupt onset and rapid decay. Examples of sources of impulsive sound include explosions, drop forge impacts, and discharge of firearms.

"Nighttime" means 10:01 p.m. to 7:59 a.m. the following day.

"Noise disturbance" means any sound which:

1. Disturbs a reasonable person of normal sensitivities;

2. Exceeds the sound level limits set forth in this chapter; or

3. Is plainly audible as defined in this section. Where no specific distance is set forth for the determination of audibility, references to noise disturbance shall be deemed to mean plainly audible at a distance of two hundred (200) feet from the real property line of the source of the sound, if the sound occurs on privately owned property, or from the source of the sound, if the sound occurs on public right-of-way, public space or other publicly owned property.

"Person" means any person, person's firm, association, copartnership, joint venture, corporation, or any entity public or private in nature.

"Plainly audible" means that the sound or noise produced or reproduced by any particular source, can be clearly distinguished from ambient noise by a person using his/her normal hearing faculties.

"Public right-of-way" means any street, avenue, boulevard, sidewalk, bike path or alley, or similar place normally accessible to the public which is owned or controlled by a governmental entity.

"Public space" means any park, recreational or community facility, or lot which contains at least one building that is open to the general public during its hours of operation.

"Residential" means all uses of land primarily for dwelling units, as well as hospitals, schools, colleges and universities, and places of religious assembly.

"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 capable of producing an auditory impression. The description of sound may include any characteristic of such sound, including duration, intensity and frequency.

"Sound level" means the weighted sound pressure level as measured in dB(A) by a sound level meter and as specified in American National Standards Institute (ANSI) specifications for sound-level meters (ANSI Section 1.4-1971 (R1976)). If the frequency weighting employed is not indicated, the A-weighting shall apply.

"Sound level meter" means an instrument, demonstrably capable of accurately measuring sound levels as defined above.

All technical definitions not defined above shall be in accordance with applicable publications and standards of the American National Standards Institute (ANSI). (Ord. 740 § 1.2, 2007)

11.80.030 Prohibited acts.

A. General Prohibition. It is unlawful and a violation of this chapter to maintain, make, cause, or allow the making of any sound that causes a noise disturbance, as defined in Section 11.80.020.

B. Sound causing permanent hearing loss.

1. Sound level limits. Based on statistics from the Center for Disease Control and Prevention and the National Institute for Occupational Safety and Health, Table 1 and Table 1-A specify sound level limits which, if exceeded, will have a high probability of producing permanent hearing loss in anyone in the area where the sound levels are being exceeded. No sound shall be permitted within the city which exceeds the parameters set forth in Tables 11.80.030-1 and 11.80.030-1-A of this chapter:

Table 11.80.030-1MAXIMUM CONTINUOUS SOUND LEVELS*

Duration per Day						
Continuous Hours	Sound level [db(A)]					
8	<mark>90</mark>					
6	92					
4	95					
3	97					

2	100
1.5	102
1	105
0.5	110
0.25	115

* When the daily sound exposure is composed of two or more periods of sound exposure at different levels, the combined effect of all such periods shall constitute a violation of this section if the sum of the percent of allowed period of sound exposure at each level exceeds 100 percent

Table 11.80.030-1A MAXIMUM IMPULSIVE SOUND LEVELS

Sound level		
[dB (A)]		
145		
135		
125		

2. Exemptions. No violation shall exist if the only persons exposed to sound levels in excess of those listed in Tables 11.80.030-1 and 11.80.030-1A are exposed as a result of:

a. Trespass;

b. Invitation upon private property by the person causing or permitting the sound; or

c. Employment by the person or a contractor of the person causing or permitting the sound.

C. Nonimpulsive Sound Decibel Limits. No person shall maintain, create, operate or cause to be operated on private property any source of sound in such a manner as to create any nonimplusive sound which exceeds the limits set forth for the source land use category (as defined in Section <u>11.80.020</u>) in Table 11.80.030-2 when measured at a distance of two hundred (200) feet or more from the real property line of the source of the sound, if the sound occurs on privately owned property, or from the source of the sound, if the sound occurs on public right-of-way, public space or other publicly owned property. Any source of sound in violation of this subsection shall be deemed prima facie to be a noise disturbance.

Table 11.80.030-2

MAXIMUM SOUND LEVELS (IN dB(A)) FOR SOURCE LAND USES

Resi	dential	Commercial		
Daytime Nighttin		Daytime	Nighttime	
60	55	<mark>65</mark>	<mark>60</mark>	

D. Specific Prohibitions. In addition to the general prohibitions set out in subsection A of this section, and unless otherwise exempted by this chapter, the following specific acts, or the causing or permitting thereof, are regulated as follows:

1. Motor Vehicles. No person shall operate or cause to be operated a public or private motor vehicle, or combination of vehicles towed by a motor vehicle, that creates a sound exceeding the sound level limits in Table 11.80.030-2 when the vehicle(s) are not otherwise subject to noise regulations provided for by the California <u>Vehicle Code</u>.

2. Radios, Televisions, Electronic Audio Equipment, Musical Instruments or Similar Devices from a Stationary Source. No person shall operate, play or permit the operation or playing of any radio, tape player, television, electronic audio equipment, musical instrument, sound amplifier or other mechanical or electronic sound making device that produces, reproduces or amplifies sound in such a manner as to create a noise disturbance. However, this subsection shall not apply to any use or activity exempted in subsection E of this section and any use or activity for which a special permit has been issued pursuant to Section <u>11.80.040</u>.

3. Radios, Electronic Audio Equipment, or Similar Devices from a Mobile Source Such as a Motor Vehicle. Sound amplification or reproduction equipment on or in a motor vehicle is subject to regulation in accordance with the California <u>Vehicle Code</u> when upon the public right-of-way. When upon public space or publicly owned property other than the public right-of-way or upon private property open to the public, sound amplification or reproduction equipment shall not be operated in such a manner that it is plainly audible at a distance of fifty (50) feet in any direction from the vehicle.

4. Portable, Hand-Held Music or Sound Amplification or Reproduction Equipment. Such equipment shall not be operated on a public right-of-way, public space or other publicly owned property in such a manner as to be plainly audible at a distance of fifty (50) feet in any direction from the operator.

5. Loudspeakers and Public Address Systems.

a. Except as permitted by Section <u>11.80.040</u>, no person shall operate, or permit the operation of, any loudspeaker, public address system or similar device, for any commercial purpose:

1. Which produces, reproduces or amplifies sound in such a manner as to create a noise disturbance; or

2. During nighttime hours on a public right-of-way, public space or other publicly owned property.

b. No person shall operate, or permit the operation of, any loudspeaker, public address system or similar device, for any noncommercial purpose, during nighttime hours in such a manner as to create a noise disturbance.

6. Animals. No person shall own, possess or harbor an animal or bird that howls, barks, meows, squawks, or makes other sounds that:

a. Create a noise disturbance;

b. Are of frequent or continued duration for ten (10) or more consecutive minutes and are plainly audible at a distance of fifty (50) feet from the real property line of the source of the sound; or

c. Are intermittent for a period of thirty (30) or more minutes and are plainly audible at a distance of fifty (50) feet from the real property line of the source of the sound.

7. Construction and Demolition. No person shall operate or cause the operation of any tools or equipment used in construction, drilling, repair, alteration or demolition work between the hours of eight p.m. and seven a.m. the following day such that the sound there from creates a noise disturbance, except for emergency work by public service utilities or for other work approved by the city manager or designee. This section shall not apply to the use of power tools as provided in subsection (D)(9) of this section.

8. Emergency Signaling Devices. No person shall intentionally sound or permit the sounding outdoors of any fire, burglar or civil defense alarm, siren or whistle, or similar stationary emergency signaling device, except for emergency purposes or for testing as follows:

a. Testing of a stationary emergency signaling device shall not occur between seven p.m. and seven a.m. the following day;

b. Testing of a stationary emergency signaling device shall use only the minimum cycle test time, in no case to exceed sixty (60) seconds;

c. Testing of a complete emergency signaling system, including the functioning of the signaling device and the personnel response to the signaling device, shall not occur more than once in each calendar month. Such testing shall only occur only on weekdays between seven a.m. and seven p.m. and shall be exempt from the time limit specified in subsection (D)(8)(2) of this section.

9. Power Tools. No person shall operate or permit the operation of any mechanically, electrically or gasoline motordriven tool during nighttime hours so as to cause a noise disturbance across a residential real property boundary.

10. Pumps, Air Conditioners, Air-Handling Equipment and Other Continuously Operating Equipment. Notwithstanding the general prohibitions of subsection a of this section, no person shall operate or permit the operation of any pump, air

conditioning, air-handling or other continuously operating motorized equipment in a state of disrepair or in a manner which otherwise creates a noise disturbance distinguishable from normal operating sounds.

E. Exemptions. The following uses and activities shall be exempt from the sound level regulations except the maximum sound levels provided in Tables 11.80.030-1 and 11.80.030-1A:

1. Sounds resulting from any authorized emergency vehicle when responding to an emergency call or acting in time of an emergency.

2. Sounds resulting from emergency work as defined in Section 11.80.020

3. Any aircraft operated in conformity with, or pursuant to, federal law, federal air regulations and air traffic control instruction used pursuant to and within the duly adopted federal air regulations; and any aircraft operating under technical difficulties in any kind of distress, under emergency orders of air traffic control, or being operated pursuant to and subsequent to the declaration of an emergency under federal air regulations.

4. All sounds coming from the normal operations of interstate motor and rail carriers, to the extent that local regulation of sound levels of such vehicles has been preempted by the Noise Control Act of 1972 (42 U.S.C. § 4901 et seq.) or other applicable federal laws or regulations

5. Sounds from the operation of motor vehicles, to the extent they are regulated by the California Vehicle Code.

6. Any constitutionally protected noncommercial speech or expression conducted within or upon a any public rightof-way, public space or other publicly owned property constituting an open or a designated public forum in compliance with any applicable reasonable time, place and manner restrictions on such speech or expression or otherwise pursuant to legal authority.

7. Sounds produced at otherwise lawful and permitted city-sponsored events, organized sporting events, school assemblies, school playground activities, by permitted fireworks, and by permitted parades on public right-of-way, public space or other publicly owned property.

8. An event for which a temporary use permit or special event permit has been issued under other provisions of this code, where the provisions of Section 11.80.040 are met, the permit granted expressly grants an exemption from specific standards contained in this chapter, and the permittee and all persons under the permittee's reasonable control actually comply with all conditions of such permit. Violation of any condition of such a permit related to sound or sound equipment shall be a violation of this chapter and punishable as such.

F. Nothing in this chapter shall be construed to limit, modify or repeal any other regulation elsewhere in this code relating to the regulation of noise sources, nor shall any such other regulation be read to permit the emission of noise in violation of any provision of this chapter. (Ord. 740 § 1.2, 2007)

11.80.040 Special provisions for temporary use and special event permits.

The exemption by permit set forth in Section 11.80.030(E)(8) shall be subject to the following requirements and conditions:

A. The permit application shall include the name, address and telephone number of the permit applicant; the date, hours and location for which the permit is requested; and the nature of the event or activity. It shall also specify the types of sounds and/or sound equipment to be permitted, the proposed duration of such sound, the specific standards from which the sound is to be exempted, and the reasons for each requested exemption.

B. The permit shall be issued provided the proposed activity meets the requirements of this section and the issuing official determines that the sound to be emitted at the event as proposed would not be detrimental to the public health, safety or welfare, that the event cannot reasonably achieve its legitimate aims and purposes without the exemption and that the sound levels proposed will not unreasonably damage the peace and quiet enjoyment of the lawful users of surrounding properties, nor constitute a public nuisance.

C. The official issuing the permit may prescribe any reasonable conditions or requirements he/she deems necessary to minimize noise disturbances upon the community or the surrounding neighborhood, and/or to protect the health, safety or welfare of the public, including participants in the permitted event, including use of mufflers, screens or other sound-attenuating devices.

D. Any permit granted must be in writing and shall contain all conditions upon which the permit shall be effective.

E. No more than six events requiring a sound limit exemption may be held at any particular location upon privately owned or controlled property per calendar year, provided further that the number of events shall not exceed the number permitted under the regulations for the type of permit issued. For purposes of this subsection, "location" means a legal parcel of real property or a complete shopping or commercial center or mall sharing common parking and access even if comprised of multiple legal parcels.

F. The exemption from sound limits under such permit shall not exceed maximum period of four hours in one twenty-four (24) hour day.

G. The permit will only be granted for hours between nine a.m. and ten p.m. on all days other than Friday and Saturday; and, on Friday and Saturday, between the hours of nine a.m. and one a.m. of the following day, except in the following circumstances:

1. A permit may be granted for hours between nine a.m. on New Year's Eve and one a.m. the following day (New Year's Day).

2. A permit may be granted for hours between nine a.m. and two a.m. the following day if there are no residences, hospitals, or nursing homes within a 0.5 mile radius of the property where the function is taking place.

H. Functions for which the permits are issued shall be limited to a continuous airborne sound level not to exceed seventy (70) dB(A), as measured two hundred (200) feet from the real property boundary of the source property if on private property, or from the source if on public right-of-way, public space or other publicly owned property. (Ord. 740 1.2, 2007)

11.80.050 Measurement or assessment of sound.

A. Measurement With Sound Meter.

1. The measurement of sound shall be made with a sound level meter meeting the standards prescribed by ANSI Section 1.4-1983 (R2006). The instruments shall be maintained in calibration and good working order. A calibration check shall be made of the system at the time of any sound level measurement. Measurements recorded shall be taken so as to provide a proper representation of the source of the sound. The microphone during measurement shall be positioned so as not to create any unnatural enhancement or diminution of the measured sound. A windscreen for the microphone shall be used at all times. However, a violation of this chapter may occur without the occasion of the measurements being made as otherwise provided.

2. The slow meter response of the sound level meter shall be used in order to best determine the average amplitude.

3. The measurement shall be made at any point on the property into which the sound is being transmitted and shall be made at least three feet away from any ground, wall, floor, ceiling, roof and other plane surface.

4. In case of multiple occupancy of a property, the measurement may be made at any point inside the premises to which any complainant has right of legal private occupancy; provided that the measurement shall not be made within three feet of any ground, wall, floor, ceiling, roof or other plane surface.

5. All measurements of sound provided for in this chapter will be made by qualified officials of the city who are designated by the city manager or designee to operate the apparatus used to make the measurements.

B. Assessment Without Sound Level Meter. Any police officer, code enforcement officer, or other official designated by the city manager or designee who hears a noise or sound that is plainly audible, as defined in Section <u>11.80.020</u>, in violation of this chapter, may enforce this chapter and shall assess the noise or sound according to the following standards:

1. The primary means of detection shall be by means of the official's normal hearing faculties, not artificially enhanced.

2. The official shall first attempt to have a direct line of sight and hearing to the vehicle or real property from which the sound or noise emanates so that the official can readily identify the offending source of the sound or noise and the distance involved. If the official is unable to have a direct line of sight and hearing to the vehicle or real property from which the sound or noise emanates, then the official shall confirm the source of the sound or noise by approaching the suspected vehicle or real property until the official is able to obtain a direct line of sight and hearing, and confirm the source of the sound or noise that was heard at the place of the original assessment of the sound or noise.

Moren	o Valley Municip	al Code				
Up	Previous	Next	Main	Search	P rint	No Frames
<u>Title 8</u> <u>Chapt</u>	BUILDINGS AND CO er 8.21 GRADING RE	NSTRUCTION GULATIONS				
8.21.05	0 Grading permit	t requirement	ts.			

A. Application for Permit.

1. The application for a grading permit shall be made on a form as provided by the city engineer. All required discretionary approvals under the zoning ordinance and municipal code must be obtained prior to issuance of a grading permit.

2. No grading permit for a development project subject to approval by the planning commission, city council or administrative approval process shall be issued until such commission, council or administrative process has approved the grading concept as part of the discretionary approval process. Any application for a grading permit which effects environmentally sensitive areas shall contain information showing that the proposed grading will be accomplished without significant harm to the environment or appropriate environmental mitigation measures that have been identified within an environmental impact report for the proposed site have been complied with.

B. Responsibility of Land Owners.

1. It is unlawful for any persons owning, leasing, occupying or having charge of any real property in the city to stockpile, deposit, or allow the placement, construction or deposition of earth material on any real property in excess of fifty (50) cubic yards without first obtaining a grading permit as hereinafter described (unless exempt as noted in Section $\underline{8.21.020}(A)(1)$ through (11), exceptions). Processing of said earth material must result in a relative compaction of at least ninety (90) percent of the maximum density compaction of the surrounding material, unless otherwise provided for as part of an approved grading plan.

2. Clearing, brushing and grubbing of vegetation done in preparation of land development shall not be undertaken until all discretionary approvals for the land development project have been issued and a grading permit for the project has been obtained. For the purposes of this section, land development shall be defined as any use of real property for which discretionary approval is required as further defined in the this code.

3. A grading permit issued by the city engineer is required prior to any grading or clearing and grubbing operations on:

a. Previously undisturbed land; or

b. Land covered by native vegetation; or

c. Land which has not been used for agricultural purposes for three years immediately prior to the initiation of a grading operation for the purpose of conducting agricultural activities.

A grading permit may be issued by the city engineer, prior to discretionary approval, if the city engineer, in cooperation with the planning official, determines that the grading and/or agricultural operation will not cause significant damage to any environmentally sensitive areas nor cause the elimination of any significant wildlife habitat for riparian area.

4. This section shall not regulate routine landscape maintenance, the removal of dead or diseased trees or shrubs or the removal of vegetation upon the order of the fire marshal for the elimination of a potential fire hazard.

C. Types of Grading Permits.

1. Either a mass grading permit, borrow site permit, rough grading permit, preliminary grading permit, precise grading permit or a stockpile permit all as defined in Section $\underline{8.21.040}$ of this chapter may be issued for grading work upon completion of a proper application and approval by the city engineer.

2. Building permits may be issued for a site graded under an approved grading plan and valid grading permit upon completion and approval of rough grade and geotechnical inspection as specified in Section $\underline{8.21.170}$ of this chapter. Building permits for construction of model homes may be issued for the model home sites only, prior to completion of rough grading for the site, provided that rough grading has been completed and approved as noted for the model home sites.

8.21.050 Grading permit requirements.

3. Building permits shall not be issued for a site graded under a preliminary grading permit until a new precise grading plan has been approved and a permit has been issued and the provisions as noted above have been satisfied.

D. Stockpile Permits.

1. A temporary stockpile permit is subject to conditions which may include, but are not limited to, the following items: a stockpile plan prepared by a registered civil engineer, an erosion control plan prepared by a registered civil engineer, fencing, hydroseeding or other maintenance requirements. Other conditions may be established, even after the permit has been issued, in the interest of public health, safety or welfare, and shall be as determined by the city engineer.

2. An indeterminate stockpile permit may be issued for soil that is to be used for the future development of the stockpile site where there is no current project, or for storage of soil for current or future sale, or for some other purpose as stated by the property owner. Requests for indeterminate stockpile permits will be reviewed on a case-by-case basis. Such requests may be considered to be the establishment of a business and may require review by other city department or divisions and shall be subject to all of the conditions of approval for such projects. An indeterminate stockpile permit is subject to all of the same requirements as a temporary stockpile permit.

E. Grading Permit Application. A grading permit application shall consist of the following items and forms completed and signed by the applicant or his/her representative, unless otherwise specified by the city engineer:

- 1. Application form;
- 2. Four sets of grading plans;
- 3. Two copies of a preliminary soils report (see subsection (M)(1) of this section);
- 4. Two copies of a preliminary geology report if applicable (see subsection (M)(2) of this section);
- 5. Two sets of erosion control plans;
- 6. Payment of the grading plan check and inspection fees.

The city engineer will inspect the project site as necessary and determine whether additional reports or other data are required prior to issuance of a grading permit. The city engineer will notify the applicant of his or her determination.

F. Grading Plan Clearances. The city engineer shall notify the applicant when clearance is required for the project from other departments or divisions within the city as well as clearance required from other agencies. All required clearances from other departments, divisions or outside agencies shall be the responsibility of and obtained by the applicant prior to issuance of the grading permit. The city engineer will not notify the applicant for South Coast Air Quality District (SCAQMD) required clearances and permits.

G. Data to Accompany Application.

1. A grading plan, approved and signed by a California registered civil engineer, soils engineer and engineering geologist shall accompany each application for a grading permit, unless waived by the city engineer. The grading plans shall be prepared on twenty-four (24) inch by thirty-six (36) inch Mylar film with a standard city title block, and shall be drawn in ink. The plans shall show the original and designed finish contours, spot elevations, building pads, public improvements, slope ratios, proposed drainage facilities, protective fencing, retaining walls and any structures or buildings on adjacent properties within fifteen (15) feet of the common property lines.

2. Unless waived by the city engineer, each application for a grading permit shall be accompanied by supporting data consisting of a soils engineering report, engineering geology report, and the grading plans and specifications. All such plans shall be drawn to engineering scales as approved by the city engineer. The title sheet of the plan set shall contain the names, addresses and phone numbers of the site owner, the civil engineer responsible for the plans preparation, the project soil engineer and engineering geologist, including registration numbers. The title sheet shall also contain a locality sketch of the project site.

3. A statement of quantities shall be furnished, giving the estimated cubic yards of excavation, embankment, fill, and shrinkage or swell factor. Also, types of ditches and down drains, lineal feet and sizes of various types of pipe, the amount of rock to be used for rip-rap or slope protection, the lineal feet of fencing and any other pertinent information useful in determining the extent of the proposed work.

4. The grading plans shall show scaled sections of all stabilization fills, buttress fills, keyways and benching for fill placement.

8.21.050 Grading permit requirements.

H. Grading Plan Check. All grading plans submitted to the city will be checked for conformance with the provisions of this chapter, conditions of approval, the city of Moreno Valley Municipal Code, applicable specific plans, other city ordinances, rules and regulations, all applicable federal and state requirements, 2010 California <u>Code of Regulations</u> Title 24, Chapter 11 accessibility requirements, city technical requirements and plan requirements, and any other applicable requirements for the development.

I. Mass Grading Plans, Rough Grading Plans, Stockpile Plans, Borrow Site Plans and Preliminary Grading Plans. The plans shall include, but not be limited to, the following information.

1. Vicinity map of the site;

2. Property limits clearly labeled or otherwise identified, accurate contours of existing ground and details of terrain, and area of drainage a minimum of fifteen (15) feet beyond the property limits (spot elevations may be used on flatland sites);

3. Prominent existing or natural terrain features;

4. Limiting dimensions, elevations of finish contours to be achieved by the grading, proposed drainage devices, and related construction;

5. Details (plan and section) of all surface and subsurface drainage devices, walls, cribbing, dams, and other protective devices to be constructed with, or as part of the proposed work, together with a map showing the drainage area and estimated runoff from the area served by the drains;

6. Location of any buildings or structures on the property where the work is to be performed and the location of any buildings of structures on land of adjacent owners which may be affected by the proposed grading operations;

7. If the grading project includes the movement of earth material to or from the site in an amount considered substantial by the city engineer, the permittee shall submit a haul route for review and approval by the public works department, land development division. The city engineer may prescribe as a condition of the grading permit and submitted haul route, alternate routes or special requirement in consideration on the possible impact on the adjacent community environment or effect on the public right-of-way itself;

8. Additional plans, drawings, calculations, environmental impact information, or other reports and information required by the city engineer.

J. Precise Grading Plans. The plans shall include of the information required in subsection I of this section plus the footprint or allowable building area of all proposed structures (including appurtenances), setback distances between structures and top or toe of slopes, setback distances between structures and property lines, detailed finish grade and finish floor elevations, flow lines for lot drainage including spot elevations for the drainage swales, details for building footings and side yard swale relationship (including extra height of or deepened footings), and all proposed PCC flatwork and PCC/AC driveways.

K. Grading Plan Correction Sheet. A grading plan standards and correction sheet which is used as the basis for plan checking, is available from the Public Works Department, Land Development Division which identifies the items typically required on grading plans depending on site conditions.

L. Geotechnical Reports. A soil engineering and engineering geology report shall be required for all grading projects unless otherwise waived by the city engineer. The reports shall include information useful to the site and any additional information required by the city engineer. Recommendations included in the reports and approved by the city engineer, shall be incorporated into the grading plans and specifications. The building official may require a soil report of additional information related to the building structure in accordance with the California <u>Code of Regulations</u> Title 24 (IBC).

M. Geotechnical Report Standards. Two copies of each geotechnical report required in subsection L of this section, shall be submitted as part of the application for a grading permit. Each report shall contain information applicable to the project as shall be prepared in accordance with generally accepted geotechnical engineering practice. Recommendations contained in the approved reports shall be incorporated into the grading plans and specifications and shall become conditions of the grading permit.

1. Preliminary Soil Report. Soil engineering reports shall be required for all residential subdivisions, commercial or industrial development projects, multi-residential projects, and similar developments for which a grading permit is required. Soil reports shall also be required for grading or building permits on single lot projects when specified by the city engineer or building official. The preliminary (initial) soil engineering report shall include information and data regarding the nature, distribution, and physical and chemical properties of existing soils, conclusions as to the adequacy **97**

8.21.050 Grading permit requirements

of the site for the proposed grading, recommendations for general and corrective grading procedures, foundation and pavement design criteria, and shall provide other recommendations, as necessary, for the project grading and development.

2. Preliminary Engineering Geology Report. Engineering geologic reports shall be required for all developments on hillside sites where geologic conditions are considered to have a substantial effect on existing and/or future site stability. This requirement may be extended to other sites as required by the city engineer. The preliminary (initial) engineering geology report shall include a comprehensive description of the site topography and geology including, where necessary, a geologic map; and opinion as to the adequacy of the proposed development from an engineering geologic standpoint; and opinion as to the extent that known or as reasonably should be known instability on adjacent properties may adversely effect the project; a description of the field investigation and findings; conclusions regarding the effect of geologic conditions on the proposed project; and specific recommendations for plan modification, corrective grading and/or special techniques and systems to facilitate a safe and stable development; and shall provide other recommendations as necessary for the project grading and development. The preliminary engineering geology report may be combined with the soil engineering report.

3. Seismicity Report. A seismicity report as determined by the city engineer, may be required as a condition for issuance of a grading permit and/or building permit for all residential subdivisions, and for commercial or industrial developments, and shall be required as a condition of development for all essential facilities (as defined in the <u>California Building Code</u>) or as determined by the city engineer, building official or planning official. Additionally, sites containing earthquake-sensitive earth materials and/or sites that are located on or near potentially active or active faults are required to submit a seismicity report as a condition for issuance of a grading permit. The report shall be prepared by an engineering geologist, geophysicist, or a civil engineer with expertise in earthquake technology and its application to buildings or other civil engineering works. The scope of the report shall be commensurate with the proposed development and shall reflect the latest available and accepted technological recommendations related to seismicity. The seismicity report may be combined with the soil and engineering geology reports.

N. Import and Export of Earth Material. Where an excess of five thousand (5,000) cubic yards of earth material for a project site is moved on public roadways to or from the project site as part of the grading operations, all of the following requirements shall apply:

1. Either water of dust preventative spray material (or both) shall be consistently applied for prevention of dust resulting from the loading or transportation of earth to or from the project site on public roadways. The permittee shall be responsible for maintaining public rights-of-way, used for transporting materials, in a condition free of dust, earth, or debris attributed to the grading operations.

2. Loading and transporting of earth materials to or from the site must be accomplished within the limitations established in subsection O of this section.

3. Access roads to the site shall be only at points designated on the approved grading plans.

4. At a minimum, the first fifty (50) feet of access road adjacent to the intersection with the public roadway shall have a grade not to exceed five percent. There must be a three hundred (300) foot clear, unobstructed sight distance to the intersection from both the public roadway and the access road. If the five percent grade or three hundred (300) foot sight distance requirements can not be obtained due to site constraints, then flagman shall be posted at the access road and shall remain for the entire duration of material transportation operations.

5. A stop sign conforming to the requirements of the California <u>Vehicle Code</u> shall be posted at the exit of the access road to the public roadway.

6. Advanced warning signs along with traffic control and safety devices shall be reviewed and approved by the city engineer and shall be posted on the public roadway in the vicinity of the access intersection as required by the current State of California Department of Transportation "Manual of Traffic Control—Warning Signs, Lights and Devices for Use in Performance of Work Upon Highways." The size, shape, color, number, spacing, and other details of all such signs and devices shall conform to the standards contained therein and in the current state of California Department of Transportation "Traffic Manual." The advanced warning signs and other devices shall be covered or removed when the access intersection is not in use.

O. Time of Grading Operations. Grading and equipment operations shall only be completed between the hours of seven a.m. to seven p.m. Monday through Friday, excluding holidays and from eight a.m. to four p.m. on Saturday. The city engineer may, however, permit grading or equipment operations before or after the allowable hours of operation if he
8.21.050 Grading permit requirements.

or she determines that such operations are not detrimental to the health, safety, or welfare of residents or the general public. Permitted hours of operations may be shortened by the city engineer's finding of a previously unforeseen effect on the health, safety, or welfare of the surrounding community.

P. Responsibility of Permittee. It shall be the responsibility of the permittee to be knowledgeable of the conditions and/or restrictions of the grading permit as outlined in applicable sections of this chapter, and as contained on the approved grading plans and in the approved geotechnical report(s). It shall also be the responsibility of the permittee to be knowledgeable with the obvious and accessible location on the site, and with a copy of the grading plans bearing the stamp or signature of approval by the city engineer. The applicant will be responsible for obtaining all clearances and permits, if any, directly from the South Coast Air Quality Management District (SCAQMD) prior to beginning grading.

Q. Haul Routes. Where excavation of embankment material is imported or exported

from one grading site to another, over public streets, whether or not either site is otherwise subject to grading permit requirements, the city engineer may specify the route to be used in transportation of the materials on public streets.

1. Deviation from the designated haul route shall constitute a violation of the condition of the permit issued under this chapter. When the city engineer does specify a route, he or she shall do so in writing on the permit document, and shall immediately notify the traffic division of the public works department as well as the traffic division of the city police department, that said haul route has been specified and approved.

2. The city engineer may further specify load limits where, in his or her opinion, the standard load capacity of vehicles used in such hauling would cause excessive damage to streets on the designated route. Any grading or hauling contractor or project site owner/permittee, moving earth materials in violation of the chapter, shall be financially responsible for any damage to the public streets caused by the hauling vehicles, and shall pay to the city of Moreno Valley the cost, as determined by the city engineer, of repairing such damage, or shall repair the damage in question to the satisfaction of the city engineer.

3. At least twenty-four (24) hours before hauling is to commence, the applicant shall be required to notify the city of Moreno Valley public works department, traffic division, and land development division as well as the city police department, traffic division. The permit may specify other necessary conditions or restrictions, where the use of public streets would disrupt the normal traffic activities or cause a public inconvenience.

R. Debris on Public Streets. <u>Vehicle Code</u> Section 23112(b) forbids the placing, dumping or depositing of dirt and rocks on public streets or any portion of the public right-of-way. All vehicles engaged in hauling materials under the provisions of this chapter, shall refrain from depositing dirt or debris on public streets by any means, including but not limited to, spillage from the bed of a truck or other vehicle and debris collected on the wheels of the haul vehicle. The city engineer may require a cash deposit to insure the clean-up of public streets.

S. Clean-Up. The permittee conducting any earth-moving operation under this chapter which requires vehicles to haul earth materials, including but not limited to, earth, mud, rock or other materials, on any public streets shall be responsible for the complete removal of such materials if spilled, dumped or deposited on a public street within twenty-four (24) hours of noted spill, dumping or deposition. If the permittee fails to remove such spillage, dumping or deposited material within the noted time frame, and it is necessary for the city to complete the removal, the permittee and/or property owner from where the material was removed from or deposited to, shall be liable to pay the city the full cost of such removal work. A cash deposit may be required to insure cleanup of public streets.

T. Dust Control. The contractor or permittee conducting any earth-moving or grading operation under this chapter shall be responsible for controlling dust at all times. The owner, contractor and permittee shall be responsible for implementing any and all Best Management Practices (BMPs) for all grading and earth-moving operations in accordance with the National Pollutant Discharge Elimination System (NPDES) and as required by South Coast Air Quality Management District (SCAQMD).

U. Protection of Adjoining Property. Each adjacent owner is entitled to the lateral and subjacent support which his/her land receives from the adjoining land, subject to the right of the owner of the adjoining land to make proper and usual excavations on the same for purposes of construction or improvement, under the following conditions:

1. Any owner of land or lessee intending to permit or to make an excavation greater than ten (10) feet in depth within fifty (50) feet of his or her property line(s) shall give reasonable notice to the owner or owners of land abutting the property line(s) affected by such excavation, stating the depth for which such excavation is intended to be made and when the excavation will begin.

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APPENDIX 5.1:

STUDY AREA PHOTOS

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L2_E 33, 52' 50.980000", 117, 14' 5.120000"



L1_S 33, 53' 18.230000", 117, 14' 15.400000"



33, 53' 18.270000", 117, 14' 15.180000"



L2_N 33, 52' 51.000000", 117, 14' 5.120000"



33, 53' 18.280000", 117, 14' 15.400000"



L1_N 33, 53' 18.000000", 117, 14' 13.060000"



JN:13447 Study Area Photos

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33, 52' 34.370000", 117, 14' 4.880000"



L3_S





L3_W 33, 52' 34.370000", 117, 14' 4.960000"



33, 52' 34.820000", 117, 14' 5.430000"



L2_S 33, 52' 51.000000", 117, 14' 5.100000"



L2_W 33, 52' 51.010000", 117, 14' 5.100000"



JN:13447 Study Area Photos

JN:13447 Study Area Photos



L4_E 33, 52' 58.580000", 117, 14' 28.880000"



33, 53' 0.760000", 117, 14' 36.300000"



L4_N 33, 52' 58.560000", 117, 14' 28.880000"



33, 53' 0.820000", 117, 14' 36.300000"

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APPENDIX 5.2:

NOISE LEVEL MEASUREMENT WORKSHEETS



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Date: Project:	Wednesday Meridian Pa	, May 20, 20. Irk D-1	20		Location:	24-Ho L1 - Located existing sing Lane.	ur Noise Le I north of the gle-family res	evel Measu Project site idential hom	on Iris Avenu es at 24307	ummary ue near Carman	Meter:	Piccolo II			JN: Analyst:	13447 P. Mara
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Timeframe	Hour			L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%		Adj.	Aaj. L _{eq}
	0	59.0 59.1	71.0	51.4	71.1	70.2	66.1	63.7	50.7	53.9	52.1	51.9	51.0	59.0 59.1	10.0	69.6 69.4
	2	57.8	69.7	49.2	69.2	68.2	65.0	62.6	55.1	51 7	49.8	49.6	49.3	57.8	10.0	67.8
	3	60.9	72.4	49.7	71.9	71.0	67.9	66.1	59.4	53.9	50.6	50.3	49.9	60.9	10.0	70.9
Night	4	63.1	74.4	48.2	73.9	73.0	70.5	68.7	61.6	54.7	49.3	48.8	48.3	63.1	10.0	73.1
	5	65.8	77.0	49.9	76.4	75.5	73.3	71.5	64.5	58.4	51.4	50.6	50.1	65.8	10.0	75.8
	6	64.2	74.9	47.4	74.5	73.6	71.2	69.7	63.8	58.0	49.1	48.3	47.6	64.2	10.0	74.2
	7	64.8	75.3	45.1	74.8	74.0	71.9	70.4	64.4	57.9	47.0	46.0	45.3	64.8	10.0	74.8
	8	64.4	74.6	46.1	74.2	73.5	71.7	70.2	63.9	56.5	47.9	46.8	46.2	64.4	0.0	64.4
	9	64.9	75.8	47.4	75.3	74.4	72.3	70.6	64.2	57.5	49.2	48.4	47.6	64.9	0.0	64.9
	10	69.0	82.1 77 5	48.7	01.0 76.0	80.9 75 9	70.8	72.7	63.9	58.9	51.2 79 5	50.0 /18 7	48.9	65.5	0.0	65.5
	12	65.0	77.7	46.5	76.9	75.6	72.8	69.9	62.5	56.6	49.9	47.7	46.7	65.0	0.0	65.0
Day	13	63.8	74.1	47.2	73.7	72.9	70.7	69.4	63.5	58.2	50.0	48.3	47.4	63.8	0.0	63.8
	14	65.4	77.0	48.7	76.6	75.7	72.8	70.4	63.8	58.2	50.9	49.9	49.1	65.4	0.0	65.4
	15	64.5	76.6	48.5	76.1	75.1	71.6	69.0	63.2	57.6	50.4	49.5	48.7	64.5	0.0	64.5
	16	66.4	78.1	50.3	77.6	76.6	73.7	71.9	64.2	59.5	52.7	51.5	50.5	66.4	0.0	66.4
	17	68.4	81.8	50.1	81.2	80.0	75.3	71.7	65.2	60.1	52.7	51.4	50.3	68.4	0.0	68.4
	18	64.8	/5.5	48.9	75.0	74.2	72.0	70.1	64.3	58.7	51.5	50.3	49.1	64.8	0.0	64.8
Evening	20	63.6	76.7 76.4	48.1	76.0 75.0	74.9	71.9	70.0 67.7	61 /	57.4	50.2	49.2 51.1	48.3	63.6	5.0	69.7
Lvening	20	62.2	73.6	50.4	73.2	72.3	69.6	67.5	60.3	55.4	51.0	50.8	50.3	62.2	5.0	67.2
	22	63.2	75.7	49.8	75.1	74.0	70.6	68.0	60.2	54.2	50.9	50.4	50.0	63.2	10.0	73.2
Night	23	60.8	73.5	50.5	73.0	71.9	68.3	65.0	57.3	53.6	51.1	50.9	50.7	60.8	10.0	70.8
Timeframe	Hour	L _{eq}	L max	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%		L _{eq} (dBA)	
Day	Min	63.8	74.1	46.1	73.7	72.9	70.7	69.0	62.5	56.5	47.9	46.8	46.2	24-Hour	Daytime	Nighttime
	Max	69.0	82.1	50.3	81.8	80.9	76.8	72.7	65.2	60.1	52.7	51.5	50.5		, and the second se	
Energy	Average	62.2	72.6	arage:	76.8	75.9	72.9	70.6	60.2	58.1	50.5	49.3	48.4	64.6	65.6	62.6
Evening	Max	64.7	76.7	50.4	76.0	74.9	71.9	70.0	63.3	57.4	51.6	49.2 51.1	40.5 50.6	24-	Hour CNEL (d	BA)
Energy	Average	63.6	Ave	erage:	75.0	73.8	70.6	68.4	61.7	56.4	51.0	50.3	49.7			
Nicht	Min	57.8	69.7	47.4	69.2	68.2	65.0	62.6	55.1	51.7	49.1	48.3	47.6	1	60 7	
Night	Max	65.8	77.0	52.0	76.4	75.5	73.3	71.5	64.5	58.4	52.5	52.4	52.1		ל.70	
Energy	Average	62.6	Ave	erage:	73.1	72.1	69.2	66.9	60.0	55.1	50.4	49.9	49.5			



Date: Project:	Wednesday Meridian Pa	r, May 20, 202 ark D-1	20			24-Hou L2 - Located existing sing	east of the l le-family res	Project site o idential hom	n Indian Stre e at 16537 L	eet near ibra Lane.	Meter:	Piccolo II			JN: Analyst:	13447 P. Mara
85.(80.(75.(70.(Particular) 1 Ajuno 45 .(1 Ajuno 45 .(1 Ajuno 45 .(3 Ajuno 45 .(1 Ajuno 45 .(3 Ajuno 45 .(3 Ajuno 4 .(4 .) 5 .(5 .)	59.1	57.3 54.6	230.6	57.8 60.2	28.8	58.7	Hourly L _{eq} of	400 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	(unadjusted)	20.1 29.4	60.5 61.4	83.0 83.0	63.4 64.1		59.0 58.8 58.8	59.4
	0	1 2	3	4 5	6	7 8	9 1	.0 11 Hour Be	12 1. eginning	3 14	15 16	17	18 19	20	21 22	23
Timeframe	Hour	L _{eq}	L max	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}
	0	59.1	66.2	56.5	65.9	65.3	63.6	61.3	58.6	58.1	57.2	57.1	56.7	59.1	10.0	69.1
	1	57.3	66.2	52.8	65.9	65.3	63.3	61.5	55.8	55.0	53.6	53.5	53.4	57.3	10.0	67.3
	2	54.6	65.4	41.9	64.8	64.4	62.6	61.0	50.8	45.8	42.5	42.2	42.0	54.6	10.0	64.6
Night	3	59.6	71.9	45.5	71.6	70.9	67.9	65.5	53.7	49.9	46.3	45.9	45.6	59.6	10.0	69.6
	4	57.8	67.5	47.3	67.1	66.5	64.6	63.0	57.4	54.0	48.5	47.9	47.4	57.8	10.0	67.8
	5	60.2	70.0	48.3	69.8	69.4	68.1	65.7	59.4	54.3	49.8	49.1	48.4	60.2	10.0	70.2
	6	58.8	69.2	47.3	68.9	68.3	66.2	63.8	57.8	53.9	48.5	47.9	47.4	58.8	10.0	68.8
	7	58.7	70.1	44.4	69.7	68.9	66.5	64.5	57.0	51.2	46.1	45.2	44.6	58.7	10.0	68.7
	8	59.5	71.1	45.3	70.6	70.1	67.5	64.6	57.1	51.9	46.8	46.1	45.4	59.5	0.0	59.5
	9	57.2	68.1	45.1	67.5	66.9	64.7	62.6	55.6	50.9	46.4	45.8	45.3	57.2	0.0	57.2
	10	60.4	/1.2	47.3	/0./	69.9	67.6	65.9	59.1	54.8	49.4	48.5	47.6	60.4	0.0	60.4
	11	59.4	70.1	47.1	69.4	68.9	67.0	65.1	57.7	54.1	48.9	48.0	47.3	59.4	0.0	59.4
_	12	61.4	71.0	46.5	70.5	70.0	68.4	67.1	62.1	55.1	48.0	47.3	46.6	61.4	0.0	61.4
Day	13	58.1	69.4	45.9	68.9	68.2	66.0	63.2	56.4	52.0	47.2	46.6	46.0	58.1	0.0	58.1
	14	59.4	69.8	46.7	69.4	68.8	66.7	64.8	58.4	54.6	48.5	47.8	46.9	59.4	0.0	59.4
	15	60.5	/1.6	48.2	/1.1	70.5	67.9	66.3	57.9	54.0	49.6	49.0	48.4	60.5	0.0	60.5
	16	61.4	73.1	48.9	72.6	72.0	69.0 70.0	66.1	59.1	55.3	50.9	49.8	49.1	61.4	0.0	61.4
	17	63.0	74.9	50.6	74.5	73.4	70.6	68.0	60.1	56.6	52.2	51.4	50.8	63.0	0.0	63.0
	18	64.1	74.8	50.2	76.2	75.7	71.5	69.0	60.2	55.9	51.7	51.1	50.4	64.1	0.0	60.1
Evening	20	58.0	67.3	J1.3	70.5 66 Q	75.5 66.6	71.0 65.6	64 1	59.0	55 5	51.3	50.7	50.1	58.0	5.0	63.0
Evening	20	59.0	70.4	45.8	69.9	69.3	66.7	64.3	56.5	52.6	/0 1	18 G	/8 1	59.0	5.0	64.0
	21	58.8	69.9	46.0	69.5	69.1	67.3	64.8	53.7	50.4	49.1	46.5	46.1	58.8	10.0	68.8
Night	23	59.4	72.3	42.6	71.7	71.4	67.5	65.0	52.0	46.2	43.3	43.0	42.7	59.4	10.0	69.4
Timeframe	Hour	Leg	Lmax	L min	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	0011	L _{eg} (dBA)	0011
	Min	57.2	68.1	45.1	67.5	66.9	64.7	62.6	55.6	50.9	46.4	45.8	45.3			
Day	Max	63.4	74.9	50.6	74.5	73.7	71.5	69.6	62.1	56.6	52.2	51.4	50.8	24-Hour	Daytime	Nighttime
Energy	Average	60.7	Ave	erage:	70.9	70.2	67.9	65.7	58.5	54.1	49.1	48.3	47.6	<u> </u>	60.0	ГО 7
Evoning	Min	58.9	67.3	47.9	66.9	66.6	65.6	64.1	56.5	52.6	49.1	48.6	48.1	00.1	00.9	JQ./
Evening	Max	64.1	76.9	51.3	76.3	75.3	71.6	68.4	60.2	56.9	52.9	52.3	51.5	24-	Hour CNEL (d	BA)
Energy	Average	61.4	Ave	erage:	71.0	70.4	68.0	65.6	58.6	55.0	51.1	50.5	49.9			
Night	Min	54.6	65.4	41.9	64.8	64.4	62.6	61.0	50.8	45.8	42.5	42.2	42.0		65 0	
- Night	Max	60.2	72.3	56.5	71.7	71.4	68.1	65.7	59.4	58.1	57.2	57.1	56.7		05.5	
Energy	Average	58.7	Ave	erage:	68.5	67.9	65.8	63.6	55.6	51.9	48.3	47.8	47.4			



						24-Ho	ur Noise L	evel Meas	urement S	ummary						
Date [.]	Wednesday	/ May 20 20	20			L3 - Located	east of the	Project site c	on Indian Stre	eet near	Meter [.]	Piccolo II			INI-	13447
Proiect:	Meridian Pa	ark D-1	20			existing sing	gle-family res	sidential hom	ne at 16855 F	Baltic Court.	Wieter.				Analvst:	P. Mara
															·	
							Hourly L _{eq} (dBA Readings	(unadjusted)							
85.0	0															
3 80.0																
B 70.0	Ď															
، 60.0 ت						<mark></mark>			—							
≥ 55.0					œ	- <mark></mark>	<u> </u>	<u>∞.</u>	<mark></mark>	<u> </u>	<mark>0.4</mark>	<u>∞</u>	<mark>63.(</mark> 0.1	o		
P 45.0	° + ° ≈ +	-0. 2. 2.	1.5	53.4	20		<mark>- 26</mark>	<mark>- 26</mark>				<u>2</u>	9	<mark>56.</mark>	- 55	
35.0										"						
	0	1 2	3	4 5	6	7 8	9 :	10 11	12 1	.3 14	15 16	17	18 19	20	21 22	23
								Hour Be	eginning							
Timeframe	Hour	L _{eq}	L max	L min	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}
	0	48.9	57.6	42.6	57.3	56.8	55.0	53.3	49.0	45.3	43.2	43.0	42.8	48.9	10.0	58.9
		46.0	55.4	42.3	55.1	54.5	51.3	48.7	44.8	43.7	42.7	42.6	42.4	46.0	10.0	56.0
	2	44.2 51.5	50.0 61.9	42.2	49.6	48.9	47.2 58.1	46.1	44.2	43.4	42.6	42.5	42.3	44.2 51.5	10.0	54.2 61.5
Night	4	53.4	63.8	44.2	63.4	62.9	60.6	58.4	49.8 51.3	40.7	44.7	44.0	44.3	53.4	10.0	63.4
	5	52.5	63.2	45.9	62.9	62.3	59.8	57.2	49.7	47.8	46.4	46.2	46.0	52.5	10.0	62.5
	6	56.8	69.8	44.6	69.5	68.9	64.7	61.0	49.2	46.6	45.2	45.0	44.7	56.8	10.0	66.8
	7	56.1	68.9	42.2	68.7	67.9	64.5	60.8	49.5	44.4	42.7	42.5	42.3	56.1	10.0	66.1
	8	63.9	77.7	42.5	77.0	76.1	73.0	67.8	49.5	44.7	43.1	42.8	42.6	63.9	0.0	63.9
	9 10	56.9	69.1 66.7	43.4	68.6 66.4	68.0 65.8	63.6	62.3	51.0 57.1	46.7 52.4	44.0	43.8	43.5	56.9 56.8	0.0	56.9
	10	56.0	66.8	44.6	66.3	65.4	62.3	60.3	56.1	51.8	46.1	45.5	44.8	56.0	0.0	56.0
	12	61.8	70.5	44.7	70.1	69.3	67.2	66.2	62.7	58.9	49.0	46.0	44.9	61.8	0.0	61.8
Day	13	52.0	62.5	44.0	62.1	61.6	58.8	56.5	50.6	47.9	44.7	44.5	44.1	52.0	0.0	52.0
	14	56.7	68.8	45.2	68.1	67.1	63.7	61.3	54.6	50.7	46.7	46.2	45.4	56.7	0.0	56.7
	15	60.4	73.6	45.8	73.0	72.0	68.2	65.3	54.4	50.9	47.0	46.6	46.1	60.4	0.0	60.4
	16	55.5	66.5 71.2	46.5	65.7 70.6	64.7	61.7 66.0	59.5	55.1	51.7	47.5	47.0	46.6	55.5	0.0	55.5
	18	63.0	74.9	48.4	70.0	74.3	71.7	69.0	56.0	51.7	49.3	40.0	48.6	63.0	0.0	63.0
	19	60.1	71.0	50.1	70.3	69.4	66.5	64.9	59.8	54.6	51.2	50.7	50.2	60.1	5.0	65.1
Evening	20	56.0	65.2	48.9	64.5	63.9	61.9	60.1	56.1	53.0	50.1	49.6	49.1	56.0	5.0	61.0
	21	50.4	58.8	45.8	58.6	58.3	56.6	55.0	49.8	47.7	46.2	46.1	45.9	50.4	5.0	55.4
Night	22	58.6	71.8	45.2	71.2	70.6	66.7	63.3	50.5	47.3	45.6	45.4	45.3	58.6	10.0	68.6
Timeframe	Hour	52.2	64.Z	42.8 L	11%	12%	59.7 15%	18%	49.0 125%	44.8	43.3	43.1 195%	43.0	52.2	L (dBA)	02.2
ninejranie	Min	= eq 52.0	- max 62.5	42.5	62.1	61.6	58.8	56.5	49.5	44.7	43.1	42.8	42.6			
Day	Max	63.9	77.7	48.4	77.0	76.1	73.0	69.0	62.7	58.9	49.3	49.0	48.6	24-Hour	Daytime	Nighttime
Energy	Average	59.6	Ave	erage:	69.3	68.5	65.7	63.0	54.8	50.9	46.7	46.0	45.5	577	58 5	53 9
Evening	Min	50.4	58.8	45.8	58.6	58.3	56.6	55.0	49.8	47.7	46.2	46.1	45.9	57.7		
Energy	Max	60.1 57.1	/1.0	50.1	/0.3	63.8	61.7	60.0	59.8	54.6	51.2	50.7	50.2	24-	HOUR CNEL (d	ВАЈ
LICIEV	Min	44.2	50.0	42.2	49.6	48.9	47.2	46.1	44.2	43.4	42.6	42.5	40.4		C1 7	
Night	Max	58.6	71.8	45.9	71.2	70.6	66.7	63.3	51.3	47.8	46.4	46.2	46.0		b1./	
Energy	Average	53.9	Ave	erage:	62.3	61.7	58.8	56.2	48.7	45.8	44.3	44.1	43.9	1		



Date	: Wednesday	y, May 20, 20	20			L4 - Located	east of the	Project site o	on Heacock S	treet near	Meter:	Piccolo II			JN:	13447
Project	: Meridian Pa	ark D-1				F&D Distrib	ution Center								Analyst:	P. Mara
							11	dDA Dendinar	(
							Hourly L _{eq}	aBA Redaings	(undajustea)							
85	5.0			1					1 1				1			
	0.0															
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60 ت ح 55		6.2	69	70 68.	68.	69 <mark>89</mark>	8	63.		08. 08.	<mark>69</mark>	69	67.(<u></u>	5.8	2.0
5 0	0.0 → 	_ o o					+ +							~	° – ° –	<u> </u>
P 45																
35	5.0 ++															
	0	1 2	3	4 5	6	7 8	9	10 11	12 1	.3 14	15 16	5 17	18 19	20	21 22	23
								Hour B	eginning							
Timeframe	e Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{ea}
	0	66.9	78.8	50.2	78.1	77.4	74.7	72.2	64.8	58.5	52.2	51.2	50.4	66.9	10.0	76.9
	1	64.9	76.6	47.8	76.1	75.1	72.3	70.3	63.1	56.0	48.9	48.4	47.9	64.9	10.0	74.9
	2	66.2	77.6	52.3	77.3	76.5	73.5	71.3	64.7	58.9	52.9	52.6	52.4	66.2	10.0	76.2
Night	3	69.1	80.7	51.3	80.1	79.2	76.3	74.2	67.7	62.4	53.3	52.1	51.5	69.1	10.0	79.1
Night	4	68.7	78.6	54.2	78.1	77.3	75.0	73.6	69.4	63.9	56.6	55.3	54.4	68.7	10.0	78.7
	5	70.6	80.8	56.4	80.3	79.4	77.2	75.5	70.8	66.2	58.9	57.7	56.6	70.6	10.0	80.6
	6	68.3	78.3	53.6	77.8	77.0	74.8	73.3	68.4	63.9	55.9	54.9	53.9	68.3	10.0	78.3
	7	69.0	78.5	54.4	78.1	77.3	75.3	74.2	69.4	64.5	57.1	55.8	54.6	69.0	10.0	79.0
	8	68.1	78.7	52.2	78.1	77.3	75.1	73.6	67.8	62.6	54.9	53.5	52.4	68.1	0.0	68.1
	9	68.1	78.4	52.8	77.9	77.2	74.8	73.1	68.0	63.1	55.6	54.4	53.1	68.1	0.0	68.1
	10	68.4	80.1	53.8	79.5	78.3	74.9	72.8	67.8	63.3	56.0	54.9	54.0	68.4	0.0	68.4
	11	67.6	/8.2	54.2	//.8	//.0	/4.4	72.4	67.2	62.6	56.2	55.3	54.5	67.6	0.0	67.6
Dav	12	72.4	83.6	52.8	83.3	82.5	80.4	78.2	70.3	65.5	56.2	54.5	53.4	72.4	0.0	72.4
Day	13	68.0	70.7	52.0	78.2	77.5	74.7	73.0	07.5	64.4	55.5	55.4	52.2	68.0 68.6	0.0	08.0 68.6
	14	68.5	78.8	53.0	78.3	78.0	75.0	73.4	68.3	63.7	55.7	54.5	52 /	68.5	0.0	68.5
	16	69.4	79.5	55.1	78.9	78.0	75.8	74.2	69.7	65.4	57.6	56.4	55.3	69.4	0.0	69.4
	17	69.5	81.4	54.8	80.7	79.6	76.3	74.2	68.3	64.0	57.1	56.1	55.1	69.5	0.0	69.5
	18	67.6	77.8	54.2	77.3	76.4	73.9	72.4	67.9	63.3	56.1	55.2	54.4	67.6	0.0	67.6
	19	66.3	77.0	52.2	76.5	75.7	72.7	71.0	66.1	61.5	54.2	53.2	52.4	66.3	5.0	71.3
Evening	20	66.7	78.3	51.9	77.8	76.9	74.1	71.6	65.1	60.0	53.7	52.8	52.1	66.7	5.0	71.7
	21	67.1	78.9	51.5	78.4	77.5	74.5	72.2	65.2	59.8	52.9	52.1	51.6	67.1	5.0	72.1
Night	22	65.8	76.8	51.6	76.3	75.5	72.4	70.6	65.3	60.1	53.2	52.5	51.7	65.8	10.0	75.8
MgHt	23	65.0	76.8	48.5	76.3	75.5	72.5	70.3	62.7	57.7	50.0	49.2	48.7	65.0	10.0	75.0
Timeframe	e Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%		L _{eq} (dBA)	
Day	Min	67.6	77.8	52.0	77.3	76.4	73.9	72.4	67.2	62.6	54.9	53.4	52.2	24-Hour	Daytime	Nighttim
,	Max	72.4	83.6	55.1	83.3	82.5	80.4	78.2	70.3	65.5	57.6	56.4	55.3		, í	
Energ	y Average	69.0	Ave	erage:	79.0	/8.1	/5.5	/3.7	68.3	63.7	56.1	54.8	53.8	68.3	68.6	67.8
Evening	Max	67.1	77.0	51.5	76.5	/5./ 77 E	74.5	71.0	65.1	59.8	52.9	52.1	51.6	24	Hour CNEL-4	
Energ		66.7	78.9 Ave	JZ.Z	78.4	77.5	74.5	72.2	65.5	60.5	53.6	52.7	52.4	24-	HOUF CIVEL (udAj
Lifelg	Min	64.9	76.6	47.8	76.1	75.1	73.8	70.3	62.7	56.0	48.9	48.4	47.9			
Night	Max	70.6	80.8	56.4	80.3	79.4	77.2	75.5	70.8	66.2	58.9	57.7	56.6		/4.4	
Energ	y Average	67.8	Ave	erage:	77.9	77.0	74.4	72.5	66.6	61.2	53.9	53.0	52.2			

24-Hour Noise Level Measurement Summary



APPENDIX 7.1:

OFF-SITE TRAFFIC NOISE CONTOURS

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	FH\	WA-RD-77-108	HIGHW	AY NO	DISE PF	REDICT		DEL			
Scenai Road Nan Road Segme	rio: Existing Wi ne: Heacock S nt: n/o Gentiar	ithout Project it. n Av.				Project Job N	Name: (umber: '	Gatev 13445	vay Aviation		
SITE	SPECIFIC IN	NPUT DATA				N	IOISE N	IODI	EL INPUTS	3	
Highway Data				S	ite Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily Peak Hour Peak H	Traffic (Adt): Percentage:	23,451 vehicle 8.08%	s		Me He	dium Tri avv Tru) ucks (2 A sks (3+ A	Autos (xles)	: 15 : 15 : 15		
Ve	hicle Sneed	50 mph	-			,					
Near/Far La	ne Distance:	48 feet		V	ehicle I Veh	Mix icleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%	6 12.9%	9.6%	6 86.23%
Ba	rrier Heiaht:	0.0 feet			Me	edium Ti	rucks:	84.8%	6 4.9%	10.3%	6 2.67%
Barrier Type (0-V	Vall, 1-Berm):	0.0			ŀ	leavy Ti	rucks:	86.5%	6 2.7%	10.8%	6 11.10%
Centerline Di	st. to Barrier:	50.0 feet		N	oise Sc	ource El	evations	s (in f	feet)		
Centerline Dist.	to Observer:	50.0 feet				Auto	s: 0.0	000			
Barrier Distance	to Observer:			Mediur	m Truck	s: 2.2	297				
Observer Height	(Above Pad):			Heav	y Truck	s: 8.0	004	Grade Adj	ustmen	nt: 0.0	
P	ad Elevation:	0.0 feet					Distance		641		
Ro	ad Elevation:	0.0 feet		Li	ane Equ	uivaient	Distanc	e (In	reet)		
	Road Grade:	0.0%				Auto	s: 44.	147			
	Right View:	-90.0 degree 90.0 degree	es es		Heav	n Truck y Truck	s: 43.9 s: 43.9	947 966			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Atte	en Be	erm Atten
Autos:	70.20	-0.16		0.71		-1.20		-4.65	0.0	00	0.000
Medium Trucks:	81.00	-15.26		0.74		-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	85.38	-9.07		0.73		-1.20		-5.43	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Hou	ur Leq Day	L	.eq Eve	ening	Leq	Night		Ldn	C	ONEL
Autos:	69	9.5	68.6		66.8		60.8		69.4		70.0
Medium Trucks:	65	5.3	64.7		58.3		56.8		65.2		65.5
Heavy Trucks:	Heavy Trucks: 75.8 75.4				66.3		67.6		75.9		76.0
Vehicle Noise:	Vehicle Noise: 77.1 76.						68.7		77.1		77.3
Centerline Distan	ce to Noise C	1		,							
			70 dE	BA	65	dBA		60 dBA	55	5 dBA	
			Ldn:		148		320		688		1,483
		Ci	VEL:		153		330		712		1,534

FHWA-RD-77-108 HIGH	WAY NO	DISE PF	REDICT		DEL			
Scenario: Existing Without Project Road Name: Heacock St. Road Segment: s/o Cardinal Av.			Project Job N	Name: (umber: 1	Gatew 3445	ay Aviation		
SITE SPECIFIC INPUT DATA			N	IOISE N	ODE		s	
Highway Data	S	ite Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily Traffic (Adt): 15,260 vehicles				A	utos:	15		
Peak Hour Percentage: 8.08%		Me	dium Tri	ucks (2 A	xles):	15		
Peak Hour Volume: 1,233 vehicles		He	avy Truc	cks (3+ A	xles):	15		
Vehicle Speed: 50 mph	V	ehicle I	Nix					
Near/Far Lane Distance: 48 feet	-	Vehi	cleType		Day	Evening	Night	Daily
Site Data				Autos:	77.5%	12.9%	9.6%	86.23%
Barrier Height: 0.0 feet		Me	edium Ti	rucks:	34.8%	4.9%	10.3%	2.67%
Barrier Type (0-Wall. 1-Berm): 0.0		ŀ	leavy Ti	rucks:	36.5%	2.7%	10.8%	11.10%
Centerline Dist. to Barrier: 50.0 feet		oioo Ca	uree El	avations	lin fi	ati		
Centerline Dist. to Observer: 50.0 feet	N	uise su	Auto	evalions	00	el)		
Barrier Distance to Observer: 0.0 feet		Modiu	n Truck	s. 0.0	00			
Observer Height (Above Pad): 5.0 feet		Heav	v Truck	s. 2.2 e 8.0	04	Grade Ad	iustment	· 0.0
Pad Elevation: 0.0 feet		neuv	y mack	3. 0.0	04	0/000/10	aounoni	. 0.0
Road Elevation: 0.0 feet	La	ane Equ	uivalent	Distanc	e (in i	feet)		
Road Grade: 0.0%			Auto	s: 44.1	47			
Left View: -90.0 degrees		Mediur	n Truck	s: 43.9	47			
Right View: 90.0 degrees		Heav	y Truck	s: 43.9	66			
FHWA Noise Model Calculations								
VehicleType REMEL Traffic Flow Dist	tance	Finite	Road	Fresn	e/	Barrier Att	en Ber	m Atten
Autos: 70.20 -2.03	0.71		-1.20		4.65	0.0	000	0.000
Medium Trucks: 81.00 -17.13	0.74		-1.20		4.87	0.0	000	0.000
Heavy Trucks: 85.38 -10.93	0.73		-1.20		5.43	0.0	000	0.00
Unmitigated Noise Levels (without Topo and barrie	r attenu	ation)						
VehicleType Leq Peak Hour Leq Day	Leq Eve	ening	Leq	Night		Ldn	C	NEL
Autos: 67.7 66.7		64.9		58.9		67.8	5	68.
Medium Trucks: 63.4 62.8		56.5		54.9		63.4	1	63.6
Heavy Trucks: 74.0 73.5		64.4		65.7		74.1	1	74.2
Vehicle Noise: 75.2 74.6		68.0		66.8		75.2	2	75.4
Centerline Distance to Noise Contour (in feet)	70 //							
I atau	70 dE	5A	65	aBA 040	e	ou aBA	55	aBA
Lan: CNEL:		111		240		517		1,114
CIVEL.		115		248		535		1,152

Tuesday, December 8, 2020

	FHV	VA-RD-77-108 H	IGHW	AY N	OISE PF	REDICTI	ON MO	DEL				
Scenario Road Name Road Segmen	 Existing Wire: Heacock St t: s/o Iris Av. 	hout Project				Project Job Ni	Name: (umber:)	Gatew 13445	ay Aviatio	n		
SITE S	PECIFIC IN	PUT DATA				N	OISE N	IODE	L INPU	rs		
Highway Data				S	ite Con	ditions (Hard =	10, So	oft = 15)			
Average Daily 1 Peak Hour P	raffic (Adt): Percentage:	14,212 vehicles			Me	dium Tru	rcks (2 A	Autos:	15			
Peak Ho	our Volume:	1 148 vehicles			He	avv Truc	ks (3+ A	(xles)	15			
Veh	icle Speed:	50 mph						,				
Near/Far Lan	e Distance:	48 feet		v	ehicle I	Nix 		_	- ·			
Site Data					Ven	cie i ype A	utos:	Day 77.5%	Evening	INI	gnt 9.6%	Daily 86.23%
Par	rior Hoight:	0.0 foot			Me	edium Tr	ucks:	84.8%	4.9%	10	0.3%	2.67%
Barrier Type (0-Wa	all, 1-Berm):	0.0			ŀ	leavy Tr	ucks:	86.5%	2.7%	1(0.8%	11.10%
Centerline Dis	t. to Barrier:	50.0 feet		Δ	loise Sc	ource Ele	evation	s (in f	eet)			
Centerline Dist. t	o Observer:	50.0 feet				Autos	: 0.0	000				
Barrier Distance t	o Observer:	0.0 feet			Mediu	n Trucks	2.2	297				
Observer Height (A	Above Pad):	5.0 feet			Heav	v Trucks	.: 8.(004	Grade A	djusti	ment:	0.0
Pa	d Elevation:	0.0 feet		-						-		
Roa	d Elevation:	0.0 feet		L	ane Equ	uvalent	Distant	ce (In	feet)			
R	load Grade:	0.0%				Autos	44.	147				
	Leπ View: Right View:	-90.0 degrees 90.0 degrees			Heav	n Trucks y Trucks	: 43. : 43.	947 966				
FHWA Noise Mode	I Calculation:	:										
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresn	el	Barrier A	tten	Berr	m Atten
Autos:	70.20	-2.34		0.71		-1.20		-4.65	0	.000		0.00
Medium Trucks:	81.00	-17.44		0.74	ļ.	-1.20		-4.87	0	.000		0.00
Heavy Trucks:	85.38	-11.24		0.73	3	-1.20		-5.43	0	.000		0.00
Unmitigated Noise	Levels (with	out Topo and b	arrier a	atteni	uation)							
VehicleType	Leq Peak Hou	r Leq Day	L	eq Ev	ening	Leq I	Vight		Ldn		CN	IEL
Autos:	67	.4 66	6.4		64.6		58.6	5	67	.2		67.
Medium Trucks:	63	.1 62	2.5		56.2		54.6	5	63	.1		63.
Heavy Trucks:	73	.7 73	3.2		64.1		65.4		73	.7		73.
Vehicle Noise:	74	.9 74	1.3		67.7		66.5	5	74	.9		75.
Centerline Distance	e to Noise Co	ntour (in feet)		70 d	BA	65.0	IRA		50 dBA		55	dBA
		17	dn:		106	001	229	· `	49	3	50	1.062
		CNE	L:		110		237		-51	0		1,099

	FH	WA-RD-77-108	BHIGHW	AY NO	DISE PF	REDICTIC	N MODEL			
Scenar Road Nam Road Segme	io: Existing W ne: Heacock S nt: s/o Nandin	ithout Project t. a Av.				Project N Job Nui	lame: Gate mber: 1344	way Aviation		
SITE	SPECIFIC IN	IPUT DATA				NC	DISE MOD	EL INPUT	5	
Highway Data				S	ite Con	ditions (H	lard = 10,	Soft = 15)		
Average Daily	Traffic (Adt):	1 vehic	es				Auto	s: 15		
Peak Hour	Percentage:	8.08%			Mee	dium Truc	ks (2 Axle	s): 15		
Peak H	lour Volume:	0 vehicle	s		Hea	avy Truck	s (3+ Axles	s): 15		
Ve	hicle Speed:	50 mph		V	ehicle A	Nix				
Near/Far La	ne Distance:	48 feet		-	Vehi	cleTvpe	Dav	Evenina	Night	Dailv
Site Data					-	Au	itos: 77.5	5% 12.9%	9.6%	86.23%
Ba	rrier Height	0.0 feet			Me	dium Tru	cks: 84.8	3% 4.9%	10.3%	2.67%
Barrier Type (0-W	/all, 1-Berm):	0.0			H	leavy Tru	cks: 86.5	5% 2.7%	10.8%	11.10%
Centerline Di	st. to Barrier:	50.0 feet		N	nise So	urco Elos	vations (in	foot)		
Centerline Dist.	to Observer:	50.0 feet		~	0136 00	Autos:	0.000	leely		
Barrier Distance	to Observer:			Modiur	n Trucks:	2 207				
Observer Height	(Above Pad):			Heav	v Trucks:	2.207	Grade Ad	iustment [.]	0.0	
P	ad Elevation:			Tieav	y mucks.	0.004	0/000/10	dounoni.	0.0	
Ro	ad Elevation:	0.0 feet		Li	ane Equ	ıivalent E	Distance (i	n feet)		
	Road Grade:	0.0%				Autos:	44.147			
	Left View:	-90.0 degre	es		Mediur	n Trucks:	43.947			
	Right View:	90.0 degre	es		Heav	y Trucks:	43.966			
FHWA Noise Mod	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresnel	Barrier Atte	en Beri	m Atten
Autos:	70.20	-43.86		0.71		-1.20	-4.6	5 0.0	000	0.000
Medium Trucks:	81.00	-58.96		0.74		-1.20	-4.8	7 0.0	000	0.000
Heavy Trucks:	85.38	-52.77		0.73		-1.20	-5.4	3 0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)					
VehicleType	Leq Peak Hou	ur Leq Da	y L	.eq Eve	ening	Leq N	ight	Ldn	CN	JEL
Autos:	25	5.8	24.9		23.1		17.1	25.7	1	26.3
Medium Trucks:	21	.6	21.0		14.6		13.1	21.5	i	21.8
Heavy Trucks:	Heavy Trucks: 32.1 31.6				22.6		23.9	32.2)	32.3
Vehicle Noise:	Vehicle Noise: 33.4 32.8				26.2		25.0	33.4	ł	33.6
Centerline Distant	terline Distance to Noise Contour (in feet)									
						65 dE	BA	60 dBA	55	dBA
			Ldn:		0		0	1		2
		C	NEL:		0		0	1		2

	FH	WA-RD-77-108	B HIGHV	VAY NO	DISE PI	REDICTIC	N MOD	EL			
Scenar Road Nan Road Segme	no: Existing W ne: Indian Av. nt: s/o Nandin	ithout Project a Av.				Project N Job Nu	lame: G mber: 1	atewa 3445	y Aviation		
SITE	SPECIFIC IN	NPUT DATA				NC	DISE M	ODEL	. INPUTS	3	
Highway Data				Si	ite Con	ditions (F	lard = 1	10, Soi	ft = 15)		
Average Daily Peak Hour	Traffic (Adt):	10,148 vehicl	es		Me	dium Truc	A ks (2 A	utos: xles):	15 15		
Peak H	lour Volume:	820 vehicle	2		He	avv Truck	s (3+ A)	xles):	15		
Ve	hicle Sneed	45 mph					- (
Near/Far La	ne Distance:	36 feet		V	ehicle	Mix					
NCall al Ed	ine bistance.	00 1001			Veh	icleType	Ľ	Day	Evening	Night	Daily
Site Data						AL	itos: 7	7.5%	12.9%	9.6%	86.23%
Ba	rrier Height:	0.0 feet			М	edium Tru	cks: 8	34.8%	4.9%	10.3%	2.67%
Barrier Type (0-W	Vall, 1-Berm):	0.0			1	Heavy Tru	cks: 8	36.5%	2.7%	10.8%	11.10%
Centerline Di	ist. to Barrier:	44.0 feet		N	oise So	ource Ele	vations	(in fe	et)		
Centerline Dist.	to Observer:	44.0 feet		-		Autos'	0.0	00			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.2	00 07			
Observer Height	(Above Pad):	5.0 feet			Heat	n Trucks:	2.2	04	Grade Adi	ustment	0.0
P	ad Elevation:	0.0 feet			near	ly mucho.	0.0	04	0,000,000	Journom.	0.0
Ro	ad Elevation:	0.0 feet		Lá	ane Eq	uivalent L	Distance	e (in fe	eet)		
	Road Grade:	0.0%				Autos:	40.4	60			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	40.2	41			
	Right View:	90.0 degre	es		Heav	y Trucks:	40.2	62			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresne	e/ E	Barrier Atte	en Ber	m Atten
Autos:	68.46	-3.34		1.28		-1.20	-	4.61	0.0	00	0.000
Medium Trucks:	79.45	-18.44		1.31		-1.20	-	4.87	0.0	00	0.000
Heavy Trucks:	84.25	-12.25		1.31		-1.20	-	5.50	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	y I	Leq Eve	ening	Leq N	ight		Ldn	CI	VEL
Autos:	65	5.2	64.2		62.5		56.4		65.0		65.6
Medium Trucks:	61	1.1	60.5		54.2		52.6		61.1		61.3
Heavy Trucks:	72	2.1	71.6		62.6		63.8		72.2		72.3
Vehicle Noise:	Vehicle Noise: 73.2				65.8		64.8		73.2		73.4
Centerline Distan	centerline Distance to Noise Contour			70 -10	24	05 -11	24		0 -10 4		-10.4
				70 at	70	65 di	450	00	JUDA	55	UDA 700
		_	Lan:		72		156		335		722
		C	NEL:		75		161		346		745

Scenario: Ex	risting Withr	out Project				Project	Name	Gatew	av Aviation	1	
Road Name: Ci	actus Av.	at i rojoot				Job N	umber:	13445	ay / maioi		
Road Segment: e/	o Heacock S	St.									
SITE SPE	CIFIC INP	UT DATA				N	IOISE I	NODE	L INPUT	s	
Highway Data				3	Site Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily Traffi	c (Adt): 23	3,388 vehicle	es					Autos:	15		
Peak Hour Perce	entage: 8	3.08%			Me	dium Tri	ucks (2 /	Axles):	15		
Peak Hour V	<i>olume:</i> 1,	890 vehicles	6		He	avy Truc	cks (3+ /	Axles):	15		
Vehicle	Speed:	40 mph		1	/ehicle I	Nix					
Near/Far Lane Di	stance:	50 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	86.23
Barrier	Heiaht:	0.0 feet			Me	edium Ti	rucks:	84.8%	4.9%	10.3%	2.67
Barrier Type (0-Wall, 1	-Berm):	0.0			ŀ	leavy T	rucks:	86.5%	2.7%	10.8%	5 11.10
Centerline Dist. to	Barrier:	44.0 feet			Voise So	urce El	evation	s (in f	eet)		
Centerline Dist. to Ob	server:	44.0 feet		F		Auto	s: 0.	000			
Barrier Distance to Ob	server:	0.0 feet			Mediur	n Truck	s: 2.	297			
Observer Height (Abov	e Pad):	5.0 feet			Heav	y Truck	s: 8.	004	Grade Ad	justmen	t: 0.0
Pad Ele	evation:	0.0 feet		-			Distan	//	f 41		
Road Ele	evation:	0.0 feet		4	ane Equ	Auto	Distant	ce (III	ieel)		
Road	Grade: (0.0%			Modiu	n Truck	5. 30. e: 36	200			
Le Rial	nt View:	00.0 degree	:5		Heav	v Truck	s. 30. s [.] 36	332			
rugi	n view.	50.0 degree	,3		mour	y maon	0. 00.	002			
FHWA Noise Model Ca	lculations										
VehicleType RI	EMEL T	raffic Flow	Dis	stance	Finite	Road	Fresr	nel	Barrier Att	en Be	rm Atten
Autos:	66.51	0.79		1.94	4	-1.20		-4.61	0.0	000	0.00
Medium Trucks:	77.72	-14.30		1.90	3	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	82.99	-8.11		1.98	3	-1.20		-5.50	0.0	J00	0.00
Unmitigated Noise Lev	els (withou	t Topo and	barri	er atten	uation)						
VehicleType Leq	Peak Hour	Leq Day		Leq Ev	/ening	Leq	Night		Ldn	0	NEL
Autos:	68.0		67.1		65.3		59.3	3	67.9	9	68.
Meaium Trucks:	64.2		53.6		57.2		55.1	r	64.2	2	64.
Heavy Trucks:	75.7		76.0		60.0		67.4	+	75.	2	75.
venicie noise.	70.0		70.0		09.0		00.0	>	70.0	5	70.
Centerline Distance to	Noise Cont	our (in feet))	70 /	ID A	65	d D A		SO dBA	5/	dRA
			I dn'	,00	122	00	263		566	1 50	1 22
			Lun.		122		203		300		1,220
		~ ~ ~			100		074		50.4		1 0 5

Tuesday, December 8, 2020

	FHV	VA-RD-77-108	HIGH	NAY NO	DISE PF	REDICTI	ON MOI	DEL			
Scenari Road Nam Road Segmen	o: Existing Wit e: Cactus Av. nt: w/o Heacoc	thout Project				Project I Job Ni	Name: (Imber: 1	Gatew 3445	ay Aviation		
SITE S	SPECIFIC IN	PUT DATA				N	OISE N	IODE	L INPUTS	6	
Highway Data				S	ite Con	ditions (Hard =	10, S	oft = 15)		
Average Daily Peak Hour Peak H	Traffic (Adt): Percentage: our Volume:	38,888 vehicle 8.08% 3,142 vehicle	es s		Me He	dium Tru avy Truc	A cks (2 A ks (3+ A	Autos (xles) (xles)	15 15 15		
Vel	hicle Speed:	50 mph		V	ehicle I	Nix					
Near/Far Lar	ne Distance:	73 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	6 12.9%	9.6%	86.23%
Bar	rier Heiaht:	0.0 feet			Me	edium Tri	ucks:	84.8%	6 4.9%	10.3%	2.67%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Tr	ucks:	86.5%	6 2.7%	10.8%	11.10%
Centerline Dis	t. to Barrier:	55.0 feet		N	oise Sc	urce Ele	vations	in f	eet)		
Centerline Dist. t	to Observer:	55.0 feet			0.00 00	Autos	. 0.0	000	000		
Barrier Distance t	to Observer:	0.0 feet			Mediu	n Trucks	. 22	97			
Observer Height ()	Above Pad):	5.0 feet			Heav	v Trucks	. 80	04	Grade Adi	ustment	0.0
Pa	d Elevation:	0.0 feet			mour	,	. 0.0				
Roa	d Elevation:	0.0 feet		L	ane Equ	uivalent	Distanc	e (in	feet)		
F	Road Grade:	0.0%				Autos	: 41.4	146			
	Left View: Right View:	-90.0 degre 90.0 degre	es es		Mediui Heav	m Trucks y Trucks	41.2 41.2	232 253			
FHWA Noise Mode	al Calculations	5									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresn	e/	Barrier Atte	en Ber	m Atten
Autos:	70.20	2.03		1.12		-1.20		-4.67	0.0	00	0.000
Medium Trucks:	81.00	-13.06		1.15		-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	85.38	-6.87		1.15		-1.20		-5.38	0.0	00	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier	r attenu	ation)						
VehicleType	Leq Peak Hou	r Leq Day	/	Leq Eve	ening	Leq I	Vight		Ldn	CI	VEL
Autos:	72	.2	71.2		69.4		63.4		72.0		72.6
Medium Trucks:	67	.9	67.3		60.9		59.4		67.9		68.1
Heavy Trucks:	78	.5	78.0		68.9		70.2		78.5		78.7
Vehicle Noise:	79	.7	79.1		72.5		71.3		79.7		79.9
Centerline Distanc	e to Noise Co	ntour (in feet)								
				70 dl	BA	65 0	IBA		60 dBA	55	dBA
			Ldn:		244		525		1,131		2,436
		C	NEL:		252		543		1,169		2,519

	FH	WA-RD-77-108	BHIGH	WAY N	NOISE PF	REDICTI	ON MC	DEL				
Scenar Road Narr Road Segme	io: Existing W ne: Harley Kno nt: e/o Patters	ithout Project x Bl. on Av.				Project Job N	Name: umber:	Gatew 13445	vay Aviatio	n		
SITE						N		MODE		e		
Highway Data	SPECIFIC II	FUIDAIA			Site Con	ditions	(Hard =	: 10, S	oft = 15)	3		
Average Daily	Traffic (Adt)	17 290 vehicl	es					Autos	15			
Peak Hour	Percentage:	8.08%			Me	dium Tru	icks (2	Axles).	15			
Peak H	lour Volume:	1,397 vehicle	s		He	avy Truc	ks (3+.	, Axles).	15			
Ve	hicle Speed:	45 mph			Vehicle I	Nix						
Near/Far La	ne Distance:	80 feet		-	Vehi	icleTvne		Dav	Evenina	Nic	ht	Daily
Site Data						οιο 1 <u>γ</u> ρο Α	utos:	77.5%	6 12.9%	9	.6%	86.23%
Ba	wier Height	0.0 feet			Me	edium Tr	ucks:	84.8%	6 1 <u>2</u> .0%	10	.3%	2.67%
Barrier Type (0-M	/all_1_Berm)	0.0 leet			F	leavy Tr	ucks:	86.5%	6 2.7%	10	.8%	11.10%
Centerline Di	st. to Barrier:	64.0 feet		-								
Centerline Dist.	to Observer:	64.0 feet			Noise So	urce El	evation	is (in f	eet)			
Barrier Distance	to Observer:	0.0 feet			1 4 m all	Autos	s: 0.	207				
Observer Height	(Above Pad):	5.0 feet			Wealur	n Trucks	5: Z	.297	Grade A	liustr	nont [.]	0.0
P	ad Elevation:	0.0 feet			neav	y mucks	s. o.	.004	Orade At	ijusin	iont.	0.0
Ro	ad Elevation:	0.0 feet		1	Lane Equ	uivalent	Distan	ce (in	feet)			
	Road Grade:	0.0%				Autos	s: 50	.210				
	Left View:	-90.0 degre	es		Mediur	n Trucks	s: 50	.033				
	Right View:	90.0 degre	es		Heav	y Trucks	s: 50	.050				
FHWA Noise Mod	el Calculation	s		l								
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fres	nel	Barrier At	ten	Berr	n Atten
Autos:	68.46	-1.03		-0.1	3	-1.20		-4.70	0.	.000		0.000
Medium Trucks:	79.45	-16.13		-0.1	1	-1.20		-4.88	0.	.000		0.000
Heavy Trucks:	84.25	-9.93		-0.1	1	-1.20		-5.31	0.	.000		0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	r atten	uation)			-				
VehicleType	Leq Peak Ho	ur Leq Da	Ý	Leq E	vening	Leq	Night		Ldn		C٨	IEL
Autos:	66	5.1	65.1		63.4		57.	3	65	.9		66.5
Medium Trucks:	62		55.1		53.	5	62	.0		62.2		
Heavy Trucks:	Heavy Trucks: 73.0 72.5						64.	7	73	.1		73.2
venicie Noise:	14	к.1	/3.5		00.7		65.	/	74	.1		74.3
Centerline Distant	ce to Noise C	ontour (in fee	9	70	-10.4	65	-10.4	1	0.404	-	55	-10.4
			I day	70 0	104 104	65 (JBA 000		ou aBA		55 (1 205
		~	Lan:		121		260	2	55	9		1,205
		L L	IVEL.		124		200	,	576	U		1,244

	FH\	NA-RD-77-108	B HIGHW	AY N	OISE PF	EDICTIO		DEL								
Scenar Road Nan Road Segme	Scenario: Existing Without Project Road Name: Harley Knox Bl. Road Segment: e/o Indian Av.						Project Name: Gateway Aviation Job Number: 13445									
SITE	SPECIFIC IN	IPUT DATA				N	OISE N	IODE	L INPUT	5						
Highway Data				S	ite Con	ditions (Hard =	10, So	oft = 15)							
Average Daily	Traffic (Adt):	8,896 vehicl	es					Autos:	15							
Peak Hour	Percentage:	8.08%			Med	dium Tru	cks (2 A	xles):	15							
Peak F	lour Volume:	719 vehicle	s		Hea	avy Truck	ks (3+ A	(xles):	15							
Ve	hicle Speed:	45 mph		V	ahicla I	liv										
Near/Far La	ne Distance:	80 feet		v	Vehi	cleTvpe		Dav	Evenina	Niaht	Dailv					
Site Data						A	utos:	77.5%	12.9%	9.6%	86.23%					
Ba	rrier Heiaht:	0.0 feet			Ме	dium Tru	icks:	84.8%	4.9%	10.3%	2.67%					
Barrier Type (0-W	/all, 1-Berm):	0.0			E	leavy Tru	icks:	86.5%	2.7%	10.8%	11.10%					
Centerline Di	st. to Barrier:	64.0 feet		A	loise So	urce Ele	vation	: (in fi	eet)							
Centerline Dist.	to Observer:	64.0 feet		Ë	0.00 00	Autos	· 00	000		-						
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks	. 23	97								
Observer Height	(Above Pad):	5.0 feet			Heavy Trucks: 8.004 Grade Adjustment: 0.0											
P	ad Elevation:	0.0 feet				,										
Ro	ad Elevation:	0.0 feet		L	ane Equ	ivalent	Distanc	e (in	feet)							
	Road Grade:	0.0%				Autos.	: 50.2	210								
	Left View:	-90.0 degre	es		Mediur	n Trucks	: 50.0	033								
	Right View:	90.0 degre	es		Heav	y Trucks.	: 50.0	50								
FHWA Noise Mod	el Calculation	s		-												
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Att	en Bei	rm Atten					
Autos:	68.46	-3.91		-0.13		-1.20		-4.70	0.0	000	0.000					
Medium Trucks:	79.45	-19.01		-0.11		-1.20		-4.88	0.0	000	0.000					
Heavy Trucks:	84.25	-12.82		-0.11		-1.20		-5.31	0.0	000	0.000					
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	uation)											
VehicleType	Leq Peak Hou	ur Leq Da	y L	.eq Ev	ening	Leq N	light		Ldn	C	NEL					
Autos:	63	3.2	62.2		60.5		54.4		63.0)	63.6					
Medium Trucks:	59	9.1	58.5		52.2		50.6		59.1	I	59.3					
Heavy Trucks:	70).1	69.6		60.6		61.8		70.2	2	70.3					
Vehicle Noise:	71	.2	70.6		63.9		62.8		71.2	2	71.4					
Centerline Distan	ce to Noise Ce	ontour (in feet	t)													
				70 d	BA	65 d	BA	(60 dBA	55	dBA					
			Ldn:	77 167 359			,	774								
		С	NEL:		80 172 371				799							

	FHV	VA-RD-77-108	HIGH	IWAY N	OISE PH	REDICI	ION MO	DEL			
Scenar	io: E+P (Non-F		Project Name: Gateway Aviation								
Road Nan	ne: Heacock Si	t.				Job N	lumber:	13445	-		
Road Segme	nt: s/o Iris Av.										
SITE	SPECIFIC IN	IPUT DATA				1	OISE	MODE	L INPUT	s	
Highway Data				5	Site Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	14,712 vehicl	es					Autos.	15		
Peak Hour	Percentage:	8.08%			Mee	dium Tr	ucks (2	Axles).	15		
Peak H	lour Volume:	1,189 vehicle	s		Hea	avy Tru	cks (3+ .	Axles).	15		
Ve	hicle Speed:	50 mph		1	/ehicle N	Nix					
Near/Far La	ne Distance:	48 feet			Vehi	cleType	9	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	86.70%
Ba	rrier Height	0.0 feet			Me	edium T	rucks:	84.8%	4.9%	10.3%	2.58%
Barrier Type (0-V	/all. 1-Berm):	0.0			F	leavy T	rucks:	86.5%	5 2.7%	10.8%	10.72%
Centerline Di	st. to Barrier:	50.0 feet			laiaa Ca	uree E	lovation	o lin f	o.o.#1		
Centerline Dist.	to Observer:	50.0 feet		<i>r</i>	voise so	Auto	levation	000	eelj		
Barrier Distance	to Observer:	0.0 feet			Modiur	AULO n Truck	is. U.	207			
Observer Height	(Above Pad):	5.0 feet			Heav	v Truck	.a. 2. re: 8	004	Grade Ad	iustment	· 0.0
P	ad Elevation:	0.0 feet			mour	,				,	
Ro	ad Elevation:	0.0 feet		L	ane Equ	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 44	.147			
	Left View:	-90.0 degre	es		Mediur	n Truck	(s: 43	.947			
	Right View:	90.0 degre	es		Heav	y Truck	(S: 43	.966			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresi	nel	Barrier Att	en Bei	rm Atten
Autos:	70.20	-2.16		0.71	I	-1.20		-4.65	0.0	000	0.00
Medium Trucks:	81.00	-17.44		0.74	1	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	85.38	-11.24		0.73	3	-1.20		-5.43	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Hou	ir Leq Daj	1	Leq Ev	rening	Leq	Night		Ldn	С	NEL
Autos:	67	.5	66.6		64.8		58.	в	67.4	4	68.0
Medium Trucks:	63	.1	62.5		56.2		54.	6	63.	1	63.3
Heavy Trucks:	73	.7	73.2		64.1		65.4	4	73.	7	73.9
Vehicle Noise:	74	.9	74.3		67.8		66.	5	74.9	9	75.2
Centerline Distan	ce to Noise Co	ontour (in feet)								
			I	70 d	IBA	65	dBA		50 dBA	55	dBA
			Ldn:		107		230)	495		1,067

Tuesday, December 8, 2020

	FHW	VA-RD-77-108 H	IIGHWA	Y NOISE	PREDICT	ION MC	DEL				
Scenari Road Nam Road Segmer	o: E+P (Non-P e: Heacock St nt: n/o Gentian	Peak) Av.			Projec Job N	t Name: lumber:	Gatew 13445	ay Aviation	1		
SITE	SPECIFIC IN	PUT DATA				NOISE	MODE	L INPUT	S		
Highway Data				Site C	conditions	(Hard =	10, So	oft = 15)			
Average Daily	Traffic (Adt):	23,851 vehicles	5				Autos:	15			
Peak Hour	Percentage:	8.08%			Medium Ti	ucks (2	Axles):	15			
Peak H	our Volume:	1,927 vehicles			Heavy Tru	cks (3+ .	Axles):	15			
Vei	hicle Speed:	50 mph		Vehic	le Mix						
Near/Far Lar	ne Distance:	48 feet		١	/ehicleType	9	Day	Evening	Nigl	nt Da	iily
Site Data						Autos:	77.5%	12.9%	9.	6% 86.4	46%
Bar	rier Height:	0.0 feet			Medium 7	rucks:	84.8%	4.9%	10.	3% 2.	62%
Barrier Type (0-W	all, 1-Berm):	0.0			Heavy 7	rucks:	86.5%	2.7%	10.	8% 10.	92%
Centerline Dis	st. to Barrier:	50.0 feet		Noise	Source F	levation	s (in fi	pet)			
Centerline Dist.	to Observer:	50.0 feet			Auto	ns' 0	000			-	
Barrier Distance	to Observer:	0.0 feet		Me	dium Truck	(e· 2	297				
Observer Height (Above Pad):	5.0 feet		H	eavy Truck	(s: 8	004	Grade Ad	liustm	ent: 0.0	
Pa	d Elevation:	0.0 feet			0017 1100						
Roa	d Elevation:	0.0 feet		Lane	Equivalen	t Distan	ce (in	feet)			
F	Road Grade:	0.0%			Auto	os: 44	.147				
	Left View:	-90.0 degrees	5	Me	dium Truck	(s: 43	.947				
	Right View:	90.0 degrees	5	н	eavy Truck	(S: 43	966				
FHWA Noise Mode	el Calculations	5									-
VehicleType	REMEL	Traffic Flow	Distance	e Fir	nite Road	Fres	nel	Barrier At	en	Berm At	ten
Autos:	70.20	-0.08	().71	-1.20		-4.65	0.	000	0	.000
Medium Trucks:	81.00	-15.26	().74	-1.20		-4.87	0.	000	0	.000
Heavy Trucks:	85.38	-9.07	0).73	-1.20		-5.43	0.	000	0	.000
Unmitigated Noise	Levels (witho	out Topo and b	arrier att	enuatio	n)						
VehicleType	Leq Peak Hou	r Leq Day	Leq	Evenin	g Leq	Night		Ldn		CNEL	
Autos:	69.	.6 6	8.7	6	6.9	60.	B	69.	5		70.
Medium Trucks:	65.	.3 6	4.7	5	8.3	56.	8	65.	2		65.5
Heavy Trucks:	75.	.8 7	5.4	6	6.3	67.	5	75.	9		76.0
Venicle Noise:	11.	.1 /	6.5	6	9.9	68.	(11.	1		11.3
Centerline Distanc	e to Noise Co	ntour (in feet)				10.4			-		
			. 7	U dBA	65	aBA		ou dBA	1	55 dBA	407
		L	an:	1	49	320)	690		1,	487
		CN	EL:	1	54	331		/14	ł	1,	538

	FH	WA-RD-77-108	HIGHW	AY N	OISE PF	REDICT	ION MO	DEL			
Scenar	io: E+P (Non-	Peak)				Project	Name: (Gatew	ay Aviation	1	
Road Nam	e: Heacock S	t.				Job N	umber:	13445			
Road Segme	nt: s/o Cardina	al Av.									
SITE	SPECIFIC IN	IPUT DATA				N	IOISE N	IODE	L INPUT	S	
Highway Data				S	ite Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	15,986 vehicle	es					Autos:	15		
Peak Hour	Percentage:	8.08%			Me	dium Tri	ucks (2 A	(xles)	15		
Peak H	lour Volume:	1,292 vehicles	6		He	avy Truc	cks (3+ A	(xles)	15		
Ve	hicle Speed:	50 mph		v	ehicle l	Nix					
Near/Far La	ne Distance:	48 feet		-	Vehi	cleType		Day	Evening	Night	Daily
Site Data						/	Autos:	77.5%	12.9%	9.6%	85.13%
Ba	rrier Heiaht:	0.0 feet			Me	edium Ti	rucks:	84.8%	4.9%	10.3%	2.72%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy T	rucks:	86.5%	2.7%	10.8%	12.15%
Centerline Di	st. to Barrier:	50.0 feet		N	loise So	urce El	evations	s (in f	eet)		
Centerline Dist.	to Observer:	50.0 feet				Auto	s: 0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediur	n Truck	s: 2.2	297			
Observer Height (Above Pad):	5.0 feet			Heavy Trucks: 8,004 Grade Adjustment: 0.0						
Pa	ad Elevation:	0.0 feet		-	_						
Roa	ad Elevation:	0.0 feet		L	ane Equ	livalent	Distanc	e (In	reet)		
	Road Grade:	0.0%			Marthur	Auto	s: 44.	147			
	Left View:	-90.0 degree	es		Mealur	n Truck	s: 43.	947			
	Right view:	90.0 degree	es		neav	y muck	5. 43.	900			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresn	el	Barrier Att	en Be	rm Atten
Autos:	70.20	-1.88		0.71		-1.20		-4.65	0.0	000	0.000
Medium Trucks:	81.00	-16.84		0.74		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	85.38	-10.34		0.73		-1.20		-5.43	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier a	attenı	uation)						
VehicleType	Leq Peak Hou	ur Leq Day	L	eq Ev	ening	Leq	Night		Ldn	C	NEL
Autos:	67	⁷ .8	66.9		65.1		59.0		67.7	7	68.3
Medium Trucks:	63	3.7	63.1		56.8		55.2		63.7	7	63.9
Heavy Trucks:	74	1.6	74.1		65.0		66.3		74.6	3	74.8
Vehicle Noise:	75	5.7	75.1		68.4		67.3		75.1	7	75.9
Centerline Distant	ce to Noise C	ontour (in feet,									
				70 d	BA	65	dBA	(50 dBA	55	i dBA
	Ldn:						259		558		1,203
		CI	VEL:	124 268 577				1,243			

	FH	NA-RD-77-108	HIGH	WAY NO	DISE PI	REDICTIC	ON MO	DEL			
Scenar	rio: E+P (Non-	Peak)				Project N	lame:	Gatewa	ay Aviation		
Road Nan Road Segme	ne: Heacock S ent: s/o Nandin	a Av.				JOD NU	mber:	13445			
SITE	SPECIFIC IN	IPUT DATA				N	DISE N	IODE		s	
Highway Data				S	ite Con	ditions (I	Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	1 vehicl	es				,	Autos:	15		
Peak Hour	Percentage:	8.08%			Me	dium Truc	cks (2 A	Axles):	15		
Peak H	lour Volume:	0 vehicle	s		He	avy Truck	(S (3+ A	(xles)	15		
Ve	ehicle Speed:	50 mph		V	ehicle l	Mix					
Near/Far La	ane Distance:	48 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						AL	utos:	77.5%	12.9%	9.6%	86.23%
Ba	rrier Height:	0.0 feet			M	edium Tru	icks:	84.8%	4.9%	10.3%	2.67%
Barrier Type (0-V	Vall, 1-Berm):	0.0			ŀ	leavy Tru	icks:	86.5%	2.7%	10.8%	11.10%
Centerline D	ist. to Barrier:	50.0 feet		N	oise So	ource Ele	vation	s (in fe	eet)		
Centerline Dist.	to Observer:	50.0 feet				Autos:	0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.2	297			
Observer Height	(Above Pad):	5.0 feet			Heav	y Trucks:	8.0	004	Grade Ad	iustment	: 0.0
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		Li	ane Eq	uivalent L	Distanc	ce (in 1	reet)		
	Road Grade:	0.0%				Autos:	44.	147			
	Left View:	-90.0 degre	es		Mediui	m Trucks:	43.	947			
	Right View:	90.0 degre	es		Heav	y Trucks:	43.	966			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresn	e/	Barrier Att	en Ber	rm Atten
Autos:	70.20	-43.86		0.71		-1.20		-4.65	0.0	000	0.000
Medium Trucks:	81.00	-58.96		0.74		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	85.38	-52.77		0.73		-1.20		-5.43	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	r attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	/	Leq Eve	ening	Leq N	light		Ldn	C	NEL
Autos:	25	5.8	24.9		23.1		17.1		25.7	7	26.3
Medium Trucks:	21	.6	21.0		14.6		13.1		21.5	5	21.8
Heavy Trucks:	32	2.1	31.6		22.6		23.9)	32.2	2	32.3
Vehicle Noise:	33	3.4	32.8		26.2		25.0)	33.4	1	33.6
Centerline Distan	ce to Noise C	ontour (in feel)								
			L	70 dE	BA	65 di	BA	6	i0 dBA	55	dBA
		-	Ldn:	0 0 1				2			
		С	NEL:		0		0		1		2

	FHV	VA-RD-77-106	HIGH	IVVAT N	UISE PI	EDICII		DEL			
Scenario	: E+P (Non-F			Project	Name:	Gatew	ay Aviatior				
Road Name	e: Cactus Av.					Job N	umber:	13445			
Road Segmen	t: w/o Heacoc	k St.									
SITE S	PECIFIC IN	PUT DATA				N	OISE	NODE	L INPUT	s	
Highway Data				s	ite Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	39,088 vehicle	es					Autos:	15		
Peak Hour I	Percentage:	8.08%			Me	dium Tru	icks (2)	Axles):	15		
Peak Ho	our Volume:	3,158 vehicle	s		He	avy Truc	:ks (3+)	Axles):	15		
Vel	icle Speed:	50 mph		v	ehicle l	Nix					
Near/Far Lar	e Distance:	73 feet			Veh	cleType		Day	Evening	Night	Daily
Site Data						A	lutos:	77.5%	12.9%	9.6%	86.30
Bar	rier Height:	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	2.65
Barrier Type (0-Wa	all, 1-Berm):	0.0			ŀ	leavy Tr	ucks:	86.5%	2.7%	10.8%	11.04
Centerline Dis	t. to Barrier:	55.0 feet			loise Sr	urce El	ovation	e (in fi	oof)		
Centerline Dist. t	o Observer:	55.0 feet		-	10136 00	Autos	. 0	000			
Barrier Distance t	o Observer:	0.0 feet			Mediu	n Trucks	s. 0. s: 2	297			
Observer Height (/	Above Pad):	5.0 feet			Heav	v Trucks	s: 8.	004	Grade Ad	iustment	: 0.0
Pa	d Elevation:	0.0 feet				,					
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in i	feet)		
F	load Grade:	0.0%				Autos	s: 41.	446			
	Left View:	-90.0 degre	es		Mediui	n Trucks	5.' 41.	232			
	Right View:	90.0 degre	es		Heav	y Trucks	5.' 41.	253			
FHWA Noise Mode	I Calculations	5									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atten
Autos:	70.20	2.06		1.12		-1.20		-4.67	0.0	000	0.00
Medium Trucks:	81.00	-13.06		1.15	i	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	85.38	-6.87		1.15		-1.20		-5.38	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er attenu	uation)						
VehicleType	Leq Peak Hou	r Leq Day	/	Leq Ev	ening	Leq	Night		Ldn	С	NEL
Autos:	72	.2	71.2		69.4		63.4	1	72.0)	72
Medium Trucks:	67	.9	67.3		60.9		59.4	1	67.9	9	68.
Heavy Trucks:	78	.5	78.0		68.9		70.2	2	78.	5	78.
Vehicle Noise:	79	.7	79.1		72.5		71.3	3	79.	7	79.
Centerline Distanc	e to Noise Co	ntour (in feet)								
			I	70 d	BA	65 (dBA	6	60 dBA	55	dBA
			Ldn:		244		525		1,131		2,43
		C	NEL:		252		543		1 170		2.52

Tuesday, December 8, 2020

	_									_
	FHW	/A-RD-77-108 HI	GHWAY	NOISE P	REDICTIO	ON MÓD)EL			
Scenario	: E+P (Non-P	'eak)			Project I	<i>lame:</i> G	ateway	Aviation		
Road Name	e: Indian Av.				Job Nu	mber: 1	3445			
Road Segmen	t: s/o Nandina	Av.								
SITE S	SPECIFIC IN	PUT DATA			N	DISE M	ODEL	INPUTS	3	
Highway Data				Site Cor	nditions (Hard = 1	0, Soft	= 15)		
Average Daily 1	Traffic (Adt):	10,774 vehicles				A	utos:	15		
Peak Hour F	Percentage:	8.08%		Me	edium Tru	cks (2 A	xles):	15		
Peak Ho	our Volume:	871 vehicles		He	eavy Truck	(3+ A)	xles):	15		
Veh	icle Speed:	45 mph		Vehicle	Mix					
Near/Far Lan	e Distance:	36 feet		Veh	nicleTvpe	Ĺ	Dav E	venina	Niaht	Dailv
Site Data					A	utos: 7	7.5%	12.9%	9.6%	84.47%
Ban	rier Height:	0.0 feet		М	ledium Tru	icks: 8	84.8%	4.9%	10.3%	2.77%
Barrier Type (0-Wa	all. 1-Berm)	0.0			Heavy Tru	icks: 8	86.5%	2.7%	10.8%	12.76%
Centerline Dis	t. to Barrier:	44.0 feet		Noine C	·	vetier -	(in to - 1	0		
Centerline Dist. t	o Observer:	44.0 feet		NOISE S	ource Ele	vauons	(in feet	9		-
Barrier Distance t	o Observer:	0.0 feet			Autos.	0.0	00			
Observer Height (A	Above Pad):	5.0 feet		Meaiu	m Trucks	2.2	97 04 G	rada Adi	uctmont	
Pa	d Elevation:	0.0 feet		неа	vy Trucks.	8.0	04 0	raue Auj	usuneni	. 0.0
Roa	d Elevation:	0.0 feet		Lane Eq	uivalent	Distance	e (in fee	et)		
F	Road Grade:	0.0%			Autos.	40.4	60			
	Left View:	-90.0 degrees		Mediu	m Trucks	40.2	41			
	Right View:	90.0 degrees		Hea	vy Trucks.	40.2	62			
FHWA Noise Mode	I Calculations	;								
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresne	el Ba	arrier Atte	en Bei	rm Atten
Autos:	68.46	-3.17	1.	28	-1.20	-	4.61	0.0	00	0.000
Medium Trucks:	79.45	-18.01	1.	.31	-1.20	-	4.87	0.0	00	0.000
Heavy Trucks:	84.25	-11.38	1.	.31	-1.20	-	5.50	0.0	00	0.000
Unmitigated Noise	Levels (with	out Topo and ba	rrier atte	enuation)						
VehicleType	Leq Peak Hou	r Leq Day	Leq	Evening	Leq N	light	L	dn	С	NEL
Autos:	65.	4 64.	.4	62.6		56.6		65.2		65.8
Medium Trucks:	61.	5 61.	0	54.6		53.1		61.5		61.8
Heavy Trucks:	73.	0 72.	5	63.4		64.7		73.1		73.2
Vehicle Noise:	73.	9 73.	4	66.4		65.6		74.0		74.2
Centerline Distanc	e to Noise Co	ntour (in feet)								-
			70) dBA	65 d	BA	60	dBA	55	dBA
		Ldr	n:	81		174		375		809
		CNEL	L:	83		180		387		834

	FH	WA-RD-77-108	HIGHWA	N NC	DISE PR	REDICTI	ON MO	DEL			
Scenar	io: E+P (Non-				Project	Name:	Gatew	ay Aviatior	ı		
Road Nam	e: Cactus Av.					Job N	umber:	13445			
Road Segme	nt: e/o Heacoo	sk St.									
SITE	SPECIFIC IN	IPUT DATA				N	IOISE N	NODE	L INPUT	S	
Highway Data				Si	te Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	23,518 vehicle	s				,	Autos.	15		
Peak Hour	Percentage:	8.08%			Med	dium Tru	icks (2 A	Axles).	15		
Peak H	lour Volume:	1,900 vehicles			Hea	avy Truc	cks (3+ A	Axles).	15		
Ve	hicle Speed:	40 mph		Ve	hicle M	Niv					
Near/Far La	ne Distance:	50 feet			Vehi	cleTvpe		Dav	Evenina	Niaht	Daily
Site Data							Autos:	77.5%	6 12.9%	9.6%	6 86.31%
Ba	rrier Heiaht [.]	0.0 feet			Ме	edium Tr	ucks:	84.8%	6 4.9%	10.3%	6 2.65%
Barrier Type (0-W	all. 1-Berm):	0.0			h	leavy Tr	ucks:	86.5%	6 2.7%	10.8%	6 11.04%
Centerline Di	st. to Barrier:	44.0 feet		No	nisa Sa	urco El	ovation	e (in f	oof)		
Centerline Dist.	to Observer:	44.0 feet		/10	130 00	Autos	evalion.	200			
Barrier Distance	to Observer:	0.0 feet			Modium	n Trucki	5. 0.1 n. 24	207			
Observer Height	Above Pad):	5.0 feet			Heave	v Trucki	5. 2.4 N Q I	04	Grade Ad	liustmer	t· 0.0
P	ad Elevation:	0.0 feet			neav.	y mucks	5. 0.1	504	0/000//10	Juotimon	
Ro	ad Elevation:	0.0 feet		La	ane Equ	ıivalent	Distand	ce (in	feet)		
	Road Grade:	0.0%				Autos	s: 36.	551			
	Left View:	-90.0 degree	s		Mediun	n Trucks	s: 36.	308			
	Right View:	90.0 degree	s		Heav	y Trucks	s: 36.	332			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distan	ce	Finite	Road	Fresn	el	Barrier Att	ten Be	rm Atten
Autos:	66.51	0.82		1.94		-1.20		-4.61	0.0	000	0.000
Medium Trucks:	77.72	-14.30		1.98		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	82.99	-8.11		1.98		-1.20		-5.50	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and I	arrier a	tenu	ation)						
VehicleType	Leq Peak Hou	ur Leq Day	Le	q Eve	ening	Leq	Night		Ldn	(NEL
Autos:	68	3.1 (57.1		65.3		59.3	3	67.9	9	68.5
Medium Trucks:	64	1.2 (63.6		57.2		55.7	,	64.3	2	64.4
Heavy Trucks:	75	5.7	5.2		66.1		67.4	ļ	75.	7	75.9
Vehicle Noise:	76	6.6	6.1		69.1		68.3	3	76.0	6	76.8
Centerline Distant	ce to Noise C	ontour (in feet)									
				70 dE	BA	65 0	dBA		60 dBA	5	5 dBA
		1	.dn:		122		263		567	, –	1,221
		CN	IEL:		126		271		584	Ļ	1,259

	FH	WA-RD-77-10	8 HIGI	HWAY	NOISE P	REDICTIO		DEL			
Scenal Road Nor	rio: E+P (Non-	Peak)				Project I	Vame: 0	Gatewa	ay Aviation		
Road Segme	ent: e/o Patters	ion Av.				300 140	iniber. I	13443			
SITE	SPECIFIC II	NPUT DATA	1			N	OISE N	IODE	L INPUT	s	
Highway Data					Site Cor	nditions (Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	17,866 vehi	cles				A	Autos:	15		
Peak Hour	r Percentage:	8.08%			Me	edium Tru	cks (2 A	xles):	15		
Peak H	Hour Volume:	1,444 vehic	es		He	eavy Truck	ks (3+ A	xles):	15		
Ve	ehicle Speed:	45 mph			Vehicle	Mix					
Near/Far La	ane Distance:	80 feet		ľ	Veh	nicleType	1	Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	85.13%
Ba	arrier Height:	0.0 feet			М	ledium Tru	ucks:	84.8%	4.9%	10.3%	2.74%
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy Tru	ucks:	86.5%	2.7%	10.8%	12.13%
Centerline D	ist. to Barrier:	64.0 feet		F	Noise S	ource Ele	vations	; (in fe	eet)		
Centerline Dist.	to Observer:	64.0 feet		Ī		Autos.	: 0.0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	: 2.2	297			
Observer Height	(Above Pad):	5.0 feet			Hear	vy Trucks.	: 8.0	004	Grade Adj	iustment	0.0
P	Pad Elevation:	0.0 feet		-	1 F-		Distance	- (((
Ro	ad Elevation:	0.0 feet		-	Lane Eq	uivaient	Distanc	e (In 1	reet)		
	Road Grade:	0.0%			14 K.	Autos.	: 50.2	210			
	Left View:	-90.0 degr	ees		Mediu	m Trucks	50.0	133			
	Right view.	90.0 degi	ees		nea	vy mucks.	. 50.0	50			
FHWA Noise Mod	lel Calculation	IS			T						
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	68.46	-0.9	4	-0.1	13	-1.20		-4.70	0.0	000	0.000
Meaium Trucks:	/9.45	-15.8	/	-0.1	11	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.20	-9.4	0	-0.1		-1.20		-5.31	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo an	d barri	ier attei	nuation)						
VehicleType	Leq Peak Ho	ur Leq D	ау	Leq E	Evening	Leq N	light		Ldn	CI	VEL
Autos:	6	5.2	65.2		63.4		57.4		66.0)	66.6
Medium Trucks:	. 0.	2.3	72.0		55.3		53.8		02.2	2	02.5 72.7
Vehicle Noise:	74	4.5	74.0		67.0)	66.2		73.0	5	74.8
Contorlino Dioton	an to Naina C	ontour (in fo								-	
Centeriine Distan	ce lo Noise C	uniour (in re	ery	70	dBA	65 d	BA	6	0 dBA	55	dBA
			Ldn:		129		278	<u> </u>	599		1.291
			CNEL:		133		287		618		1,332

Scenario	b: E+P (Peak)					Project	Name:	Gatew	ay Aviatior	ı	
Road Name	e: Heacock St					Job N	umber:	13445			
Road Segmen	t' n/o Gentian	Av.									
SITE S	SPECIFIC IN	PUT DATA				N	IOISE	MODE	L INPUT	S	
Highway Data					Site Con	ditions	(Hard =	10, Se	oft = 15)		
Average Daily	Traffic (Adt):	24,040 vehicl	es					Autos:	15		
Peak Hour I	Percentage:	8.08%			Me	dium Tr	ucks (2	Axles):	15		
Peak Ho	our Volume:	1,942 vehicle	s		He	avy Tru	cks (3+ .	Axles):	15		
Vel	nicle Speed:	50 mph			Vehicle I	Nix					
Near/Far Lar	e Distance:	48 feet			Veh	cleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	86.579
Ban	rier Height:	0.0 feet			Me	edium T	rucks:	84.8%	4.9%	10.3%	2.60%
Barrier Type (0-Wa	all, 1-Berm):	0.0			F	leavy T	rucks:	86.5%	2.7%	10.8%	10.83%
Centerline Dis	t. to Barrier:	50.0 feet			Noise Sr	urce F	evation	s (in f	eef)		
Centerline Dist. t	o Observer:	50.0 feet		F	10.00 00	Auto	s' 0	000			
Barrier Distance t	o Observer:	0.0 feet			Mediu	n Truck	s: 2	297			
Observer Height (/	Above Pad):	5.0 feet			Heav	v Truck	s: 8.	004	Grade Ad	justment	: 0.0
Pa	d Elevation:	0.0 feet		F							
Roa	d Elevation:	0.0 feet		4	Lane Eq	uivalen	Distan	ce (in	feet)		
F	Road Grade:	0.0%			1.4 m = 16 m	Auto	s: 44.	.147			
	Left View:	-90.0 degre	es		Wealu	n Truck	s: 43	.947			
	Right view:	90.0 degre	es		neav	y TTUCK	5. 43	.900			
FHWA Noise Mode	I Calculation:	5									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresi	nel	Barrier Att	ten Bei	m Atten
Autos:	70.20	-0.04		0.7	1	-1.20		-4.65	0.	000	0.00
Medium Trucks:	81.00	-15.26		0.7	4	-1.20		-4.87	0.	000	0.00
Heavy Trucks:	85.38	-9.07		0.7	3	-1.20		-5.43	0.	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day	/	Leq E	vening	Leq	Night		Ldn	С	NEL
Autos:	69	.7	68.7		66.9		60.	9	69.	5	70.
Medium Trucks:	65	.3	64.7		58.3		56.	В	65.	2	65.
Heavy Trucks:	75	.8	75.4		66.3		67.	6	75.	9	76.
Vehicle Noise:	77	.1	76.5		70.0		68.	7	77.	1	77.
Centerline Distanc	e to Noise Co	ontour (in feet)								
			T	70 0	dBA	65	dBA	(60 dBA	55	dBA
			Ldn:		149		321		691		1,488
		C					0.00		740		4 5 9 0

Tuesday, December 8, 2020

	FHV	VA-RD-77-108 H	IIGHWA	IY NO	OISE PI	REDICT	ION MO	DEL				
Scenar	io: E+P (Non-F				Project	Name:	Gatew	ay Aviati	on			
Road Nam	e: Harley Kno	x BI.				Job N	umber:	13445	·			
Road Segme	nt: e/o Indian A	Av.										
SITE	SPECIFIC IN	IPUT DATA				N	IOISE I	NODE	L INPU	TS		
Highway Data				S	Site Con	ditions	(Hard =	10, S	oft = 15)	_		
Average Daily	Traffic (Adt):	8,896 vehicles	6					Autos:	15			
Peak Hour	Percentage:	8.08%			Me	dium Tru	ucks (2 /	Axles).	15			
Peak H	lour Volume:	719 vehicles			He	avy Truc	cks (3+ /	Axles).	15			
Ve	hicle Speed:	45 mph		v	ohicle l	Mix						
Near/Far La	ne Distance:	80 feet		-	Veh	icleTvpe		Dav	Evenin	a N	iaht	Dailv
Site Data				+		, ,	Autos:	77.5%	6 12.99	%	9.6%	86.23%
Bai	rrior Hoight	0.0 feet		_	M	edium Ti	rucks:	84.8%	6 4.99	% 1	0.3%	2.67%
Barrier Type (0-W	(all. 1-Berm):	0.0			F	leavy Ti	rucks:	86.5%	6 2.79	% 1	0.8%	11.10%
Centerline Di	st. to Barrier:	64.0 feet			loico Se		ovation	e (in f	oot)			
Centerline Dist.	to Observer:	64.0 feet		N	10/38 30	Auto	evauon.	000	eeŋ			
Barrier Distance	to Observer:	0.0 feet			Madiu	nuio. Truck	s. 0.	207				
Observer Height (Above Pad):	5.0 feet			Mediui	T Truck	S: Z	297	Grade	٥diusi	ment	0.0
Pa	ad Elevation:	0.0 feet			neav	y muck	5. 0.	004	010007	10/031	ment.	0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in	feet)			
1	Road Grade:	0.0%				Auto	s: 50.	210				
	Left View:	-90.0 degrees	6		Mediu	m Truck	s: 50.	033				
	Right View:	90.0 degrees	3		Heav	y Truck	s: 50.	050				
FHWA Noise Mode	el Calculation	s										
VehicleType	REMEL	Traffic Flow	Distand	ce	Finite	Road	Fresr	nel	Barrier /	Atten	Berr	m Atten
Autos:	68.46	-3.91	-	0.13	5	-1.20		-4.70		0.000		0.000
Medium Trucks:	79.45	-19.01	-	0.11		-1.20		-4.88		0.000		0.000
Heavy Trucks:	84.25	-12.82	-	0.11		-1.20		-5.31		0.000		0.000
Unmitigated Noise	e Levels (with	out Topo and b	arrier at	tenu	uation)							
VehicleType	Leq Peak Hou	Ir Leq Day	Lee	q Ev	ening	Leq	Night		Ldn		CN	IEL
Autos:	63	.2 6	2.2		60.5		54.4	1	6	3.0		63.6
Medium Trucks:	59	.1 5	8.5		52.2		50.6	3	5	9.1		59.3
Heavy Trucks:	70	.1 6	9.6		60.6		61.8	3	7	0.2		70.3
Vehicle Noise:	71	.2 7	0.6		63.9		62.8	3	7	1.2		71.4
Centerline Distant	ce to Noise Co	ontour (in feet)										
	-			70 d	BA	65	dBA		60 dBA		55	dBA
		L	dn:		77		167		3	59		774
		CN	EL:		80		172		3	71		799

	FHV	VA-RD-77-108 H	IIGHWA	Y NOISE F	REDICTI		DEL			
Scenario Road Name Road Segmen	o: E+P (Peak) e: Heacock St t: s/o Iris Av.				Project Job Nu	Name: (Imber: 1	Gatewa 13445	ay Aviation		
SITE S	SPECIFIC IN	PUT DATA			N	OISE N	IODE		s	
Highway Data				Site Co	nditions ('Hard =	10, So	oft = 15)		
Average Daily 1 Peak Hour F	Traffic (Adt): Percentage:	14,948 vehicles 8.08%		м	edium Tru	A cks (2 A	Autos: (xles):	15 15		
Peak Ho Vet	our Volume:	1,208 vehicles		Н	eavy Truc	ks (3+ A	xles):	15		
Near/Far I an	nelic opeca. ne Distance:	49 feet		Vehicle	Mix					
Neally al East	ie bistance.	40 1001		Ve	hicleType		Day	Evening	Night	Daily
Site Data					A	utos:	77.5%	12.9%	9.6%	86.91%
Ban	rier Height:	0.0 feet		٨	ledium Tr	ucks:	84.8%	4.9%	10.3%	2.53%
Barrier Type (0-Wa	all, 1-Berm):	0.0			Heavy Tr	ucks:	86.5%	2.7%	10.8%	10.55%
Centerline Dis	t. to Barrier:	50.0 feet		Noise S	ource Ele	vations	: (in fe	et)		
Centerline Dist. t	o Observer:	50.0 feet			Autos	. 00	000			
Barrier Distance t	o Observer:	0.0 feet		Medi	im Trucks	. 22	997			
Observer Height (A	Above Pad):	5.0 feet		Hea	www.Trucks		104	Grade Ad	iustment	0.0
Pa	d Elevation:	0.0 feet		1100	vy macks	. 0.0				
Roa	d Elevation:	0.0 feet		Lane E	quivalent	Distanc	e (in f	feet)		
F	Road Grade:	0.0%			Autos	: 44.1	147			
	Left View:	-90.0 degrees		Media	ım Trucks	43.9	947			
	Right View:	90.0 degrees		Hea	vy Trucks	43.9	966			
FHWA Noise Mode	I Calculation:	s								
VehicleType	REMEL	Traffic Flow	Distanc	e Finite	e Road	Fresn	e/	Barrier Att	en Ber	m Atten
Autos:	70.20	-2.08	().71	-1.20		-4.65	0.0	000	0.000
Medium Trucks:	81.00	-17.44	().74	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	85.38	-11.24	(0.73	-1.20		-5.43	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and b	arrier at	enuation)						
VehicleType	Leq Peak Hou	r Leq Day	Leq	Evening	Leq I	Vight		Ldn	C	NEL
Autos:	67	.6 66	5.7	64.9	9	58.8		67.5	5	68.1
Medium Trucks:	63	.1 62	2.5	56.3	2	54.6		63.1	1	63.3
Heavy Trucks:	73	.7 73	3.2	64.	1	65.4		73.7	7	73.9
Vehicle Noise:	74	.9 74	4.3	67.	3	66.5		75.0)	75.2
Centerline Distance	e to Noise Co	ontour (in feet)								
			7	0 dBA	65 0	<i>IBA</i>	6	i0 dBA	55	dBA
		Le	dn:	107		230		496		1,069
		CNE	EL:	111		238		514		1,107

	FH	WA-RD-77-108	HIGHV	VAY NO	DISE PI	REDICTIC		DEL			
Scenal Road Nar	rio: E+P (Peak ne: Heacock S	.) St.				Project N	lame: (mber: 1	Gatew 3445	ay Aviation		
Road Segme	ent: s/o Cardina	al Av.									
SITE	SPECIFIC II	NPUT DATA				N	DISE N	IODE	L INPUT	5	
Highway Data				Si	ite Con	ditions (I	Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	16,330 vehicl	es				A	Autos:	15		
Peak Hour	Percentage:	8.08%			Me	dium Truc	:ks (2 A	xles):	15		
Peak I	Hour Volume:	1,319 vehicle	s		He	avy Truck	is (3+ A	xles):	15		
Ve	ehicle Speed:	50 mph		V	ehicle	Mix					
Near/Far La	ane Distance:	48 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						AL	itos:	77.5%	12.9%	9.6%	84.64%
Ba	rrier Heiaht:	0.0 feet			М	edium Tru	cks:	84.8%	4.9%	10.3%	2.75%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tru	cks:	86.5%	2.7%	10.8%	12.61%
Centerline D	ist. to Barrier:	50.0 feet		N	oise So	ource Ele	vations	; (in fe	eet)		
Centerline Dist.	to Observer:	50.0 feet				Autos:	0.0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.2	97			
Observer Height	Observer Height (Above Pad): 5.0 feet				Heav	y Trucks:	8.0	004	Grade Adj	ustment	0.0
P	Pad Elevation: 0.0 feet										
Ro	ad Elevation:	0.0 feet		La	ane Eq	uivalent L	Distanc	e (in i	'eet)		
	Road Grade:	0.0%				Autos:	44.1	147			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	43.9	947			
	Right View:	90.0 degre	es		Heav	y Trucks:	43.9	966			
FHWA Noise Mod	lel Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	70.20	-1.82		0.71		-1.20		-4.65	0.0	000	0.000
Medium Trucks:	81.00	-16.70		0.74		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	85.38	-10.08		0.73		-1.20		-5.43	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	V I	Leq Eve	ening	Leq N	light		Ldn	CI	VEL
Autos:	6	7.9	66.9		65.2		59.1		67.7	,	68.3
Medium Trucks:	6	3.8	63.3		56.9		55.3		63.8	3	64.0
Heavy Trucks:	74	4.8	74.3		65.3		66.5		74.9)	75.0
Vehicle Noise:	7	5.9	75.3		68.5		67.5		75.9)	76.1
Centerline Distan	ce to Noise C	ontour (in fee	9				_				
			∟	70 dE	ЗA	65 d	BA	6	i0 dBA	55	dBA
		_	Ldn:	124 268 577				1,244			
	CNEL:						277		596		1,285

	FHW	/A-RD-77-108	HIGH	IWAY N	OISE PI	REDICT		DEL					
Scenar Road Nam Road Segme	io: E+P (Peak) ie: Indian Av. nt: s/o Nandina			Project Job N	Name: (umber: '	Gatew 13445	ay Aviation	1					
SITE						N				9			
Highway Data		VI DAIA		s	Site Con	ditions	(Hard =	10, Sc	oft = 15)	0			
Average Daily	Traffic (Adt):	11.071 vehicle	es					Autos:	15				
Peak Hour	Percentage:	8.08%			Me	dium Tru	ucks (2 A	xles):	15				
Peak H	lour Volume:	895 vehicle	s		He	avy Truc	cks (3+ A	xles):	15				
Ve	hicle Speed:	45 mph		1	(ohiclo)	Mix							
Near/Far La	ne Distance:	36 feet		-	Veh	icleTvne		Dav	Evenina	Niaht	Daily		
Site Data					Autos: 77.5% 12.9% 9.6% 83								
Bala	rrior Hoight:	0.0 foot			Medium Trucks: 84.8% 4.9% 10.3% 2.								
Barrier Type (0-W	all 1-Berm)	0.0 1001			1	Heavy Tr	rucks:	86.5%	2.7%	10.8%	13.489		
Centerline Di	st. to Barrier:	44.0 feet		-									
Centerline Dist.	to Observer:	44.0 feet		^	voise So	burce El	evations	s (in te	eet)				
Barrier Distance	to Observer:	0.0 feet				Autos	s: 0.0	000					
Observer Height (Above Pad):	5.0 feet			Hear	a Truck	5. Z.4 c' 9.(297	Grade Ad	iustment	. 0 0		
Pa	ad Elevation:	0.0 feet		Tieav	y muck	3. 0.0	JU4	Orade Auj	usunent	0.0			
Roa	ad Elevation:	0.0 feet		L	.ane Eq	uivalent	Distanc	e (in i	feet)				
	Road Grade:	0.0%				Autos	s: 40.4	460					
	Left View:	-90.0 degree	es		Mediu	m Trucks	s: 40.	241					
	Right View:	90.0 degree	es		Heav	y Truck	s: 40.1	262					
FHWA Noise Mode	el Calculations	1		I									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten		
Autos:	68.46	-3.09		1.28	3	-1.20		-4.61	0.0	000	0.00		
Medium Trucks:	79.45	-17.81		1.31		-1.20		-4.87	0.0	000	0.00		
Heavy Trucks:	84.25	-11.02		1.31		-1.20		-5.50	0.0	000	0.00		
Unmitigated Noise	e Levels (witho	out Topo and	barrie	er atteni	uation)								
VehicleType	Leq Peak Hou	r Leq Day	/	Leq Ev	rening	Leq	Night		Ldn	C	NEL		
Autos:	65.	4	64.5		62.7		56.6		65.3	3	65.		
Medium Trucks:	61.	7	61.2		54.8		53.3		61.7	7	62.		
Heavy Trucks:	Heavy Trucks: 73.3 72.8				63.8		65.1		73.4	1	73.		
Venicle Noise:	74.	2	73.7		66.6		65.9		74.3	3	74.		
Centerline Distant	ce to Noise Co	ntour (in feet)	70 d	ID A	65	dD A	6	O dBA	55	dB A		
			I dn	70 a	0F	00	100		20.4	00	00M		
		0	NEI ·	87 188 406				048 874					
		0	•		07		100		400		0/4		

Tuesday, December 8, 2020

	FHV	VA-RD-77-108 H	HIGHWA	Y N	OISE PI	REDICT	ION MO	DEL				
Scenari Road Nam Road Segmen	o: E+P (Peak) e: Heacock St nt: s/o Nandina	I Av.				Project Job N	Name: lumber:	Gatev 1344	vay Avia 5	ation		
SITE	SPECIFIC IN	PUT DATA				N	IOISE I	MOD	EL INP	UTS		
Highway Data				S	Site Con	ditions	(Hard =	10, S	oft = 1	5)		
Average Daily Peak Hour	Traffic (Adt): Percentage:	1 vehicles 8.08%	5		Ме	dium Tr	ucks (2)	Autos Axles)	: 15 : 15			
Peak H	our Volume:	0 vehicles			He	avy Tru	cks (3+)	Axles)	: 15			
Vel	hicle Speed:	50 mph		ν	ehicle l	Mix						
Near/Far Lar	ne Distance:	48 teet			Veh	icleType	•	Day	Even	ing N	ight	Daily
Site Data						,	Autos:	77.59	% 12.	9%	9.6%	86.23%
Bar	rier Height:	0.0 feet			M	edium T	rucks:	84.89	% 4.	9% 1	0.3%	2.67%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	Heavy T	rucks:	86.5	% 2.	7% 1	0.8%	11.10%
Centerline Dis	st. to Barrier:	50.0 feet		۸	loise Sr	ource Fl	evation	s (in i	feet)			
Centerline Dist. t	to Observer:	50.0 feet		-		Auto	s: 0	000				
Barrier Distance t	to Observer:	0.0 feet			Mediu	m Truck	s 2.	297				
Observer Height (/	Above Pad):	5.0 feet			Heav	v Truck	s: 8.	004	Grade	e Adjust	ment:	0.0
Pa	d Elevation:	0.0 feet			_							
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalen	Distan	ce (In	teet)			
F	Road Grade:	0.0%				Auto	S: 44.	.147				
	Right View:	-90.0 degrees 90.0 degrees	5		Heav	n Truck y Truck	s: 43. s: 43.	.947 .966				
FHWA Noise Mode	l Calculations	5		_								
VehicleType	REMEL	Traffic Flow	Distan	ce	Finite	Road	Fresr	nel	Barrie	r Atten	Berr	n Atten
Autos:	70.20	-43.86		0.71		-1.20		-4.65		0.000		0.000
Medium Trucks:	81.00	-58.96		0.74		-1.20		-4.87		0.000		0.000
Heavy Trucks:	85.38	-52.77		0.73	5	-1.20		-5.43		0.000		0.000
Unmitigated Noise	Levels (with	out Topo and b	arrier a	tenı	uation)							
VehicleType	Leq Peak Hou	r Leq Day	Le	q Ev	ening	Leq	Night		Ldn		CN	IEL
Autos:	25	.8 2	4.9		23.1		17.1	1		25.7		26.3
Medium Trucks:	21	.6 2	1.0		14.6		13.1	1		21.5		21.8
Heavy Trucks:	32	.1 3	1.6		22.6		23.9	9		32.2		32.3
Vehicle Noise:	33	.4 3	2.8		26.2		25.0	0		33.4		33.
Centerline Distanc	e to Noise Co	ntour (in feet)										
				70 d	BA	65	dBA		60 dBA		55 (dBA
		L	dn:		0		0			1		2
		CN	EL:		0		0			1		2

	FHW	A-RD-77-108 HIG	HWAT	NUISE PI	REDICTIO		DEL			
Scenar	io: E+P (Peak)				Project N	lame:	Gatew	ay Aviation		
Road Nam	ne: Cactus Av.				Job Nur	mber:	13445			
Road Segme	nt: w/o Heacock	s St.								
SITE	SPECIFIC IN	PUT DATA			NO	ISE N	IODE	L INPUT	s	
Highway Data				Site Con	ditions (H	lard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	39,182 vehicles				,	Autos:	15		
Peak Hour	Percentage:	8.08%		Me	dium Truc	ks (2 A	Axles):	15		
Peak H	lour Volume:	3,166 vehicles		He	avy Truck	s (3+ A	Axles):	15		
Ve	hicle Speed:	50 mph		Vehicle I	Mix					
Near/Far La	ne Distance:	73 feet		Veh	icleType		Day	Evening	Night	Daily
Site Data					Au	tos:	77.5%	12.9%	9.6%	86.34%
Ba	rrier Height	0.0 feet		Me	edium Tru	cks:	84.8%	4.9%	10.3%	2.65%
Barrier Type (0-W	/all, 1-Berm):	0.0		ŀ	Heavy Tru	cks:	86.5%	2.7%	10.8%	11.02%
Centerline Di	st. to Barrier:	55.0 feet		Noise So	ource Elev	vation:	s (in fe	et)		
Centerline Dist.	to Observer:	55.0 feet			Autos:	0.0	000	.,		
Barrier Distance	to Observer:	0.0 feet		Mediu	m Trucks:	2.3	297			
Observer Height	(Above Pad):		Heavy Trucks: 8.004 Grade Adjustment: 0.0							
P	ad Elevation:	0.0 feet								
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent D	Distand	ce (in i	leet)		
	Road Grade:	0.0%			Autos:	41.	446			
	Left View:	-90.0 degrees		Mediui	m Trucks:	41.	232			
	Right View:	90.0 degrees		Heav	y Trucks:	41.	253			
FHWA Noise Mod	el Calculations									
VehicleType	REMEL	Traffic Flow D	istance	Finite	Road	Fresn	el	Barrier Atte	en Be	rm Atten
Autos:	70.20	2.07	1.1	12	-1.20		-4.67	0.0	000	0.000
Medium Trucks:	81.00	-13.06	1.1	15	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	85.38	-6.87	1.1	15	-1.20		-5.38	0.0	000	0.000
Unmitigated Noise	e Levels (witho	ut Topo and barr	ier atte	nuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq E	vening	Leq Ni	ight		Ldn	C	NEL
Autos:	72.3	2 71.2		69.5		63.4	ł	72.0)	72.6
Medium Trucks:	67.9	9 67.3		60.9		59.4	Ļ	67.9	9	68.1
Heavy Trucks:	78.	5 78.0		68.9		70.2	2	78.5	5	78.7
Vehicle Noise:	79.	7 79.1		72.5		71.3	3	79.7	7	79.9
Centerline Distant	ce to Noise Co	ntour (in feet)								
			70	dBA	65 dE	ЗA	6	60 dBA	55	i dBA
		Ldn:		244		525		1,132		2,438
		CNEL:		252		543		1,171		2,522

	FH	WA-RD-77-108	HIGH	VAY NO	DISE PF	REDICTIC		DEL			
Scenar	Scenario: E+P (Peak)						lame: (Gatewa	ay Aviation		
Road Nan	ne: Cactus Av.					Job Nu	mber: 1	13445			
Road Segme	nt: e/o Heacoo	ck St.									
SITE	SPECIFIC IN	NPUT DATA				NC	DISE N	IODE	L INPUT	S	
Highway Data				S	ite Con	ditions (I	Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	23,580 vehicl	es				A	Autos:	15		
Peak Hour	Percentage:	8.08%			Me	dium Truc	cks (2 A	(xles):	15		
Peak H	lour Volume:	1,905 vehicle	s		He	avy Truck	(S (3+ A	(xles):	15		
Ve	ehicle Speed:	40 mph		v	ehicle l	Mix					
Near/Far La	ne Distance:	50 feet		Ē	Veh	icleType		Day	Evening	Night	Daily
Site Data						AL	utos:	77.5%	12.9%	9.6%	86.34%
Ba	rrier Heiaht:	0.0 feet			Me	edium Tru	icks:	84.8%	4.9%	10.3%	2.64%
Barrier Type (0-V	Vall, 1-Berm):	0.0			ŀ	leavy Tru	icks:	86.5%	2.7%	10.8%	11.01%
Centerline D	ist. to Barrier:	44.0 feet		N	oise Sc	ource Ele	vations	s (in fe	eet)		
Centerline Dist.	to Observer:	44.0 feet				Autos:	0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks:	2.2	297			
Observer Height	Observer Height (Above Pad): 5.0 feet				Heav	v Trucks:	8.0	004	Grade Adj	iustment:	0.0
P	Pad Elevation: 0.0 feet						Di- 4	- (In)	(
Ro	ad Elevation:	0.0 feet		L	ane Equ	uivaient L	Jistanc	:e (IN 1	reet)		
	Road Grade:	0.0%				Autos:	36.5	551			
	Left View:	-90.0 degre	es		wealur	T Trucks:	30.3	308			
	Right View:	90.0 degre	es		Heav	y Trucks:	30.3	332			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	66.51	0.84		1.94		-1.20		-4.61	0.0	000	0.000
Medium Trucks:	77.72	-14.30		1.98		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	82.99	-8.11		1.98		-1.20		-5.50	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Daj	/	Leq Eve	ening	Leq N	light		Ldn	CI	VEL
Autos:	68	3.1	67.1		65.3		59.3		67.9	9	68.5
Medium Trucks:	64	1.2	63.6		57.2		55.7		64.2	2	64.4
Heavy Trucks:	75	5.7	75.2		66.1		67.4		75.7	7	75.9
Vehicle Noise:	76	5.6	76.1		69.1		68.3		76.7	7	76.9
Centerline Distan	ce to Noise C	ontour (in feel)	=				-			
			L	70 dl	ВA	65 di	BA	6	U dBA	55	аВА
			Ldn:	122 263 567				1,221			
	CNEL:						271		585		1,260

	FHV	VA-RD-77-108	HIGH	IWAT	NUISE PF	EDICI		DEL			
Scenario	: E+P (Peak)			Project	Name:	Gatew	ay Aviation				
Road Name	Harley Kno	x BI.				Job N	lumber:	13445			
Road Segment	t: e/o Indian A	Av.									
SITE S	PECIFIC IN	IPUT DATA				1	IOISE I	IODE	LINPUT	s	
Highway Data					Site Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily T	raffic (Adt):	8,896 vehicl	es					Autos:	15		
Peak Hour F	Percentage:	8.08%			Mee	dium Tr	ucks (2)	Axles):	15		
Peak Ho	ur Volume:	719 vehicle	s		Hea	avy Tru	cks (3+)	(xles	15		
Veh	icle Speed:	45 mph		F	Vehicle N	lix					
Near/Far Lan	e Distance:	80 feet		ŀ	Vehi	cleType	•	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	5 12.9%	9.6%	86.239
Barr	ier Heiaht:	0.0 feet			Me	edium T	rucks:	84.8%	4.9%	10.3%	2.67%
Barrier Type (0-Wa	II, 1-Berm):	0.0			H	leavy T	rucks:	86.5%	2.7%	10.8%	11.10%
Centerline Dist	to Barrier:	64.0 feet		ŀ	Noise So	urce F	levation	s (in fi	eef)		
Centerline Dist. to	o Observer:	64.0 feet				Auto	s' 0	000			
Barrier Distance to	o Observer:	0.0 feet			Mediur	n Truck	s: 2	297			
Observer Height (A	oserver Height (Above Pad): 5.0 feet						s: 8.	004	Grade Ad	iustmen	t: 0.0
Pad	d Elevation:	0.0 feet		-							
Road	d Elevation:	0.0 feet		-	Lane Equ	iivalen	t Distan	ce (in	feet)		
R	oad Grade:	0.0%				Auto	s: 50.	210			
	Left View:	-90.0 degre	es		Mediur	n Truck	s: 50.	033			
	Right View:	90.0 degre	es		Heav	у ттиск	S. 50.	050			
FHWA Noise Model	Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresr	el	Barrier Att	en Be	rm Atten
Autos:	68.46	-3.91		-0.1	3	-1.20		-4.70	0.0	000	0.00
Medium Trucks:	79.45	-19.01		-0.1	1	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	84.25	-12.82		-0.1	1	-1.20		-5.31	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrie	er attei	nuation)						
VehicleType I	eq Peak Hou	ir Leq Day	y I	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	63	.2	62.2		60.5		54.4	ŀ	63.0)	63.
Medium Trucks:	59	.1	58.5		52.2		50.6	6	59.1	1	59.
Heavy Trucks: 70.1 69.6					60.6		61.8	3	70.2	2	70.
Vehicle Noise:	71	.2	70.6		63.9		62.8	8	71.2	2	71.4
Centerline Distance	e to Noise Co	ontour (in feet	9								
			L	70	dBA	65	dBA		50 dBA	55	dBA
		~	Lan:	77 167 359			774				
	CNEL:						172		371		799

Tuesday, December 8, 2020

	FHW	/A-RD-77-108 I	HIGHWA	YN	OISE PI	REDICT	ION MO	DDEL				
Scenari Road Nam Road Segmer	io: E+P (Peak) le: Harley Knox nt: e/o Patterso	: Bl. n Av.				Project Job N	Name: lumber:	Gatew 13445	vay Aviat	ion		
SITE	SPECIFIC IN	PUT DATA					IOISE	MODE	EL INPU	JTS		
Highway Data				S	ite Con	ditions	(Hard :	= 10, S	oft = 15)			
Average Daily	Traffic (Adt):	18,140 vehicles	5		Ma	dium Tr	ucks (2	Autos	15			
Feak Hour	Percentage.	0.00%			IVIC Llo		ucho (2±	Avlee)	. 15			
reak n	biolo Spood	1,400 verticies			110	avy nu	una (0+	Axies)	. 15			
Near/Ear La	nicie Speeu.	45 mpn		V	'ehicle l	Nix						
Nedi/Fai Lai	ne Distance.	80 leet			Veh	icleType	•	Day	Evenin	g N	ight	Daily
Site Data						,	Autos:	77.5%	6 12.9	%	9.6%	84.63%
Bai	rrier Height:	0.0 feet			M	edium T	rucks:	84.8%	6 4.9	% 1	0.3%	2.77%
Barrier Type (0-W	all, 1-Berm):	0.0			F	leavy T	rucks:	86.5%	6 2.7	% 1	0.8%	12.60%
Centerline Dis	st. to Barrier:	64.0 feet		A	loise Sr	urce E	lovatio	ne (in f	inot)			
Centerline Dist.	to Observer:	64.0 feet			0136 00	Auto	e' (000	000			
Barrier Distance	to Observer:	0.0 feet			Modiu	n Truck	5. C	207				
Observer Height (Above Pad):	5.0 feet			Hear	n Truck	o. 4	004	Grade	Adius	tment	0.0
Pa	ad Elevation:	0.0 feet			Tieav	y HUCK	з. с	.004	0,000	lajao		0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distaı	nce (in	feet)			
1	Road Grade:	0.0%				Auto	s: 50	.210				
	Left View:	-90.0 degrees	5		Mediu	n Truck	s: 50	0.033				
	Right View:	90.0 degrees	5		Heav	y Truck	s: 50	0.050				
FHWA Noise Mode	el Calculations	1										
VehicleType	REMEL	Traffic Flow	Distanc	е	Finite	Road	Fres	nel	Barrier	Atten	Ben	m Atten
Autos:	68.46	-0.90	-().13		-1.20		-4.70		0.000		0.00
Medium Trucks:	79.45	-15.75	-().11		-1.20		-4.88		0.000		0.00
Heavy Trucks:	84.25	-9.17	-().11		-1.20		-5.31		0.000		0.00
Unmitigated Noise	e Levels (witho	ut Topo and b	arrier at	enu	uation)							
VehicleType	Leq Peak Hour	r Leq Day	Leq	Eve	ening	Leq	Night		Ldn		CI	IEL
Autos:	66.	2 6	5.3		63.5		57	.4	6	6.1		66.
Medium Trucks:	62.	4 6	1.8		55.5		53	.9	6	2.4		62.
Heavy Trucks:	73.	8 7	3.3		64.2		65	.5	7	3.8		74.
Vehicle Noise:	74.	7 7	4.2		67.2		66	.4	7	4.8		75.
Centerline Distance	ce to Noise Co	ntour (in feet)		70 d	DA	67	dBA		60 dB /		57	
			/	U dl	122	05	UBA	-	ou aBA	10	55	1 204
		L	un: El :		100		28	(6	6	10		1,331
		CN	EL:		137		29	D	6	31		1,372

	FH	WA-RD-77-108	HIGH	NAY N	OISE PI	REDICTI		DEL			
Scena	rio: OYC					Project I	Vame: (Gatew	ay Aviation		
Road Nar	ne: Heacock S	it.				Job NL	mber:	13445	-		
Road Segme	ent: n/o Gentia	n Av.									
SITE	SPECIFIC II	NPUT DATA				N	OISE N	IODE		s	
Highway Data				S	ite Con	ditions (Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	30,020 vehicl	es					Autos:	15		
Peak Hour	Percentage:	8.08%			Me	dium Tru	cks (2 A	(xles)	15		
Peak I	Hour Volume:	2,426 vehicle	s		He	avy Truc	ks (3+ A	(xles)	15		
Ve	ehicle Speed:	50 mph		v	ehicle l	Mix					
Near/Far La	ane Distance:	48 feet		F	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	6 86.23%
Ba	rrier Height	0.0 feet			M	edium Tru	ucks:	84.8%	4.9%	10.3%	6 2.67%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tru	ucks:	86.5%	2.7%	10.8%	6 11.10%
Centerline D	ist. to Barrier:	50.0 feet		Λ	loise So	ource Ele	vation	s (in f	eet)		
Centerline Dist.	to Observer:	50.0 feet		Ê	0.00 00	Autos	. 00	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	. 2.3	97			
Observer Height	Observer Height (Above Pad): 5.0 feet					w Trucks	. 80	004	Grade Ad	iustmen	t: 0.0
F	ad Elevation:	0.0 feet				,	. 0				
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distanc	e (in:	feet)		
	Road Grade:	0.0%				Autos	: 44.	147			
	Left View:	-90.0 degre	es		Mediu	m Trucks	: 43.9	947			
	Right View:	90.0 degre	es		Heav	ry Trucks	: 43.9	966			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Att	en Be	rm Atten
Autos	70.20	0.91		0.71		-1.20		-4.65	0.0	000	0.000
Medium Trucks:	81.00	-14.19		0.74		-1.20		-4.87	0.0	000	0.000
Heavy Trucks	85.38	-7.99		0.73		-1.20		-5.43	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	r attenu	uation)						
VehicleType	Leq Peak Ho	ur Leq Day		Leq Ev	ening	Leq N	light		Ldn	0	NEL
Autos:	70	0.6	69.6		67.9		61.8		70.4	1	71.1
Medium Trucks:	66	3.3	65.8		59.4		57.9)	66.3	3	66.6
Heavy Trucks	76	5.9	76.4		67.4		68.6		77.0)	77.1
Vehicle Noise:	78	3.1	77.6		71.0		69.8		78.2	2	78.4
Centerline Distan	ce to Noise C	ontour (in feet)								
				70 d	BA	65 a	IBA	(50 dBA	55	5 dBA
	Ldn:				175 377			812		1,749	
	CNEL:						390		839		1,808

	FH	WA-RD-77-108	HIGH	NAY NO	DISE PI	REDICTI		DEL			
Scena Road Nan Road Segme	rio: OYC ne: Heacock S ent: s/o Iris Av.				Project I Job Nu	Vame: (imber: 1	Gatew 13445	vay Aviation			
SITE	SPECIFIC IN	NPUT DATA				N	OISE N	IODE	EL INPUT	5	
Highway Data				S	ite Con	ditions (Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	27,902 vehicl	es				A	Autos.	15		
Peak Hour	Percentage:	8.08%			Me	dium Tru	cks (2 A	(xles)	: 15		
Peak H	lour Volume:	2,254 vehicle	s		He	avy Truc	ks (3+ A	(xles)	: 15		
Ve	ehicle Speed:	50 mph		V	ehicle	Mix					
Near/Far La	ane Distance:	48 feet		-	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	6 12.9%	9.6%	6 86.23%
Ba	rrier Height:	0.0 feet			М	edium Tru	ucks:	84.8%	6 4.9%	10.3%	6 2.67%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tru	ucks:	86.5%	6 2.7%	10.8%	6 11.10%
Centerline D	ist. to Barrier:	50.0 feet		N	oise So	ource Ele	vations	s (in f	ieet)		
Centerline Dist.	to Observer:	50.0 feet				Autos	: 0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	: 2.2	297			
Observer Height	(Above Pad):	5.0 feet			Heav	vy Trucks	: 8.0	004	Grade Adj	ustmer	nt: 0.0
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		Li	ane Eq	uivalent	Distanc	e (in	teet)		
	Road Grade:	0.0%				Autos	: 44.1	147			
	Left View:	-90.0 degre	es		Mediu	m Trucks	: 43.9	947			
	Right View:	90.0 degre	es		Heav	y Trucks	: 43.9	966			
FHWA Noise Mod	lel Calculation	S									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	en Be	erm Atten
Autos:	70.20	0.59		0.71		-1.20		-4.65	0.0	000	0.000
Medium Trucks:	81.00	-14.51		0.74		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	85.38	-8.31		0.73		-1.20		-5.43	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	r attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	v .	Leq Eve	ening	Leq N	light		Ldn	0	CNEL
Autos:	70).3	69.3		67.6		61.5		70.1		70.7
Medium Trucks:	66	3.0	65.4		59.1		57.5		66.0)	66.2
Heavy Trucks:	76	3.6	76.1		67.1		68.3		76.7	'	76.8
Vehicle Noise:	77	7.8	77.2		70.6		69.4		77.8	3	78.1
Centerline Distan	ce to Noise C	ontour (in feet)		_				-		
			L	70 dE	BA	65 d	BA		60 dBA	5	5 dBA
	Ldn:					167 359 773			1,666		
		С		172 371 799 1,72						1,722	

	FHV	VA-RD-77-108	HIGI	HWAY N	DISE PF	REDICT	ON MC	DEL					
Scenario Road Name Road Segmen	o: OYC e: Heacock St t: s/o Nandina		Project Name: Gateway Aviation Job Number: 13445										
SITE S	PECIFIC IN	PUT DATA				N	OISE	MODE	L INPUT	S			
Highway Data				s	ite Con	ditions	(Hard =	= 10, S	oft = 15)				
Average Daily 1 Peak Hour F Peak Ho	raffic (Adt): Percentage: our Volume:	1 vehicle 8.08% 0 vehicle	es s		Me He	dium Tri avy Truc	ıcks (2 :ks (3+	Autos Axles) Axles)	15 15 15				
Veh	icle Speed:	50 mph		V	ehicle l	Nix							
Near/Far Lan	e Distance:	48 feet			Vehi	cleType		Day	Evening	Night	Daily		
Site Data							Autos:	77.5%	6 12.9%	9.6%	86.239		
Bari	rier Heiaht:	0.0 feet			Me	edium Ti	ucks:	84.8%	6 4.9%	10.3%	2.67%		
Barrier Type (0-Wa	all, 1-Berm):	0.0			ŀ	leavy T	ucks:	86.5%	6 2.7%	10.8%	11.10%		
Centerline Dis	t. to Barrier:	50.0 feet		۸	loise So	urce El	evatior	ns (in f	eet)				
Centerline Dist. to Barrier Distance to Observer Height (A Pa	o Observer: o Observer: \bove Pad): d Elevation:	50.0 feet 0.0 feet 5.0 feet 0.0 feet	J.0 feet 0.0 feet 5.0 feet 0.0 feet			Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0							
Roa	d Elevation:	0.0 feet		L	ane Equ	uivalent	Distar	nce (in	feet)		-		
R	oad Grade:	0.0%				Auto	s: 44	.147					
	Left View: Right View:	-90.0 degree 90.0 degree	es es		Mediur Heav	n Truck y Truck	s: 43 s: 43	.947 .966					
FHWA Noise Mode	l Calculations	5											
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	nel	Barrier Att	en Bei	m Atten		
Autos:	70.20	-43.86		0.71		-1.20		-4.65	0.	000	0.00		
Medium Trucks:	81.00	-58.96		0.74		-1.20		-4.87	0.	000	0.00		
Heavy Trucks:	85.38	-52.77		0.73		-1.20		-5.43	0.	000	0.00		
Unmitigated Noise	Levels (witho	out Topo and	barri	er atteni	ation)								
VehicleType	Leq Peak Hou	r Leq Day	/	Leq Ev	ening	Leq	Night		Ldn	С	NEL		
Autos:	25.	.8	24.9		23.1		17.	.1	25.	7	26.		
Medium Trucks:	21.	.6	21.0		14.6		13.	.1	21.	5	21.		
Heavy Trucks:	32.	.1	31.6		22.6		23.	.9	32.	2	32.		
Vehicle Noise:	33.	.4	32.8		26.2		25	.0	33.	4	33.		
Centerline Distance	e to Noise Co	ntour (in feet)					-					
			L	70 d	ВА	65	аВА		bU dBA	55	аВА		
		-	Ldn:		0		(5	1		2		
		C	NEL:		0		(0	1		2		

Tuesday, December 8, 2020

	FHW	A-RD-77-108 H	IGHWAY	NOISE P	REDICTI		DEL			
Scenari	o: OYC				Project	Name: (Gatewa	ay Aviatior	ı	
Road Nam	e: Heacock St.				Job N	umber: '	13445			
Road Segmer	nt: s/o Cardinal	Av.								
SITE	SPECIFIC IN	PUT DATA			N	OISE N	IODE	L INPUT	s	
Highway Data				Site Cor	ditions	(Hard =	10, So	ft = 15)		
Average Daily	Traffic (Adt):	28,894 vehicles					Autos:	15		
Peak Hour	Percentage:	8.08%		Me	dium Tru	icks (2 A	(xles):	15		
Peak H	our Volume:	2,335 vehicles		He	avy Truc	:ks (3+ A	(xles):	15		
Ve	hicle Speed:	50 mph		Vehicle	Mix					
Near/Far La	ne Distance:	48 feet		Veh	icleTvpe		Dav	Evenina	Night	Dailv
Site Data					4	utos:	77.5%	12.9%	9.6%	6 86.23%
Bai	rior Hoight	0.0 feet		м	edium Tr	ucks:	84.8%	4.9%	10.3%	6 2.67%
Barrier Type (0-W	all. 1-Berm):	0.0			Heavy Tr	ucks:	86.5%	2.7%	10.8%	6 11.10%
Centerline Dis	st. to Barrier:	50.0 feet		Noine C	Suraa El	ovetien	in to	of		
Centerline Dist.	to Observer:	50.0 feet		NUISe 3	Autor	evalions		elj		
Barrier Distance	to Observer:	0.0 feet		Mark	Autos	. 0.0	007			
Observer Height (Above Pad):	5.0 feet		Mediu	m Trucks	5. 2.4	297	Grade Ad	liustman	t· 0.0
Pa	ad Elevation:	0.0 feet		пеа	y muck	s. o.u	04	Orade Au	Justinen	2. 0.0
Roa	ad Elevation:	0.0 feet		Lane Eq	uivalent	Distanc	e (in f	eet)		
1	Road Grade:	0.0%			Autos	: 44.	147			
	Left View:	-90.0 degrees		Mediu	m Trucks	s: 43.9	947			
	Right View:	90.0 degrees		Hear	y Truck	s: 43.9	966			
FHWA Noise Mode	el Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresn	el	Barrier Att	ien Be	rm Atten
Autos:	70.20	0.74	0.	71	-1.20		-4.65	0.	000	0.00
Medium Trucks:	81.00	-14.35	0.	74	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	85.38	-8.16	0.	73	-1.20		-5.43	0.0	000	0.00
Unmitigated Noise	e Levels (witho	ut Topo and ba	arrier atte	nuation)						
VehicleType	Leq Peak Hour	· Leq Day	Leg I	Evening	Leq	Night		Ldn	C	NEL
Autos:	70.	5 69	1.5	67.7		61.7		70.	3	70.9
Medium Trucks:	66.	2 65	i.6	59.2		57.7		66.	2	66.
Heavy Trucks:	76.	8 76	i.3	67.2		68.5		76.	8	77.
Vehicle Noise:	78.	0 77	.4	70.8		69.6		78.	D	78.3
Centerline Distanc	e to Noise Co	ntour (in feet)								
			70) dBA	65 (dBA	6	0 dBA	55	5 dBA
		La	in:	170		367		791		1,705
		CNE	L:	176		380		818	ł	1,763

	FH\	WA-RD-77-108	HIGH	IWAY N	IOISE PF	REDICTIO		DEL				
Scenar	io: OYC					Project I	Name:	Gatew	ay Aviatio	n		
Road Nam	ne: Indian Av.					Job Nu	imber:	13445				
Road Segme	nt: s/o Nandin	a Av.										
SITE	SPECIFIC IN	IPUT DATA				N	OISE	MODE		rs		
Highway Data					Site Con	ditions ('Hard =	10, Se	oft = 15)			
Average Daily	Traffic (Adt):	29,980 vehicle	es					Autos:	15			
Peak Hour	Percentage:	8.08%			Me	dium Tru	cks (2 .	Axles):	15			
Peak H	lour Volume:	2,422 vehicles	6		He	avy Truc	ks (3+ .	Axles):	15			
Ve	hicle Speed:	45 mph			Vehicle I	Mix						
Near/Far La	ne Distance:	36 feet			Vehi	icleType		Day	Evening	Nig	ht	Daily
Site Data						A	utos:	77.5%	12.9%	9	.6%	86.23%
Ba	rrier Height	0.0 feet			Me	edium Tru	ucks:	84.8%	4.9%	10	.3%	2.67%
Barrier Type (0-W	/all, 1-Berm):	0.0			F	leavy Tri	ucks:	86.5%	5 2.7%	10	.8%	11.10%
Centerline Di	st. to Barrier:	44.0 feet		-	Noise Sa	urce Ele	vation	e (in fi	oof)			
Centerline Dist.	to Observer:	44.0 feet		É	10/30 00	Autos	. 0	000				
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks	. 0.	297				
Observer Height	(Above Pad):	5.0 feet			Heav	n Trucks		004	Grade A	diustn	nent:	0.0
P	ad Elevation:	0.0 feet			near	y mucho	. 0.	004		.,		
Ro	ad Elevation:	0.0 feet		1	Lane Equ	uivalent	Distan	ce (in	feet)			
	Road Grade:	0.0%				Autos	: 40	.460				
	Left View:	-90.0 degree	es		Mediur	m Trucks	: 40	.241				
	Right View:	90.0 degree	es		Heav	y Trucks	: 40	.262				
FHWA Noise Mod	el Calculation	s										
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresi	nel	Barrier A	tten	Bern	n Atten
Autos:	68.46	1.36		1.2	8	-1.20		-4.61	0	.000		0.000
Medium Trucks:	79.45	-13.74		1.3	1	-1.20		-4.87	0	.000		0.000
Heavy Trucks:	84.25	-7.54		1.3	1	-1.20		-5.50	0	.000		0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	er atten	uation)							
VehicleType	Leq Peak Hou	ur Leq Day	'	Leq E	vening	Leq N	Vight		Ldn		CN	EL
Autos:	69	9.9	68.9		67.2		61.	1	69	.7		70.3
Medium Trucks:	65	5.8	65.2		58.9		57.	3	65	.8		66.0
Heavy Trucks:	76	3.8	76.3		67.3		68.	5	76	.9		77.0
Vehicle Noise:	77	⁷ .9	77.3		70.5		69.	5	77	.9		78.1
Centerline Distant	ce to Noise Co	ontour (in feet,)									
				70 0	dBA	65 a	IBA	(60 dBA		55 c	1BA
			Ldn:		149		320)	69	0		1,486
		CI	VEL:		153		331		71	2		1,535

	FH1	NA-RD-77-108	HIGH	NAY NO	DISE PI	REDICTIO		DEL			
Scenar	io: OYC				Project Name: Gateway Aviation						
Road Nan	ne: Cactus Av.					Job Nu	mber: *	13445			
Road Segme	nt: w/o Heaco	ck St.									
SITE	SPECIFIC IN	IPUT DATA				N	DISE N	IODE	L INPUTS	3	
Highway Data				S	ite Con	ditions (Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	53,522 vehicl	es					Autos:	15		
Peak Hour	Percentage:	8.08%			Me	dium Tru	cks (2 A	xles).	15		
Peak H	lour Volume:	4,325 vehicle	s		He	avy Trucl	ks (3+ A	xles).	15		
Ve	ehicle Speed:	50 mph		v	ehicle l	Mix					
Near/Far La	ne Distance:	73 feet		Ē	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	6 12.9%	9.6%	86.23%
Ba	rrier Height:	0.0 feet			M	edium Tru	icks:	84.8%	6 4.9%	10.3%	2.67%
Barrier Type (0-V	Vall, 1-Berm):	0.0			ŀ	leavy Tru	icks:	86.5%	6 2.7%	10.8%	11.10%
Centerline D	ist. to Barrier:	55.0 feet		N	oise So	ource Ele	vations	s (in f	eet)		
Centerline Dist.	to Observer:	55.0 feet				Autos.	0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.2	297			
Observer Height	Observer Height (Above Pad): 5.0 feet				Heav	v Trucks.	8.0	004	Grade Adj	ustmen	t: 0.0
P	ad Elevation:	0.0 feet		-							
Ro	Road Elevation: 0.0 feet					uivalent	Distanc	e (in	feet)		
	Road Grade:	0.0%				Autos.	: 41.4	146			
	Left View:	-90.0 degre	es		Mediu	m Trucks	: 41.1	232			
	Right View:	90.0 degre	es		Heav	ry Trucks.	: 41.3	253			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	en Be	rm Atten
Autos:	70.20	3.42		1.12		-1.20		-4.67	0.0	00	0.000
Medium Trucks:	81.00	-11.68		1.15		-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	85.38	-5.48		1.15		-1.20		-5.38	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	r attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Day	/ .	Leq Eve	ening	Leq N	light		Ldn	С	NEL
Autos:	73	3.5	72.6		70.8		64.8		73.4		74.0
Medium Trucks:	69	9.3	68.7		62.3		60.8		69.2		69.5
Heavy Trucks:	79	9.8	79.3		70.3		71.6		79.9	1	80.0
Vehicle Noise:	81	.1	80.5		73.9		72.7		81.1		81.3
Centerline Distan	ce to Noise C	ontour (in feet)								
				70 dl	BA	65 d	BA	- 1	60 dBA	55	i dBA
			Ldn:		301		649		1,399		3,014
		C	NEL:		312		672		1,447		3,117

	FHV	VA-RD-77-108	піспі	WATN		EDICII		JDEL			
Scenario:	OYC					Project	Name:	Gatew	ay Aviatior	1	
Road Name:	Harley Knox	k BI.				Job N	umber:	13445			
Road Segment:	e/o Patterso	on Av.									
SITE SI	PECIFIC IN	PUT DATA				N	OISE	MODE	L INPUT	S	
Highway Data				S	Site Con	ditions	(Hard =	= 10, S	oft = 15)		
Average Daily Tr	affic (Adt):	31,042 vehicle	es					Autos.	15		
Peak Hour Pe	ercentage:	8.08%			Me	dium Tru	ıcks (2	Axles).	15		
Peak Hou	ur Volume:	2,508 vehicle	S		He	avy Truc	cks (3+	Axles).	15		
Vehi	cle Speed:	45 mph		V	/ehicle I	Nix					
Near/Far Lane	Distance:	80 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						A	Autos:	77.5%	12.9%	9.6%	86.23
Barri	er Heiaht:	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	2.679
Barrier Type (0-Wal	l, 1-Berm):	0.0			F	leavy Tr	ucks:	86.5%	5 2.7%	10.8%	11.10
Centerline Dist.	to Barrier:	64.0 feet			loise Sc	urce El	evatio	ns (in f	eef)		
Centerline Dist. to	Observer:	64.0 feet		-		Autos	s' 0	000			
Barrier Distance to	Observer:	0.0 feet			Mediur	n Trucks	s: 2	297			
Observer Height (Al	bove Pad):	5.0 feet			Heav	v Trucks	s: 8	.004	Grade Ad	justment	: 0.0
Pad Elevation: 0.0 feet					_						
Road	4	ane Equ	uvalent	Distar	ice (in	feet)					
Ro			Autos	s: 50	.210						
-	Left View: -90.0 degrees					n Trucks	S: 50	033			
r	Right view:	90.0 degre	es		neav	y mucks	5. 30	.030			
FHWA Noise Model	Calculations	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	68.46	1.51		-0.13	3	-1.20		-4.70	0.0	000	0.00
Medium Trucks:	79.45	-13.59		-0.11		-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	84.25	-7.39		-0.11		-1.20		-5.31	0.0	000	0.00
Unmitigated Noise L	evels (with	out Topo and	barriei	r atteni	uation)						
VehicleType L	eq Peak Hou	r Leq Day	'	Leq Ev	ening	Leq	Night		Ldn	C	NEL
Autos:	68	.6	67.7		65.9		59.	.8	68.	5	69.
Medium Trucks:	64	.6	64.0		57.6		56.	.1	64.	5	64.
Heavy Trucks:	75	.6	75.1		66.0		67.	.3	75.0	5	75.
venicie Noise:	76	.6	/6.1		69.3		68.	.3	76.	(76.
Centerline Distance	to Noise Co	ontour (in feet)	70			-/0.4	-	0.404		-10.4
				70 d	BA	65 (ara 00		5U aBA	55	авА
		~	Lan:		178		38	4	826		1,780
		C.	VEL.		184		39	0	853		1,838

Tuesday, December 8, 2020

	FHW	/A-RD-77-108 F	IGHW	AY N	OISE PF	REDICTI	ON MO	DDEL				
Scenari	o: OYC					Project	Name:	Gatew	ay Aviatio	n		
Road Nam	e: Cactus Av.					Job N	umber:	13445				
Road Segmer	nt: e/o Heacocl	s St.										
SITE	SPECIFIC IN	PUT DATA				N	OISE	MODE	L INPU	rs		
Highway Data				S	Site Con	ditions	(Hard =	= 10, Sc	oft = 15)			
Average Daily	Traffic (Adt):	36,334 vehicles						Autos:	15			
Peak Hour	Percentage:	8.08%			Me	dium Tru	icks (2	Axles):	15			
Peak H	our Volume:	2,936 vehicles			He	avy Truc	:ks (3+	Axles):	15			
Vei	hicle Speed:	40 mph		L	/ehicle	Nix						
Near/Far Lar	ne Distance:	50 feet		-	Veh	cleTvpe		Dav	Evening	Nic	tht	Dailv
Site Data				-		A	utos:	77.5%	12.9%	9	.6%	86.23%
Par	rior Hoight:	0.0 foot			Me	edium Tr	ucks:	84.8%	4.9%	10	.3%	2.67%
Barrier Type (0-W	all 1-Rerm)	0.0 1001			ŀ	leavy Tr	ucks:	86.5%	2.7%	10	.8%	11.10%
Centerline Dis	st. to Barrier:	44.0 feet		-								
Centerline Dist.	to Observer:	44.0 feet		^	loise Sc	urce El	evatioi	ns (in fe	eet)			
Barrier Distance	to Observer:	0.0 feet				Autos	S: ()	.000				
Observer Height (Above Pad):	5.0 feet			Meaiui	n Trucks	s: 2	.297	Crada A	divota	no nti	0.0
Pa	d Elevation:	0.0 feet			Heav	y Trucks	8. 8	.004	Graue A	ujusin	ient.	0.0
Roa	ad Elevation:	0.0 feet		L	ane Equ	ıivalent	Distar	nce (in i	feet)			
F	Road Grade:	0.0%				Autos	5: 36	6.551				
	Left View:	-90.0 degrees			Mediur	n Trucks	s: 36	6.308				
	Right View:	90.0 degrees			Heav	y Trucks	s: 36	3.332				
FHWA Noise Mode	el Calculations											
VehicleType	REMEL	Traffic Flow	Distar	се	Finite	Road	Fres	nel	Barrier A	tten	Berr	n Atten
Autos:	66.51	2.71		1.94	ļ	-1.20		-4.61	0	.000		0.000
Medium Trucks:	77.72	-12.39		1.98	3	-1.20		-4.87	0	.000		0.000
Heavy Trucks:	82.99	-6.19		1.98	3	-1.20		-5.50	0	.000		0.000
Unmitigated Noise	e Levels (witho	out Topo and b	arrier a	attenu	uation)							
VehicleType	Leq Peak Hou	r Leq Day	L	eq Ev	rening	Leq I	Night		Ldn		C٨	IEL
Autos:	70.	0 6	9.0		67.2		61	.2	69	.8		70.4
Medium Trucks:	66.	1 6	5.5		59.2		57	.6	66	.1		66.3
Heavy Trucks:	77.	6 7	7.1		68.0		69	.3	77	.6		77.8
Vehicle Noise:	78.	5 7	3.0		71.0		70	.2	78	.6		78.8
Centerline Distanc	e to Noise Co	ntour (in feet)										
				70 d	IBA 🛛	65 0	'BA	6	60 dBA		55 (dBA
		L	dn:		164		35	3	76	0		1,637
		CNI	EL:		169		36	4	78	.3		1,688

	FH	VA-RD-77-108	HIGHWA	AY NO	JISE PI	KEDICTIO	N MO	DEL			
Scenar	io: OYC					Project N	ame:	Gatew	ay Aviatior	n	
Road Nam	e: Harley Kno	x BI.				Job Nur	nber:	13445	,		
Road Segme	nt: e/o Indian /	Av.									
SITE	SPECIFIC IN	IPUT DATA				NO	ISE	NODE	L INPUT	s	
Highway Data				S	ite Con	ditions (H	lard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	14,842 vehicle	s					Autos:	15		
Peak Hour	Percentage:	8.08%			Me	dium Truc	ks (2 /	Axles):	15		
Peak H	lour Volume:	1,199 vehicles			He	avy Truck	s (3+ /	Axles):	15		
Ve	hicle Speed:	45 mph		V	ehicle l	Mix					
Near/Far La	ne Distance:	80 feet		-	Veh	icleType		Day	Evening	Night	Daily
Site Data						Au	tos:	77.5%	12.9%	9.6	% 86.23%
Ba	rrier Height	0.0 feet			Me	edium Tru	cks:	84.8%	4.9%	10.3	% 2.67%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy Tru	cks:	86.5%	2.7%	10.8	% 11.10%
Centerline Di	st. to Barrier:	64.0 feet		N	oise Sr	urce Flev	vation	s (in fø	pet)		
Centerline Dist.	to Observer:	64.0 feet			0136 00	Autos	0	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	n Trucks	2	297			
Observer Height ((Above Pad):	5.0 feet			Heav	v Trucks	8	004	Grade Ad	liustme	nt: 0.0
Pa	ad Elevation:	0.0 feet			near	y macks.	0.	004		,	
Roa	ad Elevation:	0.0 feet		La	ane Eq	uivalent D	listan	ce (in i	feet)		
1	Road Grade:	0.0%				Autos:	50.	210			
	Left View:	-90.0 degree	s		Mediu	m Trucks:	50.	033			
	Right View:	90.0 degree	s		Heav	y Trucks:	50.	050			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresr	nel	Barrier Att	ten B	erm Atten
Autos:	68.46	-1.69		-0.13		-1.20		-4.70	0.	000	0.000
Medium Trucks:	79.45	-16.79		-0.11		-1.20		-4.88	0.	000	0.000
Heavy Trucks:	84.25	-10.59		-0.11		-1.20		-5.31	0.	000	0.000
Unmitigated Noise	e Levels (with	out Topo and I	barrier a	ttenu	ation)						
VehicleType	Leq Peak Hou	Ir Leq Day	Le	q Eve	ening	Leq Ni	ight		Ldn		CNEL
Autos:	65	.4 6	64.5		62.7		56.6	6	65.	3	65.9
Medium Trucks:	61	.4 6	60.8		54.4		52.9	9	61.	3	61.6
Heavy Trucks:	72	.3 7	71.9		62.8		64.1	1	72	4	72.5
Vehicle Noise:	73	.4 7	72.9		66.1		65.1		73.	5	73.7
Centerline Distand	ce to Noise Co	ontour (in feet)									
				70 dE	BA	65 dE	3A	6	60 dBA	5	5 dBA
		1	dn:		109		235		505	; 	1,088
		CA	IEL:		112		242		522	2	1,124

	FH\	WA-RD-77-108	HIGHV	NAY NO	DISE PF	REDICTI		DEL			
Scenar	Scenario: OYCP (Non-Peak)					Project	Name: (Gatev	vay Aviation		
Road Nan Road Segme	ne: Heacock S nt: n/o Gentiar	it. n Av.				Job N	umber: '	13445)		
SITE	SPECIFIC IN	IPUT DATA				N	IOISE N	IOD	EL INPUTS	3	
Highway Data				S	ite Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	30,420 vehicl	es				,	Autos	: 15		
Peak Hour	Percentage:	8.08%			Me	dium Tru	ucks (2 A	(xles	: 15		
Peak F	lour Volume:	2,458 vehicle	s		He	avy Truc	cks (3+ A	(xles	: 15		
Ve	hicle Speed:	50 mph		V	ehicle I	Mix					
Near/Far La	ne Distance:	48 feet		Ē	Veh	icleType		Day	Evening	Night	Daily
Site Data					Autos: 77.5% 12.9% 9.6% 86.4						
Ba	rrier Height:	0.0 feet			Me	edium Tı	rucks:	84.8%	6 4.9%	10.3%	6 2.63%
Barrier Type (0-V	Vall, 1-Berm):	0.0			ŀ	leavy Ti	rucks:	86.5%	6 2.7%	10.8%	6 10.96%
Centerline D	ist. to Barrier:	50.0 feet		N	oise Sc	ource El	evations	s (in f	feet)		
Centerline Dist.	to Observer:	50.0 feet				Autos	s: 0.0	000			
Barrier Distance	Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet				Mediur	m Trucks	s: 2.2	297			
Observer Height	Observer Height (Above Pad): 5.0 feet				Heav	y Trucks	s: 8.0	004	Grade Adj	ustmen	<i>t:</i> 0.0
P	Pad Elevation: 0.0 feet										
Ro	Road Elevation: 0.0 feet				ane Equ	uivalent	Distanc	ce (In	feet)		
	Road Grade:	0.0%				Autos	s: 44.	147			
	Left View:	-90.0 degre	es		Meaiur	m Trucks	s: 43.9	947			
	Right View:	90.0 degre	es		Heav	y Trucks	5: 43.5	900			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	en Be	erm Atten
Autos:	70.20	0.98		0.71		-1.20		-4.65	0.0	00	0.000
Medium Trucks:	81.00	-14.19		0.74		-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	85.38	-7.99		0.73		-1.20		-5.43	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	r attenu	ation)						
VehicleType	Leq Peak Hou	ur Leq Day	/ 1	Leq Eve	ening	Leq	Night		Ldn	0	ONEL
Autos:	70).7	69.7		67.9		61.9)	70.5		71.1
Medium Trucks:	66	3.3	65.8		59.4		57.9)	66.3		66.6
Heavy Trucks:	76	3.9	76.4		67.4		68.6	;	77.0		77.1
Vehicle Noise:	78	3.1	77.6		71.0		69.8	5	78.2		78.4
Centerline Distan	ce to Noise Co	ontour (in feet)								
			L	70 dE	BA	65 (dBA	1	60 dBA	5	5 dBA
			Ldn:		175		377		813		1,752
		CNEL:			181	390 841			1,812		

	FHV	VA-RD-77-108	HIGH	IWAY N	OISE PF	REDICTI		EL				
Scenar	io: OYCP (Nor		Project Name: Gateway Aviation									
Road Nam	e: Heacock St					Job Nu	mber: 1	3445				
Road Segme	nt: s/o Cardina	I Av.										
SITE	SPECIFIC IN	PUT DATA				N	OISE M	ODE		S		
Highway Data				S	Site Con	ditions (Hard = 1	0, So	ft = 15)			
Average Daily	Traffic (Adt):	29,620 vehicle	es				Α	utos:	15			
Peak Hour	Percentage:	8.08%			Me	dium Tru	cks (2 A)	des):	15			
Peak H	lour Volume:	2,393 vehicle	s		He	avy Truc	ks (3+ A)	des):	15			
Ve	hicle Speed:	50 mph		1	/ehicle	Mix						
Near/Far La	ne Distance:	48 feet		F	Veh	icleType	L	Day	Evening	Night	Daily	
Site Data					-	A	utos: 7	7.5%	12.9%	9.6%	85.64%	
Ba	rrier Height [.]	0.0 feet			Me	edium Tru	ucks: 8	4.8%	4.9%	10.3%	2.70%	
Barrier Type (0-W	(all. 1-Berm):	0.0			ŀ	leavy Tri	ucks: 8	6.5%	2.7%	10.8%	11.67%	
Centerline Di	st. to Barrier:	50.0 feet			/ 0 ·			() - K-	- 41			
Centerline Dist.	to Observer:	50.0 feet		^	ioise so	ource Ele	vations	(In re	et)			
Barrier Distance	to Observer:	0.0 feet			Medium Trucks: 2,207							
Observer Height	(Above Pad):	5.0 feet			Mediui	m Trucks	2.2	97	Crada Ad	ivetment		
P	ad Elevation:	0.0 feet			Heav	y Trucks	. 8.0	J4	Grade Auj	usimeni.	0.0	
Ro	Road Elevation: 0.0 feet					uivalent	Distance	e (in f	ieet)			
	Road Grade: 0.0%					Autos	: 44.1	47				
	Left View:	-90.0 degree	es		Mediur	n Trucks	: 43.9	47				
	Right View:	90.0 degree	es		Heav	ry Trucks	: 43.9	66				
FHWA Noise Mod	el Calculation:	s										
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresne	1	Barrier Atte	en Ber	m Atten	
Autos:	70.20	0.82		0.71		-1.20		4.65	0.0	000	0.000	
Medium Trucks:	81.00	-14.20		0.74	Ļ	-1.20	-	4.87	0.0	000	0.000	
Heavy Trucks:	85.38	-7.84		0.73	3	-1.20	-	5.43	0.0	000	0.00	
Unmitigated Nois	e Levels (with	out Topo and	barrie	er atteni	uation)						-	
VehicleType	Leq Peak Hou	r Leq Day	/	Leq Ev	ening	Leq N	light		Ldn	CI	VEL	
Autos:	70	.5	69.6		67.8		61.7		70.4	Ļ	71.0	
Medium Trucks:	66	.3	65.8		59.4		57.9		66.3	3	66.	
Heavy Trucks:	77	.1	76.6		67.5		68.8		77.1	l	77.3	
Vehicle Noise:	78	.2	77.7		71.0		69.9		78.3	3	78.	
Centerline Distan	ce to Noise Co	ontour (in feet)									
			L	70 d	BA	65 a	BA	6	0 dBA	55	dBA	
			Ldn:		178		383		825		1,777	
			CNEL:						053		1 0 2 7	

Tuesday, December 8, 2020

	FHW	/A-RD-77-108 HIC	GHWAY	NOISE PI	REDICTI	ON MOI	DEL				
Scenario Road Name Road Segmen	o: OYCP (Non- e: Heacock St. t: s/o Iris Av.	-Peak)		Project Name: Gateway Aviation Job Number: 13445							
SITE S	PECIFIC IN	PUT DATA			N	OISE N	IODE	L INPUT	5		
Highway Data				Site Con	ditions (Hard =	10, Sc	oft = 15)			
Average Daily T	raffic (Adt):	28,402 vehicles				A	Autos:	15			
Peak Hour F	Percentage:	8.08%		Me	dium Tru	icks (2 A	xles):	15			
Peak Ho	our Volume:	2,295 vehicles		He	avy Truc	ks (3+ A	xles):	15			
Veh	icle Speed:	50 mph	ŀ	Vehicle I	Mix						
Near/Far Lan	e Distance:	48 feet	ľ	Veh	icleType	1	Day	Evening	Night	Daily	
Site Data					A	utos:	77.5%	12.9%	9.6%	86.47%	
Barr	ier Height:	0.0 feet		M	edium Tr	ucks: 1	84.8%	4.9%	10.3%	2.62%	
Barrier Type (0-Wa	ull. 1-Berm):	0.0		ŀ	Heavy Tr	ucks:	86.5%	2.7%	10.8%	10.91%	
Centerline Dis	t to Barrier:	50.0 feet	-	Noiso Se	urco Ek	wations	(in fr	of			
Centerline Dist. to	o Observer:	50.0 feet	-	NUISE SC			00	ey			
Barrier Distance to	o Observer:	0.0 feet		Modiu	m Trucks	. 0.0	00				
Observer Height (A	bove Pad):	5.0 feet		Heal	n Trucks	. 2.2	04	Grade Ad	iustmen	0.0	
Pa	d Elevation:	0.0 feet		near	y macks	. 0.0		,			
Roa	d Elevation:	0.0 feet	-	Lane Eq	uivalent	Distanc	e (in i	feet)			
R	oad Grade:	0.0%			Autos	: 44.1	47				
	Left View:	-90.0 degrees		Mediu	m Trucks	43.9	947				
	Right View:	90.0 degrees		Heav	y Trucks	: 43.9	966				
FHWA Noise Mode	Calculations	1									
VehicleType	REMEL	Traffic Flow D	Distance	Finite	Road	Fresne	e/	Barrier Att	en Be	rm Atten	
Autos:	70.20	0.68	0.7	71	-1.20		4.65	0.0	000	0.00	
Medium Trucks:	81.00	-14.51	0.7	74	-1.20		4.87	0.0	000	0.00	
Heavy Trucks:	85.38	-8.31	0.7	73	-1.20		-5.43	0.0	000	0.00	
Unmitigated Noise	Levels (witho	ut Topo and ban	rier attei	nuation)							
VehicleType I	eq Peak Hou	r Leq Day	Leq E	vening	Leq I	Vight		Ldn	С	NEL	
Autos:	70.	4 69.4	1	67.7		61.6		70.2	2	70.	
Medium Trucks:	66.	0 65.4	1	59.1		57.5		66.0)	66.3	
Heavy Trucks:	76.	6 76.1	1	67.1		68.3		76.7	7	76.	
Vehicle Noise:	77.	8 77.2	2	70.7		69.4		77.9	9	78.	
Centerline Distance	e to Noise Co	ntour (in feet)									
			70	dBA	65 c	1BA	6	60 dBA	55	dBA	
		Ldn	e -	167		360		775		1,669	
		CNEL	2	173		372		801		1,727	

	FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL										
Scenari Road Nam Road Segmen	o: OYCP (No e: Heacock S nt: s/o Nandin	n-Peak) St. a Av.				Project Na Job Nun	ame: Ga nber: 13	iteway Aviatio 445	n		
SITE	SPECIFIC IN	NPUT DAT	1			NO	ISE MO	DEL INPUT	rs		
Highway Data					Site Con	ditions (H	ard = 10), Soft = 15)			
Average Daily	Traffic (Adt):	1 vehi	cles				Au	tos: 15			
Peak Hour	Percentage:	8.08%			Me	dium Truck	ks (2 Axl	es): 15			
Peak H	our Volume:	0 vehic	les		He	avy Trucks	s (3+ Axl	es): 15			
Vel	hicle Speed:	50 mph		ŀ	Vehicle I	Mix					
Near/Far Lar	ne Distance:	48 feet		ŀ	Veh	icleType	Da	ay Evening	Night	Daily	
Site Data						Aut	os: 77	.5% 12.9%	9.6%	86.23%	
Bar	rier Heiaht:	0.0 feet			Me	edium Truc	:ks: 84	.8% 4.9%	10.3%	2.67%	
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Truc	:ks: 86	6.5% 2.7%	10.8%	5 11.10%	
Centerline Dis	st. to Barrier:	50.0 feet		-	Noise Sc	ource Elev	ations (in feet)			
Centerline Dist. t	to Observer:	50.0 feet		ŀ		Autos:	0.00	n			
Barrier Distance t	to Observer:	0.0 feet			Mediu	n Trucks	2.29	7			
Observer Height (J	Above Pad):	5.0 feet			Heav	v Trucks:	8.00	4 Grade Ad	djustmen	t: 0.0	
Pa	ad Elevation:	0.0 feet		-					-		
Roa	d Elevation:	0.0 feet		-	Lane Eq	uivalent D	istance	(in feet)			
F	Road Grade:	0.0%			Modiu	AUTOS:	44.14	7			
	Right View:	-90.0 degi 90.0 degi	'ees 'ees		Heav	v Trucks:	43.94	/ 6			
ELIMA Noise Mede	Coloulation					-					
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresnel	Barrier At	tten Be	rm Atten	
Autos:	70.20	-43.8	16	0.7	1	-1.20	-4	.65 0.	.000	0.000	
Medium Trucks:	81.00	-58.9	6	0.7	74	-1.20	-4	.87 0.	.000	0.000	
Heavy Trucks:	85.38	-52.7	7	0.7	'3	-1.20	-5	.43 0.	.000	0.000	
Unmitigated Noise	Levels (with	out Topo an	d barri	ier atter	nuation)						
VehicleType	Leq Peak Hou	ur Leq D	ay	Leq E	evening	Leq Nig	ght	Ldn	C	NEL	
Autos:	25	5.8	24.9		23.1		17.1	25	.7	26.3	
Medium Trucks:	21	1.6	21.0		14.6		13.1	21	.5	21.8	
Heavy Trucks:	32	2.1	31.6		22.6		23.9	32	.2	32.3	
Vehicle Noise:	33	5.4	32.8		26.2		25.0	33	.4	33.6	
Centerline Distanc	e to Noise C	ontour (in fe	et)	70	dBA	65 AD	Δ	60 dBA	51	5 dBA	
			I dr'	70	0.07	55 UD	0	UU UDA	1 1	2007	
			CNEL:		0		0		1	2	
					0		0			-	

	FH	WA-RD-77-10	B HIGH	NAY NC	DISE PI	REDICTIC	N MOD	EL			
Scenar Road Nan Road Segme	io: OYCP (No ne: Indian Av. nt: s/o Nandin	n-Peak) a Av.				Project N Job Nui	lame: G mber: 13	ateway 3445	y Aviation		
SITE	SPECIFIC I	NPUT DATA				NC	DISE M	ODEL	INPUTS	5	
Highway Data				Si	ite Con	ditions (F	lard = 1	0, Sof	t = 15)		
Average Daily	Traffic (Adt):	30,606 vehic	les				A	utos:	15		
Peak Hour	Percentage:	8.08%			Me	dium Truc	:ks (2 Ax	des):	15		
Peak F	lour Volume:	2,473 vehicle	es		He	avy Truck	s (3+ Ax	(les):	15		
Ve	hicle Speed:	45 mph		Ve	ehicle l	Mix					
Near/Far La	ne Distance:	36 feet			Veh	icleType	D	ay E	Evening	Night	Daily
Site Data						AL	itos: 7	7.5%	12.9%	9.6%	85.61%
Ba	rrier Height:	0.0 feet			M	edium Tru	cks: 8	4.8%	4.9%	10.3%	2.70%
Barrier Type (0-V	/all, 1-Berm):	0.0			ŀ	Heavy Tru	cks: 8	6.5%	2.7%	10.8%	11.68%
Centerline Di	st. to Barrier:	44.0 feet		N	oise So	ource Ele	vations	(in fee	et)		
Centerline Dist.	to Observer:	44.0 feet				Autos:	0.00	00			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.29	97			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks:	8.00	04 0	Grade Adj	ustment	: 0.0
P	ad Elevation:	0.0 feet		_							
Ro	ad Elevation:	0.0 feet		Lá	ane Eq	uivalent L	Distance	e (in fe	et)		
	Road Grade:	0.0%				Autos:	40.46	60			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	40.24	41			
	Right View:	90.0 degre	es		Heav	y Trucks:	40.26	62			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresne	I B	arrier Atte	en Ber	m Atten
Autos:	68.46	1.42	2	1.28		-1.20	-4	4.61	0.0	00	0.000
Medium Trucks:	79.45	-13.59)	1.31		-1.20	-4	4.87	0.0	00	0.000
Heavy Trucks:	84.25	-7.23	3	1.31		-1.20	-8	5.50	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	l barriei	r attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	y	Leq Eve	ening	Leq N	ight	L	Ldn	C	NEL
Autos:	70	0.0	69.0		67.2		61.2		69.8		70.4
Medium Trucks:	66	3.0	65.4		59.0		57.5		65.9		66.2
Heavy Trucks:	77	7.1	76.6		67.6		68.8		77.2		77.3
Vehicle Noise:	78	3.2	77.6		70.7		69.8		78.2		78.4
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 dE	SA	65 dl	3A	60	i aBA	55	аВА
		_	Ldn:		155		333		718		1,548
		C	NEL:		160		344		741		1,597

	FHW	A-RD-77-108	HIGH	IWAY N	OISE PF	REDICTI	ON MOD	EL							
Scenario: OY Road Name: Ca Road Segment: e/o	Scenario: OYCP (Non-Peak) Road Name: Cactus Av. Road Segment: e/o Heacock St.						Project Name: Gateway Aviation Job Number: 13445								
SITE SPEC	IFIC IN	PUT DATA				N	OISE M	ODE		5					
Highway Data				S	Site Con	ditions	(Hard = 1	0, So	ft = 15)						
Average Daily Traffic Peak Hour Perce Peak Hour Ve	(Adt): 3 ntage: plume: 3	36,464 vehicle 8.08% 2,946 vehicle	es s		Me He	dium Tru avy Truc	A icks (2 A: iks (3+ A:	utos: kles): kles):	15 15 15						
Vehicle S	Speed:	40 mph		ν	ehicle l	Nix									
Near/Far Lane Dis	tance:	50 feet			Vehi	cleType	L	Day	Evening	Night	Daily				
Site Data						A	utos: 7	7.5%	12.9%	9.6%	86.28%				
Barrier H	leiaht:	0.0 feet			Me	edium Tr	ucks: 8	4.8%	4.9%	10.3%	2.66%				
Barrier Type (0-Wall, 1-	Berm):	0.0			F	leavy Tr	ucks: 8	6.5%	2.7%	10.8%	11.06%				
Centerline Dist. to E	Barrier:	44.0 feet			loise Sc	urce El	ovations	(in fe	of						
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% Left View: -90.0 degrees Bicht View: 0.0 0 degrees				L	Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0 Lane Equivalent Distance (in feet) Autos: 36.551										
Right	t View: t View:	90.0 degree	es es		Heav	y Trucks	s: 36.3 s: 36.3	32							
FHWA Noise Model Cale	culations														
VehicleType RE	MEL	Traffic Flow	Dis	stance	Finite	Road	Fresne	e/	Barrier Atte	en Ber	m Atten				
Autos:	66.51	2.73		1.94	ł	-1.20	-	4.67	0.0	000	0.00				
Heavy Trucks:	82.99	-12.39 -6.19		1.98	3	-1.20	-	4.87 5.50	0.0	000	0.00				
Unmitigated Noise Leve	els (witho	ut Topo and	barrie	er atteni	uation)										
VehicleType Leq F	Peak Hour	· Leq Day	'	Leq Ev	ening	Leq	Night		Ldn	CI	VEL				
Autos:	70.0	D	69.0		67.2		61.2		69.8	3	70.				
Medium Trucks:	66.1	1	65.5		59.2		57.6		66.1		66.				
Heavy Trucks:	77.6	D F	79.0		68.0		69.3		77.6) ,	77.				
Venicle Noise:	78.5	5	78.0		/1.0		70.2		78.6)	78.				
Centerline Distance to I	loise Cor	ntour (in feet,)												
			L	70 d	BA	65 (dBA	6	0 dBA	55	dBA				
		Ci	Lan: NEL:		164 169		353 364		760 784		1,638 1,689				

Tuesday, December 8, 2020

Scenario: OYCP (Non-Peak) Road Name: Cactus Av. Road Segment: w/o Heacock St. Project Name: Gateway Aviation Job Number: 13445 Site Segment: w/o Heacock St. Noise Model INPUTS Site Seciencienciencienciencienciencienciencie		FHV	VA-RD-77-108 HI	GHWAY	NOISE PI	REDICTIC	ON MOE	DEL			
Boad Name: Cactus Av. Road Segment: Wio Heacock St. Job Number: 13445 Site SepCiFic INPUT DATA NOISE MODEL INPUTS Highway Data Site Conditions (Hard = 10, Soft = 16) Average Daily Traffic (Adi): 53,722 vehicles Autos:: 15 Peak Hour Vercentage: 8.08% Medium Trucks (2 Axles):: 15 Peak Hour Vercentage: 50.08% Heavy Trucks (2 Axles):: 15 Vehicle Speed: 50 mph Vehicle Mix Near/Far Lane Distance: 73 feet Vehicle Mix Mutos: 7.5% 12.9% 9.6% 86: Barrier Height: 0.0 feet Medium Trucks: 84.8% 4.9% 10.3% 2. Barrier Type (0-Wall, 1-Berm): 0.0 Medium Trucks: 84.8% 4.9% 10.3% 2. Centerline Dist. to Desriver: 0.0 feet Mutos: 77.5% 12.9% 9.6% 86: Barrier Type (0-Wall, 1-Berm): 0.0 Medium Trucks: 84.8% 4.9% 10.3% 2. Barrier Type (0-Wall, 1-Berm): 0.0 Medium Trucks: 84.8% 4.9% 10.3% 2. Barrier Distance to Observer: 0.0 feet Mutos: 77.5% 12.9% 9.6% 8	Scenari	o: OYCP (Non	-Peak)			Project N	lame: G	Satewa	y Aviation		
Road Segment: w/o Heacock St. SITE SPECIFIC INPUT DATA NOISE MODEL INPUTS Highway Data Site Conditions (Hard = 10, Soft = 15) Average Daily Traffic (Ad): 53,722 vehicles Autos: 15 Peak Hour Percentage: 8.08% Medium Trucks (2 Axles): 15 Peak Hour Percentage: 8.08% Medium Trucks (2 Axles): 15 Vehicle Speed: 50 mph Vehicle Type Day Evening Night Da Site Data Autos: 77.5% 1.29% 9.6% 86. Barrier Height: 0.0 feet Medium Trucks: 84.8% 4.9% 10.3% 2.1 Barrier Type (0-Wall, 1-Berm): 0.0 Medium Trucks: 84.5% 2.7% 10.3% 2.1 Barrier Type (0-Wall, 1-Berm): 0.0 Medium Trucks: 86.5% 2.7% 10.3% 2.1 Barrier Iso Observer: 0.0 feet Moise Source Elevations (in feet) Moise Source Elevations (in feet) 4.40s: 2.297 Barrier Iso Add Grade: 0.0% Medium Trucks:	Road Nam	e: Cactus Av.	,			Job Nu	mber: 1	3445	·		
SITE SPECIFIC INPUT DATA NOISE MODEL INPUTS Highway Data Site Conditions (Hard = 10, Soft = 15) Average Daily Traffic (Adt): 53,722 vehicles Peak Hour Percentage: 8.08% Peak Hour Volume: 4,341 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 73 feet Ste Data Autos: Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Observer: 55.0 feet Barrier Distance to Observer: 50.0 feet Pad Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees Right View: 90.0 degrees FHWA Noise Model Calculations Finite Road VehicleType Barrier Atten Autos: 1.12 Autos: 1.14 46 Medium Trucks: 4.87 Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees	Road Segmer	nt: w/o Heacoc	k St.								
Highway Data Site Conditions (Hard = 10, Soft = 15) Average Daily Traffic (Adt): 53,722 vehicles Autos: 15 Peak Hour Percentage: 8.08% Medium Trucks (24 Akles): 15 Peak Hour Volume: 4,341 vehicles Medium Trucks (24 Akles): 15 Vehicle Speed: 50 mph Vehicle Type Day Evening Night Da Site Data - Autos: 77.5% 12.9% 9.6% 86. Barrier Height: 0.0 feet Medium Trucks: 84.8% 4.9% 10.3% 2.1% Barrier Type (0-Wail, 1-Berm): 0.0 feet Medium Trucks: 8.04 Grade Adjustment: 0.0 Centerline Dist. to Barrier: 55.0 feet Medium Trucks: 8.004 Grade Adjustment: 0.0 Road Grade: 0.0% Left View: 90.0 degrees Medium Trucks: 41.446 Road Grade: 0.0% Left View: 90.0 degrees Heavy Trucks: 41.446 WeilceType Noise Model Calculations Yutos: 41.45 0.00	SITE	SPECIFIC IN	PUT DATA			N	DISE M	ODEL		s	
Average Daily Traffic (Adt): 53,722 vehicles Autos: 15 Peak Hour Volume: 4,341 vehicles Medium Trucks (2 Avles): 15 Peak Hour Volume: 4,341 vehicles Medium Trucks (2 Avles): 15 Vehicle Speed: 50 mph Yenkice Speed: 50 mph Yenkice Speed: 15 Vehicle Speed: 50 mph Vehicle Mix Vehicle Mix Vehicle Mix Site Data Autos: 77.5% Medium Trucks: 84.8% 4.9% 10.3% 21 Barrier Type (0-Wall, 1-Berm): 0.0 Get Medium Trucks: 84.8% 4.9% 10.3% 21 Centerline Dist. to Dserver: 0.0 feet Medium Trucks: 86.5% 2.7% 10.8% 11.1 Centerline Dist. to Observer: 0.0 feet Molite Trucks: 8.004 Grade Adjustment: 0.0 Road Elevation: 0.0 feet Autos: 11.10 11.10 11.10 11.10 11.10 11.10 11.10 11.10 11.10 11.10 11.10 11.10 11.10	Highway Data				Site Con	ditions (I	Hard = 1	10, Soi	ft = 15)		
Peak Hour Percentage: 8.08% Medium Trucks (2 Akles): 15 Peak Hour Volume: 4,341 vehicles Heavy Trucks (2 Akles): 15 Vehicle Speed: 50 mph Yeak Heavy Trucks (2 Akles): 15 Near/Far Lane Distance: 73 feet Vehicle Type Day Evening Night Da Site Data Autos: 77.5% 1.29% 9.6% 86. Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 55.0 feet Medium Trucks: 84.8% 4.9% 10.3% 2.7% 10.3% 2.1 Barrier Type (0-Wall, 1-Berm): 0.0 0 feet Medium Trucks: 84.5% 2.7% 10.3% 2.1 Centerline Dist. to Observer: 0.0 feet Medium Trucks: 8.004 Grade Adjustment: 0.0 Barrier Jadd Grade: 0.0% Left View: -90.0 degrees Heavy Trucks: 4.146 Medium Trucks: 41.232 Heavy Trucks: 41.253 Heavy Trucks: 4.1253 FHWA Noise Model Calculations VehicleType <	Average Daily	Traffic (Adt):	53,722 vehicles				A	utos:	15		
Peak Hour Volume: 4,341 vehicles Vehicle Speed: Heavy Trucks (3+ Axles): 15 Near/Far Lane Distance: 73 fet Vehicle Mix Day Evening Night Da Site Data Autos: 77.5% 12.9% 9.6% 86. Barrier Height: 0.0 feet Medium Trucks: 84.8% 4.9% 10.3% 2.1 Barrier Type (O-Wall, 1-Berm): 0.0 feet Medium Trucks: 84.8% 4.9% 10.3% 2.1 Centerline Dist: to Barrier: 55.0 feet Medium Trucks: 86.5% 2.7% 10.8% 11.1 Contentine Dist: to Barrier: 0.0 feet Autos: 0.00 Medium Trucks: 8.004 Grade Adjustment: 0.0 Pad Elevation: 0.0 feet Autos: 1.146 Medium Trucks: 1.29 4.9% 10.3% 1.0 Road Grade: 0.0% Autos: 1.12 4.0% 4.0% 1.12 1.12 1.29 4.14 1.12 1.23 4.14 1.12 1.23 4.14 1.	Peak Hour	Percentage:	8.08%		Me	dium Truc	cks (2 A	xles):	15		
Vehicle Speed: 50 mph Near/Far Lane Distance: 73 feet Vehicle Mix Day Evening Night Da Site Data Autos: 77.5% 12.9% 9.6% 86. Barrier Height: 0.0 feet Medium Trucks: 84.8% 4.9% 10.3% 2.1 Barrier Type (0-Wall, 1-Berm): 0.0 Heavy Trucks: 86.5% 2.7% 10.8% 11.1 Centerline Dist. to Desrver: 5.0 feet Moise Source Elevations (in feet) Autos: 0.00 Medium Trucks: 2.297 Observer Height (Above Pad): 5.0 feet Moise Source Ilevations (in feet) Autos: 0.00 Road Grade: 0.0% Medium Trucks: 4.146 Autos: 1.0 Rober of Grade: 0.0% Medium Trucks: 41.282 Heavy Trucks: 41.246 WehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten WehicleType Leq Viewut Topo and barrier attenuation) -1.20 -4.67	Peak H	our Volume:	4,341 vehicles		He	avy Truck	is (3+ A	xles):	15		
Near/Far Lane Distance: 73 feet VehicleType Day Evening Night Day Site Data Autos: 77.5% 12.9% 9.6% 86.3% Barrier Height: 0.0 feet Medium Trucks: 84.8% 4.9% 10.3% 2.1% Barrier Type (0-Wall, 1-Berm): 0.0 0 Heavy Trucks: 86.5% 2.7% 10.3% 2.1 Centerline Dist. to Diserver: 55.0 feet Medium Trucks: 86.5% 2.7% 10.3% 11.1 Observer: 0.0 feet Autos: 0.00 Medium Trucks: 8.004 Grade Adjustment: 0.0 Barrier Distance to Observer: 0.0 feet Autos: 4.144 Medium Trucks: 41.445 Road Elevation: 0.0 feet Autos: 4.1445 Medium Trucks: 41.253 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Medium Trucks: 81.30 -11.68 1.15 -1.20 <td< td=""><td>Ve</td><td>hicle Speed:</td><td>50 mph</td><td></td><td>Vehicle</td><td>Mix</td><td></td><td></td><td></td><td></td><td></td></td<>	Ve	hicle Speed:	50 mph		Vehicle	Mix					
Site Data Autos: 77.5% 12.9% 9.6% 86. Barrier Height: 0.0 feet Medium Trucks: 84.8% 4.9% 10.3% 2.1 Barrier Type (0-Wall, 1-Berm): 0.0 Genter Stock Medium Trucks: 84.8% 4.9% 10.3% 2.1 Centerline Dist. to Diserver: 55.0 feet Molse Source Elevations (in feet) Noise Source Elevations (in feet) Noise Source Contentions (in feet) Medium Trucks: 8.004 Grade Adjustment: 0.0 Deserver Height V(Abov Pad): 0.0 feet Elevation: 0.0 feet Lance Equivalent Distance (in feet) Autos: 4.1446 Road Grade: 0.0% Laft View: 90.0 degrees Heavy Trucks: 41.232 Heavy Trucks: 41.253 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Autos: 70.20 3.44 1.12 -1.20 -4.67 0.000 0 Medium Trucks: 8.38 -5.48 1.15<	Near/Far La	ne Distance:	73 feet		Veh	icleTvpe	1	Dav	Evenina	Niaht	Dailv
Barrier Height: 0.0 feet Medium Trucks: 84.8% 4.9% 10.3% 2.1% Barrier Type (O-Wall, I-Berm): 0.0 10.0 Heavy Trucks: 86.5% 2.7% 10.8% 11.1 Centerline Dist. to Observer: 55.0 feet Autos: 0.00 Medium Trucks: 2.297 10.8% 11.1 Observer Height (Above Pad): 5.0 feet Autos: 0.00 Medium Trucks: 2.297 Pad Elevation: 0.0 feet Autos: 0.04 Grade Adjustment: 0.0 Road Grade: 0.0% Left View: -90.0 degrees Medium Trucks: 4.123 FHWA Noise Model Calculations 90.0 degrees Medium Trucks: 4.125 4.47 0.000 0 FHWA Noise Model Calculations 1.16 1.15 -1.20 -4.67 0.000 0 Medium Trucks: 81.00 -11.68 1.15 -1.20 -5.38 0.000 0 Medium Trucks: 85.38 -5.48 1.15 -1.20 -5.38 0.000 0	Site Data					AL	itos: T	77.5%	12.9%	9.6%	86.28%
Barrier Type (0-Wall, 1-Berm): 0.0 Heavy Trucks: 86.5% 2.7% 10.8% 11.1 Centerline Dist. to Deserver: 50.0 feet Noise Source Elevations (in feet) Noise Source Elevation: 0.0 feet Medium Trucks: 8.04 Grade Adjustment: 0.0 Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Matos: Noise Model Calculations Noise Model Calculations Noise Model Calculations Noise Noise Heavy Trucks: 41.253 FHWA Noise Model Calculations VenicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Audos: 70.20 -11.68 1.15 -1.20 -4.67 0.000 0 Heavy Trucks: 85.38 -5.48 1.15 -1.20 -5.38 0.000 0 <td>Bai</td> <td>rier Height:</td> <td>0.0 feet</td> <td></td> <td>М</td> <td>edium Tru</td> <td>cks: 8</td> <td>34.8%</td> <td>4.9%</td> <td>10.3%</td> <td>2.66%</td>	Bai	rier Height:	0.0 feet		М	edium Tru	cks: 8	34.8%	4.9%	10.3%	2.66%
Centerline Dist. to Barrier: 55.0 feet Moise Source Elevations (in feet) Centerline Dist. to Observer: 55.0 feet Autos: 0.000 Barrier Distance to Observer: 0.0 feet Autos: 2.297 Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.004 Grade Adjustment: 0.0 Road Grade: 0.0 feet Lane Equivalent Distance (in feet) Lane Equivalent Distance (in feet) Road Grade: 0.00 degrees Heavy Trucks: 41.232 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Medium Trucks: 81.00 -11.68 1.15 -1.20 -4.67 0.000 0 Medium Trucks: 81.00 -11.68 1.15 -1.20 -5.38 0.000 0 Medium Trucks: 85.38 -5.48 1.15 -1.20 -5.38 0.000 0 Medium Trucks: 85.38 -5.48 1.15 -1.20 -5.38 0.000 0 Unmitigated Noise Levels (without Topo an	Barrier Type (0-W	all. 1-Berm):	0.0		1	leavy Tru	cks: 8	36.5%	2.7%	10.8%	11.06%
Centerline Dist. to Observer: 55.0 feet Index: 0.00 Barrier Distance to Observer: 0.0 feet Autos: 0.000 Observer Height (Above Pad): 5.0 feet Medium Trucks: 2.297 Pad Elevation: 0.0 feet Heavy Trucks: 8.004 Grade Adjustment: 0.0 Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Heavy Trucks: 41.232 Right View: 90.0 degrees Heavy Trucks: 41.253 Heavy Trucks: 41.253 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Attan Autos: 81.00 -11.68 1.15 -1.20 -4.67 0.000 0 Medium Trucks: 81.00 -11.68 1.15 -1.20 -5.38 0.000 0 Unmitigated Noise Levels (without Topo and barrier atternation) VehicleType Leq Peak Hour Leq Vening Leq Night Ldn CNEL Unmitigated Noise Levels (without Topo and barrier atternation) Yean	Centerline Dis	st. to Barrier:	55.0 feet		Noiso S	urco Elo	vations	(in fo	of)		
Barrier Distance to Observer: 0.0 feet Medium Trucks: 0.004 Observer Height (Above Pad): 5.0 feet Medium Trucks: 2.297 Pad Elevation: 0.0 feet Heavy Trucks: 8.004 Grade Adjustment: 0.0 Road Grade: 0.0% Left View: 40.0 degrees Medium Trucks: 41.446 WeilderType RBMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Att WeilderType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Att Medium Trucks: 81.00 -11.68 1.15 -1.20 -4.67 0.000 0 Medium Trucks: 83.38 -5.48 1.15 -1.20 -5.38 0.000 0 Unmitigated Noise Levels (without Topo and barrier attenuation) Leq Night Ldn CNEL VehicleType Leq Peak Hour Leq Day Leq Revining Leq Night Zdn	Centerline Dist.	to Observer:	55.0 feet		140/36 30	Autos	vauons	00	eŋ		
Observer Height (Above Pad): 5.0 feet Instruction 100.8 2.2.9 Grade Adjustment: 0.0 Grade Adjustment:	Barrier Distance	to Observer:	0.0 feet		Madiu	Autos. Truckov	2.0	00			
Pad Elevation: 0.0 feet Pready filtures: 0.04 Other Alguments: 0.07 Road Elevation: 0.0 feet Intervy filtures: 0.04 Intervy filtures: 0.00 0 Intervy filtures: 0.00 0	Observer Height (Above Pad):	5.0 feet		Healu	n Trucks.	2.2	04	Grade Ad	iustman	t· 0.0
Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Road Grade: 0.0% Autos: 41.446 Left View: -90.0 degrees Medium Trucks: 41.232 FHWA Noise Model Calculations Heavy Trucks: 41.253 FHWA Noise Model Calculations Instructs: 41.2253 FHWA Noise Model Calculations: VehicleType REIMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Att Autos: 70.0 3.44 1.12 -1.20 -4.67 0.000 0 Medium Trucks: 81.00 -11.68 1.15 -1.20 -4.87 0.000 0 Medium Trucks: 85.38 -5.48 1.15 -1.20 -5.38 0.000 0 Unmitigated Noise Levels (without Topo and barrier atternation) Uep Reining Leq Night Ldn CNEL VehicleType Leq Peak Hour Leq Day Leq Reining Eds 73.4	Pa	ad Elevation:	0.0 feet		Tieat	y mucks.	0.0	04	0/000/10		. 0.0
Road Grade: 0.0% Autos: 41.446 Left View: -90.0 degrees Medium Trucks: 41.232 Right View: 90.0 degrees Heavy Trucks: 41.253 FHWA Noise Model Calculations VehicleType REIMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Att VehicleType REIMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Att Medium Trucks: 81.00 -11.68 1.12 -1.20 -4.67 0.000 0 Heavy Trucks: 85.38 -5.48 1.15 -1.20 -4.67 0.000 0 Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leg Day Leg Night Ldn CNEL Autos: 73.6 72.6 70.8 64.8 73.4	Roa	ad Elevation:	0.0 feet		Lane Eq	uivalent l	Distanc	e (in fe	eet)		
Left View: -90,0 degrees Medium Trucks: 41.232 Right View: 90.0 degrees Heavy Trucks: 41.253 FHWA Noise Model Calculations Frite Road Fresnel Barrier Atten Berm Atten VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Atten Autos: 70.2 3.44 1.12 -1.20 -4.67 0.000 0 Medium Trucks: 81.00 -11.68 1.15 -1.20 -4.67 0.000 0 Medium Trucks: 85.38 -5.48 1.15 -1.20 -4.67 0.000 0 Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leg Day Leg Night Ldn CNEL VehicleType Leg Day Leg Night Ldn CNEL Autos: 73.6 76.6 70.8 64.8 73.4	I	Road Grade:	0.0%			Autos:	41.4	46			
Right View: 90.0 degrees Heavy Trucks: 41.253 FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Att Autos: 70.20 3.44 1.12 -1.20 -4.67 0.000 0 Medium Trucks: 81.00 -11.68 1.15 -1.20 -4.87 0.000 0 Heavy Trucks: 85.38 -5.48 1.15 -1.20 -5.38 0.000 0 Unnitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Vening Leq Night Ldn CNEL VehicleType I.29 Peak Hour Leq Z 70.8 64.8 73.4		Left View:	-90.0 degrees		Mediu	m Trucks:	41.2	32			
EHWA Noise Model Calculations Image: Constraint of the state of the s		Right View:	90.0 degrees		Heav	y Trucks:	41.2	53			
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bern Atten Autos: 70.20 3.44 1.12 -1.20 -4.67 0.000 0 Medium Trucks: 81.00 -11.68 1.15 -1.20 -4.67 0.000 0 Heavy Trucks: 85.38 -54.8 1.15 -1.20 -5.38 0.000 0 Unititigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 73.6 72.6 70.8 64.8 73.4	FHWA Noise Mode	el Calculations	5								
Autos: 70.20 3.44 1.12 -1.20 -4.67 0.000 0 Medium Trucks: 81.00 -11.68 1.15 -1.20 -4.67 0.000 0 Heavy Trucks: 81.00 -11.68 1.15 -1.20 -4.87 0.000 0 Unmitigate Moise Levels (without Topo and barrier attenuation) - - - - - - - - - 0.000 0 VehicleType Leg Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 73.6 72.6 70.8 64.8 73.4	VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresne	el E	Barrier Att	en Be	rm Atten
Medium Trucks: 81.00 -11.68 1.15 -1.20 -4.87 0.000 0 Heavy Trucks: 85.38 -5.48 1.15 -1.20 -5.38 0.000 0 Unmitigated Noise Levels (without Topo and barrier attenuation) - - - - 0.000 0 VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 73.6 72.6 70.8 64.8 73.4	Autos:	70.20	3.44	1.	12	-1.20		4.67	0.0	000	0.000
Heavy Trucks: 85.38 -5.48 1.15 -1.20 -5.38 0.000 0 Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 73.6 72.6 70.8 64.8 73.4	Medium Trucks:	81.00	-11.68	1.	15	-1.20	-	4.87	0.0	000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 73.6 72.6 70.8 64.8 73.4	Heavy Trucks:	85.38	-5.48	1.	15	-1.20	-	5.38	0.0	000	0.000
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 73.6 72.6 70.8 64.8 73.4	Unmitigated Noise	e Levels (with	out Topo and ba	rrier atte	nuation)						
Autos: 73.6 72.6 70.8 64.8 73.4	VehicleType	Leq Peak Hou	r Leq Day	Leq E	Evening	Leq N	light		Ldn	С	NEL
	Autos:	73	.6 72.	6	70.8		64.8		73.4	4	74.0
Medium Trucks: 69.3 68.7 62.3 60.8 69.2	Medium Trucks:	69	.3 68.	.7	62.3		60.8		69.2	2	69.5
Heavy Trucks: 79.8 79.3 70.3 71.6 79.9	Heavy Trucks:	79	.8 79.	.3	70.3		71.6		79.9)	80.0
Vehicle Noise: 81.1 80.5 73.9 72.7 81.1	Vehicle Noise:	81	.1 80.	.5	73.9		72.7		81.1	i -	81.3
Centerline Distance to Noise Contour (in feet)	Centerline Distand	e to Noise Co	ntour (in feet)	Т							
70 dBA 65 dBA 60 dBA 55 dBA				70	dBA	65 di	BA	60	0 dBA	55	5 dBA
Ldn: 302 650 1,400 3,			Ldi	n:	302		650		1,400		3,016
CNEL: 312 672 1,448 3,			CNEL	L:	312		672		1,448		3,119

	FH\	NA-RD-77-108	HIGHW	AY N	OISE PF	REDICTI		DEL			
Scena	rio: OYCP (Noi	n-Peak)		Project Name: Gateway Aviation							
Road Nar	ne: Harley Kno	x BI.				Job Nu	imber: ·	13445			
Road Segme	ent: e/o Patters	on Av.									
SITE	SPECIFIC IN	IPUT DATA				N	OISE N	IODE		5	
Highway Data				S	Site Con	ditions ('Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	31,618 vehicle	es					Autos	15		
Peak Hou	Percentage:	8.08%			Me	dium Tru	cks (2 A	(xles	15		
Peak I	Hour Volume:	2,555 vehicles	6		He	avy Truc	ks (3+ A	(xles	15		
Ve	ehicle Speed:	45 mph		v	/ehicle	Mix					
Near/Far La	ane Distance:	80 feet		F	Veh	icleTvpe		Dav	Evenina	Night	Dailv
Site Data						A	utos:	77.5%	6 12.9%	9.6%	85.61%
Ba	rrier Height:	0.0 feet			Me	edium Tr	ucks:	84.8%	6 4.9%	10.3%	2.71%
Barrier Type (0-V	Vall, 1-Berm):	0.0			ŀ	leavy Tr	ucks:	86.5%	6 2.7%	10.8%	11.68%
Centerline D	ist. to Barrier:	64.0 feet		A	loise Sc	ource Ele	vation	s (in f	eet)		
Centerline Dist.	to Observer:	64.0 feet		-		Autos	. 00	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	n Trucks	. 21	297			
Observer Height	ver Height (Above Pad): 5.0 feet			Heav	n Trucks		104	Grade Adi	iustmen	t: 0.0	
F	Pad Elevation: 0.0 feet				near	y mucks	. 0.0	-04	,		
Ro	Road Elevation: 0.0 feet				ane Eq	uivalent	Distand	e (in:	feet)		
	Road Grade:	0.0%				Autos	: 50.	210			
	Left View:	-90.0 degree	es		Mediu	m Trucks	50.0	033			
	Right View:	90.0 degree	es		Heav	y Trucks	50.0	050			
FHWA Noise Moo	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Atte	en Be	rm Atten
Autos	68.46	1.56		-0.13	3	-1.20		-4.70	0.0	000	0.000
Medium Trucks:	79.45	-13.44		-0.11		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-7.09		-0.11		-1.20		-5.31	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenı	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	L	eq Ev	rening	Leq I	Vight		Ldn	С	NEL
Autos	68	1.7	67.7		66.0		59.9)	68.5	5	69.1
Medium Trucks:	64	.7	64.1		57.8		56.2		64.7	,	64.9
Heavy Trucks	75	i.9	75.4		66.3		67.6	i	75.9)	76.1
Vehicle Noise:	76	i.9	76.3		69.5		68.5		76.9)	77.1
Centerline Distan	ce to Noise Co	ontour (in feet,									
				70 d	BA	65 c	IBA		60 dBA	55	dBA
			Ldn:		185		399		859		1,851
		CI	VEL:		191	91 412 887			1,911		

	FH	WA-RD-77-108	HIGHW	AY NO	DISE PF	REDICTI		DEL			
Scenar	Scenario: OYCP (Non-Peak) Road Name: Harley Knox Bl.						Name: (Gatew	ay Aviation		
Road Nan Road Segme	ent: e/o Indian	AV.				JOD NL	infiber:	13445			
SITE	SPECIFIC IN	IPUT DATA				N	OISE N	IODE	L INPUT	S	
Highway Data				S	ite Con	ditions (Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	14,842 vehicl	es					Autos:	15		
Peak Hour	Percentage:	8.08%			Me	dium Tru	cks (2 A	(xles):	15		
Peak H	lour Volume:	1,199 vehicle	s		He	avy Truc	ks (3+ A	(xles):	15		
Ve	ehicle Speed:	45 mph		v	ehicle I	Nix					
Near/Far La	ane Distance:	80 feet		-	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	86.23%
Ba	rrier Height:	0.0 feet			Me	edium Tri	ucks:	84.8%	4.9%	10.3%	2.67%
Barrier Type (0-V	Vall, 1-Berm):	0.0			ŀ	leavy Tr	ucks:	86.5%	2.7%	10.8%	11.10%
Centerline D	ist. to Barrier:	64.0 feet		N	oise Sc	ource Ele	evations	s (in f	eet)		
Centerline Dist.	to Observer:	64.0 feet				Autos	: 0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks	: 2.2	297			
Observer Height	(Above Pad):	5.0 feet			Heav	y Trucks	: 8.0	004	Grade Adj	iustment	: 0.0
P	ad Elevation:	0.0 feet			F		Distant		641		
Ro	ad Elevation:	0.0 feet		L	ane Equ	livalent	Distant	e (In	reet)		
	Road Grade:	0.0%				Autos	50.4	210			
	Left View:	-90.0 degre	es		Mediui	TI TRUCKS	50.0	J33)50			
	Right view:	90.0 degre	es		neav	y TTUCKS	. 50.0	50			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	68.46	-1.69		-0.13		-1.20		-4.70	0.0	000	0.000
Medium Trucks:	79.45	-16.79		-0.11		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-10.59		-0.11		-1.20		-5.31	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Day	/ L	eq Eve	ening	Leq I	Vight		Ldn	C	NEL
Autos:	65	5.4	64.5		62.7		56.6		65.3	3	65.9
Medium Trucks:	61	1.4	60.8		54.4		52.9		61.3	3	61.6
Heavy Trucks:	72	2.3	71.9		62.8		64.1		72.4	1	72.5
Vehicle Noise:	73	3.4	72.9		66.1		65.1		73.5	þ	73.7
Centerline Distan	ce to Noise C	ontour (in feet)								
				70 dl	BA	65 a	IBA		50 dBA	55	dBA
		-	Ldn:		109		235		505		1,088
		C	NEL:		112		242		522		1,124

		A-100-11-100			1010211			0022					
Scenar	io: OYC (Peak)				Project	t Name:	Gatew	ay Aviatior	ı			
Road Nan	ne: Heacock Si					Job N	lumber:	13445					
Road Segme	nt: s/o Iris Av.												
SITE	SPECIFIC IN	PUT DATA					OISE	MODE	L INPUT	S			
Highway Data					Site Con	ditions	(Hard	= 10, So	oft = 15)				
Average Daily	Traffic (Adt):	28,638 vehicl	es					Autos:	15				
Peak Hour	Percentage:	8.08%			Me	dium Tr	ucks (2	Axles):	15				
Peak F	lour Volume:	2,314 vehicle	s		He	avy Tru	cks (3+	Axles):	15				
Ve	hicle Speed:	50 mph			Vehicle I	Mix							
Near/Far La	ne Distance:	48 feet			Veh	icleType	9	Day	Evening	Night	Daily		
Site Data							Autos:	77.5%	12.9%	9.6%	86.59		
Ba	rrier Height:	0.0 feet			Me	edium T	rucks:	84.8%	4.9%	10.3%	2.60%		
Barrier Type (0-V	/all, 1-Berm):	0.0			F	leavy T	rucks:	86.5%	2.7%	10.8%	10.829		
Centerline Di	st. to Barrier:	50.0 feet		- E	Noise Sc	urco E	lovatio	ne (in fi	oof)				
Centerline Dist.	to Observer:	50.0 feet		H	10130 00	Auto	10 V U U U	000					
Barrier Distance	to Observer:	0.0 feet			Mediu	n Truck	is: 0	297					
Observer Height	oserver Height (Above Pad): 5.0 feet						Heavy Trucks: 8.004 Grade Adjustment: 0.0						
P	ad Elevation:	0.0 feet		-		,							
Ro	ad Elevation:	0.0 feet		4	Lane Eq	uivalen	t Distai	nce (in	feet)				
	Road Grade:	0.0%				Auto	is: 44	1.147					
	Left View:	-90.0 degre	es		Mediui	m Truck	(S: 43	3.947					
	Right View:	90.0 degre	es		Heav	у тиск	(S. 43	3.966					
FHWA Noise Mod	el Calculation	S											
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	snel	Barrier Att	ten Ber	m Atten		
Autos:	70.20	0.72		0.7	1	-1.20		-4.65	0.	000	0.00		
Medium Trucks:	81.00	-14.51		0.7	4	-1.20		-4.87	0.	000	0.00		
Heavy Trucks:	85.38	-8.31		0.7	3	-1.20		-5.43	0.	000	0.00		
Unmitigated Nois	e Levels (with	out Topo and	barri	ier atten	uation)								
VehicleType	Leq Peak Hou	r Leq Day	/	Leq E	vening	Leq	Night		Ldn	C	NEL		
Autos:	70	.4	69.5		67.7		61	.6	70.	3	70.		
Medium Trucks:	66	.0	65.4		59.1		57	.5	66.	0	66.		
Heavy Trucks:	76	.6	76.1		67.1		68	.3	76.	7	76.		
Vehicle Noise:	77	.8	77.3		70.7		69	.5	77.	9	78.		
Centerline Distan	ce to Noise Co	ontour (in feet	,										
			l	70 (dBA	65	dBA	1	50 dBA	55	dBA		
		~	Ldn:		167		36	0	776	5	1,671		
		C	NEL:		173		37	2	802	<u> </u>	1,729		

Tuesday, December 8, 2020

	FHV	VA-RD-77-108 H	IIGHWA	YN	DISE PI	REDICT	ION MC	DEL				
Scenar Road Nan Road Segme	rio: OYC (Peak ne: Heacock St nt: n/o Gentian) Av.				Project Job N	Name: lumber:	Gatew 13445	ay Aviatic	'n		
SITE	SPECIFIC IN	PUT DATA				N	IOISE	MODE	L INPU	rs		
Highway Data				S	ite Con	ditions	(Hard =	: 10, So	oft = 15)			
Average Daily	Traffic (Adt):	30,609 vehicles						Autos:	15			
Peak Hour	Percentage:	8.08%			Me	dium Tru	ucks (2	Axles):	15			
Peak H	lour Volume:	2,473 vehicles			He	avy Truc	cks (3+	Axles):	15			
Ve	hicle Speed:	50 mph		v	ehicle I	Mix						
Near/Far La	ne Distance:	48 feet		-	Veh	icleTvpe		Dav	Evening	Nic	aht	Dailv
Site Data				-		0.01.jp0 /	Autos:	77.5%	12.9%		9.6%	86.50%
Ba	rrior Hoight	0.0 foot			M	edium Ti	rucks:	84.8%	4.9%	10	0.3%	2.61%
Barrier Type (0-W	Vall 1-Rerm)	0.0 1001			ŀ	leavy Ti	rucks:	86.5%	2.7%	5 10).8%	10.89%
Centerline Di	ist. to Barrier:	50.0 feet						- 6- 4	41			
Centerline Dist.	to Observer:	50.0 feet		N	oise so	ource El	evation	IS (IN TO	eet)			
Barrier Distance	to Observer:	0.0 feet				Auto	s: 0	000				
Observer Height	(Above Pad);	5.0 feet			Mediui	n Truck	s: 2	297	0	-11 A.		0.0
P	ad Elevation:	0.0 feet			Heav	y Truck	s: 8	.004	Grade A	ajustr	nent:	0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	t Distan	ce (in	feet)	-		-
	Road Grade:	0.0%				Auto:	s: 44	.147		-		-
	Left View:	-90.0 degrees			Mediu	n Truck	s: 43	.947				
	Right View:	90.0 degrees			Heav	y Truck	s: 43	.966				
FHWA Noise Mod	el Calculations	5		_								
VehicleType	REMEL	Traffic Flow	Distanc	е	Finite	Road	Fres	nel	Barrier A	tten	Berr	n Atten
Autos:	70.20	1.01	(0.71		-1.20		-4.65	0	.000		0.00
Medium Trucks:	81.00	-14.19	(0.74		-1.20		-4.87	0	.000		0.00
Heavy Trucks:	85.38	-7.99	(0.73		-1.20		-5.43	0	.000		0.00
Unmitigated Nois	e Levels (with	out Topo and b	arrier at	tenı	ation)							-
VehicleType	Leq Peak Hou	r Leq Day	Leo	η Ev	ening	Leq	Night		Ldn		CN	IEL
Autos:	70	.7 6	9.7		68.0		61.	9	70	.5		71.
Medium Trucks:	66	.3 6	5.8		59.4		57.	9	66	.3		66.
Heavy Trucks:	76	.9 70	5.4		67.4		68.	6	77	.0		77.
Vehicle Noise:	78	.2 7	7.6		71.0		69.	8	78	.2		78.4
Centerline Distan	ce to Noise Co	ntour (in feet)						1				
			7	70 d	BA	65	dBA		60 dBA		55 (dВА
		L	dn:		175		378	3	81	4		1,753
		CNI	EL:		181		391		84	2		1,814

	FH\	NA-RD-77-108 HI	GHWAY	NOISE PI	REDICTI		DEL			
Scenai	rio: OYC (Peak	:)			Project I	Name: (Gatew	ay Aviation		
Road Nan	ne: Heacock S	t.			Job NL	Imber:	13445			
Road Segme	nt: s/o Cardina	al Av.								
SITE	SPECIFIC IN	IPUT DATA			N	OISE N	IODE		s	
Highway Data				Site Con	ditions ('Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	29,965 vehicles				,	Autos:	15		
Peak Hour	Percentage:	8.08%		Me	dium Tru	cks (2 A	(xles)	15		
Peak H	lour Volume:	2,421 vehicles		He	avy Truc	ks (3+ A	(xles)	15		
Ve	ehicle Speed:	50 mph		Vehicle I	Mix					
Near/Far La	ane Distance:	48 feet		Veh	icleType		Day	Evening	Nigh	t Daily
Site Data					A	utos:	77.5%	12.9%	9.6	85.36%
Ra	rrier Heiaht [.]	0.0 feet		M	edium Tru	ucks:	84.8%	4.9%	10.3	% 2.71%
Barrier Type (0-V	Vall, 1-Berm):	0.0		I	Heavy Tri	ucks:	86.5%	b 2.7%	10.8	11.93%
Centerline D	ist. to Barrier:	50.0 feet		Noise So	ource Ele	evations	s (in f	eet)		
Centerline Dist.	to Observer:	50.0 feet			Autos	: 0.0	000	,		
Barrier Distance	to Observer:	0.0 feet		Mediu	m Trucks	2.2	297			
Observer Height	(Above Pad):	5.0 feet		Heav	/v Trucks	: 8.0	004	Grade Adj	iustme	ent: 0.0
P	ad Elevation:	0.0 feet								
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent	Distanc	e (in	feet)		
	Road Grade:	0.0%			Autos	: 44.	147			
	Left View:	-90.0 degrees		Mediu	m Trucks	: 43.9	947			
	Right View:	90.0 degrees		Heav	/y Trucks	43.9	966			
FHWA Noise Mod	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresn	el	Barrier Atte	en E	Berm Atten
Autos:	70.20	0.86	0.7	71	-1.20		-4.65	0.0	000	0.000
Medium Trucks:	81.00	-14.12	0.7	74	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	85.38	-7.69	0.7	73	-1.20		-5.43	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and bar	rrier atte	nuation)						
VehicleType	Leq Peak Hou	ır Leq Day	Leg E	Evening	Leq N	Vight		Ldn		CNEL
Autos:	70	0.6 69.0	6	67.8		61.8		70.4	ŧ	71.0
Medium Trucks:	66	.4 65.	8	59.5		57.9)	66.4	ł	66.6
Heavy Trucks:	77	.2 76.	7	67.7		68.9		77.3	3	77.4
Vehicle Noise:	78	.4 77.	8	71.1		70.0)	78.4	ŀ	78.6
Centerline Distan	ce to Noise Co	ontour (in feet)								
			70	dBA	65 a	íBA	(60 dBA	4	55 dBA
		Ldr	n:	181		390		841		1,811
		CNEL	<u></u>	187		403		869		1,872

	FH	WA-RD-77-108	HIGHW	AY NO	DISE PF	REDICTIC		DEL			
Scenar	io: OYC (Peal				Project N	lame: (Gatew	ay Aviation			
Road Nan Road Segme	ne: Heacock S nt: s/o Nandin	t. a Av.				Job Nu	mber: 1	13445			
SITE	SPECIFIC IN	NPUT DATA				N	DISE N	IODE	L INPUTS	5	
Highway Data				S	ite Con	ditions (I	Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	1 vehicl	es				A	Autos:	15		
Peak Hour	Percentage:	8.08%			Me	dium Truc	cks (2 A	(xles):	15		
Peak H	lour Volume:	0 vehicle	s		He	avy Truck	(S (3+ A	(xles):	15		
Ve	hicle Speed:	50 mph		V	ehicle I	Mix					
Near/Far La	ne Distance:	48 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						AL	utos:	77.5%	12.9%	9.6%	86.23%
Ba	rrier Height:	0.0 feet			Me	edium Tru	icks:	84.8%	4.9%	10.3%	2.67%
Barrier Type (0-V	/all, 1-Berm):	0.0			ŀ	leavy Tru	icks:	86.5%	2.7%	10.8%	11.10%
Centerline D	st. to Barrier:	50.0 feet		N	oise Sc	ource Ele	vations	s (in fe	eet)		
Centerline Dist.	to Observer:	50.0 feet				Autos:	0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks:	2.2	297			
Observer Height	(Above Pad):	5.0 feet			Heav	y Trucks:	8.0	004	Grade Adj	ustment	0.0
P	ad Elevation:	0.0 feet			_						
Ro	ad Elevation:	0.0 feet		Li	ane Eq	uivalent L	Distanc	e (in i	reet)		
	Road Grade:	0.0%				Autos:	44.	147			
	Left View:	-90.0 degre	es		Meaiur	n Trucks:	43.9	947			
	Right View:	90.0 degre	es		Heav	y Trucks:	43.8	900			
FHWA Noise Mod	el Calculation	S									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	70.20	-43.86		0.71		-1.20		-4.65	0.0	100	0.000
Medium Trucks:	81.00	-58.96		0.74		-1.20		-4.87	0.0	100	0.000
Heavy Trucks:	85.38	-52.77		0.73		-1.20		-5.43	0.0	100	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	/ Le	eq Eve	ening	Leq N	light		Ldn	CI	VEL
Autos:	25	5.8	24.9		23.1		17.1		25.7	/	26.3
Medium Trucks:	21	1.6	21.0		14.6		13.1		21.5	;	21.8
Heavy Trucks:	32	2.1	31.6		22.6		23.9		32.2	!	32.3
Vehicle Noise:	33	3.4	32.8		26.2		25.0		33.4	r	33.6
Centerline Distan	ce to Noise C	ontour (in feet)								
				70 dE	ЗA	65 di	ВA	6	60 dBA	55	dBA
		-	Ldn:		0		0		1		2
		С	NEL:		0		0		1		2

		VA-IND-11-100	nigi	NVATN				DEL							
Scenar	Scenario: OYC (Peak)						Project Name: Gateway Aviation								
Road Nam	e: Cactus Av.					Job N	lumber:	13445							
Road Segme	nt: w/o Heacoo	k St.													
SITE	SPECIFIC IN	PUT DATA				N	IOISE	MODE	L INPUT	S					
Highway Data				1	Site Con	ditions	(Hard =	= 10, Se	oft = 15)						
Average Daily	Traffic (Adt):	53,816 vehicle	es					Autos:	15						
Peak Hour	Percentage:	8.08%			Me	dium Tri	ucks (2	Axles):	15						
Peak H	lour Volume:	4,348 vehicles	s		He	avy Tru	cks (3+	Axles):	15						
Ve	hicle Speed:	50 mph		1	/ehicle l	Mix									
Near/Far La	ne Distance:	73 feet			Veh	icleType	•	Day	Evening	Night	Daily				
Site Data							Autos:	77.5%	12.9%	9.6%	86.31%				
Ba	rrier Heiaht:	0.0 feet			Me	edium Ti	rucks:	84.8%	4.9%	10.3%	2.65%				
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy T	rucks:	86.5%	2.7%	10.8%	11.04%				
Centerline Di	st. to Barrier:	55.0 feet		,	Voise Sr	urco El	lovatio	ne (in fi	aof)						
Centerline Dist.	to Observer:	55.0 feet		·	10/30 00	Auto	e 0	000							
Barrier Distance	to Observer:	0.0 feet			Mediu	n Truck	s. 0 s [.] 2	297							
Observer Height (bserver Height (Above Pad): 5.0 feet						Heavy Trucks: 8.004 Grade Adjustment: 0.0								
Pa	ad Elevation:	0.0 feet													
Roa	ad Elevation:	0.0 feet		1	ane Eq	uivalent	t Distar	ice (in	feet)						
	Road Grade:	0.0%				Auto	s: 41	.446							
	Left View:	-90.0 degree	es		Mediui	n Truck	s: 41	.232							
	Right View:	90.0 degree	es		Heav	у тиск	s: 41	.253							
FHWA Noise Mode	el Calculation:	s													
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten				
Autos:	70.20	3.45		1.13	2	-1.20		-4.67	0.0	000	0.000				
Medium Trucks:	81.00	-11.68		1.1	5	-1.20		-4.87	0.0	000	0.000				
Heavy Trucks:	85.38	-5.48		1.1	5	-1.20		-5.38	0.0	000	0.00				
Unmitigated Noise	e Levels (with	out Topo and	barri	er atten	uation)										
VehicleType	Leq Peak Hou	r Leq Day	<i>'</i>	Leg Ev	/ening	Leq	Night		Ldn	C	NEL				
Autos:	73	.6	72.6		70.8		64.	8	73.4	4	74.				
Medium Trucks:	69	.3	68.7		62.3		60.	8	69.3	2	69.				
Heavy Trucks:	79	.8	79.3		70.3		71.	6	79.9	9	80.0				
venicle Noise:	81	.1	80.5		73.9		72	/	81.	1	81.3				
Centerline Distant	ce to Noise Co	ontour (in feet,)	70	10.4										
			I da:	/00	IBA 000	65	aBA		DU OBA	55	aBA				
			Lan:		302		65	J	1,400		3,016				
		CI	VEL:		312		673	<u> </u>	1,448		3,119				

Tuesday, December 8, 2020

	FHV	NA-RD-77-108 HIC	GHWAY N	OISE PI	REDICTIO		EL			
Scenar	io: OYC (Peak	:)			Project I	Vame: G	atewa	y Aviation		
Road Nan	ne: Indian Av.				Job Nu	mber: 13	3445			
Road Segme	nt: s/o Nandina	a Av.								
SITE	SPECIFIC IN	IPUT DATA			N	DISE M	ODEL	. INPUTS	5	
Highway Data			5	Site Con	ditions (Hard = 1	0, Soi	ft = 15)		
Average Daily	Traffic (Adt):	30,903 vehicles				A	utos:	15		
Peak Hour	Percentage:	8.08%		Me	dium Tru	cks (2 Ax	(les):	15		
Peak F	lour Volume:	2,497 vehicles		He	avy Trucl	ks (3+ Ax	(les):	15		
Ve	hicle Speed:	45 mph	1	/ehicle	Mix					
Near/Far La	ne Distance:	36 feet	-	Veh	icleTvpe	D	av	Evenina	Night	Dailv
Site Data				-	A	utos: 7	7.5%	12.9%	9.6%	85.32%
Ba	rrier Height:	0.0 feet		M	edium Tru	icks: 8	4.8%	4.9%	10.3%	2.72%
Barrier Type (0-V	/all_1-Berm):	0.0		ŀ	leavy Tru	icks: 8	6.5%	2.7%	10.8%	11.95%
Centerline Di	st. to Barrier:	44.0 feet		laina Cr	uree Ele	vationa	lin fa	o.#)		
Centerline Dist.	to Observer:	44.0 feet	,	voise sc	Autoo	vauons		ey		
Barrier Distance	to Observer:	0.0 feet		Madiu	Autos. m Trucko	. 0.00	JU 70			
Observer Height	(Above Pad):	5.0 feet		Hear	Trucks	. 2.23		Grade Adi	ustment	0.0
P	ad Elevation:	0.0 feet		neav	y mucks.	0.00	J4	orade Auj	usiment	0.0
Ro	ad Elevation:	0.0 feet	L	ane Eq	uivalent	Distance	e (in fe	eet)		
	Road Grade:	0.0%			Autos.	40.46	50			
	Left View:	-90.0 degrees		Mediu	m Trucks	40.24	41			
	Right View:	90.0 degrees		Heav	ry Trucks.	40.26	52			
FHWA Noise Mod	el Calculation	s	I							
VehicleType	REMEL	Traffic Flow D	Distance	Finite	Road	Fresne	I E	Barrier Atte	en Ber	m Atten
Autos:	68.46	1.45	1.28	3	-1.20	-4	4.61	0.0	00	0.000
Medium Trucks:	79.45	-13.51	1.31	1	-1.20	-4	4.87	0.0	00	0.000
Heavy Trucks:	84.25	-7.09	1.31	1	-1.20	-8	5.50	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and ban	rier atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	Leg Ev	<i>ening</i>	Leq N	light		Ldn	CI	VEL
Autos:	70	.0 69.0)	67.2		61.2		69.8		70.4
Medium Trucks:	66	.0 65.5	5	59.1		57.6		66.0		66.3
Heavy Trucks:	77	.3 76.8	3	67.7		69.0		77.3		77.5
Vehicle Noise:	78	.3 77.7	7	70.8		69.9		78.3		78.5
Centerline Distan	ce to Noise Co	ontour (in feet)								
			70 a	iBA	65 d	BA	60) dBA	55	dBA
		Ldn	e	158		340		732		1,577
		CNEL		163		350		755		1,627

	FHV	VA-RD-77-108	HIGHV	VAY N	OISE PR	EDICTI		DEL			
Scenar	io: OYC (Peak)				Project I	Name:	Gatew	ay Aviation	1	
Road Nam	e: Cactus Av.					Job NL	imber:	13445			
Road Segme	nt: e/o Heacoc	k St.									
SITE	SPECIFIC IN	PUT DATA				N	OISE	NODE		s	
Highway Data				S	Site Cond	ditions (Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	36,526 vehicle	s					Autos:	15		
Peak Hour	Percentage:	8.08%			Med	lium Tru	cks (2 /	Axles):	15		
Peak H	lour Volume:	2,951 vehicles	6		Hea	ivy Truc	ks (3+)	Axles):	15		
Ve	hicle Speed:	40 mph		1	/ehicle N	lix					
Near/Far La	ne Distance:	50 feet		-	Vehio	cleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	6 86.30%
Ba	rrier Height:	0.0 feet			Me	dium Tru	ucks:	84.8%	4.9%	10.3%	6 2.65%
Barrier Type (0-W	/all, 1-Berm):	0.0			н	leavy Tri	ucks:	86.5%	2.7%	10.8%	5 11.04%
Centerline Di	st. to Barrier:	44.0 feet			loise So	urce Ele	vation	s (in fe	eet)		
Centerline Dist.	to Observer:	44.0 feet		Ē		Autos	: 0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediun	n Trucks	. 2	297			
Observer Height ((Above Pad):	5.0 feet			Heav	/ Trucks	. 8	004	Grade Ad	iustmen	t: 0.0
Pa	ad Elevation:	0.0 feet			, loar,	, maone	. 0.				
Roa	ad Elevation:	0.0 feet		L	.ane Equ	ivalent	Distan	ce (in i	feet)		
	Road Grade:	0.0%				Autos	: 36.	551			
	Left View:	-90.0 degree	s		Mediun	n Trucks	: 36.	308			
	Right View:	90.0 degree	s		Heavy	/ Trucks	: 36.	332			
FHWA Noise Mode	el Calculations	5									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite I	Road	Fresr	nel	Barrier Att	en Be	rm Atten
Autos:	66.51	2.73		1.94	1	-1.20		-4.61	0.0	000	0.000
Medium Trucks:	77.72	-12.39		1.98	3	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	82.99	-6.19		1.98	3	-1.20		-5.50	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day	· 1	Leq Ev	rening	Leq N	light		Ldn	0	NEL
Autos:	70	.0	69.0		67.2		61.3	2	69.8	В	70.4
Medium Trucks:	66	.1	65.5		59.2		57.6	5	66.1	1	66.3
Heavy Trucks:	77	.6	77.1		68.0		69.3	3	77.6	6	77.8
Vehicle Noise:	78	.5	78.0		71.0		70.2	2	78.6	5	78.8
Centerline Distant	ce to Noise Co	ntour (in feet)									
				70 d	IBA	65 a	IBA	6	60 dBA	5	5 dBA
			Ldn:		164		353		760		1,638
		CI	VEL:		169		364		784		1,689

	FH ¹	WA-RD-77-108	HIGHW	AY NO	DISE PI	REDICTI	ON MOI	DEL			
Scenar	rio: OYC (Peal			Project	Name: (Gatewa	ay Aviation				
Road Nan Road Segme	ne: Harley Kno ent: e/o Patters	on Av.				Job Ni	umber: 1	13445			
SITE	SPECIFIC IN	IPUT DATA				N	OISE N	IODE	L INPUT	s	
Highway Data				Si	ite Con	ditions (Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	31,891 vehicl	es				A	Autos:	15		
Peak Hour	Percentage:	8.08%			Me	dium Tru	icks (2 A	(xles):	15		
Peak H	lour Volume:	2,577 vehicle	s		He	avy Truc	ks (3+ A	(xles):	15		
Ve	ehicle Speed:	45 mph		V	ehicle	Mix					
Near/Far La	ane Distance:	80 feet		-	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	85.32%
Ba	rrier Height:	0.0 feet			М	edium Tr	ucks:	84.8%	4.9%	10.3%	2.73%
Barrier Type (0-V	Vall, 1-Berm):	0.0			I	Heavy Tr	ucks:	86.5%	2.7%	10.8%	11.95%
Centerline D	ist. to Barrier:	64.0 feet		N	oise So	ource Ele	evations	s (in fe	eet)		
Centerline Dist.	to Observer:	64.0 feet				Autos	: 0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	: 2.2	297			
Observer Height	(Above Pad):	5.0 feet			Heav	y Trucks	. 8.0	004	Grade Adj	iustment	: 0.0
P	ad Elevation:	0.0 feet					Distance	- (In)	(
Ro	ad Elevation:	0.0 feet		La	ane Eq	uivaient	Distanc	e (in i	reet)		
	Road Grade:	0.0%				Autos	: 50.2	210			
	Left View:	-90.0 degre	es		Meaiu	m Trucks	50.0	J33			
	Right View:	90.0 degre	es		Heat	y Trucks	: 50.0	120			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Atte	en Ber	rm Atten
Autos:	68.46	1.58		-0.13		-1.20		-4.70	0.0	000	0.000
Medium Trucks:	79.45	-13.37		-0.11		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-6.95		-0.11		-1.20		-5.31	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	/ L	.eq Eve	ening	Leq I	Vight		Ldn	C	NEL
Autos:	68	3.7	67.7		66.0		59.9		68.5	5	69.1
Medium Trucks:	64	1.8	64.2		57.8		56.3		64.7	7	65.0
Heavy Trucks:	76	3.0	75.5		66.5		67.7		76.1	1	76.2
Vehicle Noise:	77	7.0	76.4		69.5		68.6		77.0)	77.2
Centerline Distan	ce to Noise C	ontour (in feet)								
				70 dE	BA	65 0	1BA	6	60 dBA	55	dBA
		-	Ldn:		188		406		875		1,885
		С	NEL:		194 419 903					1,944	

	FHV	VA-RD-77-108	HIGH	HWAY N	OISE PI	REDICI	ION MO	DEL			
Scenario	Scenario: HY 2040 w/o ext.						Name:	Gatew	ay Aviation		
Road Name	e: Heacock St					Job N	lumber:	13445			
Road Segmen	t: n/o Gentian	Av.									
SITE S	SPECIFIC IN	PUT DATA				1	IOISE N	IODE	LINPUT	s	
Highway Data				s	ite Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	33,022 vehicle	es					Autos:	15		
Peak Hour I	Percentage:	8.08%			Me	dium Tr	ucks (2 A	(xles	15		
Peak Ho	our Volume:	2,668 vehicle	s		He	avy Tru	cks (3+ A	(xles)	15		
Vel	nicle Speed:	50 mph		ν	ehicle l	Mix					
Near/Far Lar	ne Distance:	48 feet			Veh	icleType	2	Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	86.23
Ban	rier Height:	0.0 feet			Me	edium T	rucks:	84.8%	4.9%	10.3%	2.67
Barrier Type (0-Wa	all, 1-Berm):	0.0			ŀ	leavy T	rucks:	86.5%	2.7%	10.8%	11.109
Centerline Dis	t. to Barrier:	50.0 feet			loise Sr	urce F	levation	s (in fi	eef)		
Centerline Dist. t	to Observer:	50.0 feet		Ē		Auto	s' 01	000			
Barrier Distance t	to Observer:	0.0 feet			Mediu	n Truck	s: 2.	297			
Observer Height (/	Above Pad):	5.0 feet			Heav	v Truck	s: 8.0	004	Grade Ad	iustment.	0.0
Pa	d Elevation:	0.0 feet		-							
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalen	t Distand	ce (in	feet)		
F	Road Grade:	0.0%				Auto	s: 44.	147			
	Left View:	-90.0 degree	es		Mediui	m Truck	s: 43.	947			
	Right View:	90.0 degre	es		Heav	у тиск	S: 43.	900			
FHWA Noise Mode	Calculation:	5									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	70.20	1.32		0.71		-1.20		-4.65	0.0	000	0.00
Medium Trucks:	81.00	-13.77		0.74		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	85.38	-7.58		0.73		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er atteni	uation)						
VehicleType	Leq Peak Hou	r Leq Day	/	Leq Ev	ening	Leq	Night		Ldn	CI	VEL
Autos:	71	.0	70.1		68.3		62.2	2	70.9	9	71.
Medium Trucks:	66	.8	66.2		59.8		58.3	3	66.7	7	67.
Heavy Trucks:	77	.3	76.8		67.8		69.1		77.4	1	77.
Vehicle Noise:	78	.5	78.0		71.4		70.2	2	78.6	5	78.
Centerline Distanc	e to Noise Co	ontour (in feet)					_			
			L	70 d	BA	65	dBA		50 dBA	55	dBA
		~	Ldn:		186		401		865		1,863
		G			-10.3		415		804		- a 027

Wednesday, December 9, 2020

	FHV	VA-RD-77-108	HIGH\	WAY N	NOISE PF	REDICT		DEL			
Scenar	io: OYC (Peak)				Project	Name: (Gatev	ay Aviation		
Road Nam Road Segme	ne: Harley Kno: nt: e/o Indian A	k Bl. NV.				Job N	umber: '	13445			
SITE	SPECIFIC IN	PUT DATA				N	IOISE N	IODE	EL INPUTS	5	
Highway Data					Site Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	14,842 vehicle	5					Autos.	15		
Peak Hour	Percentage:	8.08%			Me	dium Tru	ucks (2 A	(xles)	: 15		
Peak H	lour Volume:	1,199 vehicles			He	avy Truc	cks (3+ A	(xles)	: 15		
Ve	hicle Speed:	45 mph		F	Vehicle I	Nix					
Near/Far La	ne Distance:	80 feet		F	Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%	6 12.9%	9.6%	86.23%
Ba	rrier Height:	0.0 feet			Me	edium Ti	rucks:	84.8%	6 4.9%	10.3%	2.67%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy Ti	rucks:	86.5%	6 2.7%	10.8%	11.10%
Centerline Di	st. to Barrier:	64.0 feet		ŀ	Noise Sc	urce Fl	evation	: (in f	eet)		
Centerline Dist.	to Observer:	64.0 feet		Ē		Auto	s [.] 0 (000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	n Truck	e 22	97			
Observer Height ((Above Pad):	5.0 feet			Heav	v Truck	s: 2.0	004	Grade Adi	ustmen	t: 0.0
P	ad Elevation:	0.0 feet		L	nour	,	. 0.0				
Ro	ad Elevation:	0.0 feet		4	Lane Eq	uivalent	Distanc	e (in	feet)		
	Road Grade:	0.0%				Auto:	s: 50.2	210			
	Left View:	-90.0 degree	5		Mediur	n Truck	s: 50.0	033			
	Right View:	90.0 degree	5		Heav	y Truck	s: 50.0	050			
FHWA Noise Mod	el Calculation:	5									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresn	el	Barrier Atte	en Be	rm Atten
Autos:	68.46	-1.69		-0.1	3	-1.20		-4.70	0.0	00	0.000
Medium Trucks:	79.45	-16.79		-0.1	1	-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	84.25	-10.59		-0.1	1	-1.20		-5.31	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and k	arrier	r atten	nuation)						
VehicleType	Leq Peak Hou	r Leq Day		Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	65	.4 6	4.5		62.7		56.6		65.3		65.9
Medium Trucks:	61	.4 6	0.8		54.4		52.9		61.3		61.6
Heavy Trucks:	72	.3 7	1.9		62.8		64.1		72.4		72.5
Vehicle Noise:	73	.4 7	2.9		66.1		65.1		73.5		73.7
Centerline Distan	ce to Noise Co	ontour (in feet)									
				70	dBA	65	dBA		60 dBA	55	i dBA
		L	.dn:		109		235		505		1,088
		CN	EL:		112		242		522		1,124

	FHV	VA-RD-77-108	HIGHV	VAY NO	JISE PI	REDICTI	ON MO	DEL			
Scenario	Scenario: HY 2040 w/o ext. Road Name: Heacock St						Name:	Gatew	ay Aviation		
Road Name	: Heacock S	t.				Job Ni	umber:	13445			
Road Segment	: s/o Iris Av.										
SITE S	PECIFIC IN	IPUT DATA				N	OISE	MODE	L INPUT	s	
Highway Data				S	ite Con	ditions (Hard =	10, Sc	oft = 15)		
Average Daily T	raffic (Adt):	28,473 vehicle	s					Autos:	15		
Peak Hour F	Percentage:	8.08%			Me	dium Tru	icks (2 /	Axles):	15		
Peak Ho	ur Volume:	2,301 vehicles	6		He	avy Truc	ks (3+)	Axles):	15		
Veh	icle Speed:	50 mph		V	ehicle l	Mix					
Near/Far Lan	e Distance:	48 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	86.23%
Barr	ier Heiaht [.]	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	2.67%
Barrier Type (0-Wa	II, 1-Berm):	0.0			ŀ	leavy Tr	ucks:	86.5%	2.7%	10.8%	11.10%
Centerline Dist	to Barrier:	50.0 feet		A	nisa Sr	urco El	avation	e (in f	oof)		
Centerline Dist. to	o Observer:	50.0 feet		N	0138 30	Autor	- auon				
Barrier Distance to	Observer:	0.0 feet			Modiu	n Trucks	· 0.	207			
Observer Height (A	bove Pad):	5.0 feet			Heav	n Trucks	. 2.	004	Grade Ad	iustment	.00
Pad	d Elevation:	0.0 feet			near	y macks	i. 0.	004			
Road	d Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in i	feet)		
R	oad Grade:	0.0%				Autos	: 44.	.147			
	Left View:	-90.0 degree	s		Mediu	n Trucks	: 43.	.947			
	Right View:	90.0 degree	s		Heav	y Trucks	: 43.	.966			
FHWA Noise Model	Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresr	nel	Barrier Att	en Ber	rm Atten
Autos:	70.20	0.68		0.71		-1.20		-4.65	0.0	000	0.000
Medium Trucks:	81.00	-14.42		0.74		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	85.38	-8.22		0.73		-1.20		-5.43	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType L	eq Peak Hou	ir Leq Day	· .	Leq Eve	ening	Leq I	Vight		Ldn	C	NEL
Autos:	70	.4	69.4		67.7		61.6	6	70.2	2	70.8
Medium Trucks:	66	.1	65.5		59.2		57.6	6	66.1	1	66.3
Heavy Trucks:	76	.7	76.2		67.2		68.4	4	76.8	3	76.9
Vehicle Noise:	77	.9	77.3		70.7		69.	5	77.9	J	78.1
Centerline Distance	e to Noise Co	ontour (in feet)		-			-				
				70 dl	BA	65 0	1BA	6	60 dBA	55	dBA
			Ldn:		169		364		784		1,688
		CI	VEL:		175		376	6	810		1,746

	FH\	WA-RD-77-108	HIGHW.	AY NO	DISE PF	REDICTIO	ON NO	DEL					
Scenar	io: HY 2040 w	/o ext.				Project I	Vame:	Gatev	ay Aviation				
Road Nan Road Segme	ne: Heacock S nt: s/o Cardina	al Av.				JOD NL	imper:	13445	1				
SITE	SPECIFIC IN	NPUT DATA				N	OISE N	IOD	EL INPUT	s			
Highway Data				S	ite Con	ditions (Hard =	10, S	oft = 15)				
Average Daily	Traffic (Adt):	31,784 vehicle	es				,	Autos	15				
Peak Hour	Percentage:	8.08%			Me	dium Tru	cks (2 A	(xles	: 15				
Peak H	lour Volume:	2,568 vehicles	s		He	avy Truc	ks (3+ A	Axles)	: 15				
Ve	hicle Speed:	50 mph		v	ehicle l	Nix							
Near/Far La	ne Distance:	48 feet		-	Veh	icleType		Day	Evening	Night	Daily		
Site Data						A	utos:	77.5%	6 12.9%	9.6%	6 86.23%		
Ba	rrier Heiaht:	0.0 feet			Me	edium Tru	ucks:	84.8%	6 4.9%	10.3%	. 2.67%		
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy Tru	ucks:	86.5%	6 2.7%	10.8%	6 11.10%		
Centerline Di	st. to Barrier:	50.0 feet		N	loise Sc	ource Ele	vation	s (in f	ieet)		-		
Centerline Dist.	to Observer:	50.0 feet				Autos	: 0.0	000		-			
Barrier Distance	Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297							
Observer Height	Observer Height (Above Pad): 5.0 feet					y Trucks	: 8.0	004	Grade Adj	justmer	nt: 0.0		
P	Pad Elevation: 0.0 feet						Di-4		641				
Ro	ad Elevation:	0.0 feet		L	ane Equ	livalent	Distant	ce (In	reet)				
	Road Grade:	0.0%			1 4 m - 16	Autos	44.	147					
	Lett View:	-90.0 degree	es		Mediui	n Trucks	43.	947					
	Right view:	90.0 degree	es		neav	y Hucks	. 43.	900					
FHWA Noise Mod	el Calculation	s											
VehicleType	REMEL	Traffic Flow	Distar	ice	Finite	Road	Fresn	el	Barrier Atte	en Be	erm Atten		
Autos:	70.20	1.16		0.71		-1.20		-4.65	0.0)00	0.000		
Medium Trucks:	81.00	-13.94		0.74		-1.20		-4.87	0.0	000	0.000		
Heavy Trucks:	85.38	-7.75		0.73		-1.20		-5.43	0.0	000	0.000		
Unmitigated Nois	e Levels (with	out Topo and	barrier a	ttenu	ation)			1					
VehicleType	Leq Peak Hou	ur Leq Day	Le Le	eq Eve	ening	Leq N	light		Ldn		CNEL		
Autos:	70).9	69.9		68.1		62.1		70.7	1	71.3		
Medium Trucks:	66	0.6	66.0 70.7		59.7		58.1		66.6	ز -	66.8		
Heavy Trucks:	//	(.2	76.7		67.6		68.9	,	70.4		71.4		
venicie ivoise:	78	3.4	//.8		/1.2		70.0	,	78.4	ł	78.0		
Centerline Distan	Centerline Distance to Noise Contour (in feet)					70 dBA 65 dBA 60 dBA 55			5 dBA				
	I dn:					182 391		1	843	1	1.817		
		CI	NEL:	188 405 872 1,879						1,879			

		VA-IND-77-100	nigi	IWAI N		LDIGH						
Scenario	: HY 2040 w/			Project	Name: (Gatew	ay Aviation					
Road Name	e: Indian Av.					Job N	umber: `	13445				
Road Segmen	t: s/o Nandina	a Av.										
SITE S	SPECIFIC IN	PUT DATA				N	OISE N	IODE	L INPUT	S		
Highway Data				s	ite Cond	litions	Hard =	10, So	oft = 15)			
Average Daily 1	Traffic (Adt):	32,978 vehicle	es					Autos:	15			
Peak Hour F	Percentage:	8.08%			Med	lium Tru	icks (2 A	(xles)	15			
Peak Ho	our Volume:	2,665 vehicle	s		Hea	avy Truc	ks (3+ A	(xles)	15			
Veh	nicle Speed:	45 mph		V	ehicle N	lix						
Near/Far Lan	e Distance:	36 feet			Vehio	cleType		Day	Evening	Night	Daily	
Site Data					Autos: 77.5% 12.9% 9.6%							
Ban	rier Height:	0.0 feet			Me	dium Tr	ucks:	84.8%	4.9%	10.3%	2.67	
Barrier Type (0-Wa	all, 1-Berm):	0.0			н	leavy Tr	ucks:	86.5%	2.7%	10.8%	11.109	
Centerline Dis	t. to Barrier:	44.0 feet			laise Sa	urco El	avation	: (in fi	oof)			
Centerline Dist. t	o Observer:	44.0 feet		-	0130 00	Autos	. 00	000				
Barrier Distance t	o Observer:	0.0 feet			Mediun	n Trucks	. 0.0	297				
Observer Height (#	bserver Height (Above Pad): 5.0 feet						. 2.	004	Grade Ad	iustment	: 0.0	
Pa	d Elevation:	_										
Roa	d Elevation:	0.0 feet		L	ane Equ	ivalent	Distanc	e (in	feet)			
F	Road Grade:	0.0%				Autos	: 40.4	460				
	Left View:	-90.0 degre	es		Mediun	1 Trucks	: 40.	241				
	Right View:	90.0 degre	es		Heavy	/ Trucks	: 40.	262				
FHWA Noise Mode	I Calculation:	S										
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite I	Road	Fresn	el	Barrier Att	en Ber	m Atten	
Autos:	68.46	1.78		1.28		-1.20		-4.61	0.0	000	0.00	
Medium Trucks:	79.45	-13.32		1.31		-1.20		-4.87	0.0	000	0.00	
Heavy Trucks:	84.25	-7.13		1.31		-1.20		-5.50	0.0	000	0.00	
Unmitigated Noise	Levels (with	out Topo and	barri	er atteni	uation)							
VehicleType	Leq Peak Hou	r Leq Day	/	Leq Ev	ening	Leq	Vight		Ldn	C	NEL	
Autos:	70	.3	69.3		67.6		61.5		70.1	1	70.	
Medium Trucks:	66	.2	65.7		59.3		57.7		66.2	2	66	
Heavy Trucks:	77	.2	76.7		67.7 69.0 77.3			3	77.			
Vehicle Noise:	78	.3	77.7		71.0		69.9		78.3	3	78.	
Centerline Distanc	e to Noise Co	ontour (in feet)									
			L	70 d	BA	65 (1BA	6	60 dBA	55	dBA	
	Ldn:				158 341 735			1,584				
		C	NEL		164		352		750		1 639	

Wednesday, December 9, 2020

	FHV	NA-RD-77-108	HIGHWA	N N	OISE PI	REDICT	ION MO	DEL				
Scenai Road Nan	rio: HY 2040 w/ ne: Heacock Si	/o ext. t.				Project Job N	Name: umber:	Gatew 13445	vay Aviatior	۱		
Road Segme	ent: s/o Nandina	a Av.										
SITE	SPECIFIC IN	IPUT DATA				N	IOISE I	IODE	EL INPUT	s	_	
Highway Data				S	ite Con	ditions	(Hard =	10, S	oft = 15)			
Average Daily	Traffic (Adt):	1 vehicle	s					Autos	15			
Peak Hour	Percentage:	8.08%			Me	dium Tru	ucks (2 /	Axles)	: 15			
Peak H	lour Volume:	0 vehicles			He	avy Truc	cks (3+)	(xles	: 15			
Ve	ehicle Speed:	50 mph		V	ahicla I	Mix						
Near/Far La	ane Distance:	48 feet		F	Veh	icleTvpe		Dav	Evenina	Niał	nt	Dailv
Site Data				-		,	Autos:	77.5%	6 12.9%	9.	6%	86.23%
Ba	rrier Height:	0.0 feet			M	edium Ti	rucks:	84.8%	6 4.9%	10.	3%	2.67%
Barrier Type (0-V	Vall. 1-Berm):	0.0			ŀ	leavy Ti	rucks:	86.5%	6 2.7%	10.	8%	11.10%
Centerline Di	ist. to Barrier:	50.0 feet			laiaa Cr	uraa El	ovetion	- <i>(in f</i>	in a fl			
Centerline Dist.	to Observer:	50.0 feet		n n	ioise sc	Auto	evalion	s (III I	eelj			
Barrier Distance	to Observer:	0.0 feet				Auto	s: 0.	JUU 207				
Observer Height	Observer Height (Above Pad): 5.0 feet						S: Z.	297	Grade Ad	liuetm	ont.	0.0
P	Pad Elevation: 0.0 feet						s: 8.	JU4	Graue Au	jusun	ent.	0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in	feet)			
	Road Grade:	0.0%				Auto	s: 44.	147				
	Left View:	-90.0 degree	s		Mediu	m Truck	s: 43.	947				
	Right View:	90.0 degree	s		Heav	y Truck	s: 43.	966				
FHWA Noise Mod	lel Calculation	s										
VehicleType	REMEL	Traffic Flow	Distan	ce	Finite	Road	Fresr	el	Barrier Att	en i	Berm	n Atten
Autos:	70.20	-43.86		0.71		-1.20		-4.65	0.0	000		0.000
Medium Trucks:	81.00	-58.96		0.74		-1.20		-4.87	0.0	000		0.000
Heavy Trucks:	85.38	-52.77		0.73		-1.20		-5.43	0.0	000		0.000
Unmitigated Nois	e Levels (with	out Topo and I	arrier a	ttenı	uation)							
VehicleType	Leq Peak Hou	ır Leq Day	Le	q Ev	ening	Leq	Night		Ldn		CN	EL
Autos:	25	.8 2	4.9		23.1		17.1		25.	7		26.3
Medium Trucks:	21	.6 2	1.0		14.6		13.1		21.	5		21.8
Heavy Trucks:	32	.1 3	1.6		22.6		23.9)	32.	2		32.3
Vehicle Noise:	33	.4 3	2.8		26.2		25.0)	33.4	4		33.6
Centerline Distan	ce to Noise Co	ontour (in feet)	-									
				70 d	BA	65	dBA		60 dBA		55 d	BA
		1	.dn:		0		0		1	1		2
		CN	EL:		0		0		1	1		2

	FHV	NA-RD-77-108	HIGHW	AY NO	OISE PF	REDICTI		DEL			
Scenari	io: HY 2040 w	/o ext.				Project	Name: (Gatew	ay Aviation	n	
Road Nam	e: Cactus Av.					Job N	umber: `	13445			
Road Segmer	nt: w/o Heacoo	ok St.									
SITE	SPECIFIC IN	IPUT DATA				N	OISE N	IODE	L INPUT	S	
Highway Data				S	ite Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	58,874 vehicle	es				,	Autos:	15		
Peak Hour	Percentage:	8.08%			Me	dium Tru	icks (2 A	Axles):	15		
Peak H	lour Volume:	4,757 vehicles	5		He	avy Truc	:ks (3+ A	Axles):	15		
Ve	hicle Speed:	50 mph		V	ehicle l	Nix					
Near/Far La	ne Distance:	73 feet		F	Vehi	cleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	6 86.23%
Bai	rrier Height	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	6 2.67%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Tr	ucks:	86.5%	2.7%	10.8%	6 11.10%
Centerline Dis	st. to Barrier:	55.0 feet		N	loise Sc	urco El	ovation	s (in fa	oof)		
Centerline Dist.	to Observer:	55.0 feet			0.30 00	Autos	. 00	200			
Barrier Distance	to Observer:	0.0 feet			Modiur	n Trucki	. 0.0	207			
Observer Height (Above Pad):	5.0 feet			Heav	n Trucks	s. 2.2	207	Grade Ad	iustmer	t. 0.0
Pá	ad Elevation:	0.0 feet			Tieav	y mucks	5. 0.0	504	0/000/10	Juotimon	. 0.0
Roa	ad Elevation:	0.0 feet		L	ane Equ	uivalent	Distanc	ce (in i	feet)		
I	Road Grade:	0.0%				Autos	s: 41.4	446			
	Left View:	-90.0 degree	es		Mediur	n Trucks	s: 41.5	232			
	Right View:	90.0 degree	es		Heav	y Trucks	5: 41.3	253			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	псе	Finite	Road	Fresn	el	Barrier Att	en Be	erm Atten
Autos:	70.20	3.83		1.12		-1.20		-4.67	0.0	000	0.000
Medium Trucks:	81.00	-11.26		1.15		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	85.38	-5.07		1.15		-1.20		-5.38	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier a	attenu	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	' L	eq Ev	ening	Leq	Night		Ldn	0	ONEL
Autos:	74	.0	73.0		71.2		65.2	2	73.8	В	74.4
Medium Trucks:	69	.7	69.1		62.7		61.2	2	69.7	7	69.9
Heavy Trucks:	80	0.3	79.8		70.7		72.0)	80.3	3	80.5
Vehicle Noise:	81	.5	80.9		74.3		73.1		81.5	ō	81.7
Centerline Distance	ce to Noise Co	ontour (in feet,	1								
				70 di	BA	65 (dBA	6	60 dBA	5	5 dBA
	Ldn:						321 692 1,491			3,212	
		CI	VEL:		332		716		1,542		3,321

	FH	WA-RD-77-10	8 HIGH	WAY N	OISE P	REDICTIO	ON MOE	DEL			
Scena	rio: HY 2040 w	//o ext.				Project N	Vame: G	Gatew	ay Aviation		
Road Nar	ne: Cactus Av					Job Nu	mber: 1	3445			
Road Segme	ent: e/o Heaco	ck St.									
SITE	SPECIFIC II	NPUT DATA				N	DISE M	ODE	L INPUTS	3	
Highway Data				S	Site Cor	nditions (l	Hard = 1	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	39,968 vehic	les				A	utos:	15		
Peak Hour	Percentage:	8.08%			Me	edium True	cks (2 A	xles):	15		
Peak H	lour Volume:	3,229 vehicle	es		He	avy Truck	ks (3+ A	xles):	15		
Ve	ehicle Speed:	40 mph		v	ehicle/	Mix					
Near/Far La	ane Distance:	50 feet		Ē	Veh	icleType	l	Day	Evening	Night	Daily
Site Data						A	utos: T	77.5%	12.9%	9.6%	86.23%
Ba	rrier Height:	0.0 feet			М	edium Tru	icks: {	34.8%	4.9%	10.3%	2.67%
Barrier Type (0-V	Vall, 1-Berm):	0.0				Heavy Tru	icks: 8	36.5%	2.7%	10.8%	11.10%
Centerline D	ist. to Barrier:	44.0 feet		٨	loise S	ource Ele	vations	(in fe	eet)		
Centerline Dist.	to Observer:	44.0 feet				Autos:	0.0	00	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	22	97			
Observer Height	Observer Height (Above Pad): 5.0 feet				Hea	v Trucks	8.0	04	Grade Adj	ustment	: 0.0
P	Pad Elevation: 0.0 feet							-			
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distanc	e (in i	feet)		
	Road Grade:	0.0%				Autos:	36.5	51			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	36.3	80			
	Right View:	90.0 degre	es		Hear	vy Trucks:	36.3	32			
FHWA Noise Mod	lel Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresne	e/	Barrier Atte	en Ber	m Atten
Autos:	66.51	3.12	2	1.94	ļ	-1.20	-	4.61	0.0	00	0.000
Medium Trucks:	77.72	-11.98	3	1.98	3	-1.20	-	4.87	0.0	00	0.000
Heavy Trucks:	82.99	-5.78	3	1.98	3	-1.20	-	5.50	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	l barrie	r attenu	uation)						
VehicleType	Leq Peak Ho	ur Leq Da	y	Leq Ev	ening	Leq N	light		Ldn	C	VEL
Autos:	70	0.4	69.4		67.6		61.6		70.2		70.8
Medium Trucks:	66	6.5	65.9		59.6		58.0		66.5		66.7
Heavy Trucks:	78	3.0	77.5		68.5		69.7		78.1		78.2
Vehicle Noise:	78	3.9	78.4		71.4		70.6		79.0		79.2
Centerline Distan	enterline Distance to Noise Contour (in feet)										
						65 d	BA	6	60 dBA	55	dBA
	Ldn:				174 376 810				1,744		
		C	NEL:		180		388		835		1,799

	FHV	VA-RD-77-108	HIG	HWAY N	OISE PI	REDICT	ION MC	DDEL				
Scenario Road Name Road Segment	: HY 2040 w/ : Harley Knox : e/o Indian A	o ext. < Bl.				Project Job N	Name: lumber:	Gatew 13445	ay Aviatior	1		
SITE S	PECIFIC IN	PUT DATA				N	IOISE	MODE		s		
Highway Data				5	Site Con	ditions	(Hard =	10, S	oft = 15)	-		
Average Daily T Peak Hour F Peak Ho Veh	raffic (Adt): Percentage: ur Volume: icle Speed:	16,326 vehicle 8.08% 1,319 vehicle 45 mph	es s		Me He	dium Tri avy Truc	ucks (2 cks (3+	Autos. Axles). Axles).	15 15 15			
Near/Far Lan	e Distance:	80 feet			Venicie i Veh	VIIX icleType		Dav	Evenina	Niaht	Daily	
Site Data					ven	icie i ype	Autos	77.5%	12.9%	9.6%	86 239	
Barr	ior Hoight	0.0 feet			M	edium Ti	rucks:	84.8%	4.9%	10.3%	2.679	
Barrier Type (0-Wa	ll, 1-Berm):	0.0			1	Heavy T	rucks:	86.5%	2.7%	10.8%	11.109	
Centerline Dist	to Barrier:	64.0 feet		,	loise So	ource El	levatior	ns (in f	eet)			
Centerline Dist. to Barrier Distance to Observer Height (A Pao			Mediu Heav	Auto m Truck vy Truck	s: 0 s: 2 s: 8	.000 .297 .004	Grade Ad	ljustment	: 0.0			
Road	d Elevation:	0.0 feet		L	.ane Eq	uivalent	t Distan	ice (in	feet)			
R	oad Grade: Left View: Right View:	0.0% -90.0 degree 90.0 degree	es es		Autos: 50.210 Medium Trucks: 50.033 Heavy Trucks: 50.050							
FHWA Noise Model	Calculations	5										
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	nel	Barrier Att	en Bei	rm Atten	
Autos:	68.46	-1.28		-0.13	3	-1.20		-4.70	0.0	000	0.00	
Medium Trucks:	79.45	-16.38		-0.11	I	-1.20		-4.88	0.0	000	0.00	
Heavy Trucks:	84.25	-10.18		-0.11	I	-1.20		-5.31	0.0	000	0.00	
Unmitigated Noise	Levels (with	out Topo and	barri	er atten	uation)							
VehicleType I	.eq Peak Hou	r Leq Day	/	Leq Ev	rening	Leq	Night		Ldn	С	NEL	
Autos:	65	.9	64.9		63.1		57.	1	65.	7	66.	
Medium Trucks:	61	.8	61.2		54.8		53.	3	61.3	7	62.	
Heavy Trucks:	72	.8	72.3		63.2		64.	5	72.	8	73.	
Vehicle Noise:	73	.8	73.3		66.5		65.	5	73.9	9	74.	
Centerline Distance	e to Noise Co	ntour (in feet)	70 -	0.4	65	10.4	1	0 -0 4		-10.4	
			I dn	70 0	110	60	UDA	<u> </u>	50 UDA	1 55	1 1 C	
	CNEL:				120 258 556 1.1				1,160			
											,	

Wednesday, December 9, 2020

	FHV	VA-RD-77-108 I	HIGHWA	AY NO	OISE PF	REDICTIC	N MO	DEL			
Scenario: HY	2040 w/	o ext.				Project N	ame:	Gatew	ay Aviation	1	
Road Name: Har	ley Kno	k BI.				Job Nu	nber:	13445			
Road Segment: e/o	Patterso	on Av.									
SITE SPEC	IFIC IN	PUT DATA				NC	ISE N	IODE	L INPUT	S	
Highway Data				S	ite Con	ditions (H	lard =	10, Sc	oft = 15)		
Average Daily Traffic	(Adt):	34,146 vehicles	3					Autos:	15		
Peak Hour Percei	ntage:	8.08%			Me	dium Truc	ks (2 A	Axles):	15		
Peak Hour Vo	lume:	2,759 vehicles			He	avy Truck	s (3+ A	Axles):	15		
Vehicle S	peed:	45 mph		V	ehicle I	lix					
Near/Far Lane Dis	tance:	80 feet		-	Vehi	cleTvpe		Dav	Evenina	Night	Dailv
Site Data						AL	tos:	77.5%	12.9%	9.6%	86.23%
Barrier H	eiaht:	0.0 feet		Medium Trucks: 84.8% 4.9% 10.3% 2.6							
Barrier Type (0-Wall, 1-E	Berm):	0.0			F	leavy Tru	cks:	86.5%	2.7%	10.8%	11.10%
Centerline Dist. to B	arrier:	64.0 feet		N	laise Sa	urce Elev	ation	: (in fa	oot)		
Centerline Dist. to Obs	erver:	64.0 feet			0/30 00	Autos:	0.0	200			
Barrier Distance to Obs	erver:	0.0 feet			Modiur	n Trucke	2	207			
Observer Height (Above	Observer Height (Above Pad): 5.0 feet				Heav	v Trucks:	2.4	04	Grade Ad	iustment	· 0.0
Pad Elev			neav	y maona.	0.1	504	,				
Road Elev	ation:	0.0 feet		L	ane Equ	ivalent L	Distand	ce (in i	feet)		
Road C	Grade:	0.0%				Autos:	50.	210			
Left	View:	-90.0 degrees	3		Mediur	n Trucks:	50.	033			
Right	View:	90.0 degrees	3		Heav	y Trucks:	50.	050			
FHWA Noise Model Cald	ulation	5									
VehicleType REI	MEL	Traffic Flow	Distan	се	Finite	Road	Fresn	el	Barrier Att	en Bei	rm Atten
Autos:	68.46	1.93		-0.13		-1.20		-4.70	0.0	000	0.000
Medium Trucks:	79.45	-13.17		-0.11		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-6.98		-0.11		-1.20		-5.31	0.0	000	0.000
Unmitigated Noise Leve	ls (with	out Topo and b	arrier a	ttenu	uation)						
VehicleType Leg P	eak Hou	r Leq Day	Le	q Eve	ening	Leq N	ight		Ldn	С	NEL
venicie rype Ley r	can nou				66.3		60.3	1	68.9	9	69.5
Autos:	69	.1 6	8.1				00.0		00.0		
Autos: Medium Trucks:	69 65	.1 6 .0 6	8.1 4.4		58.0		56.5	5	64.9	Э	65.2
Autos: Medium Trucks: Heavy Trucks:	69 65 76	.1 6 .0 6 .0 7	8.1 4.4 5.5		58.0 66.4		56.5 67.7	, ,	64.9 76.0	9 D	65.2 76.2
Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	69 65 76 77	.1 6 .0 6 .0 7 .0 7	8.1 4.4 5.5 6.5		58.0 66.4 69.7		56.5 67.7 68.7	; ,	64.9 76.0 77.1	9 D 1	65.2 76.2 77.3
Autos: Medium Trucks: Heavy Trucks: Vehicle Noise: Centerline Distance to N	69 65 76 77 Ioise Co	.1 6 .0 6 .0 7 .0 7 ontour (in feet)	8.1 4.4 5.5 6.5		58.0 66.4 69.7		56.5 67.7 68.7	,	64.9 76.0 77.1	9) 1	65.2 76.2 77.3
Autos: Medium Trucks: Heavy Trucks: Vehicle Noise: Centerline Distance to N	69 65 76 77 Ioise Co	.1 6 .0 6 .0 7 .0 7 <i>ontour (in feet)</i>	8.1 4.4 5.5 6.5	70 dl	58.0 66.4 69.7 BA	65 dl	56.5 67.7 68.7	6	64.9 76.0 77.1	9) 1 55	65.2 76.2 77.3 i dBA
Autos: Autos: Heavy Trucks: Vehicle Noise: Centerline Distance to N	69 65 76 77 Ioise Co	.1 6 .0 6 .0 7 .0 7 <i>ntour (in feet)</i>	8.1 4.4 5.5 6.5 dn:	70 dl	58.0 66.4 69.7 BA 190	65 dl	56.5 67.7 68.7 3A 409	6	64.9 76.0 77.1 60 dBA 880	9) 1 55	65.2 76.2 77.3 <i>dBA</i> 1,897

	FHV	VA-RD-77-108	HIGHW.	AY NO	DISE PF	REDICTI	ON MOI	DEL				
Scenario: Road Name: Road Segment:	HYP 2040 v Heacock St n/o Gentian	w/o ext. (Non-F t. 1 Av.	eak)	Project Name: Gateway Aviation Job Number: 13445								
SITE SP	ECIFIC IN	IPUT DATA				N	IOISE N	IODE	L INPUT	s		
Highway Data				S	ite Con	ditions	(Hard =	10, So	oft = 15)			
Average Daily Tra	affic (Adt):	33,372 vehicle	es					Autos:	15			
Peak Hour Pe	rcentage:	8.08%			Me	dium Tru	icks (2 A	xles):	15			
Peak Hou	r Volume:	2,696 vehicle	s		He	avy Truc	cks (3+ A	xles):	15			
Vehic	le Speed:	50 mph		14	ohiclo I	Mix						
Near/Far Lane	Distance:	48 feet			Veh	icleTvne		Dav	Evenina	Niaht	Daily	
Site Data					VCIII	icie i ype	Autos:	77.5%	12.9%	9.6%	5 86.38%	
Barrio	v Hoight	0.0 foot			Me	edium Ti	ucks:	84.8%	4.9%	10.3%	2.64%	
Barrier Type (0-Wall	1_Rerm)	0.0 leet			ŀ	Heavy Tr	ucks:	86.5%	2.7%	10.8%	10.98%	
Centerline Dist.	to Barrier:	50.0 feet		-								
Centerline Dist. to	Observer:	50.0 feet		N	oise Sc	burce El	evations	s (in te	et)			
Barrier Distance to	Observer:	0.0 feet				Autos	s: 0.0	000				
Observer Height (Ab	Observer Height (Above Pad): 5.0 feet						S.' 2.4	297	Crada Ad	ivetmen	+ 0.0	
Pad	Elevation:	0.0 feet			Heav	y Truck	s: 8.0	04	Graue Auj	usunen	1. 0.0	
Road	Elevation:	0.0 feet		La	ane Eq	uivalent	Distanc	e (in f	feet)			
Roa	ad Grade:	0.0%				Autos	s: 44.1	147				
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 43.9	947				
R	ight View:	90.0 degree	es		Heav	y Truck	s: 43.9	966				
FHWA Noise Model C	Calculation	s										
VehicleType	REMEL	Traffic Flow	Distar	ice	Finite	Road	Fresn	e/	Barrier Att	en Be	rm Atten	
Autos:	70.20	1.38		0.71		-1.20		-4.65	0.0	000	0.000	
Medium Trucks:	81.00	-13.77		0.74		-1.20		-4.87	0.0	000	0.000	
Heavy Trucks:	85.38	-7.58		0.73		-1.20		-5.43	0.0	000	0.000	
Unmitigated Noise L	evels (with	out Topo and	barrier a	ttenu	ation)							
VehicleType Le	q Peak Hou	ir Leq Day	' Le	eq Eve	ening	Leq	Night		Ldn	0	NEL	
Autos:	71	.1	70.1		68.3		62.3		70.9	9	71.5	
Medium Trucks:	66	.8	66.2		59.8		58.3		66.7	7	67.0	
Heavy Trucks:	77	.3	76.8		67.8		69.1		77.4	1	77.5	
Vehicle Noise:	Vehicle Noise: 78.6 78.0						70.2		78.6	6	78.8	
Centerline Distance	enterline Distance to Noise Contour (in feet)									T		
							70 dBA 65 dBA 60 dBA			55	5 dBA	
			Ldn:	187 402 866				1,866				
		C	NEL:		193 416 896 1,5					1,930		

	FH	WA-RD-77-10	B HIGHV	VAY NO	DISE PI	REDICTIC	ON MOE	DEL					
Scena Road Nan Road Segme	rio: HYP 2040 ne: Heacock S ent: s/o Iris Av.	w/o ext. (Non- st.	Peak)			Project N Job Nu	lame: 0 mber: 1	Gatew 3445	ay Aviation				
SITE	SPECIFIC II	NPUT DATA				NO	DISE M	ODE	L INPUTS	5			
Highway Data				Si	ite Con	ditions (I	Hard = 1	10, So	oft = 15)				
Average Daily	Traffic (Adt):	28,923 vehic	les				A	utos:	15				
Peak Hour	r Percentage:	8.08%			Me	dium Truc	cks (2 A	xles):	15				
Peak I	Hour Volume:	2,337 vehicle	es		He	avy Truck	is (3+ A	xles):	15				
Ve	ehicle Speed:	50 mph		V	ehicle	Mix							
Near/Far La	ane Distance:	48 feet			Veh	icleType	L	Day	Evening	Night	Daily		
Site Data						AL	itos:	77.5%	12.9%	9.6%	86.45%		
Ba	arrier Height:	0.0 feet			М	edium Tru	cks: 8	34.8%	4.9%	10.3%	2.62%		
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tru	cks: 8	36.5%	2.7%	10.8%	10.93%		
Centerline D	ist. to Barrier:	50.0 feet		N	oise So	ource Ele	vations	(in f	eet)				
Centerline Dist.	to Observer:	50.0 feet				Autos:	0.0	00	,				
Barrier Distance	Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2,297							
Observer Height	Observer Height (Above Pad): 5.0 feet				Hea	v Trucks	8.0	04	Grade Adi	ustment	0.0		
F	Pad Elevation: 0.0 feet					<i>y maono</i> .	0.0	0.	,				
Ro	ad Elevation:	0.0 feet		Lá	ane Eq	uivalent l	Distanc	e (in	feet)				
	Road Grade:	0.0%				Autos:	44.1	47					
	Left View:	-90.0 degre	es		Mediu	m Trucks:	43.9	47					
	Right View:	90.0 degre	es		Heav	y Trucks:	43.9	66					
FHWA Noise Mod	lel Calculation	IS											
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresne	e/	Barrier Atte	en Ber	rm Atten		
Autos:	70.20	0.76	5	0.71		-1.20	-	4.65	0.0	00	0.000		
Medium Trucks:	81.00	-14.42	2	0.74		-1.20	-	4.87	0.0	00	0.000		
Heavy Trucks:	85.38	-8.22	2	0.73		-1.20	-	5.43	0.0	00	0.000		
Unmitigated Nois	e Levels (with	out Topo and	l barrier	attenu	ation)								
VehicleType	Leq Peak Ho	ur Leq Da	y l	Leq Eve	ening	Leq N	light		Ldn	C	NEL		
Autos:	70	0.5	69.5		67.7		61.7		70.3		70.9		
Medium Trucks:	6	5.1	65.5		59.2		57.6		66.1		66.3		
Heavy Trucks:	70	6.7	76.2		67.2		68.4		76.8		76.9		
Vehicle Noise:	Vehicle Noise: 77.9 77.3						69.5		77.9		78.2		
Centerline Distan	enterline Distance to Noise Contour (in feet)					r							
						70 dBA 65 dBA 60 dBA		55	dBA				
			Ldn:		169 364 785				1,692				
		C	NEL:		175		377		812		1,750		

	FHV	VA-RD-77-108	HIGH	HWAY NC	DISE PR	EDICTI		DEL			
Scenario Road Name Road Segmen	b: HYP 2040 v e: Heacock St t: s/o Nandina			Project I Job Nu	Vame: (Imber: 1	Gatew 3445	ay Aviation				
SITES	SPECIFIC IN	PUT DATA				N	OISE N	IODE	L INPUT	S	
Highway Data				Si	te Cond	litions (Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	451 vehicle	es				A	Autos:	15		
Peak Hour I	Percentage:	8.08%			Med	lium Tru	cks (2 A	xles):	15		
Peak He	our Volume:	36 vehicle	s		Hea	vy Truc	ks (3+ A	xles):	15		
Vel	nicle Speed:	50 mph		Ve	hicle N	lix					
Near/Far Lar	e Distance:	48 feet		-	Vehio	leType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	99.979
Bar	rier Heiaht:	0.0 feet			Me	dium Tru	ucks:	84.8%	4.9%	10.3%	0.019
Barrier Type (0-Wa	all, 1-Berm):	0.0			н	eavy Tri	ucks:	86.5%	2.7%	10.8%	0.02
Centerline Dis	t. to Barrier:	50.0 feet		N	nico So	urco Ele	wations	(in f	aati		
Centerline Dist. t	o Observer:	50.0 feet		740	Jise 30	Autoo	vauons	00	een		
Barrier Distance t	o Observer:	0.0 feet			Modium	Autos	. 0.0	00			
Observer Height (/	bserver Height (Above Pad): 5.0 feet						· 80	04	Grade Ad	iustment	0.0
Pa	d Elevation:		neavy	mucho	. 0.0	-04	0/000/10	uounoni	. 0.0		
Roa	d Elevation:	0.0 feet		La	ane Equ	ivalent	Distanc	e (in	feet)		
F	Road Grade:	0.0%				Autos	: 44.1	47			
	Left View:	-90.0 degree	es		Mediun	Trucks	: 43.9	947			
	Right View:	90.0 degre	es		Heavy	/ I rucks	: 43.9	166			
FHWA Noise Mode	I Calculations	5									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite I	Road	Fresn	e/	Barrier Atte	en Ber	m Atten
Autos:	70.20	-16.68		0.71		-1.20		4.65	0.0	000	0.00
Medium Trucks:	81.00	-58.96		0.74		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	85.38	-52.77		0.73		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er attenu	ation)						
VehicleType	Leq Peak Hou	r Leq Day	/	Leq Eve	ening	Leq N	light		Ldn	C	NEL
Autos:	53.	.0	52.1		50.3		44.2		52.9)	53.
Medium Trucks:	21.	.6	21.0		14.6		13.1		21.5	5	21.
Heavy Trucks:	32.	.1	31.6		22.6		23.9		32.2	2	32.
Vehicle Noise:	53.	.1	52.1		50.3		44.3		52.9)	53.
Centerline Distanc	e to Noise Co	ntour (in feet)								
			L	70 dE	BA	65 a	ΙBA		60 dBA	55	dBA
		-	Ldn:		4 8 17			36			
	CNEL:						0		18		40

Wednesday, December 9, 2020

	FHV	VA-RD-77-108	HIGHW	AY N	OISE PI	REDICT	ION MO	DDEL						
Scenar Road Narr Road Segme	io: HYP 2040 v ne: Heacock Si nt: s/o Cardina	w/o ext. (Non-P t. I Av.	eak)			Project Job N	t Name: lumber:	Gatew 13445	vay Aviatio	'n				
SITE	SPECIFIC IN	IPUT DATA				1	OISE	MODE	EL INPU	rs				
Highway Data				S	Site Con	ditions	(Hard :	= 10, S	oft = 15)					
Average Daily Peak Hour Peak H Veak H	Traffic (Adt): Percentage: lour Volume: hicle Speed:	32,560 vehicle 8.08% 2,631 vehicles 50 mph	is S		Me He	dium Tr avy Tru	ucks (2 cks (3+	Autos Axles) Axles)	: 15 : 15 : 15					
Near/Far La	ne Distance:	48 feet		V	venicle i			Dev	Evening	Nia	.ht	Deily		
Site Data					ven	cie i ype	Autos:	77.5%	Evening	IVIG	nt 6%	25 71%		
Barrier Type (0-W	rrier Height: /all, 1-Berm):	0.0 feet 0.0			Me H	edium T Heavy T	rucks: rucks: rucks:	84.8% 86.5%	6 4.9% 6 2.7%	10 10	.3% .8%	2.69% 11.60%		
Centerline Di	st. to Barrier:	50.0 feet			Noise Source Elevations (in feet)									
Centerline Dist. Barrier Distance Observer Height (P	Centerline Dist. to Observer: 50.0 Barrier Distance to Observer: 0.0 Observer Height (Above Pad): 5.0 Pad Elevation: 0.0 Road Elevation: 0.0				Mediui Heav	Auto n Truck ry Truck	is: 0 is: 2 is: 8	.000 .297 .004	Grade A	djustn	nent:	0.0		
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distar	nce (in	feet)					
	Road Grade: Left View: Right View:	0.0% -90.0 degree 90.0 degree	is		Autos: 44.147 Medium Trucks: 43.947 Heavy Trucks: 43.966									
VehicleType	el Calculation	S Traffic Flow	Dista	nce	Finite	Road	Fres	nel	Barrier A	tten	Rer	n Atten		
Autos:	70.20	1.24	Biota	0.71	1 11110	-1.20		-4.65	0	.000	5011	0.00		
Medium Trucks:	81.00	-13.80		0.74	Ļ	-1.20		-4.87	0	.000		0.00		
Heavy Trucks:	85.38	-7.45		0.73	5	-1.20		-5.43	0	.000		0.00		
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	uation)									
VehicleType	Leq Peak Hou	r Leq Day	L	.eq Ev	ening	Leq	Night		Ldn		C٨	IEL		
Autos:	70	.9	70.0		68.2		62	.2	70	.8		71.		
Medium Trucks:	66	.7	66.2		59.8		58	.3	66	.7		66.		
Heavy Trucks:	Heavy Trucks: 77.5 77.0				67.9 69.2 77.5					77.				
Vehicle Noise:	78	.6	78.0		71.4		70	.2	78	.7		78.		
Centerline Distan	ce to Noise Co	ontour (in feet)												
				70 d	BA	65	dBA		60 dBA		55	dBA		
	Ldn:			189 407 876			1,887							
	CNEL:				195		42	0	90	5		1,951		

		MA-100-11-100				LDIOII					
Scenar	io: HYP 2040	w/o ext. (Non-F	Peak)			Project	Name:	Gatew	ay Aviatior	ı –	
Road Nam	ne: Indian Av.					Job Ni	umber:	13445			
Road Segme	nt: s/o Nandin	a Av.									
SITE	SPECIFIC IN	IPUT DATA				N	OISE	NODE	L INPUT	s	
Highway Data				S	Site Con	ditions ((Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	33,304 vehicle	es					Autos:	15		
Peak Hour	Percentage:	8.08%			Me	dium Tru	icks (2)	Axles):	15		
Peak H	lour Volume:	2,691 vehicles	s		He	avy Truc	:ks (3+)	Axles):	15		
Ve	hicle Speed:	45 mph		V	/ehicle I	Mix					
Near/Far La	ne Distance:	36 feet		Ē	Vehi	icleType		Day	Evening	Night	Daily
Site Data						A	lutos:	77.5%	12.9%	9.69	% 85.54%
Ba	rrier Heiaht:	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.39	% 2.72%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy Tr	ucks:	86.5%	2.7%	10.89	% 11.74%
Centerline Di	st. to Barrier:	44.0 feet		A	loise So	ource Ele	evation	s (in fe	eet)		
Centerline Dist.	to Observer:	44.0 feet				Autos	· 0	000	,		
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks	. 0.	297			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks	· –	004	Grade Ad	iustmer	nt: 0.0
P	Pad Elevation: 0.0 feet						. 0.				
Ro	ad Elevation:	0.0 feet		L	ane Equ	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%				Autos	s: 40.	460			
	Left View:	-90.0 degree	es		Mediur	n Trucks	s: 40.	241			
	Right View:	90.0 degree	es		Heav	y Trucks	s: 40.	262			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresr	nel	Barrier Att	en Be	erm Atten
Autos:	68.46	1.78		1.28	3	-1.20		-4.61	0.0	000	0.000
Medium Trucks:	79.45	-13.19		1.31		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-6.84		1.31		-1.20		-5.50	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	er atteni	uation)						
VehicleType	Leq Peak Hou	ur Leq Day	/	Leq Ev	ening	Leq I	Night		Ldn	(CNEL
Autos:	70).3	69.3		67.6		61.	5	70.	1	70.8
Medium Trucks:	66	6.4	65.8		59.4		57.9	9	66.3	3	66.6
Heavy Trucks:	77	7.5	77.0		68.0		69.2	2	77.0	6	77.7
Vehicle Noise:	78	3.5	78.0		71.1		70.2	2	78.0	6	78.8
Centerline Distant	ce to Noise Co	ontour (in feet,)								
				70 d	BA	65 0	dBA	6	60 dBA	5	5 dBA
	Ldn:				164 354 762				1,642		
		CI		169		365		786	i	1,694	

	FH	WA-RD-77-108	B HIGHW	AY NO	DISE PI	REDICTIO		DEL			
Scena Road Nan Road Segme	rio: HYP 2040 ne: Cactus Av. ent: w/o Heaco	w/o ext. (Non-l ck St.	Peak)			Project N Job Nu	Vame: (mber: 1	Gatew 13445	ay Aviation		
SITE	SPECIFIC II	NPUT DATA				N	DISE N	IODE	L INPUTS	5	
Highway Data				Si	ite Con	ditions (I	Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	59,024 vehicl	es				A	Autos.	15		
Peak Hour	r Percentage:	8.08%			Me	dium True	cks (2 A	(xles)	15		
Peak I	Hour Volume:	4,769 vehicle	s		He	avy Truck	ks (3+ A	(xles)	15		
Ve	ehicle Speed:	50 mph		V	ehicle	Mix					
Near/Far La	ane Distance:	73 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	6 12.9%	9.6%	86.27%
Ba	arrier Height:	0.0 feet			М	edium Tru	icks:	84.8%	6 4.9%	10.3%	2.66%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tru	icks:	86.5%	6 2.7%	10.8%	11.07%
Centerline D	ist. to Barrier:	55.0 feet		N	oise So	ource Ele	vations	s (in f	eet)		
Centerline Dist.	to Observer:	55.0 feet				Autos:	0.0	000	1		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	22	97			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks	8.0	004	Grade Adi	ustment	: 0.0
F	Pad Elevation:	0.0 feet				,	-				
Ro	ad Elevation:	0.0 feet		Lá	ane Eq	uivalent l	Distanc	e (in:	feet)		
	Road Grade:	0.0%				Autos:	41.4	446			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	: 41.2	232			
	Right View:	90.0 degre	es		Heav	y Trucks:	41.2	253			
FHWA Noise Mod	lel Calculation	IS		_							
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Atte	en Bei	rm Atten
Autos:	70.20	3.85		1.12		-1.20		-4.67	0.0	00	0.000
Medium Trucks:	81.00	-11.26		1.15		-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	85.38	-5.07		1.15		-1.20		-5.38	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	y L	eq Eve	ening	Leq N	light		Ldn	C	NEL
Autos:	74	4.0	73.0		71.2		65.2		73.8		74.4
Medium Trucks:	69	9.7	69.1		62.7		61.2		69.7		69.9
Heavy Trucks:	80	0.3	79.8		70.7		72.0		80.3		80.5
Vehicle Noise:	8	1.5	80.9		74.3		73.1		81.5		81.7
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 dE	BA	65 d	BA		60 dBA	55	dBA
			Ldn:		321		692		1,491		3,213
		C	NEL:		332		716		1,542		3,323

	FHV	VA-RD-77-108	HIGH	IWAY N	OISE PF	EDICI		DEL			
Scenario Road Name Road Segmen	Scenario: HYP 2040 w/o ext. (Non-Peak) Road Name: Harley Knox Bl. Road Segment: e/o Patterson Av.					Project Job N	Name: (lumber: 1	Gatew 13445	ay Aviation		
SITE S	SPECIFIC IN	PUT DATA				N	IOISE N	IODE		s	
Highway Data				S	ite Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily 1	Traffic (Adt):	34,772 vehicle	es					Autos:	15		
Peak Hour F	Percentage:	8.08%			Mee	dium Tr	ucks (2 A	xles):	15		
Peak Ho	our Volume:	2,810 vehicle	s		Hea	avy Tru	cks (3+ A	xles):	15		
Veh	nicle Speed:	45 mph		v	ehicle N	lix					
Near/Far Lan	e Distance:	80 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%	5 12.9%	9.6%	85.69%
Ban	rier Heiaht:	0.0 feet			Me	dium T	rucks:	84.8%	4.9%	10.3%	2.70%
Barrier Type (0-Wa	all, 1-Berm):	0.0			H	leavy T	rucks:	86.5%	2.7%	10.8%	11.619
Centerline Dis	t. to Barrier:	64.0 feet			laise Sa	urco E	lovations	in f	oof)		
Centerline Dist. t	o Observer:	64.0 feet		-	0130 00	Auto	s' 0.0	000			
Barrier Distance t	o Observer:	0.0 feet			Mediur	n Truck	s: 2.2	97			
Observer Height (#	Above Pad):	5.0 feet			Heav	v Truck	s: 8.0	004	Grade Ad	iustment	: 0.0
Pa	d Elevation:	0.0 feet		-							
Roa	d Elevation:	0.0 feet		1	ane Equ	livalen	t Distanc	e (in	feet)		
F	Road Grade:	0.0%				Auto	s: 50.2	210			
	Left View:	-90.0 degree	es		Mediur	n Truck	S: 50.0	133			
	Right view:	90.0 degre	es		neav	y TTUCK	5. 50.0	50			
FHWA Noise Mode	I Calculations	5									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	e/	Barrier Att	en Ber	m Atten
Autos:	68.46	1.98		-0.13		-1.20		-4.70	0.0	000	0.00
Medium Trucks:	79.45	-13.04		-0.11		-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	84.25	-6.70		-0.11		-1.20		-5.31	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrie	er attenu	uation)						
VehicleType	Leq Peak Hou	r Leq Day	/	Leq Ev	ening	Leq	Night		Ldn	C	NEL
Autos:	69	.1	68.1		66.4		60.3		68.9	9	69.
Medium Trucks:	65	.1	64.5		58.2		56.6		65.1	1	65.
Heavy Trucks:	76	.2	75.7		66.7		68.0		76.3	3	76.
Vehicle Noise:	77	.3	76.7		69.9		68.9		77.3	3	77.
Centerline Distanc	e to Noise Co	ntour (in feet)								
			L	70 d	BA	65	dBA		50 dBA	55	dBA
			Ldn:		197		424		913		1,966
		C	NEL:		203		437		942		2.029

Wednesday, December 9, 2020

	FH	VA-RD-77-108	HIGHW	AY N	OISE PF	REDICTIO	on Mc	DEL			
Scenari Road Nam Road Segmen	b: HYP 2040 e: Cactus Av. t: e/o Heacoo	w/o ext. (Non-Pe k St.	eak)			Project I Job Nu	Vame: mber:	Gatew 13445	ay Aviation	I	
SITE S	SPECIFIC IN	IPUT DATA				N	DISE	MODE		S	
Highway Data				3	Site Con	ditions (Hard =	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	40,098 vehicle	s					Autos:	15		
Peak Hour	Percentage:	8.08%			Me	dium Tru	cks (2	Axles):	15		
Peak H	our Volume:	3,240 vehicles			He	avy Truci	ks (3+	Axles):	15		
Vel	nicle Speed:	40 mph		1	/ehicle I	<i>lix</i>					
Near/Far Lar	e Distance:	50 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	86.28%
Bar	rier Height:	0.0 feet			Me	edium Tru	icks:	84.8%	4.9%	10.3%	2.66%
Barrier Type (0-W	all, 1-Berm):	0.0			ŀ	leavy Tru	icks:	86.5%	2.7%	10.8%	11.07%
Centerline Dis	t. to Barrier:	44.0 feet			loico Sa	urco Ela	vatior	e (in fr	nof)		
Centerline Dist. t	o Observer:	44.0 feet		<i>'</i>	10/36 30		vauor	000	eey		
Barrier Distance t	o Observer:	0.0 feet			Madiu	Autos Trucka	. 0	207			
Observer Height (/	Above Pad):	5.0 feet			Heav	n mucks v Trucks		004	Grade Ad	iustment	. 0.0
Pa	d Elevation:	0.0 feet		L	Ticav	y muchs	. 0	.004	0,000,10	aounon	. 0.0
Roa	d Elevation:	0.0 feet		L	.ane Equ	ivalent	Distan	ce (in i	feet)		
F	Road Grade:	0.0%				Autos	36	.551			
	Left View:	-90.0 degree	s		Mediur	n Trucks	36	.308			
	Right View:	90.0 degree	s		Heav	y Trucks	36	.332			
FHWA Noise Mode	I Calculation	s									
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fres	nel	Barrier Att	en Ber	rm Atten
Autos:	66.51	3.14		1.94	1	-1.20		-4.61	0.0	000	0.00
Medium Trucks:	77.72	-11.98		1.98	3	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	82.99	-5.78		1.98	3	-1.20		-5.50	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and l	arrier a	tten	uation)						
VehicleType	Leq Peak Hou	ir Leq Day	Le	eq Ev	ening/	Leq N	light		Ldn	C	NEL
A	70	.4 6	9.4		67.6		61.	6	70.2	2	70.
Autos:		.5 6	5.9		59.6		58.	0	66.5	5	66.
Medium Trucks:	66				68.5		69.	7	78.1	1	78.
Autos: Medium Trucks: Heavy Trucks:	66 78	.0 7	7.5								70 '
Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	66 78 78	.0 7 .9 7	'7.5 '8.4		71.4		70.	6	79.0)	15.
Autos: Medium Trucks: Heavy Trucks:_ Vehicle Noise: Centerline Distanc	66 78 78 e to Noise Co	.0 7 .9 7 ontour (in feet)	7.5 8.4		71.4		70.	6	79.0)	15.4
Autos: Medium Trucks: Heavy Trucks: Vehicle Noise: Centerline Distanc	66 78 78 e to Noise Co	.0 7 .9 7 ontour (in feet)	7.5	70 c	71.4 IBA	65 d	70. BA	6	79.0 60 dBA	55	dBA
Autos: Medium Trucks: Heavy Trucks: Vehicle Noise: Centerline Distanc	66 78 78 e to Noise Co	.0 7 .9 7 ontour (in feet)	7.5 '8.4 .dn:	70 c	71.4 IBA 175	65 d	70. BA 376	6 6 3	79.0 60 dBA 810	55	dBA 1,745

	FH/	VA-RD-77-108	HIGHWAY	Y NOISE P	REDICT	ON MOI	DEL			
Scenari Road Nam Road Segmer	Scenario: HYP 2040 w/o ext. (Non-Peak) Road Name: Harley Knox Bl. Road Segment: e/o Indian Av.					Name: (umber: 1	Gatew 13445	ay Aviation		
SITE	SPECIFIC IN	IPUT DATA			N	OISE N	IODE	L INPUT	5	
Highway Data				Site Col	nditions	(Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	16,426 vehicle	s				Autos:	15		
Peak Hour	Percentage:	8.08%		M	edium Tru	icks (2 A	xles):	15		
Peak H	our Volume:	1,327 vehicles	6	He	eavy Truc	cks (3+ A	xles):	15		
Vei	hicle Speed:	45 mph		Vohiclo	Mix					
Near/Far La	ne Distance:	80 feet		Venicle	nicleType		Dav	Evenina	Night	Daily
Site Data				10.		utos:	77.5%	12.9%	9.6%	86.32%
Ra	rior Hoight:	0.0 foot		N	Iedium Ti	ucks:	84.8%	4.9%	10.3%	2.65%
Barrier Type (0-W	all 1-Berm)	0.0 1001			Heavy Ti	ucks:	86.5%	2.7%	10.8%	11.03%
Centerline Dis	all, 1 Borni): at. to Barrier:	64.0 feet		Naina S	ouroo El	ovetion	in f	o.o.fl		
Centerline Dist.	to Observer:	64.0 feet		Noise 3	Ource Er	evalions	s (III 16	eel)		
Barrier Distance	to Observer:	0.0 feet		Marti	Autos	s. 0.0	007			
Observer Height (Above Pad):	5.0 feet		Weuld	IIII TTUCK	s. 2.2	04	Grade Adi	ustment	. 0 0
Pa	ad Elevation:	0.0 feet		пеа	vy muck:	s. o.u	104	Grade Auj	usunen	. 0.0
Roa	ad Elevation:	0.0 feet		Lane Eq	quivalent	Distanc	e (in :	feet)		
F	Road Grade:	0.0%			Autos	s: 50.2	210			
	Left View:	-90.0 degree	s	Mediu	Im Truck	s: 50.0	033			
	Right View:	90.0 degree	s	Hea	vy Truck:	s: 50.0	050			
FHWA Noise Mode	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Distance	e Finite	e Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	68.46	-1.25	-0).13	-1.20		-4.70	0.0	00	0.000
Medium Trucks:	79.45	-16.38	-0).11	-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	84.25	-10.18	-0).11	-1.20		-5.31	0.0	00	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier att	enuation)						
VehicleType	Leq Peak Hou	ir Leq Day	Leq	Evening	Leq	Night		Ldn	C	NEL
Autos:	65	.9	64.9	63.1		57.1		65.7		66.3
Medium Trucks:	61	.8	61.2	54.8	3	53.3		61.7		62.0
Heavy Trucks:	72	.8	72.3	63.2	2	64.5		72.8	1	73.0
Vehicle Noise:	73	.8	73.3	66.5	5	65.5		73.9)	74.1
Centerline Distance	e to Noise Co	ontour (in feet)								
			7	0 dBA	65	dBA	e	60 dBA	55	dBA
			Ldn:	116		250		539		1,161
		CI	VEL:	120		258		556		1,199

	FH	WA-RD-77-10	B HIGHV	VAY NC	DISE PI	REDICTIC	ON MOE	DEL			
Scena Road Nan Road Segme	rio: HYP 2040 ne: Heacock S ent: n/o Gentia	w/o ext. (Peak st. n Av.)			Project N Job Nu	lame: 0 mber: 1	atew 3445	ay Aviation		
SITE	SPECIFIC II	NPUT DATA				N	DISE M	ODE	L INPUTS	5	
Highway Data				Si	te Con	ditions (I	Hard = 1	10, So	oft = 15)		
Average Daily	Traffic (Adt):	33,537 vehic	es				A	utos:	15		
Peak Hour	Percentage:	8.08%			Me	dium Truc	cks (2 A	xles):	15		
Peak I	lour Volume:	2,710 vehicle	s		He	avy Truck	is (3+ A	xles):	15		
Ve	ehicle Speed:	50 mph		Ve	ehicle	Mix					
Near/Far La	ane Distance:	48 feet			Veh	icleType	L	Day	Evening	Night	Daily
Site Data						AL	itos:	77.5%	5 12.9%	9.6%	86.44%
Ba	rrier Height:	0.0 feet			М	edium Tru	cks: 8	34.8%	4.9%	10.3%	2.63%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tru	cks: 8	36.5%	2.7%	10.8%	10.93%
Centerline D	ist. to Barrier:	50.0 feet		N	oise So	ource Ele	vations	(in f	eet)		
Centerline Dist.	to Observer:	50.0 feet				Autos:	0.0	00	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.2	97			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks:	8.0	04	Grade Adj	ustment	: 0.0
F	ad Elevation:	0.0 feet				,					
Ro	ad Elevation:	0.0 feet		La	ane Eq	uivalent l	Distanc	e (in	feet)		
	Road Grade:	0.0%				Autos:	44.1	47			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	43.9	47			
	Right View:	90.0 degre	es		Heav	y Trucks:	43.9	66			
FHWA Noise Mod	lel Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresne	e/	Barrier Atte	en Bei	rm Atten
Autos:	70.20	1.40	1	0.71		-1.20	-	4.65	0.0	00	0.000
Medium Trucks:	81.00	-13.77		0.74		-1.20	-	4.87	0.0	00	0.000
Heavy Trucks:	85.38	-7.58		0.73		-1.20	-	5.43	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	y I	Leq Eve	ening	Leq N	light		Ldn	C	NEL
Autos:	7	1.1	70.1		68.4		62.3		70.9		71.5
Medium Trucks:	6	5.8	66.2		59.8		58.3		66.7		67.0
Heavy Trucks:	7	7.3	76.8		67.8		69.1		77.4		77.5
Vehicle Noise:	71	3.6	78.0		71.4		70.2		78.6		78.8
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 dE	ЗA	65 d	BA		50 dBA	55	dBA
			Ldn:		187		402		867		1,867
		C	NEL:		193		416		896		1,931

	FHV	VA-RD-77-108	HIGH	IWAY N	OISE PR	EDICT		DEL			
Scenario	Scenario: HYP 2040 w/o ext. (Peak)						Name: G	Gatew	ay Aviation	1	
Road Name	e: Heacock St					Job N	umber: 1	3445			
Road Segmen	t: s/o Cardina	I Av.									
SITE S	PECIFIC IN	PUT DATA				N	IOISE M	ODE	L INPUT	s	
Highway Data				S	ite Con	ditions	(Hard = 1	10, Sc	oft = 15)		
Average Daily 1	Traffic (Adt):	32,928 vehicle	es				A	utos:	15		
Peak Hour H	Percentage:	8.08%			Med	dium Tr	ucks (2 A	xles):	15		
Peak Ho	our Volume:	2,661 vehicle	s		Hea	avy Tru	cks (3+ A	xles):	15		
Veh	icle Speed:	50 mph		v	ehicle N	lix					
Near/Far Lan	e Distance:	48 feet			Vehi	cleType	1	Day	Evening	Night	Daily
Site Data							Autos: 7	7.5%	12.9%	9.6%	85.47%
Ban	rier Heiaht:	0.0 feet			Me	dium T	rucks: 8	34.8%	4.9%	10.3%	2.70%
Barrier Type (0-Wa	all. 1-Berm):	0.0			h	leavy T	rucks: 8	86.5%	2.7%	10.8%	11.83%
Centerline Dis	t. to Barrier:	50.0 feet			laiaa Ca	uree E	ovetiene	link	ati		
Centerline Dist. t	o Observer:	50.0 feet		N	0158 50	urce El	evations		eet)		
Barrier Distance t	o Observer:	0.0 feet			Madium	AUIO AUIO	s: 0.0	00			
Observer Height (A	Above Pad):	5.0 feet			Heave	Truck	5. Z.Z	04	Grade Ad	iustment	0.0
Pa	d Elevation:	0.0 feet			neav,	y muck	3. 0.0	04	Orade Au	usunon.	0.0
Roa	d Elevation:	0.0 feet		L	ane Equ	iivalen	Distanc	e (in i	feet)		
F	load Grade:	0.0%				Auto	s: 44.1	47			
	Left View:	-90.0 degre	es		Mediun	n Truck	s: 43.9	47			
	Right View:	90.0 degree	es		Heav	y Truck	s: 43.9	66			
FHWA Noise Mode	I Calculation:	5									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresne	e/	Barrier Att	en Ber	m Atten
Autos:	70.20	1.27		0.71		-1.20	-	4.65	0.0	000	0.000
Medium Trucks:	81.00	-13.73		0.74		-1.20	-	4.87	0.0	000	0.000
Heavy Trucks:	85.38	-7.32		0.73		-1.20	-	5.43	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrie	er attenu	ation)						
VehicleType	Leq Peak Hou	r Leq Day	/	Leq Ev	ening	Leq	Night		Ldn	CI	VEL
Autos:	71	.0	70.0		68.2		62.2		70.8	3	71.4
Medium Trucks:	66	.8	66.2		59.9		58.3		66.8	3	67.0
Heavy Trucks:	77	.6	77.1		68.1		69.3		77.1	7	77.8
Vehicle Noise:	78	.7	78.2		71.5		70.4		78.8	3	79.
Centerline Distanc	e to Noise Co	ontour (in feet)	70.0			(8.4				
			L	70 d	BA	65	ава	6	OU OBA	55	aBA
		~	Lan: NEL ·		192		414		891		1,921
		6	VEL:		198		428		921		1,985

Wednesday, December 9, 2020

	FHW	/A-RD-77-108 H	HIGH	IWAY N	IOISE PF	REDICTI	ON MOI	DEL			
Scenario: H Road Name: H Road Segment: s	HYP 2040 w Heacock St. s/o Iris Av.	ı/o ext. (Peak)				Project I Job Ni	Name: (Imber: '	Gatev 13445	vay Aviation		
SITE SPI	ECIFIC IN	PUT DATA				N	OISE N	IODI	EL INPUT	S	
Highway Data				3	Site Con	ditions (Hard =	10, S	oft = 15)		
Average Daily Trat	ffic (Adt):	29,135 vehicles	5					Autos	: 15		
Peak Hour Per	centage:	8.08%			Me	aium Tru	CKS (2 F	(xies)	: 15		
Peak Hour	volume:	2,354 vehicles			не	avy Truc	KS (3+ A	(xies)	: 15		
Venicie Nasa/Ess Lana I	e Speed:	50 mpn		۱	Vehicle I	Nix					
Near/Far Lane L	Jistance:	48 reet			Vehi	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	6 12.9%	9.6	% 86.55%
Barrier	r Height:	0.0 feet			Me	edium Tri	ucks:	84.8%	6 4.9%	10.39	% 2.61%
Barrier Type (0-Wall,	1-Berm):	0.0			F	leavy Tr	ucks:	86.5%	6 2.7%	10.89	% 10.85%
Centerline Dist. to	o Barrier:	50.0 feet		1	Noise So	ource Ele	vations	s (in f	feet)		
Centerline Dist. to C	Observer:	50.0 feet		_		Autos	: 0.0	000	,		
Barrier Distance to C	Observer:	0.0 feet			Mediur	n Trucks	: 2.2	297			
Observer Height (Abo	ove Pad):	5.0 feet			Heav	v Trucks	: 8.0	004	Grade Ad	iustmer	nt: 0.0
Pad E	levation:	0.0 feet					Distant		64		
Road E	levation:	0.0 feet		-	Lane Equ	livalent	Distanc	:e (IN	reet)		
Roa	d Grade:	0.0%				Autos	44.	147			
L	ett View:	-90.0 degrees	5		Heav	n Trucks v Trucks	43.9	947 966			
		Solo degree.	,			,	. 10.1				
FHWA Noise Model C	DEMEI	Traffic Flow	Die	tance	Finito	Poad	Ereco		Parrier Att	on R	arm Atten
Autos	70.20	0.80	Dis	0.7	1	-1.20	116311	-4 65			0.000
Medium Trucks:	81.00	-14.42		0.7	4	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	85.38	-8.22		0.73	3	-1.20		-5.43	0.0	000	0.000
Unmitigated Noise Le	vels (witho	ut Topo and b	arrie	er atten	uation)						
VehicleType Leo	Peak Hou	Leq Day		Leg Ev	/ening	Leg I	Vight	1	Ldn	(CNEL
Autos:	, 70.	5 6	9.5		67.8		61.7	,	70.3	3	70.9
Medium Trucks:	66.	1 6	5.5		59.2		57.6	5	66.1	1	66.3
Heavy Trucks:	76.	7 7	6.2		67.2		68.4	Ļ	76.8	3	76.9
Vehicle Noise:	77.	9 7	7.3		70.8		69.5	j.	77.9	9	78.2
Centerline Distance to	o Noise Co	ntour (in feet)									
			1	70 c	1BA	65 a	IBA		60 dBA	5	5 dBA
		L	.dn:		169		365	•	786		1,693
		CN	EL:		175		377		813		1,752

	FH\	NA-RD-77-108	HIGHWA	AY NO	DISE PF	REDICTIC		DEL			
Scenar	io: HYP 2040	w/o ext. (Peak)				Project N	lame: (Gatewa	ay Aviation		
Road Nan	ne: Heacock S	t.				Job Nu	mber: `	13445			
Road Segme	nt: s/o Nandin	a Av.									
SITE	SPECIFIC IN	IPUT DATA				NC	DISEN	IODE	L INPUT	s	
Highway Data				S	ite Con	ditions (F	Hard =	10, So	ft = 15)		
Average Daily	Traffic (Adt):	663 vehicle	es					Autos:	15		
Peak Hour	Percentage:	8.08%			Me	dium Truc	cks (2 A	(xles)	15		
Peak H	lour Volume:	54 vehicle	s		He	avy Truck	(3+ A	(xles)	15		
Ve	hicle Speed:	50 mph		V	ehicle I	Nix					
Near/Far La	ne Distance:	48 feet		-	Vehi	cleType		Day	Evening	Night	Daily
Site Data						AL	itos:	, 77.5%	12.9%	9.6%	99.98%
Ba	rrier Height	0.0 feet			Me	edium Tru	icks:	84.8%	4.9%	10.3%	0.00%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy Tru	icks:	86.5%	2.7%	10.8%	0.02%
Centerline Di	st. to Barrier:	50.0 feet		N	oise So	urce Ele	vation	s (in fe	et)		
Centerline Dist.	to Observer:	50.0 feet		-		Autos	0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediur	n Trucks	2:	297			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks:	8.0	104	Grade Ad	iustmen	t: 0.0
P	ad Elevation:	0.0 feet			neuv	y macks.	0.0	-04			
Ro	ad Elevation:	0.0 feet		La	ane Equ	uivalent I	Distand	e (in t	feet)		
	Road Grade:	0.0%				Autos:	44.	147			
	Left View:	-90.0 degree	es		Mediur	n Trucks:	43.9	947			
	Right View:	90.0 degre	es		Heav	y Trucks:	43.9	966			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresn	el	Barrier Att	en Be	rm Atten
Autos:	70.20	-15.00		0.71		-1.20		-4.65	0.0	000	0.000
Medium Trucks:	81.00	-58.96		0.74		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	85.38	-52.77		0.73		-1.20		-5.43	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	ttenu	ation)						
VehicleType	Leq Peak Hou	ir Leq Day	/ Le	eq Eve	ening	Leq N	light		Ldn	C	NEL
Autos:	54	.7	53.7		52.0		45.9		54.8	5	55.1
Medium Trucks:	21	.6	21.0		14.6		13.1		21.5	5	21.8
Heavy Trucks:	32	.1	31.6		22.6		23.9		32.2	2	32.3
Vehicle Noise:	54	.7	53.8		52.0		45.9		54.6	3	55.2
Centerline Distan	ce to Noise Co	ontour (in feet)								
	-	-		70 dE	BA	65 dl	BA	6	0 dBA	55	5 dBA
			Ldn:		5	-	10		22		47
		C	NEL:		5		11		24		51

	FH1	WA-RD-77-10	B HIGHV	VAY NO	DISE PI	REDICTIC		DEL			
Scena Road Nan Road Segme	rio: HYP 2040 ne: Indian Av. ent: s/o Nandin	w/o ext. (Peak a Av.)			Project N Job Nu	lame: G mber: 1	atewa 3445	ay Aviation		
SITE	SPECIFIC IN	NPUT DATA				NO	DISE M	ODE	L INPUTS	6	
Highway Data				Si	ite Con	ditions (I	Hard = 1	10, So	ft = 15)		
Average Daily	Traffic (Adt):	33,460 vehic	les				А	utos:	15		
Peak Hour	Percentage:	8.08%			Me	dium Truc	cks (2 A)	xles):	15		
Peak H	lour Volume:	2,704 vehicle	es		He	avy Truck	is (3+ A)	xles):	15		
Ve	ehicle Speed:	45 mph		V	ehicle	Mix					-
Near/Far La	ane Distance:	36 feet			Veh	icleType	L	Day	Evening	Night	Daily
Site Data						AL	itos: 7	7.5%	12.9%	9.6%	85.21%
Ba	rrier Heiaht:	0.0 feet			М	edium Tru	cks: 8	34.8%	4.9%	10.3%	2.75%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tru	cks: 8	86.5%	2.7%	10.8%	12.04%
Centerline D	ist. to Barrier:	44.0 feet		N	oise So	ource Ele	vations	(in fe	et)		
Centerline Dist.	to Observer:	44.0 feet				Autos	0.0	00	.,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	2.2	97			
Observer Height	(Above Pad):	5.0 feet			Heat	v Trucks	8.0	04	Grade Adi	ustment	: 0.0
F	ad Elevation:	0.0 feet			11001	<i>y maono</i> .	0.0		,		
Ro	ad Elevation:	0.0 feet		La	ane Eq	uivalent l	Distance	e (in f	eet)		
	Road Grade:	0.0%				Autos:	40.4	60			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	40.2	41			
	Right View:	90.0 degre	es		Heav	y Trucks:	40.2	62			
FHWA Noise Mod	lel Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresne	e/ 1	Barrier Atte	en Ber	m Atten
Autos:	68.46	1.79	9	1.28		-1.20	-	4.61	0.0	00	0.000
Medium Trucks:	79.45	-13.12	2	1.31		-1.20	-	4.87	0.0	00	0.000
Heavy Trucks:	84.25	-6.71		1.31		-1.20	-	5.50	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	l barrier	attenu	ation)						-
VehicleType	Leq Peak Ho	ur Leq Da	y l	Leq Eve	ening	Leq N	light		Ldn	C	VEL
Autos:	70	0.3	69.4		67.6		61.5		70.2		70.8
Medium Trucks:	66	5.4	65.9		59.5		58.0		66.4		66.6
Heavy Trucks:	77	7.6	77.2		68.1		69.4		77.7		77.8
Vehicle Noise:	78	3.7	78.1		71.2		70.3		78.7		78.9
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 dE	3A	65 di	BA	6	0 dBA	55	dBA
			Ldn:		167		360		775		1,669
		C	NEL:		172		371		799		1,722

FHWA-RD-77-108 HIGH	IWAY N	IOISE PI	REDICTI	ON MOD	EL			
Scenario: HYP 2040 w/o ext. (Peak) Road Name: Cactus Av. Road Segment: e/o Heacock St.			Project Job N	Name: G umber: 13	atewa 3445	y Aviation	1	
SITE SPECIFIC INPUT DATA			N	OISE M	ODEL		s	
Highway Data	5	Site Con	ditions	Hard = 1	0, Soi	ft = 15)		
Average Daily Traffic (Adt): 40,159 vehicles				A	utos:	15		
Peak Hour Percentage: 8.08%		Me	dium Tru	icks (2 Ax	des):	15		
Peak Hour Volume: 3,245 vehicles		He	avy Truc	ks (3+ Ax	(les):	15		
Vehicle Speed: 40 mph	1	Vehicle I	Mix					
Near/Far Lane Distance: 50 feet		Veh	icleType	D)ay	Evening	Night	Daily
Site Data			A	utos: 7	7.5%	12.9%	9.6%	86.30%
Barrier Height: 0.0 feet		Me	edium Tr	ucks: 8	4.8%	4.9%	10.3%	2.65%
Barrier Type (0-Wall, 1-Berm): 0.0		F	leavy Tr	ucks: 8	6.5%	2.7%	10.8%	11.05%
Centerline Dist. to Barrier: 44.0 feet	-	Noiso Se	urco El	watione	(in fo	of		
Centerline Dist. to Observer: 44.0 feet	ť	10136 30			00	ey		
Barrier Distance to Observer: 0.0 feet		Mediu	n Trucks	. 0.00	70			
Observer Height (Above Pad): 5.0 feet		Heav	v Trucks	. 2.20	14	Grade Ad	iustment	0.0
Pad Elevation: 0.0 feet	-		,					
Road Elevation: 0.0 feet	4	Lane Eq	uivalent	Distance	e (in fe	eet)		
Road Grade: 0.0%			Autos	: 36.55	51			
Left View: -90.0 degrees		Mediui	m Trucks	: 36.30	38			
Right View: 90.0 degrees		Heav	y Trucks	36.30	32			
FHWA Noise Model Calculations								
VehicleType REMEL Traffic Flow Dis	tance	Finite	Road	Fresne	I E	Barrier Att	en Ber	m Atten
Autos: 66.51 3.15	1.94	4	-1.20	-4	4.61	0.0	000	0.000
Medium Trucks: 77.72 -11.98	1.98	8	-1.20	-4	4.87	0.0	000	0.000
Heavy Trucks: 82.99 -5.78	1.98	8	-1.20	-{	5.50	0.0	000	0.00
Unmitigated Noise Levels (without Topo and barrie	er atten	uation)						
VehicleType Leq Peak Hour Leq Day	Leg Ev	vening	Leq	Vight		Ldn	CI	VEL
Autos: 70.4 69.4		67.7		61.6		70.2	2	70.8
Medium Trucks: 66.5 65.9		59.6		58.0		66.5	5	66.
Heavy Trucks: 78.0 77.5		68.5		69.7		78.1	1	78.2
Vehicle Noise: 78.9 78.4		71.4		70.6		79.0)	79.2
Centerline Distance to Noise Contour (in feet)							Т	
	70 c	dBA	65 0	IBA	60	0 dBA	55	dBA
Ldn:		175		376		810		1,745
CNEL:		180		388		835		1.800

Wednesday, December 9, 2020

	FH\	WA-RD-77-108	HIGHW	AY N		REDICTIO	N MO	DEL		_	_
Scenario	Scenario: HYP 2040 w/o ext. (Peak) Road Name: Cactus Av.					Project N	lame:	Gatew	ay Aviation		
Road Name	Cactus Av.					Job Nu	mber:	13445			
Road Segment	: w/o Heacoo	ck St.									
SITE S	PECIFIC IN	IPUT DATA				N	DISE I	NODE	L INPUT	s	
Highway Data				S	Site Con	ditions (l	lard =	10, Sc	oft = 15)		
Average Daily T	raffic (Adt):	59,095 vehicle	s					Autos:	15		
Peak Hour P	Percentage:	8.08%			Me	dium Truc	:ks (2 /	Axles):	15		
Peak Ho	ur Volume:	4,775 vehicles			He	avy Truck	s (3+ /	Axles):	15		
Veh	icle Speed:	50 mph		v	ehicle l	Mix					
Near/Far Lan	e Distance:	73 feet		-	Veh	icleTvpe		Dav	Evenina	Niaht	Dailv
Site Data						AL	itos:	77.5%	12.9%	9.6%	86.28%
Barr	ier Heiaht [.]	0.0 feet			Me	edium Tru	cks:	84.8%	4.9%	10.3%	2.66%
Barrier Type (0-Wa	II, 1-Berm):	0.0			ŀ	leavy Tru	cks:	86.5%	2.7%	10.8%	5 11.06%
Centerline Dist	to Barrier:	55.0 feet			loise Sc	urce Ele	vation	s (in fi	pet)		
Centerline Dist. to	o Observer:	55.0 feet		~	10/30 00	Autos	0	000			
Barrier Distance to	Observer:	0.0 feet			Modiu	n Trucke	2	207			
Observer Height (A	bove Pad):	5.0 feet			Heav	n Trucks.	2	004	Grade Adi	iustmen	t· 0.0
Pad	d Elevation:	0.0 feet			near	y mucho.	0.	004	,		
Road	d Elevation:	0.0 feet		L	ane Equ	uivalent l	Distan	ce (in i	feet)		
R	oad Grade:	0.0%				Autos:	41.	446			
	Left View:	-90.0 degree	s		Mediur	n Trucks:	41.	232			
	Right View:	90.0 degree	s		Heav	y Trucks:	41.	253			
FHWA Noise Model	Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresr	nel	Barrier Atte	en Be	rm Atten
Autos:	70.20	3.85		1.12	2	-1.20		-4.67	0.0	000	0.00
Medium Trucks:	81.00	-11.26		1.15	5	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	85.38	-5.07		1.15	5	-1.20		-5.38	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrier a	attenı	uation)						
VehicleType L	eq Peak Hou	ur Leq Day	L	eq Ev	ening	Leq N	ight		Ldn	C	NEL
Autos:	74	.0	73.0		71.2		65.2	2	73.8	3	74.4
Medium Trucks:	69	9.7	59.1		62.7		61.2	2	69.7	7	69.9
Heavy Trucks:	80).3	79.8		70.7		72.0)	80.3	3	80.
		5	30.9		74.3		73.1	1	81.5	5	81.
Vehicle Noise:	81										
Vehicle Noise: Centerline Distance	81 e to Noise Co	ontour (in feet)									
Vehicle Noise:	81 e to Noise Co	ontour (in feet)		70 d	BA	65 di	BA	6	60 dBA	55	ō dBA
Vehicle Noise: Centerline Distance	81 e to Noise Co	ontour (in feet)	Ldn:	70 d	BA 321	65 di	BA 692	6	60 dBA 1,492	55	5 dBA 3,213

	FH	WA-RD-77-	108 HIG	HWAY	NOISE PR	REDICTIO		L			
Scenari Road Nam Road Segmer	io: HYP 2040 ne: Harley Kno nt: e/o Patters	w/o ext. (Pe ox Bl. son Av.	ak)			Project N Job Nun	ame: Gat nber: 134	eway Aviation 45			
SITE	SPECIFIC II	NPUT DAT	Ά			NO	ISE MO	DEL INPUT	S		
Highway Data					Site Con	ditions (H	ard = 10,	Soft = 15)			
Average Daily	Traffic (Adt):	35,069 vel	nicles				Auto	os: 15			
Peak Hour	Percentage:	8.08%			Me	dium Truci	ks (2 Axle	s): 15			
Peak H	lour Volume:	2,834 veh	cles		He	avy Trucks	s (3+ Axle	s): 15			
Ve	hicle Speed:	45 mpł	1		Vehicle I	Mix					
Near/Far La	ne Distance:	80 feet			Veh	icleType	Da	/ Evening	Night	Daily	
Site Data						Au	tos: 77.	5% 12.9%	9.6%	85.43%	
Bai	rrier Heiaht:	0.0 fee	t		Me	edium Truc	cks: 84.	8% 4.9%	10.3%	2.72%	
Barrier Type (0-W	/all, 1-Berm):	0.0			F	leavy Truc	cks: 86.	5% 2.7%	10.8%	11.85%	
Centerline Dis	st. to Barrier:	64.0 fee	t		Noise So	ource Elev	ations (ii	n feet)			
Centerline Dist.	to Observer:	64.0 fee	t			Autos:	0.000	,			
Barrier Distance	to Observer:	0.0 fee	t		Mediu	n Trucks:	2.297				
Observer Height (Above Pad):	5.0 fee	t		Heav	y Trucks:	8.004	Grade Ad	justment:	0.0	
Pa	ad Elevation:	0.0 fee	t		Long Ea	uivelent D	istance (in fact)			
Roa	ad Elevation:	0.0 tee	t		Lane Eq	Autoo:	FO 240	in reel)			
	Road Grade:	0.0%			Modiu	m Trucks:	50.210				
	Right View:	-90.0 dej 90.0 dej	grees grees		Heav	y Trucks:	50.055				
			-								
VehicleType	REMEL	Traffic Flo	w Di	istance	Finite	Road	Fresnel	Barrier Att	en Berr	n Atten	
Autos:	68.46	2	.00	-0.	13	-1.20	-4.1	70 0.0	000	0.000	
Medium Trucks:	79.45	-12	.98	-0.	11	-1.20	-4.8	38 0.0	000	0.000	
Heavy Trucks:	84.25	-6	.58	-0.	11	-1.20	-5.3	31 0.0	000	0.000	
Unmitigated Noise	e Levels (with	out Topo a	nd barr	ier atte	nuation)						
VehicleType	Leq Peak Ho	ur Leq	Day	Leq E	Evening	Leq Ni	ght	Ldn	CN	IEL	
Autos:	69	9.1	68.2		66.4		60.3	69.0)	69.6	
Medium Trucks:	65	5.2	64.6		58.2		56.7	65.1	1	65.4	
Heavy Trucks:	76	5.4	75.9		66.8		68.1	76.4	1	76.6	
Vehicle Noise:	71	7.4	76.8		69.9		69.0	77.4	1	77.6	
Centerline Distance	ce to Noise C	ontour (in f	eet)								
				70	dBA	65 dB	A	60 dBA	55 (dBA	
			Ldn:		200		431	928		1,999	
			CNEL:		206		444	957 2,062			
	FH\	NA-RD-77-108	HIGHV	VAY NO	DISE PI	REDICTI	ON MO	DEL			
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Scenai Road Nan Road Segme	no: HYP 2040 ne: Harley Kno nt: e/o Indian /	w/o ext. (Peak x Bl. Av.				Project Job No	Name: (umber:	Gatew 13445	vay Aviation		
SITE	SPECIFIC IN	IPUT DATA				N	OISE N	NODE	EL INPUT	5	
Highway Data				S	ite Con	ditions ((Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	16,473 vehicl	es				,	Autos	: 15		
Peak Hour	Percentage:	8.08%			Me	dium Tru	icks (2 A	Axles)	: 15		
Peak H	lour Volume:	1,331 vehicle	s		He	avy Truc	:ks (3+ A	Axles)	: 15		
Ve	ehicle Speed:	45 mph		V	ehicle l	Mix					
Near/Far La	ne Distance:	80 feet		-	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	6 12.9%	9.6%	86.36%
Ba	rrier Height:	0.0 feet			M	edium Tr	ucks:	84.8%	6 4.9%	10.3%	2.64%
Barrier Type (0-V	Vall, 1-Berm):	0.0			F	Heavy Tr	ucks:	86.5%	6 2.7%	10.8%	11.00%
Centerline D	ist. to Barrier:	64.0 feet		N	oise So	ource Ele	evation	s (in f	ieet)		
Centerline Dist.	to Observer:	64.0 feet				Autos	s: 0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	: 2.1	297			
Observer Height	Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0					
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		Li	ane Eq	uivalent	Distanc	ce (in	feet)		
	Road Grade:	0.0%				Autos	s: 50.:	210			
	Left View:	-90.0 degre	es		Mediu	m Trucks	s: 50.	033			
	Right View:	90.0 degre	es		Heav	y Trucks	50.	050			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	nel	Barrier Atte	en Be	rm Atten
Autos:	68.46	-1.23		-0.13		-1.20		-4.70	0.0	000	0.000
Medium Trucks:	79.45	-16.38		-0.11		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-10.18		-0.11		-1.20		-5.31	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Hou	ur Leq Daj	/ 1	Leq Eve	ening	Leq I	Night		Ldn	С	NEL
Autos:	65	5.9	64.9		63.2		57.1		65.7	,	66.3
Medium Trucks:	61	.8	61.2		54.8		53.3	3	61.7	,	62.0
Heavy Trucks:	72	2.8	72.3		63.2		64.5	5	72.8	3	73.0
Vehicle Noise:	73	3.9	73.3		66.5		65.5	5	73.9)	74.1
Centerline Distan	ce to Noise C	ontour (in feel)								
				70 dE	BA	65 c	'BA		60 dBA	55	5 dBA
			Ldn:		116		250		539		1,161
		С	NEL:		120		258		557		1,199

	FHVV	A-RD-77-108	пюг	IVVAT	NUISE PR	EDIC		JDEL							
Scenario: H	Scenario: HY 2040 w/ext.							Project Name: Gateway Aviation							
Road Name: H	leacock St.					Job I	Number:	13445							
Road Segment: s	/o Iris Av.														
SITE SPE	CIFIC IN	PUT DATA				I	NOISE	MODE	L INPUT	s					
Highway Data					Site Con	ditions	: (Hard :	= 10, Se	oft = 15)						
Average Daily Trafi	fic (Adt): 2	28,473 vehicle	es		Autos: 15										
Peak Hour Perc	entage:	8.08%			Med	dium T	rucks (2	Axles):	15						
Peak Hour	Volume:	2,301 vehicles	s		Hea	avy Tru	ıcks (3+	Axles):	15						
Vehicle	Speed:	50 mph			Vehicle N	lix									
Near/Far Lane D	istance:	48 feet			Vehi	cleTyp	e	Day	Evening	Night	Daily				
Site Data							Autos:	77.5%	5 12.9%	9.6%	86.23%				
Barrier	Height:	0.0 feet			Ме	dium 1	Frucks:	84.8%	4.9%	10.3%	2.67%				
Barrier Type (0-Wall, 1	I-Berm):	0.0			h	leavy T	Frucks:	86.5%	5 2.7%	10.8%	11.10%				
Centerline Dist. to	Barrier:	50.0 feet			Noise So	urce F	levatio	ns (in fi	eef)						
Centerline Dist. to O	bserver:	50.0 feet				Auto	ns' (000							
Barrier Distance to O	bserver:	0.0 feet			Mediun	n Truck	ks: 2	297							
Observer Height (Abo	ve Pad):	5.0 feet			Heav	v Truci	ks: 8	.004	Grade Ad	iustment	£ 0.0				
Pad El	evation:														
Road E	evation:	0.0 feet			Lane Equ	ivalen	t Distar	nce (in	feet)						
Road	Grade:	0.0%				Auto	os: 44	1.147							
Le	eft View:	-90.0 degree	es		Mediun	n Truci	KS: 43	5.947							
Rig	nt view:	90.0 degree	es		Heav	y Truci	(S: 43	0.900							
FHWA Noise Model Ca	lculations														
VehicleType R	EMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Bei	rm Atten				
Autos:	70.20	0.68		0.7	71	-1.20		-4.65	0.0	000	0.000				
Medium Trucks:	81.00	-14.42		0.7	4	-1.20		-4.87	0.0	000	0.000				
Heavy Trucks:	85.38	-8.22		0.7	73	-1.20		-5.43	0.0	000	0.000				
Unmitigated Noise Lev	els (witho	ut Topo and	barri	er attei	nuation)										
VehicleType Leq	Peak Hour	Leq Day	<i>,</i>	Leq E	vening	Leg	Night		Ldn	С	NEL				
Autos:	70.4	1	69.4		67.7		61	.6	70.3	2	70.8				
Medium Trucks:	66.1	1	65.5		59.2		57	.6	66.	1	66.3				
Heavy Trucks:	76.7	7	76.2		67.2		68	.4	76.	3	76.9				
Vehicle Noise:	77.9	9	77.3		70.7		69	.5	77.9	9	78.1				
Centerline Distance to	Noise Cor	ntour (in feet,)												
				70	dBA	65	dBA	(50 dBA	55	dBA				
	Ldn:				169 364 784 1,6				1,688						
	CNEL:				175 376 810 1,746										

Wednesday, December 9, 2020

	FHW	VA-RD-77-108 H	IGHWA	Y NOISE P	REDICTI	ON MODEL	-	
Scenario: Road Name: Road Segment:	HY 2040 w/ Heacock St n/o Gentian	ext. Av.			Project Job Ni	Name: Gate umber: 134	eway Aviation 45	
SITE SP	ECIFIC IN	PUT DATA			N	OISE MOI	DEL INPUTS	
Highway Data				Site Cor	nditions ('Hard = 10,	Soft = 15)	
Average Daily Tra	ffic (Adt):	33,022 vehicles				Auto	os: 15	
Peak Hour Pe	rcentage:	8.08%		Me	edium Tru	icks (2 Axle	s): 15	
Peak Hou	r Volume:	2,668 vehicles		He	eavy Truc	ks (3+ Axle	s): 15	
Vehic	le Speed:	50 mph		Vehicle	Mix			
Near/Far Lane	Distance:	48 feet		Veh	icleTvpe	Dav	Evening N	light Dailv
Site Data					A	utos: 77.	5% 12.9%	9.6% 86.23%
Barrie	r Heiaht	0.0 feet		M	ledium Tr	ucks: 84.	8% 4.9% 1	10.3% 2.67%
Barrier Type (0-Wall.	1-Berm):	0.0			Heavy Tr	ucks: 86.	5% 2.7% 1	10.8% 11.10%
Centerline Dist. 1	o Barrier:	50.0 feet		Noine C	ouroo Ek	wationa (ir	fact	
Centerline Dist. to	Observer:	50.0 feet		Noise 3	Ource Ele		i ieelj	
Barrier Distance to	Observer:	0.0 feet		Madiu	Autos	. 0.000		
Observer Height (Ab	Observer Height (Above Pad): 5.0 feet					. 2.231	Grade Adius	tment: 0.0
Pad	Elevation:	0.0 feet		i iea	vy mucha	. 0.004	0/000/10/00	
Road	Elevation:	0.0 feet		Lane Eq	uivalent	Distance (in feet)	
Roa	ad Grade:	0.0%			Autos	: 44.147		
1	Left View:	-90.0 degrees		Mediu	m Trucks	43.947		
Ri	ight View:	90.0 degrees		Hea	vy Trucks	43.966		
FHWA Noise Model C	Calculations	5						
VehicleType	REMEL	Traffic Flow	Distanc	e Finite	Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.32	(0.71	-1.20	-4.6	65 0.000	0.00
Medium Trucks:	81.00	-13.77	(0.74	-1.20	-4.8	87 0.000	0.00
Heavy Trucks:	85.38	-7.58	(0.73	-1.20	-5.4	13 0.000	0.00
Unmitigated Noise L	evels (witho	out Topo and ba	arrier att	tenuation)				
VehicleType Le	q Peak Hou	r Leq Day	Leq	Evening	Leq I	Vight	Ldn	CNEL
Autos:	71.	.0 70	0.1	68.3		62.2	70.9	71.
Medium Trucks:	66.	.8 66	5.2	59.8		58.3	66.7	67.
Heavy Trucks:	77.	.3 76	5.8	67.8	1	69.1	77.4	77.
Vehicle Noise:	78.	.5 78	3.0	71.4		70.2	78.6	78.
Centerline Distance t	o Noise Co	ntour (in feet)						
			7	'0 dBA	65 c	iBA	60 dBA	55 dBA
		Lo	dn:	186		401	865	1,863

	FH\	WA-RD-77-108	HIGHW	AY N	OISE PR	REDICTIC	ON MO	DEL			
Scenar	io: HY 2040 w	/ext.				Project N	lame:	Gatew	ay Aviatio	n	
Road Nam	e: Heacock S	t.				Job Nu	mber:	13445			
Road Segme	nt: s/o Cardina	al Av.									
SITE	SPECIFIC IN	IPUT DATA				N	DISE	NODE	L INPUT	s	
Highway Data				S	ite Con	ditions (l	Hard =	10, Se	oft = 15)		
Average Daily	Traffic (Adt):	31,784 vehicle	es					Autos:	15		
Peak Hour	Percentage:	8.08%			Med	dium Truc	cks (2 /	Axles):	15		
Peak H	lour Volume:	2,568 vehicle	s		Hea	avy Truck	(S (3+)	Axles):	15		
Ve	hicle Speed:	50 mph		v	ehicle N	Nix					
Near/Far La	ne Distance:	48 feet		-	Vehi	cleType		Day	Evening	Night	Daily
Site Data						AL	utos:	77.5%	12.9%	9.6	% 86.23%
Ba	rrier Heiaht [.]	0.0 feet			Me	dium Tru	icks:	84.8%	4.9%	10.3	% 2.67%
Barrier Type (0-W	all. 1-Berm):	0.0			h	leavy Tru	icks:	86.5%	5 2.7%	10.8	% 11.10%
Centerline Di	st. to Barrier:	50.0 feet			laisa Sa	urco Elo	vation	e (in f	ootl		
Centerline Dist.	to Observer:	50.0 feet		N	10136 30	Autos:	vauon	000	eeŋ		
Barrier Distance	to Observer:	0.0 feet			Madium	Autos.	. 2	207			
Observer Height (Observer Height (Above Pad): 5.0 feet						2	201	Grade Ar	liustma	nt: 0.0
Pa	ad Elevation:	0.0 feet			neav.	y muchs.	0.	004	0/000/10	juotinio	N. 0.0
Roa	ad Elevation:	0.0 feet		L	ane Equ	ivalent l	Distan	ce (in	feet)		
	Road Grade:	0.0%				Autos:	44.	147			
	Left View:	-90.0 degree	es		Mediun	n Trucks:	43.	947			
	Right View:	90.0 degree	es		Heav	y Trucks:	43.	966			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	псе	Finite	Road	Fresr	nel	Barrier At	ten B	erm Atten
Autos:	70.20	1.16		0.71		-1.20		-4.65	0.	000	0.000
Medium Trucks:	81.00	-13.94		0.74		-1.20		-4.87	0.	000	0.000
Heavy Trucks:	85.38	-7.75		0.73		-1.20		-5.43	0.	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier a	attenu	uation)						
VehicleType	Leq Peak Hou	ur Leq Day	' L	eq Ev	ening	Leq N	light		Ldn		CNEL
Autos:	70).9	69.9		68.1		62.1	1	70.	7	71.3
Medium Trucks:	66	6.6	66.0		59.7		58.1	1	66.	6	66.8
Heavy Trucks:	77	⁷ .2	76.7		67.6		68.9	9	77.	2	77.4
Vehicle Noise:	78	3.4	77.8		71.2		70.0)	78.	4	78.6
Centerline Distant	ce to Noise C	ontour (in feet)								
-				70 d	BA	65 di	BA		50 dBA	5	5 dBA
			Ldn:	182 391 843			1,817				
		C	NEL:		188		405		872	2	1,879

	FH\	NA-RD-77-108	HIGHW	VAY NO	DISE PI	REDICT	ION MO	DEL			
Scenar	<i>io:</i> HY 2040 w	/ext.				Project	Name:	Gatev	vay Aviation		
Road Nan Road Segme	ne: Heacock S nt: s/o Nandin	t. a Av.				Job N	umber:	13445	5		
SITE	SPECIFIC IN	IPUT DATA				N	IOISE N	IODI	EL INPUTS	5	
Highway Data				S	ite Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	14,626 vehicl	es				,	Autos	: 15		
Peak Hour	Percentage:	8.08%			Me	dium Tru	ucks (2 A	(xles	: 15		
Peak F	lour Volume:	1,182 vehicle	s		He	avy Truc	cks (3+ A	(xles	: 15		
Ve	hicle Speed:	50 mph		v	ehicle I	Mix					
Near/Far La	ne Distance:	48 feet		-	Veh	icleType		Day	Evening	Night	Daily
Site Data						1	Autos:	77.5%	6 12.9%	9.6%	66.23%
Ba	rrier Height:	0.0 feet			M	edium Ti	rucks:	84.8%	6 4.9%	10.3%	2.67%
Barrier Type (0-V	Vall, 1-Berm):	0.0			F	leavy Ti	rucks:	86.5%	6 2.7%	10.8%	5 11.10%
Centerline Di	ist. to Barrier:	50.0 feet		N	oise So	ource El	evation	s (in f	feet)		
Centerline Dist.	to Observer:	50.0 feet				Auto	s: 0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s: 2.1	297			
Observer Height	Observer Height (Above Pad): 5.0 feet					Heavy Trucks: 8.004 Grade Adjustment: 0.0					
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distant	ce (In	teet)		
	Road Grade:	0.0%				Auto	s: 44.	147			
	Left View:	-90.0 degre	es		Meaiui	m Truck	s: 43.	947			
	Right View:	90.0 degre	es		Heav	у тиск	5: 43.	900			
FHWA Noise Mod	el Calculation	S									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Atte	en Be	rm Atten
Autos:	70.20	-2.21		0.71		-1.20		-4.65	0.0	00	0.000
Medium Trucks:	81.00	-17.31		0.74		-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	85.38	-11.12		0.73		-1.20		-5.43	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Hou	ur Leq Da	′ L	Leq Eve	ening	Leq	Night		Ldn	C	NEL
Autos:	67	.5	66.5		64.8		58.7	,	67.3		67.9
Medium Trucks:	63	3.2	62.6		56.3		54.7	,	63.2		63.4
Heavy Trucks:	73	3.8	73.3		64.3		65.5	5	73.9	1	74.0
Vehicle Noise:	75	5.0	74.4		67.8		66.6	5	75.0		75.3
Centerline Distan	ce to Noise Co	ontour (in feet)								
				70 dl	BA	65	dBA		60 dBA	55	5 dBA
			Ldn:	108 233 503			1,083				
		С	NEL:		112		241		520		1,120

0			_			Our is at	A /	Orter			
Scenario Road Name	 HY 2040 W/ Contum Avr. 	ext.				Project	Name:	Gatew 12445	ay Aviation	1	
Road Segmen	 cactus AV. w/o Heacor 	k St				<i>JOD</i> Ν	umper:	13445			
nood ooginen	w/oriedCOC	av ot.									
SITE S	SPECIFIC IN	PUT DATA			Sito Con	N	IOISE	MODE		5	
Auguray Dala		50.074			Sile COII	unuons	(naru ·	- 10, 3	JIC = 15)		
Average Daily	raffic (Adt):	58,874 venici	es			diana Ta	(0	Autos.	15		
Peak Hour I	Percentage:	8.08%			ivie:		JCKS (2	Axies).	15		
Peak Ho	our volume:	4,757 vehicle	s		не	avy Truc	CKS (3+	Axies).	15		
Ver Neer/Eer Ler	nicie Speed:	50 mpn		1	/ehicle I	Nix					
Nedi/Fai Lai	le Distance.	73 leet			Vehi	icleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	86.23
Bar	rier Height:	0.0 feet			Me	edium Ti	rucks:	84.8%	4.9%	10.3%	2.67
Barrier Type (0-Wa	all, 1-Berm):	0.0			F	leavy T	rucks:	86.5%	2.7%	10.8%	11.109
Centerline Dis	t. to Barrier:	55.0 feet		1	Voise So	ource El	evatio	ns (in f	eet)		
Centerline Dist. t	o Observer:	55.0 feet		Ē		Auto	s: 0	000	,		
Barrier Distance t	o Observer:	0.0 feet			Mediur	n Truck	s: 2	2.297			
Observer Height (/	Above Pad):	5.0 feet			Heav	y Truck	s: 8	3.004	Grade Ad	ljustment	: 0.0
Pa	Pad Elevation: 0.0 feet							,,			
Roa	d Elevation:	0.0 feet		1	ane Equ	uivalent	Distar	nce (In	feet)		
F	Road Grade:	0.0%			1 4 m all 1 m	Auto	S.' 41	1.446			
	Left View:	-90.0 degre	es		Mediur	m Truck	S.' 41	1.232			
	Right View:	90.0 degre	es		Heav	у тиск	S: 41	1.253			
FHWA Noise Mode	I Calculation:	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	snel	Barrier Att	en Bei	m Atten
Autos:	70.20	3.83		1.12	2	-1.20		-4.67	0.	000	0.00
Medium Trucks:	81.00	-11.26		1.1	5	-1.20		-4.87	0.	000	0.00
Heavy Trucks:	85.38	-5.07		1.1	5	-1.20		-5.38	0.	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	ier atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day	/	Leg Ev	/ening	Leq	Night		Ldn	С	NEL
Autos:	74	.0	73.0		71.2		65	.2	73.	8	74.
Medium Trucks:	69	.7	69.1		62.7		61	.2	69.	7	69.
Heavy Trucks:	80	.3	79.8		70.7		72	.0	80.	3	80.
Vehicle Noise:	81	.5	80.9		74.3		73	.1	81.	5	81.
Centerline Distanc	e to Noise Co	ontour (in feet)								
				70 c	iBA	65	dBA		60 dBA	55	dBA
			Ldn:		321		69	2	1,491		3,212
	CNEL:				332 716 1,542 3,32						

	Et INA		UBACAN				-			
Scena Road Nan Road Segme	rio: HY 2040 w/e ne: Indian Av. nt: s/o Nandina	A-RD-77-108 Hig ext. Av.	HWAT	NOISE PI	Project Na Job Nun	ame: G aber: 13	atewa 3445	ay Aviation	1	
SITE	SPECIFIC IN				NO	ISE M	ODEI		s	
Highway Data				Site Con	ditions (H	ard = 1	0, So	ft = 15)	-	
Average Daily Peak Hou Peak F	Traffic (Adt): Percentage: Hour Volume:	27,978 vehicles 8.08% 2,261 vehicles		Me He	dium Truck avy Trucks	Ai (s (2 Ax s (3+ Ax	utos: des): des):	15 15 15		
Near/Far La	ne Distance:	36 feet		Vehicle	Mix					
011 D (no Biotanoo.	30 1001		Veh	icleType	D)ay	Evening	Night	Daily
Barrier Type (0-V	rrier Height: Vall, 1-Berm):	0.0 feet 0.0		M	Aut edium Truc Heavy Truc	os: 7 :ks: 8 :ks: 8	7.5% 4.8% 6.5%	12.9% 4.9% 2.7%	9.6% 10.3% 10.8%	2.67% 11.10%
Centerline D	ist. to Barrier:	44.0 feet		Noise So	ource Elev	ations	(in fe	et)		
Centerline Dist. Barrier Distance Observer Height F	to Observer: to Observer: (Above Pad): ad Elevation:	44.0 feet 0.0 feet 5.0 feet 0.0 feet		Mediu Heav	Autos: m Trucks: vy Trucks:	0.00 2.29 8.00	00 97 04	Grade Adj	iustment.	0.0
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent D	istance	e (in f	eet)		
	Road Grade: Left View: Right View:	0.0% -90.0 degrees 90.0 degrees		Mediu Heav	Autos: m Trucks: vy Trucks:	40.40 40.24 40.26	60 41 62			
FHWA Noise Mod	el Calculations									
VehicleType	REMEL	Traffic Flow D	istance	Finite	Road	Fresne	/ E	Barrier Att	en Ber	m Atten
Autos:	68.46	1.06	1.	28	-1.20	-4	4.61	0.0	000	0.000
Heavy Trucks:	79.45 84.25	-14.04 -7.84	1.	31	-1.20		4.87 5.50	0.0	000	0.000
Unmitigated Nois	e Levels (witho	ut Topo and barr	ier atte	nuation)						
VehicleType	Leq Peak Hour	Leq Day	Leg	Evening	Leq Nig	ght		Ldn	CI	VEL
Autos:	69.	6 68.6		66.9		60.8		69.4	1	70.0
Medium Trucks:	65.	5 64.9		58.6		57.0		65.5	5	65.7
Heavy Trucks:	76.	5 76.0	1	67.0		68.2		76.6	6	76.7
Vehicle Noise:	77.	6 77.0		70.2		69.2		77.6	3	77.8
Centerline Distan	ce to Noise Co	ntour (in feet)								
			70	dBA	65 dB	A	6	0 dBA	55	dBA
		Ldn. CNEL		142 147		306 316		659 680		1,419 1,466

	FHW	/A-RD-77-108 F	IIGHW	AY NO	OISE PF	REDICTI	ON MC	DEL				
Scenari	io: HY 2040 w/	ext.				Project	Name:	Gatew	ay Avia	tion		
Road Nam	e: Cactus Av.					Job N	umber:	13445				
Road Segmer	nt: e/o Heacock	c St.										
SITE	SPECIFIC IN	PUT DATA				N	OISE	MODE		UTS		
Highway Data				S	ite Con	ditions	(Hard =	= 10, Se	oft = 15)		
Average Daily	Traffic (Adt):	39,968 vehicles						Autos:	15			
Peak Hour	Percentage:	8.08%			Me	dium Tru	icks (2	Axles):	15			
Peak H	lour Volume:	3,229 vehicles			He	avy Truc	:ks (3+	Axles):	15			
Ve	hicle Speed:	40 mph		V	ehicle I	Niv						
Near/Far La	ne Distance:	50 feet			Vehi	cleTvpe		Dav	Evenir	na N	iaht	Dailv
Site Data							utos:	77.5%	5 12.9	1%	9.6%	86.23%
Ba	rrior Hoight:	0.0 foot			Me	dium Tr	ucks:	84.8%	4.9	9% 1	0.3%	2.67%
Barrier Type (0-W	all 1-Rerm)	0.0 1001			F	leavy Tr	ucks:	86.5%	5 2.7	'% 1	0.8%	11.10%
Centerline Dis	st. to Barrier:	44.0 feet						(i #	4			
Centerline Dist.	to Observer:	44.0 feet		N	oise so	urce El	evation	is (in t	eet)			
Barrier Distance	to Observer:	0.0 feet				Autos	S: 0	.000				
Observer Height (Above Pad):	5.0 feet			Mediur	n Trucks	3. 2	.297	0	A		0.0
Pa	ad Elevation:			Heav	y Trucks	5. 8	.004	Grade	Aajust	ment	0.0	
Roa	ad Elevation:	0.0 feet		L	ane Equ	iivalent	Distan	ice (in	feet)			
	Road Grade:	0.0%				Autos	s: 36	.551				
	Left View:	-90.0 degrees			Mediur	n Trucks	s: 36	.308				
	Right View:	90.0 degrees			Heav	y Trucks	s: 36	.332				
FHWA Noise Mode	el Calculations	:										
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fres	nel	Barrier	Atten	Berr	n Atten
Autos:	66.51	3.12		1.94		-1.20		-4.61		0.000		0.000
Medium Trucks:	77.72	-11.98		1.98		-1.20		-4.87		0.000		0.000
Heavy Trucks:	82.99	-5.78		1.98		-1.20		-5.50		0.000		0.000
Unmitigated Noise	e Levels (witho	out Topo and b	arrier a	attenu	ation)					-		
VehicleType	Leq Peak Hou	r Leq Day	L	eq Eve	ening	Leq	Night		Ldn		CN	IEL
Autos:	70.	4 6	9.4		67.6		61.	6	7	70.2		70.8
Medium Trucks:	66.	5 6	5.9		59.6		58.	0	6	36.5		66.7
Heavy Trucks:	78.	0 7	7.5		68.5		69.	7	7	78.1		78.2
Vehicle Noise:	78.	9 7	8.4		71.4		70.	6	1	79.0		79.2
Centerline Distance	ce to Noise Co	ntour (in feet)										
				70 dl	BA	65 (dBA	(60 dBA		55	dBA
		L	dn:	174 37		376	3	8	310		1,744	
		CN	EL:		180		388	3	8	335		1,799

Wednesday, December 9, 2020

	FH	WA-RD-77-1	08 HIG	HWAY N	NOISE P	REDICTIC		DEL				
Scenar	<i>io:</i> HY 2040 w	//ext.				Project N	lame: G	Gatewa	ay Aviation			
Road Nan Road Segme	ne: Harley Kno nt: e/o Patters	on Av.				Job Nu	mber: 1	3445				
SITE	SPECIFIC IN	NPUT DAT	1			NC	DISE M	ODE	L INPUT	5		
Highway Data					Site Cor	nditions (I	Hard = 1	10, So	ft = 15)			
Average Daily	Traffic (Adt):	34,146 vehi	cles				A	utos:	15			
Peak Hour	Percentage:	8.08%			Me	edium Truc	cks (2 A	xles):	15			
Peak F	lour Volume:	2,759 vehic	les		He	eavy Truck	(S (3+ A	xles):	15			
Ve	hicle Speed:	45 mph		F	Vehicle	Mix						
Near/Far La	ne Distance:	80 feet		-	Veh	nicleType	L	Day	Evening	Night	Daily	
Site Data						AL	utos: 1	77.5%	12.9%	9.6%	86.23%	
Ba	rrier Height:	0.0 feet			М	ledium Tru	icks: 8	34.8%	4.9%	10.3%	2.67%	
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tru	icks: {	36.5%	2.7%	10.8%	11.10%	
Centerline D	ist. to Barrier:	64.0 feet			Noise S	ource Ele	vations	(in fe	et)			
Centerline Dist.	to Observer:	64.0 feet				Autos:	0.0	00				
Barrier Distance	Barrier Distance to Observer: 0.0 feet					Medium Trucks: 2.297						
Observer Height	Observer Height (Above Pad): 5.0 feet				Hear	vy Trucks:	8.0	04	Grade Adj	ustment	0.0	
P	ad Elevation:	0.0 feet		-								
Ro	ad Elevation:	0.0 feet		-	Lane Eq	uivalent L	Distanc	e (in f	eet)			
	Road Grade:	0.0%				Autos:	50.2	10				
	Left View:	-90.0 degi	rees		Mediu	m Trucks:	50.0	33				
	Right View:	90.0 degi	rees		Hea	vy Trucks:	50.0	150				
FHWA Noise Mod	el Calculation	IS										
VehicleType	REMEL	Traffic Flow	ı Di	stance	Finite	Road	Fresne	e/ I	Barrier Atte	en Ber	m Atten	
Autos:	68.46	1.9	3	-0.1	3	-1.20	-	4.70	0.0	000	0.000	
Medium Trucks:	79.45	-13.1	7	-0.1	1	-1.20	-	4.88	0.0	000	0.000	
Heavy Trucks:	84.25	-6.9	8	-0.1	1	-1.20	-	5.31	0.0	000	0.000	
Unmitigated Nois	e Levels (with	out Topo an	d barri	ier atten	nuation)							
VehicleType	Leq Peak Ho	ur Leq D	ay	Leq E	vening	Leq N	light		Ldn	CI	VEL	
Autos:	69	9.1	68.1		66.3		60.3		68.9)	69.5	
Medium Trucks:	65	5.0	64.4		58.0)	56.5		64.9)	65.2	
Heavy Trucks:	76	5.0	75.5		66.4		67.7		76.0)	76.2	
Vehicle Noise:	71	7.0	76.5		69.7		68.7		77.1		77.3	
Centerline Distan	ce to Noise C	ontour (in fe	et)									
						70 dBA 65 dBA 60 dBA 55			dBA			
			Ldn:		190		409		880		1,897	
			CNEL:		196		422		909		1,959	

	FHV	VA-RD-77-108	HIG	HWAY N	IOISE PI	REDICT		DEL						
Scenari Road Nam Road Segmer	io: HYP 2040 v ne: Heacock St nt: n/o Gentian	v/ext. (Non-Pe Av.	ak)			Project Job N	Name: (lumber: 1	Gatew 13445	ay Aviation					
SITE	SPECIFIC IN	PUT DATA				N	IOISE N	IODE		s				
Highway Data				1	Site Con	ditions	(Hard =	10, Sc	oft = 15)					
Average Daily	Traffic (Adt):	33,372 vehicle	es					Autos:	15					
Peak Hour	Percentage:	8.08%			Me	dium Tr	ucks (2 A	xles):	15					
Peak H	lour Volume:	2,696 vehicle	s		Heavy Trucks (3+ Axles): 15									
Ve	hicle Speed:	50 mph		1	Vehicle	Mix								
Near/Far La	ne Distance:	48 feet		F	Veh	icleType		Dav	Evenina	Niaht	Daily			
Site Data					Autos: 77.5% 12.9% 9.6% 8f									
Rai	rrier Height:	0.0 feet			Medium Trucks: 84.8% 4.9% 10.3% 2.6									
Barrier Type (0-W	all. 1-Berm):	0.0			Heavy Trucks: 86.5% 2.7% 10.8% 10.98									
Centerline Dis	st. to Barrier:	50.0 feet		H.	N 0.			. <i>(</i> f .	41					
Centerline Dist.	to Observer:	50.0 feet		'	voise so	ource El	levations		eet)					
Barrier Distance	to Observer:	0.0 feet			Madiu	AUIO Truck	S: 0.0	007						
Observer Height (Above Pad):	5.0 feet			Hear	a Truck	S. 2.2	104	Grade Ad	iustment	0.0			
Pa	ad Elevation:		Ticas	y muck	3. 0.0	104	Orade Au	usunent	0.0					
Roa	ad Elevation:	0.0 feet		1	Lane Eq	uivalen	t Distanc	e (in i	feet)					
I	Road Grade:	0.0%				Auto	s: 44.1	147						
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 43.9	947						
	Right View:	90.0 degre	es		Heav	y Truck	s: 43.9	966						
FHWA Noise Mode	el Calculations	5												
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten			
Autos:	70.20	1.38		0.7	1	-1.20		-4.65	0.0	000	0.00			
Medium Trucks:	81.00	-13.77		0.74	4	-1.20		-4.87	0.0	000	0.00			
Heavy Trucks:	85.38	-7.58		0.73	3	-1.20		-5.43	0.0	000	0.00			
Unmitigated Noise	e Levels (with	out Topo and	barri	ier atten	uation)									
VehicleType	Leq Peak Hou	r Leq Day	/	Leg Ev	vening	Leq	Night		Ldn	CI	VEL			
Autos:	71	.1	70.1		68.3		62.3		70.9	•	71.			
Medium Trucks:	66	.8 О	66.2		59.8		58.3		66.7	(67.			
Heavy Trucks:	77	.3 e	70.8		07.8		69.1		70.4	+	70			
venicie ivolse:	78	.0	10.0		/1.4		70.2		78.6)	78.			
Centerline Distanc	ce to Noise Co	ntour (in feet)	70 /		65	dBA	6	Oden	55	dRA			
			I dn	701	187	05	402		AGD OF	55	1 866			
		C	NEL.		107 402 000 1,00				1,000					
		0.			155		-10		090		1,000			

Wednesday, December 9, 2020

	FH\	NA-RD-77-108 H	IIGHWA	Y NO	DISE PI	REDICT		DEL			
Scenar Road Narr Road Segme	io: HY 2040 w ne: Harley Kno nt: e/o Indian /	/ext. x Bl. Av.				Project Job N	Name: 0 lumber: 1	Gatew 3445	vay Aviation		
SITE	SPECIFIC IN	IPUT DATA				N	IOISE N	IODE	EL INPUT	5	
Highway Data				S	ite Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	16,647 vehicles	;				A	Autos:	15		
Peak Hour	Percentage:	8.08%			Me	dium Tru	ucks (2 A	xles).	: 15		
Peak H	lour Volume:	1,345 vehicles			He	avy Truc	cks (3+ A	xles).	: 15		
Ve	hicle Speed:	45 mph		V	ohiclo	Mix					
Near/Far La	ne Distance:	80 feet			Veh	icleTvne		Dav	Evening	Niaht	Daily
Site Data				-	VCII	icie i ype	Autos	77.5%	6 12.9%	9.6	% 86.23%
0.10 Dulu D-		0.0.6		-	M	edium Ti	rucks:	84.8%	6 4.9%	10.3	% 2.67%
Ban Barriar Turna (0.14	rrier Height:	0.0 teet			F	leavy Ti	rucks:	86.5%	6 2.7%	10.8	% 11.10%
Centerline Di	ist to Barrier	64.0 feet				,					
Centerline Dist	to Observer:	64.0 feet		N	oise So	ource El	evations	; (in f	eet)		
Barrier Distance	to Observer:	0.0 feet				Auto	s: 0.0	000			
Observer Height ((Above Pad):	5.0 feet			Mediu	m Truck	s: 2.2	297			
P	ad Elevation:	0.0 feet			Heav	y Truck	s: 8.0)04	Grade Adj	ustme	nt: 0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distanc	e (in	feet)		
	Road Grade:	0.0%				Auto	s: 50.2	210			
	Left View:	-90.0 degrees			Mediu	m Truck	s: 50.0	033			
	Right View:	90.0 degrees	5		Heav	y Truck	s: 50.0	050			
FHWA Noise Mod	el Calculation	s		_							
VehicleType	REMEL	Traffic Flow	Distanc	e	Finite	Road	Fresne	e/	Barrier Atte	en B	erm Atten
Autos:	68.46	-1.19	-	0.13		-1.20		-4.70	0.0	000	0.000
Medium Trucks:	79.45	-16.29	-	0.11		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-10.10	-	0.11		-1.20		-5.31	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and b	arrier at	tenu	ation)						
VehicleType	Leq Peak Hou	ur Leq Day	Leo	q Eve	ening	Leq	Night		Ldn		CNEL
Autos:	65	5.9 6	5.0		63.2		57.1		65.8	3	66.4
Medium Trucks:	61	.9 6	1.3		54.9		53.4		61.8	3	62.
Heavy Trucks:	72	2.8 7	2.4		63.3		64.6		72.9)	73.
Vehicle Noise:	73	8.9 7	3.4		66.6		65.6		74.0)	74.2
Centerline Distan	ce to Noise Co	ontour (in feet)								-	
				70 dl	BA	65	dBA	1	60 dBA	1	55 dBA
		L	dn:		118		253		545		1,175
		CN	EL:		121		261		563		1,213

	FH\	NA-RD-77-108	HIGHW.	AY NO	OISE PR	REDICTI	ON MO	DEL					
Scenar Road Narr Road Segme	io: HYP 2040 v ne: Heacock Si nt: s/o Iris Av.	w/ext. (Non-Pea t.	ık)			Project Job Ni	Name: umber:	Gatew 13445	ay Aviatior	I			
SITE	SPECIFIC IN	IPUT DATA				N	OISE N	IODE	L INPUT	s			
Highway Data				S	ite Con	ditions ((Hard =	10, So	oft = 15)				
Average Daily	Traffic (Adt):	28,923 vehicle	s					Autos:	15				
Peak Hour	Percentage:	8.08%			Med	dium Tru	icks (2 A	xles):	15				
Peak H	lour Volume:	2,337 vehicles			Hea	avy Truc	:ks (3+ A	(xles):	15				
Ve	hicle Speed:	50 mph		V	ehicle I	Niv							
Near/Far La	ne Distance:	48 feet			Vehi	cleTvne		Dav	Evenina	Night	Daily		
Site Data					10111	а.от.)ро А	utos:	77.5%	12.9%	9.6%	86.45%		
Ba	wies Height	0.0 feet			Me	dium Tr	ucks:	84.8%	4.9%	10.3%	2.62%		
Barrier Type (0-M	(all 1-Berm)	0.0 1001			h	leavy Tr	ucks:	86.5%	2.7%	10.8%	10.93%		
Centerline Di	st. to Barrier:	50.0 feet		-									
Centerline Dist.	to Observer:	50.0 feet		N	oise So	urce Ele	evation	s (in fe	eet)				
Barrier Distance	to Observer:	0.0 feet				Autos	5.' 0.0	000					
Observer Height	Observer Height (Above Pad): 5.0 feet						Medium Trucks: 2.297						
P	ad Elevation:	0.0 feet			Heav	y Trucks	5.' 8.0	JU4	Grade Au	usimeni	. 0.0		
Ro	ad Elevation:	0.0 feet		L	ane Equ	ıivalent	Distand	e (in :	feet)				
	Road Grade:	0.0%				Autos	s: 44.	147					
	Left View:	-90.0 degree	s		Mediun	n Trucks	s: 43.	947					
	Right View:	90.0 degree	s		Heav	y Trucks	s: 43.	966					
FHWA Noise Mod	el Calculation	s											
VehicleType	REMEL	Traffic Flow	Distar	ice	Finite	Road	Fresn	el	Barrier Att	en Bei	rm Atten		
Autos:	70.20	0.76		0.71		-1.20		-4.65	0.0	000	0.000		
Medium Trucks:	81.00	-14.42		0.74		-1.20		-4.87	0.0	000	0.000		
Heavy Trucks:	85.38	-8.22		0.73		-1.20		-5.43	0.0	000	0.000		
Unmitigated Noise	e Levels (with	out Topo and I	barrier a	ttenu	uation)								
VehicleType	Leq Peak Hou	ir Leq Day	Le	eq Ev	ening	Leq I	Night		Ldn	С	NEL		
Autos:	70	0.5 (69.5		67.7		61.7		70.3	3	70.9		
Medium Trucks:	66	i.1 (65.5		59.2		57.6	,	66.	1	66.3		
Heavy Trucks:	76	5.7	76.2		67.2		68.4		76.8	3	76.9		
Vehicle Noise:	77	.9	7.3		70.8		69.5		77.9	9	78.2		
Centerline Distant	ce to Noise Co	ontour (in feet)											
				70 dBA 65 dBA 60 dBA 55 d			dBA						
		1	dn:	169 364 785			1,692						
		CN	IEL:		175		377		812		1,750		

	FH	WA-RD-77-10	BHIGHW	VAY NO	DISE PI	REDICTIC		DEL			
Scena Road Nan Road Segme	rio: HYP 2040 ne: Heacock S ent: s/o Cardin	w/ext. (Non-Pe st. al Av.	eak)			Project N Job Nui	lame: G mber: 1	atewa 3445	ay Aviation		
SITE	SPECIFIC II	NPUT DATA				NC	DISE M	ODE	L INPUTS	6	
Highway Data				Si	ite Con	ditions (F	Hard = 1	10, So	ft = 15)		
Average Daily	Traffic (Adt):	32,560 vehic	es				А	utos:	15		
Peak Hour	r Percentage:	8.08%			Me	dium Truc	cks (2 A)	xles):	15		
Peak H	Hour Volume:	2,631 vehicle	s		He	avy Truck	is (3+ A)	xles):	15		
Ve	ehicle Speed:	50 mph		V	ehicle l	Mix					-
Near/Far La	ane Distance:	48 feet		-	Veh	icleType	L	Day	Evening	Night	Daily
Site Data						AL	itos: 7	7.5%	12.9%	9.6%	85.71%
Ba	arrier Height:	0.0 feet			M	edium Tru	cks: 8	34.8%	4.9%	10.3%	2.69%
Barrier Type (0-V	Vall, 1-Berm):	0.0			ŀ	Heavy Tru	cks: 8	86.5%	2.7%	10.8%	11.60%
Centerline D	ist. to Barrier:	50.0 feet		N	oise So	ource Ele	vations	(in fe	et)		
Centerline Dist.	to Observer:	50.0 feet				Autos:	0.0	00	.,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:	2.2	97			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks	8.0	04	Grade Adi	ustment	: 0.0
F	Pad Elevation:	0.0 feet			mour	<i>, , , , , , , , , , , , , , , , , , , </i>	0.0				
Ro	ad Elevation:	0.0 feet		La	ane Eq	uivalent L	Distance	e (in f	eet)		
	Road Grade:	0.0%				Autos:	44.1	47			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	43.9	47			
	Right View:	90.0 degre	es		Heav	vy Trucks:	43.9	66			
FHWA Noise Mod	lel Calculation	IS									-
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresne	e/	Barrier Atte	en Ber	m Atten
Autos:	70.20	1.24		0.71		-1.20	-	4.65	0.0	00	0.000
Medium Trucks:	81.00	-13.80	1	0.74		-1.20	-	4.87	0.0	00	0.000
Heavy Trucks:	85.38	-7.45		0.73		-1.20	-	5.43	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						-
VehicleType	Leq Peak Ho	ur Leq Da	y L	Leq Eve	ening	Leq N	light		Ldn	C	NEL
Autos:	70	0.9	70.0		68.2		62.2		70.8		71.4
Medium Trucks:	66	5.7	66.2		59.8		58.3		66.7		66.9
Heavy Trucks:	7	7.5	77.0		67.9		69.2		77.5		77.7
Vehicle Noise:	78	3.6	78.0		71.4		70.2		78.7		78.9
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 dE	BA	65 dl	BA	6	0 dBA	55	dBA
			Ldn:		189		407		876		1,887
	Lan: CNEL:				195		420		905		1,951

	FHV	VA-RD-77-108	HIG	HWAY N	OISE PH	EDICI		PEL			
Scenario: HY Road Name: Ind Road Segment: s/o	P 2040 v ian Av. Nandina	v/ext. (Non-Pe ı Av.	ak)			Project Job N	Name: 0 umber: 1	Gatew 3445	ay Aviation		
SITE SPEC	IFIC IN	PUT DATA				N	IOISE N	ODE	L INPUT	S	
Highway Data				5	Site Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily Traffic	(Adt):	28,304 vehicl	es				A	utos:	15		
Peak Hour Perce	ntage:	8.08%			Me	dium Tr	ucks (2 A	xles):	15		
Peak Hour Vo	olume:	2,287 vehicle	s		He	avy Tru	cks (3+ A	xles):	15		
Vehicle S	Speed:	45 mph		1	/ehicle I	lix					
Near/Far Lane Dis	tance:	36 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data							Autos:	77.5%	12.9%	9.6%	85.42
Barrier H	eight:	0.0 feet			Me	dium T	rucks:	34.8%	4.9%	10.3%	2.73
Barrier Type (0-Wall, 1-	Berm):	0.0			ŀ	leavy T	rucks:	36.5%	2.7%	10.8%	11.859
Centerline Dist. to E	arrier:	44.0 feet			loise Sc	urce F	evations	(in f	pet)		
Centerline Dist. to Obs	server:	44.0 feet		Ľ.		Auto	s [.] 0.0	00			
Barrier Distance to Obs	server:	0.0 feet			Mediur	n Truck	s 22	97			
Observer Height (Above	Pad):	5.0 feet			Heav	v Truck	s: 8.0	04	Grade Ad	iustment.	0.0
Pad Ele	vation:	0.0 feet		L							
Road Ele	vation:	0.0 feet		4	ane Equ	ivalen	Distanc	e (in i	feet)		
Road	Grade:	0.0%			1 4 m all 1 m	Auto	s: 40.4	-60			
Len	View:	-90.0 degre	es		Wealur	n Truck	s: 40.2	41			
Right	view.	90.0 degre	es		neav	y much	3. 40.2	.02			
FHWA Noise Model Cale	culations	5									
VehicleType RE	MEL	Traffic Flow	Di	stance	Finite	Road	Fresn	e/	Barrier Atte	en Ber	m Atten
Autos:	68.46	1.07		1.28	3	-1.20		4.61	0.0	000	0.00
Medium Trucks:	79.45	-13.88		1.31	I	-1.20		4.87	0.0	000	0.00
Heavy Trucks:	84.25	-7.51		1.31	1	-1.20		5.50	0.0	000	0.00
Unmitigated Noise Leve	ls (with	out Topo and	barri	er atten	uation)						
VehicleType Leq F	eak Hou	r Leq Day	/	Leg Ev	rening	Leq	Night		Ldn	CI	VEL
Autos:	69	.6	68.6		66.9		60.8		69.4	Ļ	70.
Medium Trucks:	65	.7	65.1		58.7		57.2		65.7		65.
Heavy Trucks:	76	.9	76.4		67.3		68.6		76.9)	77.
Vehicle Noise:	77	.9	77.3		70.4		69.5		77.9)	78.
Centerline Distance to I	loise Co	ntour (in feet)			-					
				70 a	IBA	65	dBA	6	60 dBA	55	dBA
		-	Ldn:		148		319		687		1,48
		C	NEL:		153		329		709		1,528

Wednesday, December 9, 2020

		IA-IND-11-1001	IIGHWA		JISE PR	EDICI		DEL			
Scenar Road Nam Road Segmei	io: HYP 2040 v e: Heacock St nt: s/o Nandina	v/ext. (Non-Pea a Av.	<)			Project Job N	Name: umber:	Gatew 13445	ay Aviation		
SITE	SPECIFIC IN	PUT DATA				N	IOISE	MODE	L INPUT	s	
Highway Data				S	ite Con	ditions	(Hard :	= 10, Sc	ft = 15)		
Average Daily Peak Hour	Traffic (Adt): Percentage:	15,076 vehicles 8.08%	5		Me	dium_Tru	ucks (2	Autos: Axles):	15 15		
Peak H	lour Volume:	1,218 vehicles			He	avy Truc	cks (3+	Axles):	15		
Ve	hicle Speed:	50 mph		V	ehicle I	Nix					
Near/Far La	ne Distance:	48 feet			Vehi	icleType		Day	Evening	Night	Daily
Site Data						A	Autos:	77.5%	12.9%	9.6%	86.64%
Bai	rrier Height:	0.0 feet			Me	edium Ti	rucks:	84.8%	4.9%	10.3%	2.59%
Barrier Type (0-W	all, 1-Berm):	0.0			F	leavy Ti	rucks:	86.5%	2.7%	10.8%	10.77%
Centerline Di	st. to Barrier:	50.0 feet		N	oise So	ource El	evatio	ns (in fe	et)		
Centerline Dist.	to Observer:	50.0 feet				Auto	s: 0	000			
Barrier Distance	to Observer:	0.0 feet			Mediur	n Truck	s: 2	.297			
Observer Height (Above Pad):	5.0 feet			Heav	y Truck	s: 8	.004	Grade Ad	iustment	: 0.0
Pa	ad Elevation:	0.0 feet					Dista		41		
Roa	ad Elevation:	0.0 feet		Li	ane Equ	livaient	Distar		eet)		
	Road Grade:	0.0%			Madium	Auto	5: 44	.147			
	Right View:	90.0 degrees	5		Heav	y Truck	s. 43 s: 43	.966			
FHWA Noise Mode	el Calculation	5									
VehicleType	REMEL	Traffic Flow	Distan	ce	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	70.20	-2.06		0.71		-1.20		-4.65	0.0	000	0.00
Medium Trucks:	81.00	-17.31		0.74		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	85.38	-11.12		0.73		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise	e Levels (with	out Topo and b	arrier a	ttenu	ation)						
VehicleType	Leq Peak Hou	r Leq Day	Le	q Eve	ening	Leq	Night		Ldn	C	NEL
Autos:	67	.7 6	6.7		64.9		58	.9	67.5	5	68.
Medium Trucks:	63	.2 6	2.6		56.3		54	7	63.2	2	63.4
Heavy Trucks:	73	.8 7	3.3		64.3		65	5	73.9		74.
	75	.0 7	4.5		67.9		66	./	75.1		75.3
Vehicle Noise:		(l f4)						-			
Vehicle Noise: Centerline Distant	ce to Noise Co	ontour (in feet)	1				10.4				
Vehicle Noise: Centerline Distand	ce to Noise Co	ntour (in reet)		70 dE	BA	65	dBA	6	0 dBA	55	abA A DOT
Vehicle Noise: Centerline Distance	ce to Noise Co	L	dn:	70 dE	BA 109	65	dBA 23	4	0 dBA 505	55	ава 1,087

	FHW	A-RD-77-108	HIGHWAY	NOISE P	REDICTI	ON MOD	DEL			
Scenar	<i>io:</i> HYP 2040 w	/ext. (Non-Pe	ak)		Project	Name: G	atewa	y Aviation	1	
Road Nan	ne: Cactus Av.	< Ct			Job N	umber: 1	3445			
Road Seyme	n. w/o neacock	ι οι.		1						
SITE	SPECIFIC INF	PUT DATA		0.4	N	OISE M	ODEL	INPUT	S	
Highway Data				Site Con	ditions	(Hard = 1	10, Sof	t = 15)		
Average Daily	Traffic (Adt): 5	59,024 vehicle	s			A	utos:	15		
Peak Hour	Percentage:	8.08%		Me	dium Tru	icks (2 A	xles):	15		
Peak H	lour Volume:	4,769 vehicles	3	He	avy Truc	:ks (3+ A)	xles):	15		
Ve	hicle Speed:	50 mph		Vehicle	Mix					
Near/Far La	ne Distance:	73 feet		Veh	icleType	L	Day I	Evening	Night	Daily
Site Data					A	lutos: 7	7.5%	12.9%	9.6%	6 86.27%
Ba	rrier Heiaht:	0.0 feet		М	edium Ti	ucks: 8	34.8%	4.9%	10.3%	2.66%
Barrier Type (0-W	/all, 1-Berm):	0.0			Heavy Ti	ucks: 8	86.5%	2.7%	10.8%	5 11.07%
Centerline Di	ist. to Barrier:	55.0 feet		Noise Se	ource El	evations	(in fee	et)		
Centerline Dist.	to Observer:	55.0 feet			Autos	s: 0.0	00	/		
Barrier Distance	to Observer:	0.0 feet		Mediu	m Truck	2.2	97			
Observer Height		Heav	/v Truck	s: 8.0	04 (Grade Ad	iustmen	t: 0.0		
P	ad Elevation:			,						
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent	Distance	e (in fe	eet)		
	Road Grade:	0.0%			Autos	5: 41.4	46			
	Left View:	-90.0 degree	s	Mediu	m Truck	5: 41.2	32			
	Right View:	90.0 degree	s	Hear	/y Truck:	5: 41.2	53			
FHWA Noise Mod	el Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresne	el B	Barrier Att	en Be	rm Atten
Autos:	70.20	3.85	1.	.12	-1.20	-	4.67	0.0	000	0.000
Medium Trucks:	81.00	-11.26	1.	.15	-1.20	-	4.87	0.0	000	0.000
Heavy Trucks:	85.38	-5.07	1.	.15	-1.20	-	5.38	0.0	000	0.000
Unmitigated Nois	e Levels (witho	ut Topo and	barrier atte	enuation)						
VehicleType	Leq Peak Hour	· Leq Day	Leq	Evening	Leq	Night	l	Ldn	C	NEL
Autos:	74.0	D	73.0	71.2		65.2		73.8	3	74.4
Medium Trucks:	69.7	7	69.1	62.7		61.2		69.7	7	69.9
Heavy Trucks:	80.3	3	79.8	70.7		72.0		80.3	3	80.5
Vehicle Noise:	81.5	5	80.9	74.3		73.1		81.5	5	81.7
Centerline Distan	ce to Noise Cor	ntour (in feet)								
			70	0 dBA	65	dBA	60) dBA	55	5 dBA
			Ldn:	321		692		1,491		3,213
		CI	VEL:	332 716 1,542 3,323					3,323	

	FH	WA-RD-77-10	8 HIGHV	NAY NO	DISE PI	REDICTIO	ON MOE	DEL			
Scena Road Nan Road Segme	rio: HYP 2040 ne: Cactus Av. ent: e/o Heaco	w/ext. (Non-Pe ck St.	eak)			Project N Job Nu	lame: G mber: 1	Gatew 3445	ay Aviation		
SITE	SPECIFIC II	NPUT DATA				N	DISE M	IODE	L INPUTS	6	
Highway Data				S	ite Con	ditions (I	Hard = 1	10, So	oft = 15)		
Average Daily	Traffic (Adt):	40,098 vehic	les				A	Autos:	15		
Peak Hour	r Percentage:	8.08%			Me	dium True	cks (2 A	xles):	15		
Peak I	Hour Volume:	3,240 vehicle	es		He	avy Truck	(S (3+ A	xles):	15		
Ve	ehicle Speed:	40 mph		V	ehicle	Mix					
Near/Far La	ane Distance:	50 feet			Veh	icleType	L	Day	Evening	Night	Daily
Site Data						A	utos: 1	77.5%	12.9%	9.6%	86.28%
Ba	arrier Height:	0.0 feet			М	edium Tru	icks: {	84.8%	4.9%	10.3%	2.66%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tru	icks: {	86.5%	2.7%	10.8%	11.07%
Centerline D	ist. to Barrier:	44.0 feet		N	oise So	ource Ele	vations	(in f	eet)		
Centerline Dist.	to Observer:	44.0 feet				Autos	0.0	00	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	22	97			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks	8.0	04	Grade Adi	ustment	: 0.0
F	Pad Elevation:	0.0 feet				,					
Ro	ad Elevation:	0.0 feet		Li	ane Eq	uivalent l	Distanc	e (in	feet)		
	Road Grade:	0.0%				Autos:	36.5	551			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	36.3	808			
	Right View:	90.0 degre	es		Heav	y Trucks:	36.3	32			
FHWA Noise Mod	lel Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresne	e/	Barrier Atte	en Ber	m Atten
Autos:	66.51	3.14	Ļ	1.94		-1.20	-	4.61	0.0	00	0.000
Medium Trucks:	77.72	-11.98	3	1.98		-1.20	-	4.87	0.0	00	0.000
Heavy Trucks:	82.99	-5.78	3	1.98		-1.20	-	-5.50	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	l barrier	r attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	y .	Leq Eve	ening	Leq N	light		Ldn	C	NEL
Autos:	70	0.4	69.4		67.6		61.6		70.2		70.8
Medium Trucks:	6	6.5	65.9		59.6		58.0		66.5		66.7
Heavy Trucks:	78	3.0	77.5		68.5		69.7		78.1		78.2
Vehicle Noise:	71	3.9	78.4		71.4		70.6		79.0		79.2
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70 dE	BA	65 d	BA		60 dBA	55	dBA
			Ldn:		175		376		810		1,745
	Lan: CNEL:				180		388		835		1,799

	FHV	VA-RD-77-108	HIGH	IWAY NO	DISE PF	REDICTI		DEL			
Scenario Road Name Road Segmen	o: HYP 2040 v e: Harley Kno» it: e/o Indian A	v/ext. (Non-Pe Bl. v.	ak)			Project Job Ni	Name: (Imber: 1	Gatew 3445	ay Aviation		
SITE S	SPECIFIC IN	PUT DATA				N	OISE N	IODE	L INPUT	5	
Highway Data				S	ite Con	ditions ('Hard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	16,747 vehicle	es					Autos:	15		
Peak Hour I	Percentage:	8.08%			Me	dium Tru	cks (2 A	xles):	15		
Peak He	our Volume:	1,353 vehicle	s		He	avy Truc	ks (3+ A	xles):	15		
Vel	nicle Speed:	45 mph		v	ehicle I	Nix					
Near/Far Lar	ne Distance:	80 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	12.9%	9.6%	86.319
Bar	rier Height:	0.0 feet			Me	edium Tr	ucks:	84.8%	4.9%	10.3%	2.65%
Barrier Type (0-Wa	all, 1-Berm):	0.0		1	ŀ	leavy Tr	ucks:	86.5%	2.7%	10.8%	11.04%
Centerline Dis	t. to Barrier:	64.0 feet		N	nisa Sr	urco Ele	vations	(in f	a of)		
Centerline Dist. t	to Observer:	64.0 feet			0136 00	Autos	. 00	00			
Barrier Distance t	to Observer:	0.0 feet			Mediur	n Trucks	20	97			
Observer Height (/	Above Pad):	5.0 feet			Heav	v Trucks	8.0	04	Grade Ad	iustment	0.0
Pa	d Elevation:	0.0 feet				,					
Roa	d Elevation:	0.0 feet		L	ane Equ	uivalent	Distanc	e (in	feet)		
F	Road Grade:	0.0%				Autos	: 50.2	210			
	Left View:	-90.0 degree	es		Mediur	n Trucks	50.0	133			
	Right view:	90.0 degre	es		neav	y TTUCKS	. 50.0	150			
FHWA Noise Mode	l Calculations	;									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	e/	Barrier Atte	en Ber	m Atten
Autos:	68.46	-1.16		-0.13		-1.20		-4.70	0.0	000	0.00
Medium Trucks:	79.45	-16.29		-0.11		-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	84.25	-10.10		-0.11		-1.20		-5.31	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrie	er attenu	ation)						
VehicleType	Leq Peak Hou	r Leq Day	/	Leq Eve	ening	Leq I	Vight		Ldn	C	VEL
Autos:	66.	0	65.0		63.2		57.2		65.8	3	66.
Medium Trucks:	61.	9	61.3		54.9		53.4		61.8	3	62.
Heavy Trucks:	72.	8	72.4		63.3		64.6		72.9)	73.
Vehicle Noise:	73.	9	73.4		66.6		65.6		74.0)	74.
Centerline Distanc	e to Noise Co	ntour (in feet)								
			. L	70 di	BA	65 0	<i>IBA</i>		60 dBA	55	dBA
			Ldn:		118		253		546		1,176
		C	VEL.		121		262		564		1,214

Wednesday, December 9, 2020

		100 110								_
Scenar Road Nan Road Segme	io: HYP 2040 v ne: Harley Kno: nt: e/o Patterse	w/ext. (Non-Peak) x Bl. on Av.			Project N Job Nu	lame: mber:	Gatew 13445	ay Aviation		
SITE	SPECIFIC IN				N	DISE	MODE		s	
Highway Data				Site Con	ditions (I	lard =	10, Sc	ft = 15)	-	
Average Daily Peak Hour Peak F	Traffic (Adt): Percentage: lour Volume:	34,772 vehicles 8.08% 2,810 vehicles		Me He	dium Truc avy Truck	cks (2 (s (3+ .	Autos: Axles): Axles):	15 15 15		
Ve	hicle Speed:	45 mph	-	Vohiclo	Niv					
Near/Far La	ne Distance:	80 feet	-	Vehicle	icleTvne		Dav	Evenina	Niaht	Daily
Site Data				10/1	AI	itos:	77.5%	12.9%	9.6%	85.69%
Pa	rrior Hoight:	0.0 foot		Me	edium Tru	cks:	84.8%	4.9%	10.3%	2.70%
Barrier Type (0-W	/all. 1-Berm):	0.0		ŀ	leavy Tru	cks:	86.5%	2.7%	10.8%	11.61%
Centerline Di	st. to Barrier:	64.0 feet	-	Noise Sc	urco Elo	vation	e (in fa	of)		
Centerline Dist.	to Observer:	64.0 feet	-	NUISE SU		0	000	ey		
Barrier Distance	to Observer:	0.0 feet		Modiu	n Trucks	2	207			
Observer Height	(Above Pad):	5.0 feet		Heav	v Trucks	8	004	Grade Ad	iustment	0.0
P	ad Elevation:	0.0 feet		neav	y macks.	0.	.004			
Ro	ad Elevation:	0.0 feet	-	Lane Eq	uivalent l	Distan	ce (in i	eet)		
	Road Grade:	0.0%			Autos:	50	.210			
	Left View: Right View:	-90.0 degrees 90.0 degrees		Mediui Heav	n Trucks: y Trucks:	50 50	.033 .050			
FHWA Noise Mod	el Calculation	٠ د								
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	68.46	1.98	-0.1	13	-1.20		-4.70	0.0	000	0.00
Medium Trucks:	79.45	-13.04	-0.1	11	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	84.25	-6.70	-0.1	11	-1.20		-5.31	0.0	000	0.00
Unmitigated Nois	e Levels (with	out Topo and bai	rrier atter	nuation)						
VehicleType	Leq Peak Hou	r Leq Day	Leq E	vening	Leq N	light		Ldn	C	NEL
Autos:	69	.1 68.	1	66.4		60.	3	68.9	9	69.
Medium Trucks:	65	.1 64.	5	58.2		56.	6	65.1	I	65.
Heavy Trucks:	76	.2 75.	7	66.7		68.	0	76.3	3	76.
Vehicle Noise:	77	.3 76.	7	69.9		68.	9	77.3	3	77.
Oranta aliana Diata a	ce to Noise Co	ontour (in feet)								
Centerline Distant			70	dBA	65 d	BA	6	0 dBA	55	dBA
Centerline Distan			70	UDA	00 0.					
Centerline Distan		Ldr	n: 70	197	00 0	424	Ļ	913		1,966

	FHV	VA-RD-77-108	HIGHWA	NY NO	ISE PF	REDICT	ION MOD	DEL			
Scenai	rio: HYP 2040 v	w/ext. (Peak)				Project	Name: 0	Batew	ay Aviation		
Road Nan	ne: Heacock St	t. Š				Job N	lumber: 1	3445			
Road Segme	ent: n/o Gentian	ı Av.									
SITE	SPECIFIC IN	IPUT DATA				N	IOISE M	ODE		5	
Highway Data				Si	te Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	33,537 vehicle	es				A	utos.	15		
Peak Hour	Percentage:	8.08%			Me	dium Tr	ucks (2 A	xles).	15		
Peak H	-lour Volume:	2,710 vehicles	6		He	avy Tru	cks (3+ A	xles).	15		
Ve	ehicle Speed:	50 mph		Ve	hicle I	Mix					
Near/Far La	ane Distance:	48 feet		Ve	Vehi	icleTvne		Dav	Evenina	Niaht	Daily
Site Data				-		, , , , , ,	Autos:	77.5%	12.9%	9.6%	86.44%
Pa	rrior Hoight:	0.0 foot			Me	edium T	rucks: 8	34.8%	4.9%	10.3%	2.63%
Barrier Type (0-V	Vall. 1-Berm):	0.0			ŀ	leavy T	rucks: 8	36.5%	2.7%	10.8%	10.93%
Centerline D	ist. to Barrier:	50.0 feet		No	vice Ce	uree E	lovationa	lint	o.o.#1		
Centerline Dist.	to Observer:	50.0 feet		NC	lise 30	Auto	evalions	00	eel)		
Barrier Distance	to Observer:	0.0 feet			1 de	Auto	s. 0.0	00			
Observer Height	(Above Pad):	5.0 feet			wealur	T Truck	S: 2.2	97	Grade Ad	iustmont	
P	ad Elevation:	0.0 feet			Heav	у тиск	S: 8.0	04	Graue Auj	usunen	. 0.0
Ro	ad Elevation:	0.0 feet		La	ne Equ	uivalen	t Distanc	e (in	feet)		
	Road Grade:	0.0%				Auto	s: 44.1	47			
	Left View:	-90.0 degree	es		Mediur	n Truck	s: 43.9	47			
	Right View:	90.0 degree	es		Heav	ry Truck	s: 43.9	66			
FHWA Noise Mod	lel Calculation:	s		-							
VehicleType	REMEL	Traffic Flow	Distan	ce	Finite	Road	Fresne	e/	Barrier Atte	en Ber	m Atten
Autos:	70.20	1.40		0.71		-1.20		4.65	0.0	000	0.000
Medium Trucks:	81.00	-13.77		0.74		-1.20	-	4.87	0.0	000	0.000
Heavy Trucks:	85.38	-7.58		0.73		-1.20	-	5.43	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	ttenua	ation)						
VehicleType	Leq Peak Hou	ir Leq Day	Le	q Eve	ning	Leq	Night		Ldn	C	NEL
Autos:	71	.1	70.1		68.4		62.3		70.9)	71.5
Medium Trucks:	66	.8	66.2		59.8		58.3		66.7	7	67.0
Heavy Trucks:	77	.3	76.8		67.8		69.1		77.4	Ļ	77.5
Vehicle Noise:	78	.6	78.0		71.4		70.2		78.6	3	78.8
Centerline Distan	ce to Noise Co	ontour (in feet,)								
				70 dB	BA	65	dBA		50 dBA	55	dBA
			Ldn:		187		402		867		1,867
		CI	VEL:		193		416		896		1,931

	FH ¹	WA-RD-77-108	HIGHW	AY NO	DISE PI	REDICTIO		DEL			
Scena Road Nan Road Segme	rio: HYP 2040 ne: Heacock S ent: s/o Iris Av.	w/ext. (Peak) t.				Project I Job Nu	Vame: (imber: '	Gatev 13445	vay Aviation		
SITE	SPECIFIC IN	IPUT DATA				N	OISE N	IODI	EL INPUT	5	
Highway Data				S	ite Con	ditions (Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	29,135 vehicl	es				,	Autos	: 15		
Peak Hour	Percentage:	8.08%			Me	dium Tru	cks (2 A	(xles)	: 15		
Peak I	lour Volume:	2,354 vehicle	s		He	avy Truc	ks (3+ A	(xles)	: 15		
Ve	ehicle Speed:	50 mph		V	ehicle	Mix				-	
Near/Far La	ane Distance:	48 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	77.5%	6 12.9%	9.6%	6 86.55%
Ba	rrier Height:	0.0 feet			М	edium Tru	icks:	84.8%	6 4.9%	10.3%	6 2.61%
Barrier Type (0-V	Vall, 1-Berm):	0.0			1	Heavy Tri	icks:	86.5%	6 2.7%	10.8%	6 10.85%
Centerline D	ist. to Barrier:	50.0 feet		N	oise So	ource Ele	vations	s (in f	feet)	-	
Centerline Dist.	to Observer:	50.0 feet				Autos	: 0.0	000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	: 2.2	297			
Observer Height	(Above Pad):	5.0 feet			Heav	vy Trucks	: 8.0	004	Grade Adj	iustmen	t: 0.0
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		Li	ane Eq	uivalent	Distanc	e (In	feet)		
	Road Grade:	0.0%				Autos	: 44.	147			
	Left View:	-90.0 degre	es		Mediu	m Trucks	: 43.9	947			
	Right View:	90.0 degre	es		Heav	y Trucks	: 43.9	966			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Atte	en Be	rm Atten
Autos:	70.20	0.80		0.71		-1.20		-4.65	0.0	000	0.000
Medium Trucks:	81.00	-14.42		0.74		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	85.38	-8.22		0.73		-1.20		-5.43	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	/ L	.eq Eve	ening	Leq N	light		Ldn	C	NEL
Autos:	70	0.5	69.5		67.8		61.7		70.3	3	70.9
Medium Trucks:	66	6.1	65.5		59.2		57.6		66.1	1	66.3
Heavy Trucks:	76	6.7	76.2		67.2		68.4		76.8	3	76.9
Vehicle Noise:	77	7.9	77.3		70.8		69.5		77.9)	78.2
Centerline Distan	ce to Noise C	ontour (in feet)					1			
				70 dE	BA	65 d	BA	I	60 dBA	55	5 dBA
		-	Ldn:		169	169 365 786			1,693		
		С	NEL:		175		377		813		1,752

	FHV	A-RD-77-108	HIGH	IWAY N	OISE PF	REDICT		DEL			
Scenario	: HYP 2040 v	v/ext. (Peak)				Project	Name: (Gatew	ay Aviatior	1	
Road Name	e: Heacock St					Job N	umber: 1	3445			
Road Segmen	t: s/o Nandina	Av.									
SITE S	PECIFIC IN	PUT DATA				N	IOISE N	IODE	L INPUT	s	
Highway Data				S	ite Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily 1	Traffic (Adt):	15,288 vehicle	es				1	Autos:	15		
Peak Hour H	Percentage:	8.08%			Me	dium Tri	ucks (2 A	xles):	15		
Peak Ho	our Volume:	1,235 vehicle	s		He	avy Truc	cks (3+ A	xles):	15		
Veh	icle Speed:	50 mph		v	ehicle l	Mix					
Near/Far Lan	e Distance:	48 feet			Vehi	icleType		Day	Evening	Night	Daily
Site Data						/	Autos:	77.5%	12.9%	9.6%	86.83%
Ban	rier Heiaht:	0.0 feet			Me	edium Ti	rucks:	84.8%	4.9%	10.3%	2.55%
Barrier Type (0-Wa	all, 1-Berm):	0.0			ŀ	leavy T	rucks:	86.5%	2.7%	10.8%	10.62%
Centerline Dis	t. to Barrier:	50.0 feet			loiso Sa	urco El	ovation	(in f	nof)		
Centerline Dist. t	o Observer:	50.0 feet		7	10136 30	Auto		000	eey		
Barrier Distance t	o Observer:	0.0 feet			Mediur	n Truck	s. 0.0	00			
Observer Height (A	Above Pad):	5.0 feet			Heav	v Truck	s 2.2	104	Grade Ad	iustment	0.0
Pa	d Elevation:	0.0 feet			mour	<i>y</i>	0. 0.0			,	
Roa	d Elevation:	0.0 feet		L	ane Equ	uivalent	Distanc	e (in	feet)		
F	oad Grade:	0.0%				Auto	s: 44.1	147			
	Left View:	-90.0 degree	es		Mediur	n Truck	s: 43.9	947			
	Right View:	90.0 degre	es		Heav	y Truck	s: 43.9	966			
FHWA Noise Mode	I Calculations	;									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	70.20	-1.99		0.71		-1.20		-4.65	0.0	000	0.000
Medium Trucks:	81.00	-17.31		0.74		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	85.38	-11.12		0.73		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrie	er attenu	uation)						
VehicleType	Leq Peak Hou	r Leq Day	/	Leq Ev	ening	Leq	Night		Ldn	C	NEL
Autos:	67.	.7	66.7		65.0		58.9		67.	5	68.2
Medium Trucks:	63.	2	62.6		56.3		54.7		63.3	2	63.4
Heavy Trucks:	73.	.8	73.3		64.3		65.5		73.9	9	74.(
Vehicle Noise:	75.	.1	74.5		68.0		66.7		75.	1	75.3
Centerline Distanc	e to Noise Co	ntour (in feet)								
			L	70 d	BA	65	dBA	6	60 dBA	55	dBA
			Ldn:		109		235		506		1,089
		0	NEL		440		242		523		1 1 2 7

Wednesday, December 9, 2020

	FHV	VA-RD-77-108 HI	IGHWAY	NOISE PI	REDICTIO	ON MOD	EL			
Scenari Road Nam Road Segmer	io: HYP 2040 v e: Heacock St nt: s/o Cardina	v/ext. (Peak) I Av.			Project I Job Nu	Vame: G mber: 13	ateway A 3445	viation		
SITE	SPECIFIC IN	PUT DATA			N	DISE M	ODEL IN	IPUTS		
Highway Data				Site Con	ditions (Hard = 1	0, Soft =	15)		
Average Daily	Traffic (Adt):	32,928 vehicles				A	utos: 1	5		
Peak Hour	Percentage:	8.08%		Me	dium Tru	cks (2 A)	des): 1	5		
Peak H	lour Volume:	2,661 vehicles		He	avy Trucl	ks (3+ A)	<i>(les):</i> 1	5		
Ve	hicle Speed:	50 mph		Vehicle	Mix					
Near/Far La	ne Distance:	48 feet		Veh	icleType	6	av Eve	nina N	liaht	Dailv
Site Data					A	utos: 7	7.5% 1	2.9%	9.6%	85.47%
Bai	rrier Height	0.0 feet		М	edium Tru	icks: 8	4.8%	4.9% 1	0.3%	2.70%
Barrier Type (0-W	all 1-Berm)	0.0		1	Heavy Tru	icks: 8	6.5%	2.7% 1	0.8%	11.83%
Centerline Dis	st. to Barrier:	50.0 feet		Noise O			(in fr + 4)			
Centerline Dist.	to Observer:	50.0 feet		Noise So	ource Ele	vations	(In reet)			
Barrier Distance	to Observer:	0.0 feet			Autos.	0.00	JU 7			
Observer Height (Above Pad):	5.0 feet		Mediu	m Trucks.	2.2	97 0. Cro	do Adius	imont:	0.0
Pa	ad Elevation:	0.0 feet		Heav	y Trucks.	8.00	ją Gra	ue Aujus	uneni.	0.0
Roa	ad Elevation:	0.0 feet		Lane Eq	uivalent	Distance	e (in feet)			
I	Road Grade:	0.0%			Autos.	44.1	47			
	Left View:	-90.0 degrees		Mediu	m Trucks	43.9	47			
	Right View:	90.0 degrees		Heav	ry Trucks.	43.9	66			
FHWA Noise Mode	el Calculations	5								
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresne	I Barr	ier Atten	Berr	n Atten
Autos:	70.20	1.27	0.	71	-1.20	-	4.65	0.000)	0.000
Medium Trucks:	81.00	-13.73	0.	74	-1.20		4.87	0.000)	0.00
Heavy Trucks:	85.38	-7.32	0.	73	-1.20	-	5.43	0.000)	0.00
Unmitigated Noise	e Levels (with	out Topo and ba	rrier atte	nuation)						
VehicleType	Leq Peak Hou	r Leq Day	Leq I	Evening	Leq N	light	Ldn		CN	IEL
Autos:	71	.0 70	.0	68.2		62.2		70.8		71.4
Medium Trucks:	66	.8 66	.2	59.9		58.3		66.8		67.
Heavy Trucks:	77.	.6 77	.1	68.1		69.3		77.7		77.
Vehicle Noise:	78	.7 78	.2	71.5		70.4		78.8		79.
Centerline Distance	ce to Noise Co	ntour (in feet)								
			70	dBA	65 d	BA	60 dE	3A	55	dBA
		Ld	In:	192		414		891		1,921
		CNE	L:	198		428		921		1,985

	FH\	NA-RD-77-108	HIGH	WAY N	DISE PF	REDICTIC		DEL			
Scenai	rio: HYP 2040	w/ext. (Peak)				Project N	lame: 0	Gatew	ay Aviation		
Road Nan	ne: Indian Av.					Job Nu	mber: 1	3445			
Road Segme	ent: s/o Nandin	a Av.									
SITE	SPECIFIC IN	IPUT DATA				NC	DISE M	ODE	L INPUTS	3	
Highway Data				s	ite Con	ditions (F	Hard = :	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	28,460 vehicl	es				A	utos:	15		
Peak Hour	Percentage:	8.08%			Me	dium Truc	cks (2 A	xles):	15		
Peak H	Hour Volume:	2,300 vehicle	s		He	avy Truck	(3+ A	xles):	15		
Ve	ehicle Speed:	45 mph		V	ehicle I	Niv					
Near/Far La	ane Distance:	36 feet		-	Vehi	cleTvpe		Dav	Evenina	Niaht	Dailv
Site Data						AL	itos:	77.5%	12.9%	9.6%	85.03%
Ba	orrior Hoight	0.0 feet			Me	edium Tru	cks: 8	34.8%	4.9%	10.3%	2.77%
Barrier Type (0-V	Vall. 1-Berm):	0.0			H	leavy Tru	icks: 8	36.5%	2.7%	10.8%	12.20%
Centerline D	ist. to Barrier:	44.0 feet			loise Sc	urce Ele	vations	(in fa	of		
Centerline Dist.	to Observer:	44.0 feet			0.30 00	Autos:	0.0	00			
Barrier Distance	to Observer:	0.0 feet			Modiur	n Trucke:	2.0	97			
Observer Height	(Above Pad):	5.0 feet			Heav	v Trucks:	8.0	04	Grade Adi	ustment	0.0
P	Pad Elevation:	0.0 feet			neuv	y macks.	0.0	04			
Ro	ad Elevation:	0.0 feet		L	ane Equ	uivalent L	Distanc	e (in i	feet)		
	Road Grade:	0.0%				Autos:	40.4	60			
	Left View:	-90.0 degre	es		Mediur	n Trucks:	40.2	41			
	Right View:	90.0 degre	es		Heav	y Trucks:	40.2	62			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresne	e/	Barrier Atte	en Ber	rm Atten
Autos:	68.46	1.07		1.28		-1.20		4.61	0.0	00	0.000
Medium Trucks:	79.45	-13.80		1.31		-1.20	-	4.87	0.0	00	0.000
Heavy Trucks:	84.25	-7.36		1.31		-1.20		5.50	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	r attenı	uation)						
VehicleType	Leq Peak Hou	Ir Leq Da	/	Leq Ev	ening	Leq N	light		Ldn	C	NEL
Autos:	69	1.6	68.6		66.9		60.8		69.4		70.0
Medium Trucks:	65	i.8	65.2		58.8		57.3		65.7		66.0
Heavy Trucks:	77	.0	76.5		67.5		68.7		77.1		77.2
Vehicle Noise:	78	1.0	77.4		70.5		69.6		78.0		78.2
Centerline Distan	ce to Noise Co	ontour (in fee)								
				70 d	BA	65 dl	BA	e	60 dBA	55	dBA
			Ldn:		151		325		701		1,509
		С	NEL:		156		335		723		1,557

	FH	WA-RD-77-108	HIGHW	AY NO	DISE PF	REDICTIC	ON MOD	DEL			
Scenar	io: HYP 2040	w/ext. (Peak)				Project N	lame: (Gatew	ay Aviation		
Road Nam	e: Cactus Av.					Job Nu	mber: 1	3445	-		
Road Segme	nt: w/o Heaco	ck St.									
SITE	SPECIFIC I	NPUT DATA				NC	DISE N	IODE		5	
Highway Data				S	ite Con	ditions (H	lard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	59,095 vehicl	es				A	lutos:	15		
Peak Hour	Percentage:	8.08%			Me	dium Truc	:ks (2 A	xles):	15		
Peak H	lour Volume:	4,775 vehicle	s		He	avy Truck	s (3+ A	xles):	15		
Ve	hicle Speed:	50 mph		v	ehicle l	Mix					
Near/Far La	ne Distance:	73 feet		-	Veh	icleType	I	Day	Evening	Night	Daily
Site Data						AL	itos:	77.5%	12.9%	9.6%	86.28%
Bai	rrier Heiaht:	0.0 feet			Me	edium Tru	cks: I	34.8%	4.9%	10.3%	2.66%
Barrier Type (0-W	/all, 1-Berm):	0.0			ŀ	leavy Tru	cks:	86.5%	2.7%	10.8%	11.06%
Centerline Di	st. to Barrier:	55.0 feet		N	oise Sc	ource Ele	vations	(in fe	eet)		
Centerline Dist.	to Observer:	55.0 feet				Autos:	0.0	00	,		
Barrier Distance	to Observer:	0.0 feet			Mediur	m Trucks:	2.2	97			
Observer Height (Above Pad):	5.0 feet			Heav	v Trucks:	8.0	04	Grade Adj	ustment	: 0.0
Pa	ad Elevation:	0.0 feet									
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalent L	Distanc	e (in i	feet)		
	Road Grade:	0.0%				Autos:	41.4	46			
	Left View:	-90.0 degre	es		Mediui	m Trucks:	41.2	232			
	Right View:	90.0 degre	es		Heav	y Trucks:	41.2	53			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresn	e/	Barrier Atte	en Bei	rm Atten
Autos:	70.20	3.85		1.12		-1.20		4.67	0.0	00	0.000
Medium Trucks:	81.00	-11.26		1.15		-1.20		4.87	0.0	00	0.000
Heavy Trucks:	85.38	-5.07		1.15		-1.20		-5.38	0.0	00	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier a	attenu	ation)						
VehicleType	Leq Peak Ho	ur Leq Da	/ L	eq Eve	ening	Leq N	ight		Ldn	C	NEL
Autos:	74	4.0	73.0		71.2		65.2		73.8		74.4
Medium Trucks:	69	9.7	69.1		62.7		61.2		69.7		69.9
Heavy Trucks:	80	0.3	79.8		70.7		72.0		80.3		80.5
Vehicle Noise:	81	1.5	80.9		74.3		73.1		81.5		81.7
Centerline Distant	ce to Noise C	ontour (in feet)								
				70 dl	BA	65 dl	BA	6	60 dBA	55	dBA
			Ldn:		321		692		1,492		3,213
		С	NEL:		332		716		1,543		3,323

FHWA-RD-77-108 HIGH	WAY I	NOISE PE	REDICTI		DEL			
Scenario: HYP 2040 w/ext. (Peak) Road Name: Harley Knox Bl. Road Segment: e/o Patterson Av.			Project Job N	Name: G umber: 1	Gatew 3445	ay Aviation	I	
SITE SPECIFIC INPUT DATA			N	OISE M	ODE		s	
Highway Data		Site Con	ditions	(Hard = 1	10, Sc	oft = 15)		
Average Daily Traffic (Adt): 35,069 vehicles				A	utos:	15		
Peak Hour Percentage: 8.08%		Me	dium Tru	icks (2 A	xles):	15		
Peak Hour Volume: 2,834 vehicles		He	avy Truc	:ks (3+ A	xles):	15		
Vehicle Speed: 45 mph	-	Vehicle I	Nix					
Near/Far Lane Distance: 80 feet		Veh	cleType	L	Day	Evening	Night	Daily
Site Data			A	utos: ī	7.5%	12.9%	9.6%	85.43%
Barrier Height: 0.0 feet		Me	edium Tr	ucks: 8	34.8%	4.9%	10.3%	2.72%
Barrier Type (0-Wall. 1-Berm): 0.0		F	leavy Tr	ucks: 8	86.5%	2.7%	10.8%	11.85%
Centerline Dist. to Barrier: 64.0 feet	-	Noiso Se	urco El	ovations	(in fr	ootl		
Centerline Dist. to Observer: 64.0 feet		140/36 30	Autor		00	eey		
Barrier Distance to Observer: 0.0 feet		Mediu	n Trucks	5. 0.0 5. 2.2	97			
Observer Height (Above Pad): 5.0 feet		Heav	v Trucks	s 2.2 s 8.0	04	Grade Ad	iustment	0.0
Pad Elevation: 0.0 feet		mour	y maone	. 0.0	•••			
Road Elevation: 0.0 feet	4	Lane Eq	uivalent	Distanc	e (in 1	feet)		
Road Grade: 0.0%			Autos	s: 50.2	10			
Left View: -90.0 degrees		Mediu	n Trucks	s: 50.0	33			
Right View: 90.0 degrees		Heav	y Trucks	50.0	50			
FHWA Noise Model Calculations								
VehicleType REMEL Traffic Flow Dis	tance	Finite	Road	Fresne	e/	Barrier Att	en Ber	m Atten
Autos: 68.46 2.00	-0.1	3	-1.20	-	4.70	0.0	000	0.000
Medium Trucks: 79.45 -12.98	-0.1	1	-1.20	-	4.88	0.0	000	0.000
Heavy Trucks: 84.25 -6.58	-0.1	1	-1.20	-	5.31	0.0	000	0.000
Unmitigated Noise Levels (without Topo and barrie	er atter	nuation)						
VehicleType Leq Peak Hour Leq Day	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos: 69.1 68.2		66.4		60.3		69.0)	69.6
Medium Trucks: 65.2 64.6		58.2		56.7		65.1	1	65.4
Heavy Trucks: 76.4 75.9		66.8		68.1		76.4	1	76.6
Vehicle Noise: 77.4 76.8		69.9		69.0		77.4	1	77.6
Centerline Distance to Noise Contour (in feet)								
	70	dBA	65 (dBA	6	60 dBA	55	dBA
Ldn:		200		431		928		1,999
CNEL:		206		111		057		2 062

Wednesday, December 9, 2020

	FHV	VA-RD-77-108 H	IIGHWA	y Nois	E PREDIC	TION MC	DEL				
Scena Road Nar Road Segme	rio: HYP 2040 v ne: Cactus Av. ent: e/o Heacoc	w/ext. (Peak) k St.			Proje Job	ct Name: Number:	Gatew 13445	ay Aviatio	n		
SITE	SPECIFIC IN	IPUT DATA				NOISE	MODE	L INPU	TS		
Highway Data				Site	Condition	s (Hard =	: 10, So	oft = 15)			
Average Daily	Traffic (Adt):	40,159 vehicles	5				Autos:	15			
Peak Hour	Percentage:	8.08%			Medium 1	rucks (2	Axles):	15			
Peak I	lour Volume:	3,245 vehicles			Heavy Tr	ucks (3+	Axles):	15			
Ve	ehicle Speed:	40 mph		Voh	icle Mix						
Near/Far La	ane Distance:	50 feet		ven	VehicleTv	be	Dav	Evening	Ni	aht	Dailv
Site Data						Autos:	77.5%	6 12.9%		9.6%	86.30%
Ba	rrier Height:	0.0 feet			Medium	Trucks:	84.8%	6 4.9%	5 1	0.3%	2.65%
Barrier Type (0-V	Vall. 1-Berm):	0.0			Heavy	Trucks:	86.5%	6 2.7%	5 1	0.8%	11.05%
Centerline D	ist. to Barrier:	44.0 feet		Noir	o Sourco	Elovation	e (in fi	oot			
Centerline Dist.	to Observer:	44.0 feet		NOIS	e Source I	Elevation		eel)			
Barrier Distance	to Observer:	0.0 feet			AUI	US. U.	207				
Observer Height	(Above Pad):	5.0 feet		IVI	Heavy Truc	KS. 2.	004	Grade A	diust	ment [.]	0.0
P	ad Elevation:	0.0 feet			leavy mu	no. 0.	.004	0/000//	ajaot	nont.	0.0
Ro	ad Elevation:	0.0 feet		Lan	e Equivale	nt Distan	ce (in	feet)			
	Road Grade:	0.0%			Aut	os: 36	.551				
	Left View:	-90.0 degrees	5	М	edium Truc	ks: 36	.308				
	Right View:	90.0 degrees	5		Heavy Truc	ks: 36	.332				
FHWA Noise Mod	lel Calculation	s		-							
VehicleType	REMEL	Traffic Flow	Distance	e F	inite Road	Fres	nel	Barrier A	tten	Berr	n Atten
Autos:	66.51	3.15	1	.94	-1.20)	-4.61	C	.000		0.000
Medium Trucks:	77.72	-11.98	1	.98	-1.20)	-4.87	C	.000		0.000
Heavy Trucks:	82.99	-5.78	1	.98	-1.20)	-5.50	C	.000		0.000
Unmitigated Nois	e Levels (with	out Topo and b	arrier att	enuati	on)						
VehicleType	Leq Peak Hou	Ir Leq Day	Leq	Eveni	ng Le	q Night		Ldn		CN	IEL
Autos:	70	.4 6	9.4		67.7	61.	6	70	.2		70.8
Medium Trucks:	66	.5 6	5.9		59.6	58.	0	66	.5		66.7
Heavy Trucks:	78	.0 7	7.5		68.5	69.	7	78	.1		78.2
Vehicle Noise:	78	.9 7	8.4		71.4	70.	6	79	.0		79.2
Centerline Distan	ce to Noise Co	ontour (in feet)									
			7	'0 dBA	6	5 dBA		60 dBA		55 (dBA
		L	dn:		175	376	6	81	0	-	1,745
		CN	EL:		180	388	3	83	5		1,800

FI	1WA-RD-77-108	B HIGHWA	Y NOISE P	REDICTIO	N MODEL		
Scenario: HYP 204 Road Name: Harley Kr Road Segment: e/o Indiar) w/ext. (Peak) lox Bl. l Av.			Project Na Job Nurr	ame: Gate nber: 1344	way Aviation 5	
SITE SPECIFIC	INPUT DATA			NO	ISE MOD	EL INPUTS	;
Highway Data			Site Cor	nditions (H	ard = 10,	Soft = 15)	
Average Daily Traffic (Adt): Peak Hour Percentage:	16,794 vehicl 8.08%	les	Me	edium Truck	Auto ks (2 Axles	s: 15 s): 15	
Vehicle Speed	1,007 verilicie	.5	110	avy nacks	NO ANOS	<i>i</i> y. 10	
Neer/Fer Lens Distance:	45 mpn		Vehicle	Mix			
Neal/Fai Lane Distance.	80 leet		Veh	nicleType	Day	Evening	Night Daily
Site Data				Aut	os: 77.5	i% 12.9%	9.6% 86.35%
Barrier Height:	0.0 feet		M	ledium Truc	ks: 84.8	% 4.9%	10.3% 2.64%
Barrier Type (0-Wall, 1-Berm):	0.0			Heavy Truc	:ks: 86.5	% 2.7%	10.8% 11.00%
Centerline Dist. to Barrier:	64.0 feet		Noise S	ource Elev	ations (in	feet)	
Centerline Dist. to Observer:	64.0 feet			Autos:	0.000		
Barrier Distance to Observer:	0.0 feet		Mediu	m Trucks	2.297		
Observer Height (Above Pad):	5.0 feet		Hea	vv Trucks:	8.004	Grade Adju	istment: 0.0
Pad Elevation:	0.0 feet						
Road Elevation:	0.0 feet		Lane Eq	uivalent D	istance (ii	n feet)	
Road Grade:	0.0%			Autos:	50.210		
Left View:	-90.0 degre	es	Mediu	m Trucks:	50.033		
Right View:	90.0 degre	es	Hea	vy Trucks:	50.050		
FHWA Noise Model Calculatio	ns						
VehicleType REMEL	Traffic Flow	Distant	ce Finite	Road	Fresnel	Barrier Atte	n Berm Atten
Autos: 68.4	6 -1.15	-	0.13	-1.20	-4.7	0.00	0.000
Medium Trucks: 79.4	5 -16.29) -	0.11	-1.20	-4.8	8 0.00	0.000 0.000
Heavy Trucks: 84.2	5 -10.10) -	0.11	-1.20	-5.3	1 0.00	0.000 00
Unmitigated Noise Levels (with	hout Topo and	barrier at	ttenuation)				
VehicleType Leq Peak H	our Leq Da	y Le	q Evening	Leq Nig	ght	Ldn	CNEL
Autos:	6.0	65.0	63.2	2	57.2	65.8	66.4
Medium Trucks:	61.9	61.3	54.9)	53.4	61.8	62.1
Heavy Trucks:	72.8	72.4	63.3	}	64.6	72.9	73.0
Vehicle Noise:	73.9	73.4	66.6	5	65.6	74.0	74.2
Centerline Distance to Noise	Contour (in fee	t)					
			70 dBA	65 dB	A	60 dBA	55 dBA
		Ldn:	118		253	546	1,176
	C	NEL:	121		262	564	1,215



APPENDIX 9.1:

CADNAA OPERATIONAL NOISE MODEL INPUTS



13445 - Meridian D-1 Gateway

CadnaA Noise Prediction Model: 13445-07.cna Date: 06.06.22 Analyst: B. Lawson

Calculation Configuration

Configurat	tion
Parameter	Value
General	
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	0.00
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		Lir	nit. Valı	ue		Land	Use	Height	:	C	oordinates	
			Day	Night	CNEL	Day	Night	CNEL	Туре	Auto	Noise Type			Х	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
RECEIVERS		R1	25.0	24.2	30.9	55.0	55.0	0.0				5.00	а	6261541.44	2268345.63	5.00
RECEIVERS		R2	36.1	35.9	42.6	55.0	55.0	0.0				5.00	а	6262793.15	2267209.01	5.00
RECEIVERS		R3	36.1	36.0	42.7	55.0	55.0	0.0				5.00	а	6262827.55	2265320.23	5.00
RECEIVERS		R4	36.9	36.8	43.5	55.0	55.0	0.0				5.00	а	6262827.12	2263841.06	5.00

Point Source(s)

Name	М.	ID	R	esult. PW	'L		Lw/L	i	Ope	erating Ti	me	Height	t	Co	oordinates	
			Day	Evening	Night	Туре	Value	norm.	Day	Special	Night			Х	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
POINTSOURCE		AC01	88.9	88.9	88.9	Lw	88.9		252.00	0.00	152.00	5.00	g	6258848.64	2263909.32	50.00
POINTSOURCE		TRASH01	89.0	89.0	89.0	Lw	89		150.00	0.00	90.00	5.00	а	6258831.46	2263704.30	5.00

Line Source(s)

Name	М.	ID	R	esult. PW	ľL	R	esult. PW	τ'		Lw / Li		Оре	erating Ti	me		Moving Pt. Src				ıt
			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		DWY01	95.0	79.6	85.9	77.0	61.7	68.0	PWL-Pt	93.2					239.0	7.0	30.0	6.2	8	а

Name	ŀ	lei	ght		Coordinat	es	
	Begin		End	х	У	z	Ground
	(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
LINESOURCE	8.00	а		6258816.62	2263774.88	8.00	0.00

Name	He	ight		Coordinat	es	
	Begin	End	х	у	z	Ground
	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
			6258857.26	2263796.75	8.00	0.00
			6258867.70	2263801.81	8.00	0.00
			6258878.83	2263805.06	8.00	0.00
			6258890.35	2263806.40	8.00	0.00
			6258901.93	2263805.80	8.00	0.00
			6258913.25	2263803.27	8.00	0.00
			6258923.99	2263798.89	8.00	0.00
			6258933.84	2263792.77	8.00	0.00
			6258942.53	2263785.10	8.00	0.00
			6258949.82	2263776.07	8.00	0.00
			6258955.50	2263765.96	8.00	0.00
			6258975.56	2263727.57	8.00	0.00

Area Source(s)

Name	М.	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)	Π
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		Π
AREASOURCE		DOCK01	111.5	111.5	111.5	72.2	72.2	72.2	Lw	111.5					8	a

Name	ŀ	lei	ght			Coordinat	es	
	Begin		End		х	у	z	Ground
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
AREASOURCE	8.00	а			6258769.21	2263865.07	8.00	0.00
					6258784.81	2263839.07	8.00	0.00
					6258856.31	2263694.78	8.00	0.00
					6258439.02	2263473.79	8.00	0.00
					6258345.42	2263646.68	8.00	0.00

Barrier(s)

Name	М.	ID	Abso	rption	Z-Ext.	Cant	ilever	F	lei	ght		Coordinat	es	
			left	right		horz.	vert.	Begin		End	х	у	z	Ground
					(ft)	(ft)	(ft)	(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
BARRIERS		BARRIERS00001						6.00	а		6262812.23	2265552.95	6.00	0.00
											6262810.93	2265287.33	6.00	0.00
BARRIERS		BARRIERS00002						6.00	а		6262814.73	2264941.01	6.00	0.00
											6262814.73	2264474.43	6.00	0.00
BARRIERS		BARRIERS00003						6.00	а		6262812.56	2264416.92	6.00	0.00
											6262809.66	2263810.58	6.00	0.00
BARRIERS		BARRIERS00004						6.00	а		6262807.49	2263720.52	6.00	0.00
											6262806.41	2263631.55	6.00	0.00
BARRIERS		BARRIERS00005						6.00	а		6261425.99	2268327.40	6.00	0.00
											6261928.31	2268324.65	6.00	0.00

Building(s)

Name	М.	ID	RB	Residents	Absorption	Height			Coordinat	es	
						Begin		х	У	z	Ground
						(ft)		(ft)	(ft)	(ft)	(ft)
BUILDING		BUILDING00001	х	0		45.00	а	6258206.33	2263914.47	45.00	0.00
								6258736.71	2264191.36	45.00	0.00
								6258890.10	2263896.27	45.00	0.00
								6258784.81	2263839.07	45.00	0.00
								6258769.21	2263865.07	45.00	0.00
								6258345.42	2263646.68	45.00	0.00

APPENDIX 10.1:

CADNAA CONSTRUCTION NOISE MODEL INPUTS





13445 - Meridian D-1 Gateway

CadnaA Noise Prediction Model: 13445-07_Construction.cna Date: 06.06.22 Analyst: B. Lawson

Calculation Configuration

Configurat	tion
Parameter	Value
General	
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	0.00
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	Y	Z	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)	
RECEIVERS		R1	38.0	38.0	44.7	55.0	55.0	0.0				5.00	а	6261541.44	2268345.63	5.00	
RECEIVERS		R2	42.4	42.4	49.1	55.0	55.0	0.0				5.00	а	6262793.15	2267209.01	5.00	
RECEIVERS		R3	39.4	39.4	46.1	55.0	55.0	0.0				5.00	а	6262827.55	2265320.23	5.00	
RECEIVERS		R4	39.6	39.6	46.3	55.0	55.0	0.0				5.00	а	6262827.12	2263841.06	5.00	

Area Source(s)

Name	М.	ID	R	esult. PW	Ľ	R	esult. PW	L"		Lw/L	i	Op	erating Ti	me	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)		
SITEBOUNDARY		CONSTRUCTION	115.0	115.0	115.0	61.1	61.1	61.1	Lw	115					8	а

Name	Heig		ght		Coordinat	es	
	Begin		End	х	У	z	Ground
	(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
SITEBOUNDARY	8.00 a			6257270.22	2264233.50	8.00	0.00
				6257363.82	2264422.98	8.00	0.00
				6257658.30	2264886.39	8.00	0.00
				6257815.82	2265048.48	8.00	0.00
				6258226.73	2265178.60	8.00	0.00
				6258441.32	2265064.46	8.00	0.00
				6258244.99	2264701.48	8.00	0.00
				6260027.78	2265630.70	8.00	0.00
				6260062.50	2265575.14	8.00	0.00

Name	He	eight		Coordinat	es	
	Begin	End	x	У	z	Ground
	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
			6258867.62	2264947.28	8.00	0.00
			6259004.34	2264690.77	8.00	0.00
			6258991.97	2263780.61	8.00	0.00
			6259682.08	2264137.38	8.00	0.00
			6259707.29	2264146.87	8.00	0.00
			6259733.16	2264154.39	8.00	0.00
			6259759.53	2264159.92	8.00	0.00
			6259786.24	2264163.42	8.00	0.00
			6259952.04	2264160.60	8.00	0.00
			6259950.96	2264195.32	8.00	0.00
			6259996.53	2264197.49	8.00	0.00
			6259999.78	2264411.25	8.00	0.00
			6260009.55	2264447.06	8.00	0.00
			6260011.72	2264461.17	8.00	0.00
			6260012.81	2264486.12	8.00	0.00
			6260028.00	2264486.12	8.00	0.00
			6260026.91	2264161.69	8.00	0.00
			6260110.46	2264161.69	8.00	0.00
			6260106.12	2264068.37	8.00	0.00
			6259796.88	2264077.05	8.00	0.00
			6259767.51	2264074.99	8.00	0.00
			6259738.41	2264070.48	8.00	0.00
			6259709.80	2264063.55	8.00	0.00
			6259681.86	2264054.26	8.00	0.00
			6259363.93	2263884.99	8.00	0.00
			6257894.75	2263122.19	8.00	0.00
			6257641.93	2263509.56	8.00	0.00
			6257620.23	2263467.24	8.00	0.00
			6257399.96	2263576.83	8.00	0.00
			6257526.91	2263829.65	8.00	0.00

Barrier(s)

Name	М.	ID	Abso	orption	Z-Ext.	Canti	ilever	F	lei	ght		Coordinat	es	
			left	right		horz.	vert.	Begin		End	x	У	z	Ground
					(ft)	(ft)	(ft)	(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
BARRIERS		BARRIERS00001						6.00	а		6262812.23	2265552.95	6.00	0.00
											6262810.93	2265287.33	6.00	0.00
BARRIERS		BARRIERS00002						6.00	а		6262814.73	2264941.01	6.00	0.00
											6262814.73	2264474.43	6.00	0.00
BARRIERS		BARRIERS00003						6.00	а		6262812.56	2264416.92	6.00	0.00
											6262809.66	2263810.58	6.00	0.00
BARRIERS		BARRIERS00004						6.00	а		6262807.49	2263720.52	6.00	0.00
											6262806.41	2263631.55	6.00	0.00
BARRIERS		BARRIERS00005						6.00	а		6261425.99	2268327.40	6.00	0.00
											6261928.31	2268324.65	6.00	0.00

APPENDIX 10.2:

CADNAA CONCRETE POUR NOISE MODEL INPUTS



13445 - Meridian D-1 Gateway

CadnaA Noise Prediction Model: 13445-07_ConcretePour.cna Date: 06.06.22 Analyst: B. Lawson

Calculation Configuration

Configurat	ion
Parameter	Value
General	
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	0.00
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	Y	Z	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)	
RECEIVERS		R1	37.6	37.6	44.3	55.0	55.0	0.0				5.00	а	6261541.44	2268345.63	5.00	
RECEIVERS		R2	42.4	42.4	49.0	55.0	55.0	0.0				5.00	а	6262793.15	2267209.01	5.00	
RECEIVERS		R3	39.6	39.6	46.2	55.0	55.0	0.0				5.00	а	6262827.55	2265320.23	5.00	
RECEIVERS		R4	40.1	40.1	46.8	55.0	55.0	0.0				5.00	а	6262827.12	2263841.06	5.00	

Area Source(s)

Name	М.	ID	R	esult. PW	'L	Re	esult. PW	L"		Lw / L	i	Оре	erating Ti	me	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)		
BUILDING		CONCRETEPOUR	115.0	115.0	115.0	72.6	72.6	72.6	Lw	115					8	а

Name	ŀ	lei	ght			Coordinat	es	
	Begin		End		х	У	z	Ground
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
BUILDING	8.00 a				6258206.33	2263914.47	8.00	0.00
	0.00 4				6258736.71	2264191.36	8.00	0.00
					6258890.10	2263896.27	8.00	0.00
					6258784.81	2263839.07	8.00	0.00
					6258769.21	2263865.07	8.00	0.00
					6258345.42	2263646.68	8.00	0.00

Barrier(s)

Name	М.	ID	Absorption		Z-Ext.	Canti	ilever	Height			Coordinates			
			left	right		horz.	vert.	Begin		End	х	У	z	Ground
					(ft)	(ft)	(ft)	(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
BARRIERS		BARRIERS00001						6.00	а		6262812.23	2265552.95	6.00	0.00
											6262810.93	2265287.33	6.00	0.00
BARRIERS		BARRIERS00002						6.00	а		6262814.73	2264941.01	6.00	0.00
											6262814.73	2264474.43	6.00	0.00
BARRIERS		BARRIERS00003						6.00	а		6262812.56	2264416.92	6.00	0.00
											6262809.66	2263810.58	6.00	0.00
BARRIERS		BARRIERS00004						6.00	а		6262807.49	2263720.52	6.00	0.00
											6262806.41	2263631.55	6.00	0.00
BARRIERS		BARRIERS00005						6.00	а		6261425.99	2268327.40	6.00	0.00
											6261928.31	2268324.65	6.00	0.00