Goodman Industrial Park Fontana III

NOISE IMPACT ANALYSIS

CITY OF FONTANA

PREPARED BY:

Bill Lawson, PE, INCE
blawson@urbanxroads.com
(949) 336-5979

Alex Wolfe, INCE
awolfe@urbanxroads.com
(949) 336-5977

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LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
ANSI	American National Standards Institute
Calveno	California Vehicle Noise
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
dBA	A-weighted decibels
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
I-10	Interstate 10
INCE	Institute of Noise Control Engineering
LA/ONT	Los Angeles/Ontario International Airport
L_{eq}	Equivalent continuous (average) sound level
L_{max}	Maximum level measured over the time interval
L_{min}	Minimum level measured over the time interval
mph	Miles per hour
PPV	Peak Particle Velocity
Project	Goodman Industrial Park Fontana III
REMEL	Reference Energy Mean Emission Level
RMS	Root-mean-square
UPRR	Union Pacific Railroad
VdB	Vibration Decibels

EXECUTIVE SUMMARY

Urban Crossroads, Inc. has prepared this noise study to determine the noise exposure and the necessary noise mitigation measures, if any, for the proposed Goodman Industrial Park Fontana III development ("Project"). The Project site is located north of Jurupa Avenue, between Cypress Avenue and Juniper Avenue, in the City of Fontana. The Project is proposed to consist of 1,118,460 square feet of warehousing (80%) and high-cube cold storage warehouse use (20%) across three buildings. This study has been prepared consistent with applicable City of Fontana noise standards, and significance criteria based on guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1) The significance criteria and analysis methodologies used in this report are also consistent with the *Scoping Agreement* prepared for the Project and approved by the City of Fontana. (2)

OFF-SITE TRAFFIC NOISE ANALYSIS

Traffic generated by the operation of the proposed Project will influence the traffic noise levels in surrounding off-site areas. To quantify the traffic noise increases on the surrounding off-site areas, the changes in traffic noise levels on 23 roadway segments surrounding the Project site were calculated based on the change in the average daily traffic (ADT) volumes. The traffic noise levels provided in this analysis are based on the traffic forecasts found in the *Goodman Industrial Park Fontana III Traffic Impact Analysis* prepared by Urban Crossroads, Inc. (3) To assess the off-site noise level impacts associated with the proposed Project, noise contour boundaries were developed for Existing, Opening Year 2022, and Horizon Year 2040 traffic conditions. The analysis shows that the unmitigated Project-related traffic noise level increases under all traffic scenarios will be *less than significant*.

OPERATIONAL NOISE ANALYSIS

Using reference noise levels to represent the potential noise sources within Goodman Industrial Park Fontana III site, this analysis estimates the Project-related operational (stationary-source) noise levels at the nearby receiver locations. The Project-related operational noise sources are expected to include roof-top air conditioning units, fire pump emergency diesel generators, parking lot vehicle movements, idling trucks, delivery truck activities, backup alarms, refrigerated containers or reefers, as well as loading and unloading of dry goods. The analysis shows that the unmitigated Project-related operational noise levels will satisfy the City of Fontana 70 dBA L_{eq} daytime and 65 dBA L_{eq} nighttime exterior noise level standards at all of the off-site noise-sensitive receiver locations. Project operational noise levels at all receiver locations, therefore, will result in *less than significant* noise impacts.

Moreover, the operational noise analysis provided in this report does not account for any additional barrier attenuation provided by any planned Project perimeter walls or noise barriers other than the Project building itself and existing noise barriers in the Project study area.

CONSTRUCTION NOISE ANALYSIS

Construction activities are expected to create temporary and intermittent high-level noise conditions at receivers surrounding the Project site. Using sample reference noise levels to represent the construction activities of the Goodman Industrial Park Fontana III site, this analysis estimates the Project-related construction noise levels at nearby sensitive receiver locations. Project construction noise levels are considered exempt if activities occur within the hours specified in the City of Fontana Municipal Code, Section 18-63(7) of 7:00 a.m. to 6:00 p.m. on weekdays and between the hours of 8:00 a.m. to 5:00 p.m. on Saturdays.

If Project construction activity occurs outside of the hours specified in the Municipal Code, noise levels shall satisfy the City of Fontana construction noise level thresholds of 70 dBA L_{eq} during the daytime hours and 65 dBA L_{eq} during the nighttime hours. At the time of this analysis, no nighttime Project construction activity was planned.

CONSTRUCTION VIBRATION ANALYSIS

At distances ranging from 30 to 847 feet from Project construction activity, construction vibration velocity levels are expected to approach 0.07 in/sec PPV. Based on the vibration standards used in this report, the unmitigated Project construction vibration levels will satisfy the 0.2 in/sec PPV threshold at all of the nearby sensitive receiver locations. Therefore, the vibration impacts due to Project construction are considered *less than significant*. Further, vibration levels at the site of the closest sensitive receiver are unlikely to be sustained during the entire construction period but will occur rather only during the times that heavy construction equipment is operating simultaneously adjacent to the Project site perimeter.

SUMMARY OF CEQA SIGNIFICANCE FINDINGS

The results of this Goodman Industrial Park Fontana III 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). (1). Table ES-1 shows the findings of significance for each potential noise and/or vibration impact under CEQA before and after any required mitigation measures described below.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

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

1 INTRODUCTION

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

1.1 SITE LOCATION

The proposed Goodman Industrial Park Fontana III Project is located north of Jurupa Avenue, between Cypress Avenue and Juniper Avenue, in the City of Fontana, as shown on Exhibit 1-A. The Project site is located roughly 4,500 feet south of Interstate 10 (I-10) and Union Pacific Railroad (UPRR) lines, and approximately 7.75 miles east of the Los Angeles/Ontario International Airport (LA/ONT).

Existing noise-sensitive uses in the Project study area include residential homes located north, south, east, and west of the Project site, Citrus High School northwest of the Project site, and St. Mary's Catholic Church located southwest of the Project site. Future sensitive receiver locations in the Project study area include the proposed South Fontana Sports Park adjacent to the northern Projects site boundary.

1.2 PROJECT DESCRIPTION

Exhibits 1-B and 1-C illustrate the interim and expansion site plans for the Project. As indicated on Exhibit 1-C, the buildout of the proposed Project is to consist of 1,118,460 square feet across three buildings:

- 894,768 square feet of warehousing (80% of the total square footage);
- 223,692 square feet of high-cube cold storage warehouse use (20% of the total square footage)

1.3 ANALYSIS SCENARIOS & APPROACH

A brief summary of Project-specific analysis scenarios and assumptions are provided below to describe the approach used in this report.

1.3.1 PROJECT SITE PLAN SCENARIOS

For the purpose of this report, the following scenarios are used to analyze potential operational (stationary-source) and construction impacts:

- Scenario 1 – Interim Conditions: This scenario refers to interim conditions (Exhibit 1-B) under which an existing residential receiver location, R11, located on Cactus Avenue will be bounded to the north, east, and south by the Project.

- Scenario 2 – Expansion Conditions: This scenario refers to Project buildout (expansion) conditions (Exhibit 1-C) under which the Project would expand into the area formerly represented by receiver location R11.

1.3.2 PROJECT OPERATIONAL NOISE SOURCES

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

1.3.3 OFF-SITE TRAFFIC NOISE MODELING

Per the *Traffic Impact Analysis,* the Project is expected to generate a total of approximately 2,036 trip-ends per day (actual vehicles). (3) The Project trip generation includes 658 truck trip-ends per day from the proposed building within the Project site. This noise study relies on the actual Project trips (as opposed to the passenger car equivalents) to accurately account for the effect of individual truck trips on the study area roadway network.

EXHIBIT 1-A: LOCATION MAP

EXHIBIT 1-B: INTERIM SITE PLAN

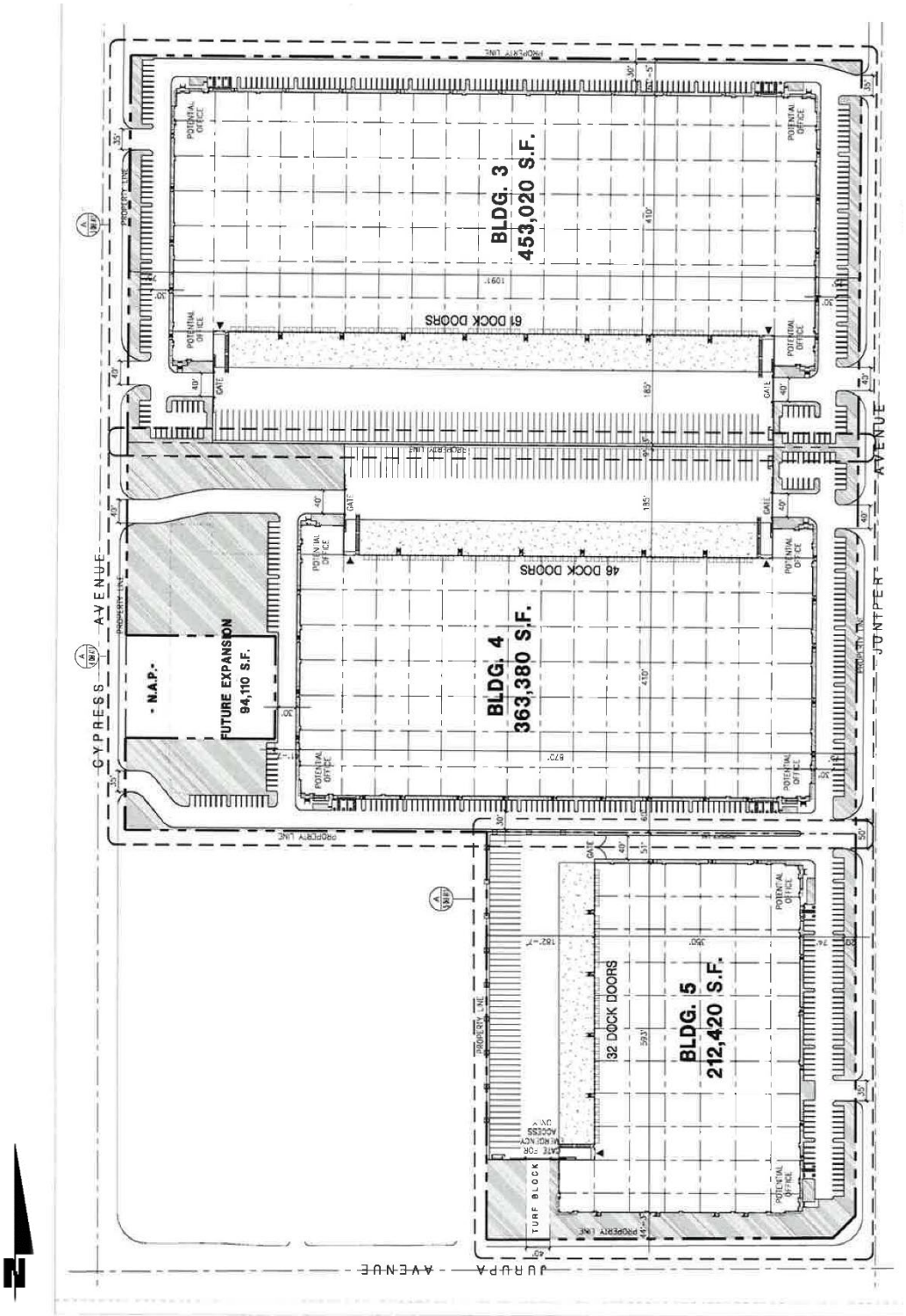
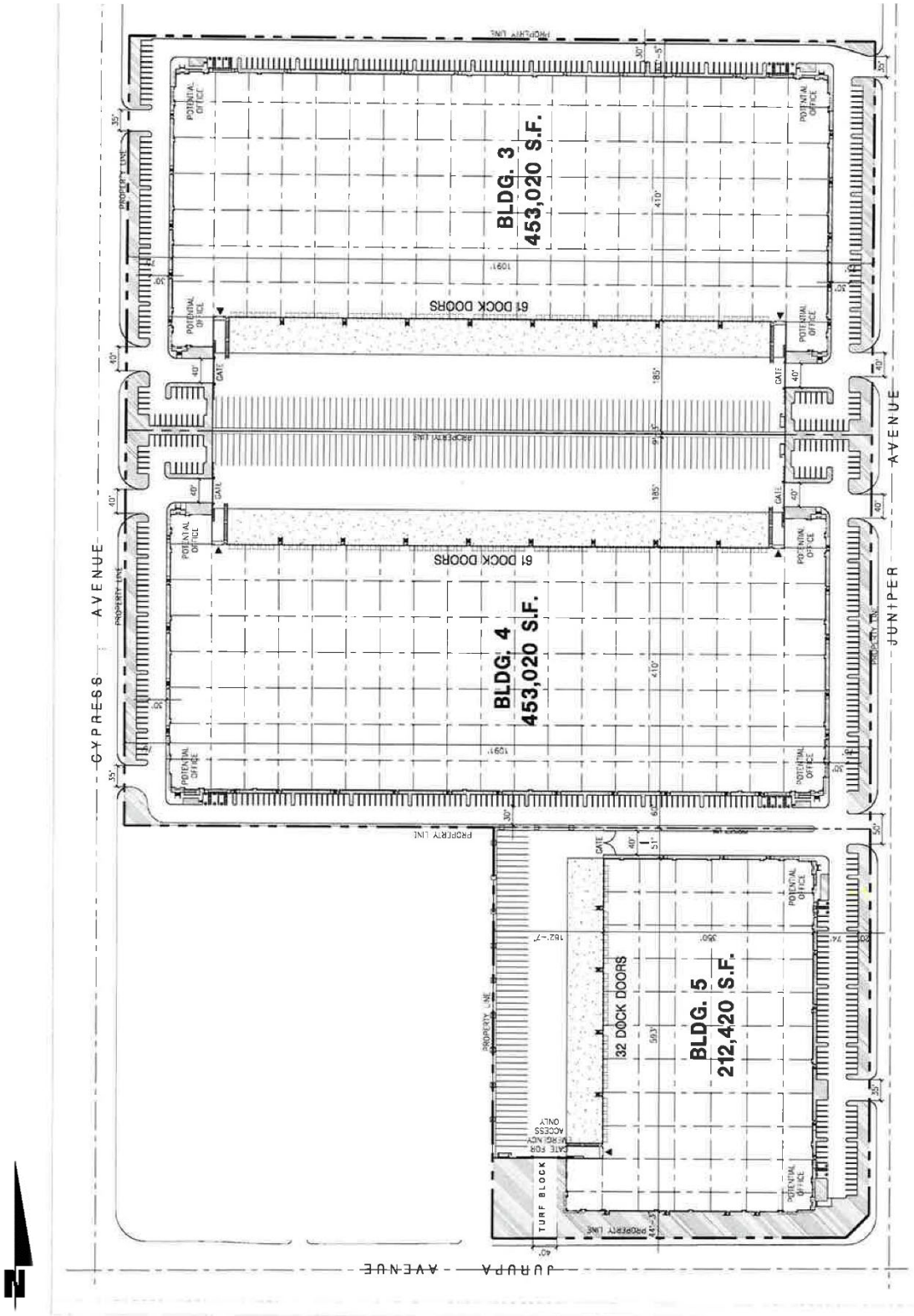


EXHIBIT 1-C: EXPANSION SITE PLAN



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2 FUNDAMENTALS

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

EXHIBIT 2-A: TYPICAL NOISE LEVELS

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

Source: 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. (4) The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud jet engine noises equate to 110 dBA

at approximately 100 feet, which can cause serious discomfort. (5) Another important aspect of noise is the duration of the sound and the way it is described and distributed in time.

2.2 NOISE DESCRIPTORS

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

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. To account for this, the Community Noise Equivalent Level (CNEL), representing a composite 24-hour noise level is utilized. The CNEL is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time of day corrections require the addition of 5 decibels to dBA L_{eq} sound levels in the evening from 7:00 p.m. to 10:00 p.m., and the addition of 10 decibels to dBA L_{eq} sound levels at night between 10:00 p.m. and 7:00 a.m. These additions are made to account for the noise sensitive time periods during the evening and night hours when sound appears louder. CNEL does not represent the actual sound level heard at any time, but rather represents the total sound exposure. The City of Fontana 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. (4)

2.3.2 GROUND ABSORPTION

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

sufficiently accurate for distances of less than 200 ft. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receptor, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receptor such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source. (6)

2.3.3 ATMOSPHERIC EFFECTS

Receptors located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects. (4)

2.3.4 SHIELDING

A large object or barrier in the path between a noise source and a receptor can substantially attenuate noise levels at the receptor. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Shielding by trees and other such vegetation typically only has an "out of sight, out of mind" effect. That is, the perception of noise impact tends to decrease when vegetation blocks the line-of-sight to nearby resident. However, for vegetation to provide a substantial, or even noticeable, noise reduction, the vegetation area must be at least 15 feet in height, 100 feet wide and dense enough to completely obstruct the line-of sight between the source and the receiver. This size of vegetation may provide up to 5 dBA of noise reduction. The FHWA does not consider the planting of vegetation to be a noise abatement measure. (6)

2.4 NOISE CONTROL

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

2.5 NOISE BARRIER ATTENUATION

Effective noise barriers can reduce noise levels by 10 to 15 dBA, cutting the loudness of traffic noise in half. A noise barrier is most effective when placed close to the noise source or receptor. Noise barriers, however, do have limitations. For a noise barrier to work, it must be high enough and long enough to block the path of the noise source. (6)

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. (7)

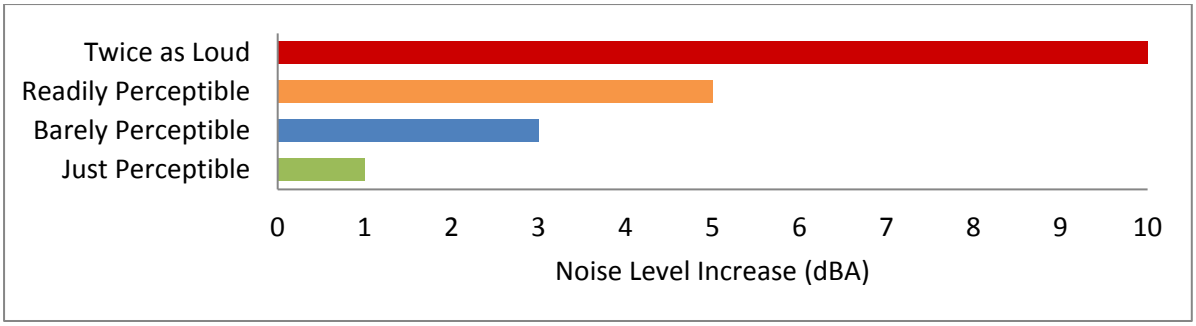
2.7 COMMUNITY RESPONSE TO NOISE

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

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

Approximately ten percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints will occur. Another twenty-five percent of the population will not complain even in very severe noise environments. Thus, a variety of reactions can be expected from people exposed to any given noise environment. (8) Surveys have shown that about ten percent of the people exposed to traffic noise of 60 dBA will report being highly annoyed with the noise, and each increase of one dBA is associated with approximately two percent more people being highly annoyed. When traffic noise exceeds 60 dBA or aircraft noise exceeds 55 dBA, people may begin to complain. (8) Despite this variability in behavior on an individual level, the population can be expected to exhibit the following responses to changes in noise levels as shown on Exhibit 2-B. An increase or decrease of 1 dBA cannot be perceived except in carefully controlled laboratory experiments, a change of 3 dBA are considered *barely perceptible*, and changes of 5 dBA are considered *readily perceptible*. (6)

EXHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION



2.8 EXPOSURE TO HIGH NOISE LEVELS

The Occupational Safety and Health Administration (OSHA) sets legal limits on noise exposure in the workplace. The permissible exposure limit (PEL) for a worker over an eight-hour day is 90 dBA. The OSHA standard uses a 5 dBA exchange rate. This means that when the noise level is increased by 5 dBA, the amount of time a person can be exposed to a certain noise level to receive the same dose is cut in half. The National Institute for Occupational Safety and Health (NIOSH) has recommended that all worker exposures to noise should be controlled below a level equivalent to 85 dBA for eight hours to minimize occupational noise induced hearing loss. NIOSH also recommends a 3 dBA exchange rate so that every increase by 3 dBA doubles the amount of the noise and halves the recommended amount of exposure time. (9)

OSHA has implemented requirements to protect all workers in general industry (e.g. the manufacturing and the service sectors) for employers to implement a Hearing Conservation Program where workers are exposed to a time weighted average noise level of 85 dBA or higher over an eight-hour work shift. Hearing Conservation Programs require employers to measure noise levels, provide free annual hearing exams and free hearing protection, provide training, and conduct evaluations of the adequacy of the hearing protectors in use unless changes to tools, equipment and schedules are made so that they are less noisy and worker exposure to noise is less than the 85 dBA. This noise study does not evaluate the noise exposure of workers within a project or construction site based on CEQA requirements, and instead, evaluates Project-related operational and construction noise levels at the nearby sensitive receiver locations in the Project study area. Further, periodic exposure to high noise levels in short duration, such as Project construction, is typically considered an annoyance and not impactful to human health. It would take several years of exposure to high noise levels to result in hearing impairment. (10)

2.9 VIBRATION

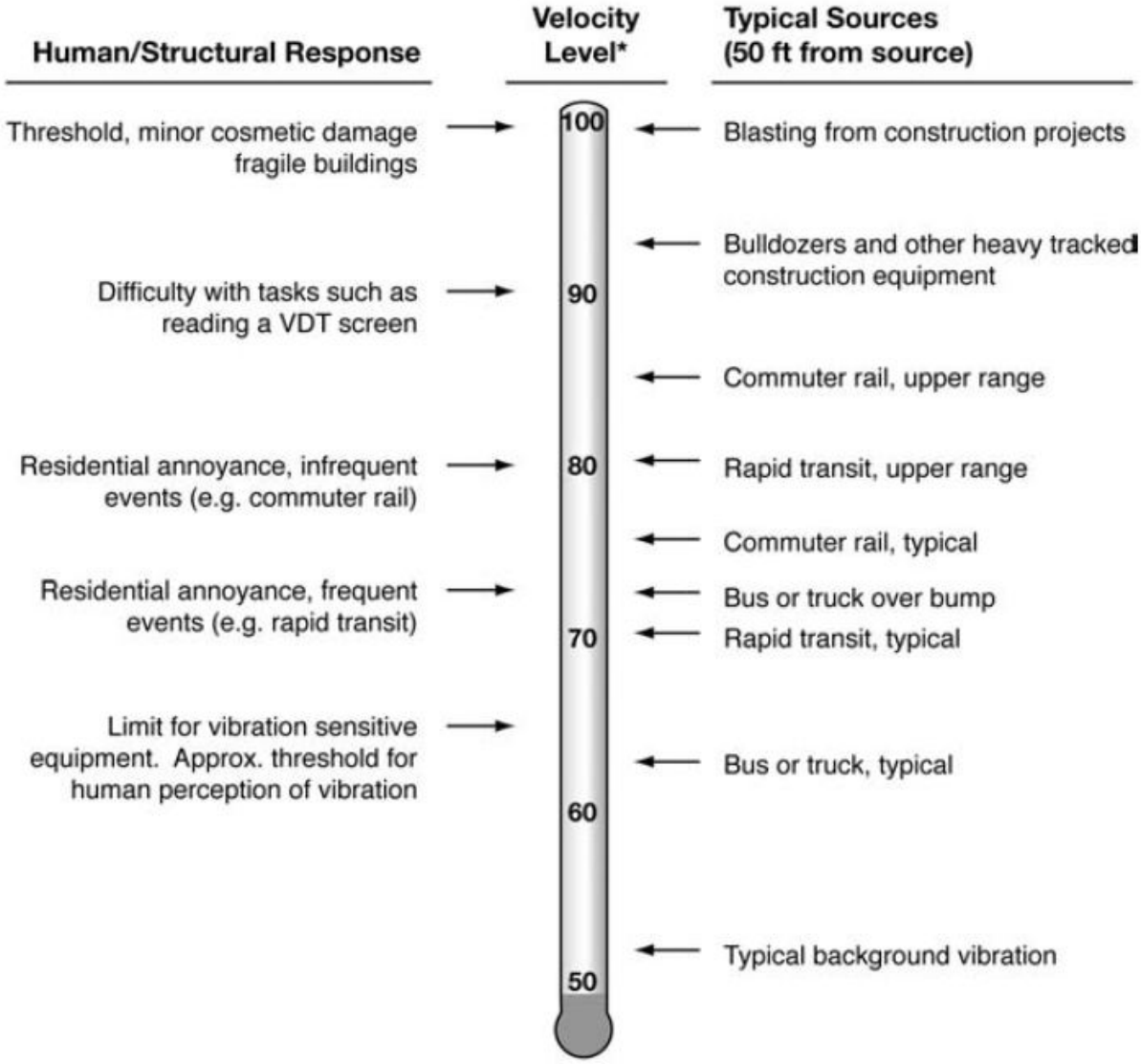
Per the Federal Transit Administration (FTA) *Transit Noise Impact and Vibration Assessment* (11), vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure-borne noise. Sources of ground-borne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions.

As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency.

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

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

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



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

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

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3 REGULATORY SETTING

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

3.1 STATE OF CALIFORNIA NOISE REQUIREMENTS

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared per guidelines adopted by the Governor's Office of Planning and Research. (12) The purpose of the Noise Element is to *limit the exposure of the community to excessive noise levels*. In addition, the California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including environmental noise impacts.

3.2 STATE OF CALIFORNIA BUILDING STANDARDS

The 2016 State of California's Green Building Standards Code contains mandatory measures for non-residential building construction in Section 5.507 on Environmental Comfort. (13) These noise standards are applied to new construction in California for controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when non-residential structures are developed in areas where the exterior noise levels exceed 65 dBA CNEL, such as within a noise contour of an airport, freeway, railroad, and other areas where noise contours are not readily available. If the development falls within an airport or freeway 65 dBA CNEL noise contour, the combined sound transmission class (STC) rating of the wall and roof-ceiling assemblies must be at least 50. For those developments in areas where noise contours are not readily available, and the noise level exceeds 65 dBA L_{eq} for any hour of operation, a wall and roof-ceiling combined STC rating of 45, and exterior windows with a minimum STC rating of 40 are required (Section 5.507.4.1).

3.3 CITY OF FONTANA GENERAL PLAN NOISE ELEMENT

The City of Fontana General Plan was updated on November 13th, 2018. (14) To protect residents from the negative effect of "spillover" noise (Goal #10), the City of Fontana has identified the following policies in the General Plan Noise Element:

Policy

Residential land uses and areas identified as noise-sensitive shall be protected from excessive noise from non-transportation sources including industrial, commercial, and residential activities and equipment.

Actions

A. Projects located in commercial areas shall not exceed stationary- source noise standards at the property line of proximate residential or commercial uses.

B. Industrial uses shall not exceed commercial or residential stationary source noise standards at the most proximate land uses.

C. Non-transportation noise shall be considered in land use planning decisions.

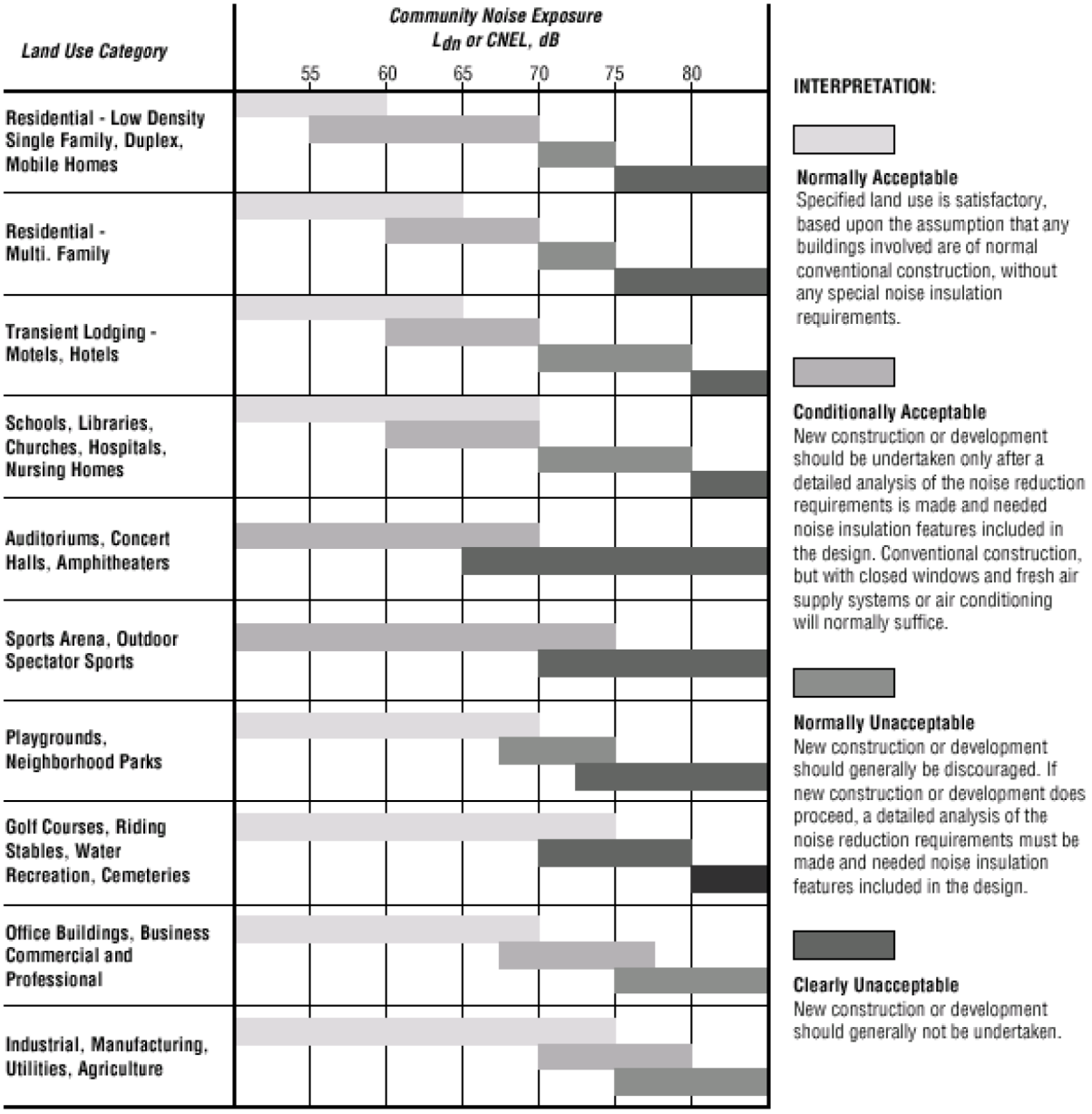
D. Construction shall be performed as quietly as feasible when performed in proximity to residential or other noise sensitive land uses.

3.3.1 LAND USE COMPATIBILITY

While the General Plan provides background and noise fundamentals, it does not identify criteria to assess the impacts associated with off-site transportation-related noise impacts. Therefore, for this analysis, the transportation noise criteria are derived from standards contained in the California Office of Planning and Research (OPR) *General Plan Guidelines*.

The OPR land use/noise compatibility standards are used by many California cities and counties and specify the maximum noise levels allowable for new developments impacted by transportation noise sources. The OPR land use/noise compatibility criteria, found in Figure 2 of the *General Plan Guidelines, Appendix C: Noise Element Guidelines,* identify the criteria for industrial land uses such as the Project, as shown on Exhibit 3-A. When the unmitigated exterior noise levels approach 70 dBA CNEL Project land use is considered *normally acceptable*. With exterior noise levels range from 70 to 75 dBA CNEL, industrial land uses are considered *conditionally acceptable*, and with exterior noise levels greater than 75 dBA CNEL, they are considered *normally unacceptable*. For *normally unacceptable* land use, *new construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.* (15)

EXHIBIT 3-A: LAND USE NOISE COMPATIBILITY CRITERIA



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

3.4 OPERATIONAL NOISE STANDARDS

To analyze noise impacts originating from a designated fixed location or private property such as the Goodman Industrial Park Fontana III Project, stationary-source (operational) noise such as the expected roof-top air conditioning units, fire pump emergency diesel generators, parking lot vehicle movements, idling trucks, delivery truck activities, backup alarms, refrigerated containers or reefers, as well as loading and unloading of dry goods are typically evaluated against standards established under a jurisdiction's Municipal Code.

The City of Fontana noise control guidelines for determining and mitigating non-transportation or stationary noise source impacts from operations in neighboring residential areas are found in the Zoning and Development Code (Section 30-259), provided in Appendix 3.1. For industrial zoning districts, Section 30-259 indicates that *no person shall create or cause to be created any sound which exceeds the noise levels in this section as measured at the property line of any residentially zoned property*. The performance standards found in Section 30-259 limit the exterior noise level to 70 dBA L_{eq} during the daytime hours, and 65 dBA L_{eq} during the nighttime hours at sensitive receiver locations as shown on Table 3-1. (16)

TABLE 3-1: OPERATIONAL NOISE STANDARDS

Jurisdiction	Land Use	Time Period	Exterior Noise Levels (dBA L_{eq})[2]
City of Fontana[1]	Residential	Daytime	70
		Nighttime	65

[1] Source: Section 30-259 of the City of Fontana Development Code (Appendix 3.1).
[2] L_{eq} represents a steady state sound level containing the same total energy as a time varying signal over a given sample period.
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

3.5 CONSTRUCTION NOISE STANDARDS

The City of Fontana has set restrictions to control noise impacts associated with the construction of the proposed Project. According to Section 18-63(b)(7), *Construction or repairing of buildings or structures,* construction activity is limited: *between the hours of 7:00 a.m. and 6:00 p.m. on weekdays and between the hours of 8:00 a.m. and 5:00 p.m. on Saturdays except in the case of urgent necessity*. (17) Project construction noise levels are, therefore, considered exempt if activities occur within the hours specified in the City of Fontana Municipal Code, Section 18-63(7) of 7:00 a.m. to 6:00 p.m. on weekdays and between the hours of 8:00 a.m. to 5:00 p.m. on Saturdays. However, if activity occurs outside of these hours, the City of Fontana stationary-source (operational) noise level standards of 70 dBA L_{eq} during the daytime hours, and 65 dBA L_{eq} during the nighttime hours shall apply, previously discussed in Section 3.4.

3.6 CONSTRUCTION VIBRATION STANDARDS

To analyze vibration impacts originating from the operation and construction of the Goodman Industrial Park Fontana III, vibration-generating activities are typically evaluated against standards established under a City's Municipal Code. The City of Fontana Municipal Code, Section 30-183, indicates that operational vibration levels shall not *create or cause to be created any activity that causes a vibration that can be felt beyond the property line with or without the aid of an instrument*. (17) For analysis purposes, a peak-particle-velocity (PPV) vibration threshold of 0.2 in/sec PPV is used to determine perception consistent with the City of Fontana Municipal Code requirements based on guidance provided by the Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual. (11)

4 SIGNIFICANCE CRITERIA

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

A. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

B. Generation of excessive ground-borne vibration or ground-borne noise levels?

C. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

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

4.1 CEQA GUIDELINES NOT FURTHER ANALYZED

Based on the Los Angeles/Ontario International Airport Land Use Compatibility Plan (LA/ONT ALUCP) future airport noise level contours, provided in Map 2-3 of the LA/ONT ALUCP, the Project site is currently located within what Table 2-3 of the LA/ONT ALUCP indicates is considered the *normally compatible* 60 to 65 dBA CNEL noise level contour boundaries for the Project's land use. The Project site is also not located within the vicinity of a private airstrip. As such, the Project site would not be exposed to excessive noise levels from airport operations, and therefore, impacts are considered *less than significant,* and no further noise analysis is conducted in relation to Guideline C.

4.2 SIGNIFICANCE CRITERIA SUMMARY

Consistent with guidance provided by the City of Fontana, the following thresholds are used in this analysis to evaluate potential impacts. (18) Noise impacts, therefore, 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.

OFF-SITE TRAFFIC NOISE

- When off-site traffic noise levels, without or with the Project, at existing and future noise-sensitive land uses (e.g. residential, schools, churches, etc.) exceed the City of Fontana General Plan Noise and Safety Element, Goal 8, Action A 65 dBA CNEL standard, and the Project creates a community noise level increase of greater than 3 dBA CNEL.
- When off-site traffic noise levels, without or with the Project, at existing and future non-noise-sensitive land uses (e.g. industrial, etc.) exceed the OPR General Plan Guidelines, Appendix C:

Noise Element Guidelines, normally acceptable 70 dBA CNEL noise level criteria and the Project creates a barely perceptible 3 dBA CNEL or greater Project-related noise level increase.

OPERATIONAL NOISE

- If operational (stationary-source) noise levels exceed the exterior 70 dBA L_{eq} daytime or 65 dBA L_{eq} nighttime noise level standards at adjacent land uses in the City of Fontana (City of Fontana Municipal Code, Chapter 30 Zoning and Development Code, Section 30-259), and the Project creates a community noise level increase of greater than 3 dBA L_{eq}.

OPERATIONAL VIBRATION

- If long-term Project generated operational vibration levels *create or cause to be created any activity that causes a vibration that can be felt beyond the property line with or without the aid of an instrument* (City of Fontana Municipal Code, Section 30-183). For analysis purposes, the peak-particle-velocity (PPV) vibration threshold of 0.2 in/sec PPV is used to determine perception consistent with the City of Fontana Municipal Code requirements (Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual).

CONSTRUCTION NOISE

- Project construction noise levels are considered exempt if activities occur within the hours specified in the City of Fontana Municipal Code, Section 18-63(7) of 7:00 a.m. to 6:00 p.m. on weekdays and between the hours of 8:00 a.m. to 5:00 p.m. on Saturdays.
- If Project construction activities occur outside of the hours specified above:
    - and Project construction noise levels would exceed the exterior 70 dBA L_{eq} daytime or 65 dBA L_{eq} nighttime noise level standards at adjacent land uses in the City of Fontana (City of Fontana Municipal Code, Chapter 30 Zoning and Development Code, Section 30-259);
    - and the Project creates a community noise level increase of greater than 3 dBA L_{eq}.

CONSTRUCTION VIBRATION

- If short-term Project construction vibration levels exceed the Caltrans human annoyance vibration threshold of 0.2 in/sec PPV at adjacent uses (Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual). The FTA threshold is used to quantify potential impacts related to perception of short-term construction-related vibration levels.

TABLE 4-1: SIGNIFICANCE CRITERIA SUMMARY

Analysis	Receiving Land Use	Condition(s)	Significance Criteria	
			Daytime	Nighttime
Off-Site Traffic Noise[1]	Noise-Sensitive	If off-site traffic noise is > 65 dBA CNEL	≥ 3 dBA CNEL Project increase	
	Non-Noise-Sensitive	If off-site traffic noise is > 70 dBA CNEL	≥ 3 dBA CNEL Project increase	
Operational Noise[2]	Adjacent Uses	If operational noise is > 70 dBA L_{eq} (daytime) and/or > 65 dBA L_{eq} (nighttime):	≥ 3 dBA L_{eq} Project increase	
Operational Vibration[3]		If operational vibration exceeds:	0.2 in/sec PPV	
Construction Noise[4]		If construction occurs outside of permitted hours, and construction noise is > 70 dBA L_{eq} (daytime) and/or > 65 dBA L_{eq} (nighttime):	≥ 3 dBA L_{eq} Project increase	
Construction Vibration[5]		If construction vibration exceeds:	0.2 in/sec PPV	

[1] Based on the City of Fontana General Plan Safety and Noise Element, Office of Planning and Research guidelines.
[2] Based on Section 30-259 of the City of Fontana Municipal Code.
[3] Based on Section 30-183 of the City of Fontana Municipal Code and the Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual.
[4] Based on Sections 18-63(7) and 30-259 of the City of Fontana Municipal Code.
[5] Based on the Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual.
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

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5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, nine 24-hour noise level measurements were taken at receiver locations in the Project study area. The receiver locations were selected to describe and document the existing noise environment within the Project study area. Exhibit 5-A provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Tuesday, March 26th, and Wednesday, April 10th, 2019. Appendix 5.1 includes study area photos.

5.1 MEASUREMENT PROCEDURE AND CRITERIA

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

5.2 NOISE MEASUREMENT LOCATIONS

The long-term noise level measurements were positioned as close to the nearest sensitive receiver locations as possible to assess the existing ambient hourly noise levels surrounding the Project site. Both Caltrans and the FTA recognize that it is not reasonable to collect noise level measurements that can fully represent any part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development projects. This is demonstrated in the Caltrans general site location guidelines which indicate that, *sites must be free of noise contamination by sources other than sources of interest. Avoid sites located near sources such as barking dogs, lawnmowers, pool pumps, and air conditioners unless it is the express intent of the analyst to measure these sources*. (4) Further, FTA guidance states, t*hat 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*. (11)

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. (11) In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source. Receivers represent a location of noise sensitive areas and are used to estimate the future noise level impacts. Collecting reference ambient noise level measurements at the nearby

sensitive receiver locations allows for a comparison of the before and after Project noise levels and is necessary to assess potential noise impacts due to the Project's contribution to the ambient noise levels.

5.3 NOISE MEASUREMENT RESULTS

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

- Location L1 represents the noise levels on Juniper Avenue, northeast of the Project site, near an existing U.S. Post Office and residential home. The noise level measurements collected show an overall 24-hour exterior noise level of 69.0 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 64.9 dBA L_{eq} with an average nighttime noise level of 61.7 dBA L_{eq}.
- Location L2 represents the noise levels on Juniper Avenue, on the eastern border of the Project site, near existing rural residential homes. The noise level measurements collected show an overall 24-hour exterior noise level of 68.8 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 65.1 dBA L_{eq} with an average nighttime noise level of 61.4 dBA L_{eq}.
- Location L3 represents the noise levels on Juniper Avenue, near the eastern border of the Project site and existing rural residential homes. The 24-hour CNEL indicates that the overall exterior noise level is 67.2 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 64.6 dBA L_{eq} with an average nighttime noise level of 59.0 dBA L_{eq}.
- Location L4 represents the noise levels on Windcrest Drive, south of the Project site, within an existing single-family residential neighborhood. The noise level measurements collected show an overall 24-hour exterior noise level of 59.2 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 54.7 dBA L_{eq} with an average nighttime noise level of 51.8 dBA L_{eq}.
- Location L5 represents the noise levels adjacent to St. Mary's Church, near the southwest corner of Project site boundary. The unmitigated exterior noise level measurements collected show an overall 24-hour noise level of 64.8 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 58.1 dBA L_{eq} with an average nighttime noise level of 58.0 dBA L_{eq}.
- Location L6 represents the noise levels on Cypress Avenue, on the western boundary of the Project site, near existing rural-residential homes. The noise level measurements collected show an overall 24-hour exterior noise level of 68.7 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 64.7 dBA L_{eq} with an average nighttime noise level of 61.3 dBA L_{eq}.
- Location L7 represents the noise levels on Cypress Avenue, on the western border of the Project site, near an industrial construction site. The 24-hour CNEL indicates that the overall exterior noise level is 74.5 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 68.6 dBA L_{eq} with an average nighttime noise level of 67.8 dBA L_{eq}.
- Location L8 represents the noise levels on Santa Ana Avenue near existing residential homes and a vacant lot. The noise level measurements collected show an overall 24-hour exterior noise level

of 66.0 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 61.6 dBA L_{eq} with an average nighttime noise level of 58.5 dBA L_{eq}.

- Location L9 represents the noise levels within the Citrus High School parking lot, west of Cypress Avenue near existing residential homes, north of the Project Site. The unmitigated exterior noise level measurements collected show an overall 24-hour noise level of 65.3 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 63.3 dBA L_{eq} with an average nighttime noise level of 56.9 dBA L_{eq}.

Table 5-1 provides the (energy average) noise levels used to describe the daytime and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. Appendix 5.2 provides summary worksheets of the noise levels for each hour as well as the minimum, maximum, L_1, L_2, L_5, L_8, L_{25}, L_{50}, L_{90}, L_{95}, and L_{99} percentile noise levels observed during the daytime and nighttime periods.

The background ambient noise levels in the Project study area are dominated by the transportation-related noise associated with the arterial roadway network. The 24-hour existing noise level measurements shown on Table 5-1 present the existing ambient noise conditions.

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

Location[1]	Description	Energy Average Noise Level (dBA L_{eq})[2]		CNEL
		Daytime	Nighttime	
L1	Located on Juniper Avenue, northeast of the Project site, near an existing U.S. Post Office and residential home.	64.9	61.7	69.0
L2	Located on Juniper Avenue, on the eastern border of the Project site, near existing rural residential homes.	65.1	61.4	68.8
L3	Located on Juniper Avenue, near the eastern border of the Project site and existing rural residential homes.	64.6	59.0	67.2
L4	Located on Windcrest Drive, south of the Project site, within an existing single-family residential neighborhood.	54.7	51.8	59.2
L5	Located adjacent to St. Mary's Church, near the southwest corner of Project site boundary.	58.1	58.0	64.8
L6	Located on Cypress Avenue, on the western boundary of the Project site, near existing rural-residential homes.	64.7	61.3	68.7
L7	Located on Cypress Avenue, on the western border of the Project site, near an industrial construction site.	68.6	67.8	74.5
L8	Located on Santa Ana Avenue near existing residential homes and a vacant lot.	61.6	58.5	66.0
L9	Located within the Citrus High School parking lot, west of Cypress Avenue near existing residential homes, north of the Project Site.	63.3	56.9	65.3

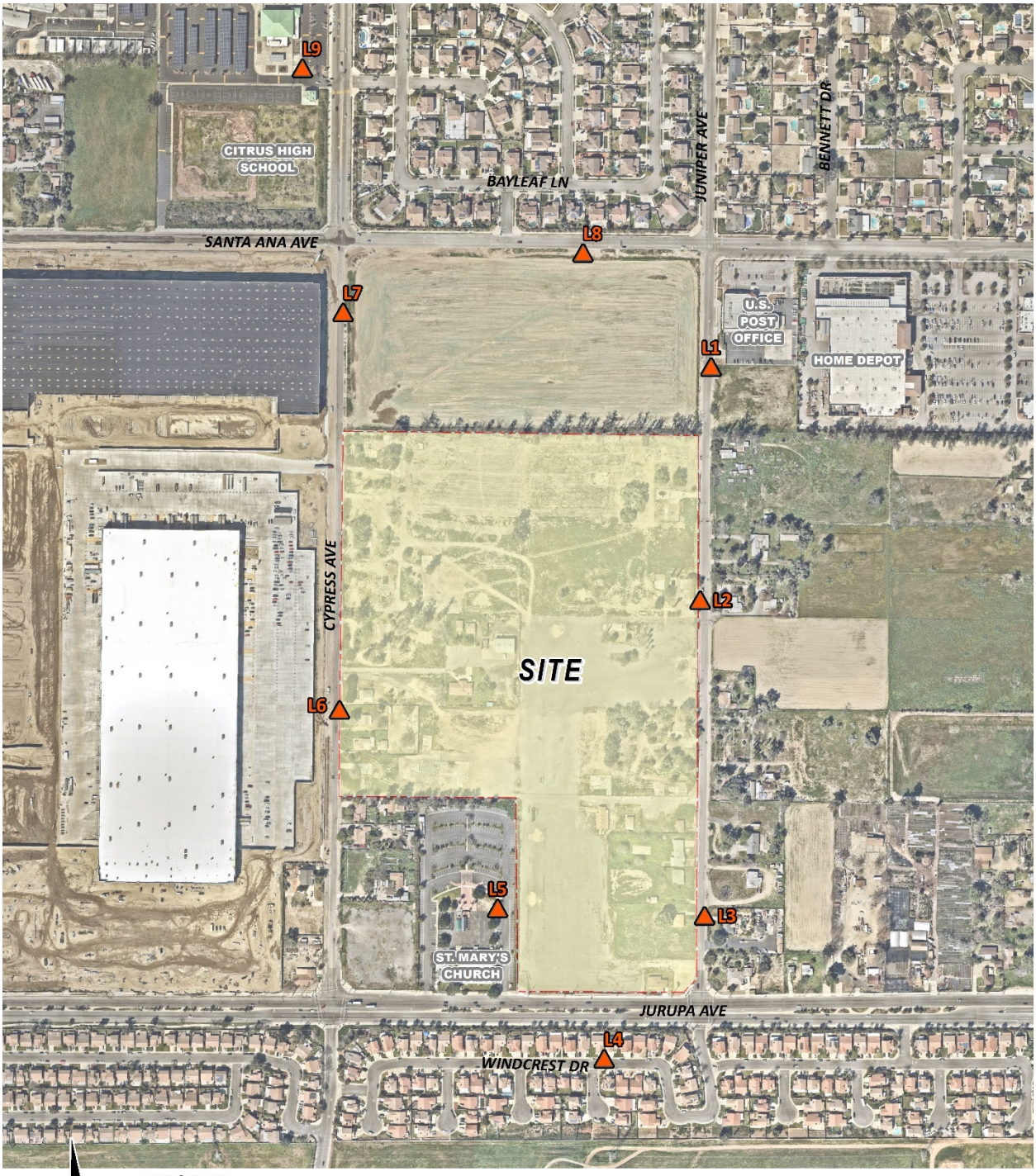
[1] See Exhibit 5-A for the noise level measurement locations.
[2] Energy (logarithmic) average hourly levels. The long-term 24-hour measurement worksheets are included in Appendix 5.2.
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

5.4 SHORT-TERM AIRCRAFT FLYOVER EVENTS

To describe the exterior noise levels associated with short-term aircraft flyover events related to LA/ONT aircraft activity, Urban Crossroads, Inc. collected three short-term noise level measurements within a vacant lot inside the Proposed Project site boundaries on Tuesday, April 9th, 2019. The short-term noise level measurements were collected using a Larson Davis Type 1 LxT sound level meter with windscreen at a height of five feet. The short-term noise level measurement data is provided in Appendix 5.3.

Without aircraft flyovers, an ambient short-term noise level was measured over 52 seconds approaching 58.3 dBA L_{eq}. With aircraft flyover events, the short-term noise levels over two individual measurement periods ranged from 60.5 dBA L_{eq} (two minutes and 16 seconds) to 62.0 dBA L_{eq} (one-minute and 15 seconds). Based on the short-term noise level measurements it is estimated that short-term aircraft flyover events result in an approximate 2 to 4 dBA L_{eq} short-term noise level increase, which is considered *barely perceptible*, as previously described in Section 2.7. However, as discussed in Section 4.1, long-term aircraft noise levels will result in *less than significant* noise impacts at the Project site. Moreover, the exterior noise level increases related to short-term aircraft flyovers will vary depending on each event, concurrent ambient conditions, the aircraft type, speed, and other factors.

EXHIBIT 5-A: LONG-TERM NOISE MEASUREMENT LOCATIONS



6 METHODS AND PROCEDURES

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

6.1 FHWA TRAFFIC NOISE PREDICTION MODEL

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

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 23 study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per the City of Fontana General Plan Circulation Element, and the posted vehicle speeds. The ADT volumes used in this study are presented on Table 6-2 are based on the *Traffic Impact Analysis* for the following traffic scenarios: Existing, Opening Year 2022, and Horizon Year 2040 conditions. (3) For this analysis, soft site conditions are used to analyze the traffic noise impacts within the Project study area. Soft site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. Caltrans' research has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model as used in this off-site traffic noise analysis. (22)

TABLE 6-1: OFF-SITE ROADWAY PARAMETERS

ID	Roadway	Segment	Adjacent Planned (Existing if Different) Land Use[1]	Distance from Centerline to Nearest Adjacent Land Use (Feet)[2]	Vehicle Speed (mph)[3]
1	Citrus Av.	s/o I-10 Ramps	Industrial (Residential)	66'	45
2	Citrus Av.	s/o Slover Av.	Industrial/Public/Commercial	46'	40
3	Citrus Av.	s/o Santa Ana Av.	Industrial (Vacant)	46'	40
4	Juniper Av.	n/o Santa Ana Av.	Residential	34'	40
5	Juniper Av.	s/o Santa Ana Av.	Industrial (Vacant/Commercial)	34'	40
6	Sierra Av.	n/o Slover Av.	Commercial (Residential)	66'	40
7	Sierra Av.	s/o Slover Av.	Industrial/Comm./Residential	66'	50
8	Sierra Av.	s/o Santa Ana Av.	Residential/Commercial	66'	50
9	Sierra Av.	s/o Jurupa Av.	Residential/Public	66'	55
10	Slover Av.	w/o Sierra Av.	Industrial (Residential)	52'	45
11	Santa Ana Av.	e/o Citrus Av.	Industrial/Residential	46'	40
12	Santa Ana Av.	e/o Juniper Av.	Residential (Commercial)	46'	40
13	Santa Ana Av.	e/o Sierra Av.	Industrial/Residential	46'	40
14	Jurupa Av.	w/o Cherry Av.	Public/Residential	60'	45
15	Jurupa Av.	e/o Cherry Av.	Industrial/Residential	60'	45
16	Jurupa Av.	e/o Beech Av.	Industrial/Residential	60'	45
17	Jurupa Av.	e/o Poplar Av.	Industrial/Residential	60'	45
18	Jurupa Av.	e/o Citrus Av.	Industrial/Residential	60'	45
19	Jurupa Av.	e/o Oleander Av.	Industrial/Residential	60'	45
20	Jurupa Av.	e/o Cypress Av.	Residential (Church)	60'	45
21	Jurupa Av.	e/o Juniper Av.	Residential	60'	45
22	Armstrong Rd.	w/o Sierra Av.	Residential/Commercial	59'	45
23	Armstrong Rd.	w/o 34th St.	Residential	59'	45

[1] Sources: City of Fontana and Jurupa Valley General Plan Land Use Maps.
[2] Distance to adjacent land use is based upon the right-of-way distances for each functional roadway classification provided in the General Plan Circulation Element.
[3] Source: Goodman Industrial Park Fontana III Traffic Impact Analysis.

Traffic noise analysis provided in this report is based on the actual vehicle volumes obtained from the *Traffic Impact Analysis* for the Project. Per the *Traffic Impact Analysis,* the Project is expected to generate a total of approximately 2,036 trip-ends per day (actual vehicles). (3) The Project trip generation includes 658 truck trip-ends per day from the proposed building within the Project site. 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.

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

TABLE 6-2: AVERAGE DAILY TRAFFIC VOLUMES

ID	Roadway	Segment	Average Daily Traffic Volumes[1]					
			Existing (2019)		Opening Year 2022		Horizon Year 2040	
			Without Project	With Project	Without Project	With Project	Without Project	With Project
1	Citrus Av.	s/o I-10 Ramps	24,431	24,920	32,009	32,498	35,210	35,699
2	Citrus Av.	s/o Slover Av.	12,722	13,293	19,389	19,960	21,328	21,899
3	Citrus Av.	s/o Santa Ana Av.	10,160	10,516	14,528	14,884	15,981	16,337
4	Juniper Av.	n/o Santa Ana Av.	2,451	2,658	2,568	2,775	2,825	3,032
5	Juniper Av.	s/o Santa Ana Av.	2,807	3,400	2,925	3,518	3,289	3,882
6	Sierra Av.	n/o Slover Av.	51,993	52,415	62,368	62,790	68,605	69,027
7	Sierra Av.	s/o Slover Av.	29,623	29,949	40,332	40,658	44,365	44,691
8	Sierra Av.	s/o Santa Ana Av.	30,692	30,877	37,429	37,614	41,172	41,357
9	Sierra Av.	s/o Jurupa Av.	24,654	24,760	29,166	29,272	37,879	37,985
10	Slover Av.	w/o Sierra Av.	19,017	19,058	23,939	23,980	26,333	26,374
11	Santa Ana Av.	e/o Citrus Av.	2,979	3,255	8,143	8,419	8,957	9,233
12	Santa Ana Av.	e/o Juniper Av.	6,907	7,293	11,082	11,468	12,191	12,577
13	Santa Ana Av.	e/o Sierra Av.	6,283	6,529	7,608	7,854	8,368	8,614
14	Jurupa Av.	w/o Cherry Av.	19,886	20,258	26,415	26,787	29,057	29,429
15	Jurupa Av.	e/o Cherry Av.	16,755	17,147	23,104	23,496	25,414	25,806
16	Jurupa Av.	e/o Beech Av.	17,357	17,756	22,807	23,206	25,087	25,486
17	Jurupa Av.	e/o Poplar Av.	18,883	19,349	24,624	25,090	27,087	27,553
18	Jurupa Av.	e/o Citrus Av.	16,856	17,678	20,399	21,221	22,439	23,261
19	Jurupa Av.	e/o Oleander Av.	17,780	18,602	20,774	21,596	22,851	23,673
20	Jurupa Av.	e/o Cypress Av.	19,790	19,928	23,022	23,160	25,325	25,463
21	Jurupa Av.	e/o Juniper Av.	18,605	18,937	21,640	21,972	23,804	24,136
22	Armstrong Rd.	w/o Sierra Av.	23,072	23,178	27,766	27,872	30,543	30,649
23	Armstrong Rd.	w/o 34th St.	30,547	30,653	39,977	40,083	43,974	44,080

[1] Source: Goodman Industrial Park Fontana III Traffic Impact Analysis.

TABLE 6-3: TIME OF DAY VEHICLE SPLITS

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

Typical Southern California vehicle mix. Vehicle mix percentage values rounded to the nearest one-hundredth.
"Daytime" = 7:00 a.m. to 7:00 p.m.; "Evening" = 7:00 p.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

TABLE 6-4: WITHOUT PROJECT CONDITIONS VEHICLE MIX

Classification	Total % Traffic Flow			Total
	Autos	Medium Trucks	Heavy Trucks	
All Segments	95.52%	2.33%	2.15%	100.00%

Based on an existing PM peak hour vehicle count taken at Citrus Avenue and Jurupa Avenue (Goodman Industrial Park Fontana III Traffic Impact Analysis.). Vehicle mix percentage values rounded to the nearest one-hundredth.

TABLE 6-5: EXISTING WITH PROJECT CONDITIONS VEHICLE MIX

ID	Roadway	Segment	With Project[1]			
			Autos	Medium Trucks	Heavy Trucks	Total[2]
1	Citrus Av.	s/o I-10 Ramps	95.03%	2.40%	2.57%	100.00%
2	Citrus Av.	s/o Slover Av.	94.32%	2.52%	3.16%	100.00%
3	Citrus Av.	s/o Santa Ana Av.	93.60%	2.69%	3.71%	100.00%
4	Juniper Av.	n/o Santa Ana Av.	95.87%	2.15%	1.98%	100.00%
5	Juniper Av.	s/o Santa Ana Av.	96.30%	1.92%	1.78%	100.00%
6	Sierra Av.	n/o Slover Av.	95.33%	2.36%	2.31%	100.00%
7	Sierra Av.	s/o Slover Av.	95.17%	2.39%	2.44%	100.00%
8	Sierra Av.	s/o Santa Ana Av.	94.99%	2.43%	2.57%	100.00%
9	Sierra Av.	s/o Jurupa Av.	95.17%	2.40%	2.44%	100.00%
10	Slover Av.	w/o Sierra Av.	95.53%	2.32%	2.15%	100.00%
11	Santa Ana Av.	e/o Citrus Av.	95.90%	2.13%	1.97%	100.00%
12	Santa Ana Av.	e/o Juniper Av.	95.76%	2.21%	2.04%	100.00%
13	Santa Ana Av.	e/o Sierra Av.	94.88%	2.41%	2.71%	100.00%
14	Jurupa Av.	w/o Cherry Av.	94.85%	2.45%	2.70%	100.00%
15	Jurupa Av.	e/o Cherry Av.	94.70%	2.47%	2.83%	100.00%
16	Jurupa Av.	e/o Beech Av.	94.69%	2.47%	2.83%	100.00%
17	Jurupa Av.	e/o Poplar Av.	94.71%	2.47%	2.82%	100.00%
18	Jurupa Av.	e/o Citrus Av.	93.49%	2.69%	3.81%	100.00%
19	Jurupa Av.	e/o Oleander Av.	93.59%	2.67%	3.73%	100.00%
20	Jurupa Av.	e/o Cypress Av.	95.55%	2.31%	2.14%	100.00%
21	Jurupa Av.	e/o Juniper Av.	94.21%	2.58%	3.21%	100.00%
22	Armstrong Rd.	w/o Sierra Av.	95.14%	2.40%	2.46%	100.00%
23	Armstrong Rd.	w/o 34th St.	95.24%	2.38%	2.38%	100.00%

[1] Source: Goodman Industrial Park Fontana III Traffic Impact Analysis.
[2] Total of vehicle mix percentage values rounded to the nearest one-hundredth.

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

ID	Roadway	Segment	With Project[1]			
			Autos	Medium Trucks	Heavy Trucks	Total[2]
1	Citrus Av.	s/o I-10 Ramps	95.14%	2.39%	2.47%	100.00%
2	Citrus Av.	s/o Slover Av.	94.72%	2.46%	2.82%	100.00%
3	Citrus Av.	s/o Santa Ana Av.	94.16%	2.58%	3.25%	100.00%
4	Juniper Av.	n/o Santa Ana Av.	95.85%	2.16%	1.99%	100.00%
5	Juniper Av.	s/o Santa Ana Av.	96.27%	1.94%	1.79%	100.00%
6	Sierra Av.	n/o Slover Av.	95.36%	2.35%	2.29%	100.00%
7	Sierra Av.	s/o Slover Av.	95.26%	2.37%	2.36%	100.00%
8	Sierra Av.	s/o Santa Ana Av.	95.09%	2.41%	2.50%	100.00%
9	Sierra Av.	s/o Jurupa Av.	95.22%	2.39%	2.39%	100.00%
10	Slover Av.	w/o Sierra Av.	95.53%	2.33%	2.15%	100.00%
11	Santa Ana Av.	e/o Citrus Av.	95.67%	2.25%	2.08%	100.00%
12	Santa Ana Av.	e/o Juniper Av.	95.67%	2.25%	2.08%	100.00%
13	Santa Ana Av.	e/o Sierra Av.	94.99%	2.40%	2.62%	100.00%
14	Jurupa Av.	w/o Cherry Av.	95.01%	2.42%	2.57%	100.00%
15	Jurupa Av.	e/o Cherry Av.	94.92%	2.43%	2.65%	100.00%
16	Jurupa Av.	e/o Beech Av.	94.89%	2.44%	2.67%	100.00%
17	Jurupa Av.	e/o Poplar Av.	94.90%	2.43%	2.67%	100.00%
18	Jurupa Av.	e/o Citrus Av.	93.83%	2.63%	3.54%	100.00%
19	Jurupa Av.	e/o Oleander Av.	93.86%	2.63%	3.51%	100.00%
20	Jurupa Av.	e/o Cypress Av.	95.55%	2.32%	2.14%	100.00%
21	Jurupa Av.	e/o Juniper Av.	94.39%	2.55%	3.06%	100.00%
22	Armstrong Rd.	w/o Sierra Av.	95.21%	2.39%	2.40%	100.00%
23	Armstrong Rd.	w/o 34th St.	95.30%	2.37%	2.33%	100.00%

[1] Source: Goodman Industrial Park Fontana III Traffic Impact Analysis.
[2] Total of vehicle mix percentage values rounded to the nearest one-hundredth.

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

ID	Roadway	Segment	With Project[1]			
			Autos	Medium Trucks	Heavy Trucks	Total[2]
1	Citrus Av.	s/o I-10 Ramps	95.18%	2.38%	2.44%	100.00%
2	Citrus Av.	s/o Slover Av.	94.79%	2.45%	2.76%	100.00%
3	Citrus Av.	s/o Santa Ana Av.	94.28%	2.56%	3.16%	100.00%
4	Juniper Av.	n/o Santa Ana Av.	95.83%	2.17%	2.00%	100.00%
5	Juniper Av.	s/o Santa Ana Av.	96.20%	1.97%	1.82%	100.00%
6	Sierra Av.	n/o Slover Av.	95.38%	2.35%	2.27%	100.00%
7	Sierra Av.	s/o Slover Av.	95.29%	2.37%	2.34%	100.00%
8	Sierra Av.	s/o Santa Ana Av.	95.13%	2.41%	2.47%	100.00%
9	Sierra Av.	s/o Jurupa Av.	95.29%	2.37%	2.34%	100.00%
10	Slover Av.	w/o Sierra Av.	95.53%	2.33%	2.15%	100.00%
11	Santa Ana Av.	e/o Citrus Av.	95.65%	2.26%	2.09%	100.00%
12	Santa Ana Av.	e/o Juniper Av.	95.66%	2.26%	2.08%	100.00%
13	Santa Ana Av.	e/o Sierra Av.	95.03%	2.39%	2.58%	100.00%
14	Jurupa Av.	w/o Cherry Av.	95.06%	2.41%	2.53%	100.00%
15	Jurupa Av.	e/o Cherry Av.	94.98%	2.42%	2.60%	100.00%
16	Jurupa Av.	e/o Beech Av.	94.94%	2.43%	2.63%	100.00%
17	Jurupa Av.	e/o Poplar Av.	94.95%	2.42%	2.62%	100.00%
18	Jurupa Av.	e/o Citrus Av.	93.98%	2.60%	3.42%	100.00%
19	Jurupa Av.	e/o Oleander Av.	94.01%	2.60%	3.39%	100.00%
20	Jurupa Av.	e/o Cypress Av.	95.54%	2.32%	2.14%	100.00%
21	Jurupa Av.	e/o Juniper Av.	94.49%	2.53%	2.98%	100.00%
22	Armstrong Rd.	w/o Sierra Av.	95.24%	2.38%	2.38%	100.00%
23	Armstrong Rd.	w/o 34th St.	95.32%	2.37%	2.31%	100.00%

[1] Source: Goodman Industrial Park Fontana III Traffic Impact Analysis.
[2] Total of vehicle mix percentage values rounded to the nearest one-hundredth.

6.3 CONSTRUCTION VIBRATION ASSESSMENT METHODOLOGY

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

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

TABLE 6-8: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

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

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

7 OFF-SITE TRANSPORTATION NOISE IMPACTS

To assess the off-site transportation CNEL noise level impacts associated with development of the proposed Project, noise contours were developed based on the *Traffic Impact Analysis*. (3) Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway. Noise contours were developed for the following traffic scenarios:

- Existing Conditions Without / With Project: This scenario refers to the existing present-day noise conditions without and with the proposed Project.
- Opening Year 2022 Without / With the Project: This scenario refers to Opening Year noise conditions without and with the proposed Project. This scenario includes all cumulative projects identified in the *Traffic Impact Analysis*.
- Horizon Year 2040 Without / With the Project: This scenario refers Year 2040 noise conditions without and with the proposed Project. This scenario includes all cumulative projects identified in the *Traffic Impact Analysis*.

7.1 TRAFFIC NOISE CONTOURS

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

TABLE 7-1: EXISTING WITHOUT PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned (Existing) Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Citrus Av.	s/o I-10 Ramps	Industrial (Residential)	71.8	87	188	405
2	Citrus Av.	s/o Slover Av.	Industrial/Public/Commercial	69.3	RW	89	192
3	Citrus Av.	s/o Santa Ana Av.	Industrial (Vacant)	68.3	RW	77	165
4	Juniper Av.	n/o Santa Ana Av.	Residential	63.2	RW	RW	56
5	Juniper Av.	s/o Santa Ana Av.	Industrial (Vacant/Commercial)	63.8	RW	RW	61
6	Sierra Av.	n/o Slover Av.	Commercial (Residential)	74.0	121	261	563
7	Sierra Av.	s/o Slover Av.	Industrial/Comm./Residential	73.7	116	250	539
8	Sierra Av.	s/o Santa Ana Av.	Residential/Commercial	73.8	119	256	552
9	Sierra Av.	s/o Jurupa Av.	Residential/Public	73.8	119	256	552
10	Slover Av.	w/o Sierra Av.	Industrial (Residential)	71.6	67	144	310
11	Santa Ana Av.	e/o Citrus Av.	Industrial/Residential	63.0	RW	RW	73
12	Santa Ana Av.	e/o Juniper Av.	Residential (Commercial)	66.7	RW	59	128
13	Santa Ana Av.	e/o Sierra Av.	Industrial/Residential	66.2	RW	56	120
14	Jurupa Av.	w/o Cherry Av.	Public/Residential	71.5	76	164	353
15	Jurupa Av.	e/o Cherry Av.	Industrial/Residential	70.8	68	146	315
16	Jurupa Av.	e/o Beech Av.	Industrial/Residential	70.9	69	149	322
17	Jurupa Av.	e/o Poplar Av.	Industrial/Residential	71.3	73	158	341
18	Jurupa Av.	e/o Citrus Av.	Industrial/Residential	70.8	68	147	316
19	Jurupa Av.	e/o Oleander Av.	Industrial/Residential	71.1	70	152	327
20	Jurupa Av.	e/o Cypress Av.	Residential (Church)	71.5	76	163	351
21	Jurupa Av.	e/o Juniper Av.	Residential	71.2	73	157	337
22	Armstrong Rd.	w/o Sierra Av.	Residential/Commercial	71.0	69	148	318
23	Armstrong Rd.	w/o 34th St.	Residential	72.2	83	178	383

[1] Sources: City of Fontana and Jurupa Valley General Plan Land Use Maps.

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

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

TABLE 7-2: EXISTING WITH PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned (Existing) Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Citrus Av.	s/o I-10 Ramps	Industrial (Residential)	72.2	93	200	431
2	Citrus Av.	s/o Slover Av.	Industrial/Public/Commercial	70.3	48	104	224
3	Citrus Av.	s/o Santa Ana Av.	Industrial (Vacant)	69.7	RW	94	203
4	Juniper Av.	n/o Santa Ana Av.	Residential	63.4	RW	RW	57
5	Juniper Av.	s/o Santa Ana Av.	Industrial (Vacant/Commercial)	64.2	RW	RW	65
6	Sierra Av.	n/o Slover Av.	Commercial (Residential)	74.1	125	268	578
7	Sierra Av.	s/o Slover Av.	Industrial/Comm./Residential	73.9	121	260	561
8	Sierra Av.	s/o Santa Ana Av.	Residential/Commercial	74.2	125	270	581
9	Sierra Av.	s/o Jurupa Av.	Residential/Public	74.0	123	265	570
10	Slover Av.	w/o Sierra Av.	Industrial (Residential)	71.6	67	144	310
11	Santa Ana Av.	e/o Citrus Av.	Industrial/Residential	63.2	RW	RW	75
12	Santa Ana Av.	e/o Juniper Av.	Residential (Commercial)	66.8	RW	60	130
13	Santa Ana Av.	e/o Sierra Av.	Industrial/Residential	66.9	RW	61	132
14	Jurupa Av.	w/o Cherry Av.	Public/Residential	72.0	82	177	381
15	Jurupa Av.	e/o Cherry Av.	Industrial/Residential	71.4	74	160	346
16	Jurupa Av.	e/o Beech Av.	Industrial/Residential	71.6	76	164	354
17	Jurupa Av.	e/o Poplar Av.	Industrial/Residential	71.9	81	174	374
18	Jurupa Av.	e/o Citrus Av.	Industrial/Residential	72.2	84	181	390
19	Jurupa Av.	e/o Oleander Av.	Industrial/Residential	72.4	86	186	401
20	Jurupa Av.	e/o Cypress Av.	Residential (Church)	71.5	76	163	352
21	Jurupa Av.	e/o Juniper Av.	Residential	72.1	83	179	385
22	Armstrong Rd.	w/o Sierra Av.	Residential/Commercial	71.2	71	154	331
23	Armstrong Rd.	w/o 34th St.	Residential	72.4	85	184	395

[1] Sources: City of Fontana and Jurupa Valley General Plan Land Use Maps.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

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

ID	Road	Segment	Adjacent Planned (Existing) Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Citrus Av.	s/o I-10 Ramps	Industrial (Residential)	73.0	104	225	485
2	Citrus Av.	s/o Slover Av.	Industrial/Public/Commercial	71.1	55	118	254
3	Citrus Av.	s/o Santa Ana Av.	Industrial (Vacant)	69.9	RW	97	210
4	Juniper Av.	n/o Santa Ana Av.	Residential	63.4	RW	RW	58
5	Juniper Av.	s/o Santa Ana Av.	Industrial (Vacant/Commercial)	64.0	RW	RW	63
6	Sierra Av.	n/o Slover Av.	Commercial (Residential)	74.8	137	295	636
7	Sierra Av.	s/o Slover Av.	Industrial/Comm./Residential	75.0	143	307	662
8	Sierra Av.	s/o Santa Ana Av.	Residential/Commercial	74.7	136	292	630
9	Sierra Av.	s/o Jurupa Av.	Residential/Public	74.6	133	286	617
10	Slover Av.	w/o Sierra Av.	Industrial (Residential)	72.6	78	168	361
11	Santa Ana Av.	e/o Citrus Av.	Industrial/Residential	67.4	RW	66	143
12	Santa Ana Av.	e/o Juniper Av.	Residential (Commercial)	68.7	RW	81	175
13	Santa Ana Av.	e/o Sierra Av.	Industrial/Residential	67.1	RW	63	136
14	Jurupa Av.	w/o Cherry Av.	Public/Residential	72.8	92	198	426
15	Jurupa Av.	e/o Cherry Av.	Industrial/Residential	72.2	84	181	390
16	Jurupa Av.	e/o Beech Av.	Industrial/Residential	72.1	83	179	386
17	Jurupa Av.	e/o Poplar Av.	Industrial/Residential	72.5	88	189	407
18	Jurupa Av.	e/o Citrus Av.	Industrial/Residential	71.6	77	166	359
19	Jurupa Av.	e/o Oleander Av.	Industrial/Residential	71.7	78	168	363
20	Jurupa Av.	e/o Cypress Av.	Residential (Church)	72.2	84	180	389
21	Jurupa Av.	e/o Juniper Av.	Residential	71.9	80	173	373
22	Armstrong Rd.	w/o Sierra Av.	Residential/Commercial	71.8	78	167	360
23	Armstrong Rd.	w/o 34th St.	Residential	73.4	99	213	459

[1] Sources: City of Fontana and Jurupa Valley General Plan Land Use Maps.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

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

ID	Road	Segment	Adjacent Planned (Existing) Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Citrus Av.	s/o I-10 Ramps	Industrial (Residential)	73.3	110	236	508
2	Citrus Av.	s/o Slover Av.	Industrial/Public/Commercial	71.8	61	131	282
3	Citrus Av.	s/o Santa Ana Av.	Industrial (Vacant)	70.9	53	113	244
4	Juniper Av.	n/o Santa Ana Av.	Residential	63.6	RW	RW	59
5	Juniper Av.	s/o Santa Ana Av.	Industrial (Vacant/Commercial)	64.4	RW	RW	67
6	Sierra Av.	n/o Slover Av.	Commercial (Residential)	74.9	140	302	650
7	Sierra Av.	s/o Slover Av.	Industrial/Comm./Residential	75.2	147	316	682
8	Sierra Av.	s/o Santa Ana Av.	Residential/Commercial	75.0	142	305	657
9	Sierra Av.	s/o Jurupa Av.	Residential/Public	74.7	137	294	634
10	Slover Av.	w/o Sierra Av.	Industrial (Residential)	72.6	78	168	361
11	Santa Ana Av.	e/o Citrus Av.	Industrial/Residential	67.4	RW	67	144
12	Santa Ana Av.	e/o Juniper Av.	Residential (Commercial)	68.8	RW	82	177
13	Santa Ana Av.	e/o Sierra Av.	Industrial/Residential	67.6	RW	69	148
14	Jurupa Av.	w/o Cherry Av.	Public/Residential	73.2	97	210	452
15	Jurupa Av.	e/o Cherry Av.	Industrial/Residential	72.6	90	194	418
16	Jurupa Av.	e/o Beech Av.	Industrial/Residential	72.6	90	193	416
17	Jurupa Av.	e/o Poplar Av.	Industrial/Residential	72.9	94	203	438
18	Jurupa Av.	e/o Citrus Av.	Industrial/Residential	72.8	92	199	429
19	Jurupa Av.	e/o Oleander Av.	Industrial/Residential	72.9	93	201	433
20	Jurupa Av.	e/o Cypress Av.	Residential (Church)	72.2	84	181	389
21	Jurupa Av.	e/o Juniper Av.	Residential	72.7	90	194	419
22	Armstrong Rd.	w/o Sierra Av.	Residential/Commercial	72.0	80	173	372
23	Armstrong Rd.	w/o 34th St.	Residential	73.5	101	218	470

[1] Sources: City of Fontana and Jurupa Valley General Plan Land Use Maps.

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

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

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

ID	Road	Segment	Adjacent Planned (Existing) Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Citrus Av.	s/o I-10 Ramps	Industrial (Residential)	73.4	111	240	516
2	Citrus Av.	s/o Slover Av.	Industrial/Public/Commercial	71.6	58	126	271
3	Citrus Av.	s/o Santa Ana Av.	Industrial (Vacant)	70.3	48	104	224
4	Juniper Av.	n/o Santa Ana Av.	Residential	63.8	RW	RW	61
5	Juniper Av.	s/o Santa Ana Av.	Industrial (Vacant/Commercial)	64.5	RW	RW	68
6	Sierra Av.	n/o Slover Av.	Commercial (Residential)	75.2	146	314	677
7	Sierra Av.	s/o Slover Av.	Industrial/Comm./Residential	75.4	152	327	706
8	Sierra Av.	s/o Santa Ana Av.	Residential/Commercial	75.1	145	312	671
9	Sierra Av.	s/o Jurupa Av.	Residential/Public	75.7	158	341	734
10	Slover Av.	w/o Sierra Av.	Industrial (Residential)	73.0	83	179	385
11	Santa Ana Av.	e/o Citrus Av.	Industrial/Residential	67.8	RW	71	152
12	Santa Ana Av.	e/o Juniper Av.	Residential (Commercial)	69.1	RW	87	187
13	Santa Ana Av.	e/o Sierra Av.	Industrial/Residential	67.5	RW	67	145
14	Jurupa Av.	w/o Cherry Av.	Public/Residential	73.2	98	211	454
15	Jurupa Av.	e/o Cherry Av.	Industrial/Residential	72.6	89	193	415
16	Jurupa Av.	e/o Beech Av.	Industrial/Residential	72.5	89	191	412
17	Jurupa Av.	e/o Poplar Av.	Industrial/Residential	72.9	93	201	433
18	Jurupa Av.	e/o Citrus Av.	Industrial/Residential	72.1	82	177	382
19	Jurupa Av.	e/o Oleander Av.	Industrial/Residential	72.1	83	180	387
20	Jurupa Av.	e/o Cypress Av.	Residential (Church)	72.6	89	192	414
21	Jurupa Av.	e/o Juniper Av.	Residential	72.3	86	184	397
22	Armstrong Rd.	w/o Sierra Av.	Residential/Commercial	72.2	83	178	383
23	Armstrong Rd.	w/o 34th St.	Residential	73.8	105	227	489

[1] Sources: City of Fontana and Jurupa Valley General Plan Land Use Maps.

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

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

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

ID	Road	Segment	Adjacent Planned (Existing) Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Citrus Av.	s/o I-10 Ramps	Industrial (Residential)	73.7	116	250	540
2	Citrus Av.	s/o Slover Av.	Industrial/Public/Commercial	72.2	64	138	298
3	Citrus Av.	s/o Santa Ana Av.	Industrial (Vacant)	71.2	55	119	257
4	Juniper Av.	n/o Santa Ana Av.	Residential	64.0	RW	RW	63
5	Juniper Av.	s/o Santa Ana Av.	Industrial (Vacant/Commercial)	64.8	RW	RW	72
6	Sierra Av.	n/o Slover Av.	Commercial (Residential)	75.3	149	321	691
7	Sierra Av.	s/o Slover Av.	Industrial/Comm./Residential	75.6	156	336	725
8	Sierra Av.	s/o Santa Ana Av.	Residential/Commercial	75.4	150	324	698
9	Sierra Av.	s/o Jurupa Av.	Residential/Public	75.8	162	348	750
10	Slover Av.	w/o Sierra Av.	Industrial (Residential)	73.0	83	179	385
11	Santa Ana Av.	e/o Citrus Av.	Industrial/Residential	67.8	RW	71	153
12	Santa Ana Av.	e/o Juniper Av.	Residential (Commercial)	69.2	RW	88	189
13	Santa Ana Av.	e/o Sierra Av.	Industrial/Residential	68.0	RW	73	156
14	Jurupa Av.	w/o Cherry Av.	Public/Residential	73.5	103	222	479
15	Jurupa Av.	e/o Cherry Av.	Industrial/Residential	73.0	95	205	443
16	Jurupa Av.	e/o Beech Av.	Industrial/Residential	73.0	95	204	440
17	Jurupa Av.	e/o Poplar Av.	Industrial/Residential	73.3	100	215	463
18	Jurupa Av.	e/o Citrus Av.	Industrial/Residential	73.1	97	209	451
19	Jurupa Av.	e/o Oleander Av.	Industrial/Residential	73.2	98	211	455
20	Jurupa Av.	e/o Cypress Av.	Residential (Church)	72.6	89	193	415
21	Jurupa Av.	e/o Juniper Av.	Residential	73.0	95	205	442
22	Armstrong Rd.	w/o Sierra Av.	Residential/Commercial	72.4	85	183	395
23	Armstrong Rd.	w/o 34th St.	Residential	73.9	108	232	499

[1] Sources: City of Fontana and Jurupa Valley General Plan Land Use Maps.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

7.2 EXISTING CONDITION PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-1 presents the Existing without Project conditions CNEL noise levels. The without Project exterior noise levels are expected to range from 63.0 to 74.0 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-2 shows the Existing with Project conditions will range from 63.2 to 74.2 dBA CNEL. As shown on Table 7-7 the Project will generate a noise level increase of up to 1.3 dBA CNEL on the study area roadway segments. Based on the significance criteria in Section 4, the Project-related noise level increases are considered *less than significant* under Existing conditions at the land uses adjacent to roadways conveying Project traffic.

7.3 OPENING YEAR PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-3 presents the Opening Year 2022 without Project conditions CNEL noise levels. The without Project exterior noise levels are expected to range from 63.4 to 75.0 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-4 shows the Opening Year 2022 with Project conditions will range from 63.6 to 75.2 dBA CNEL. As shown on Table 7-8 the Project will generate a noise level increase of up to 1.1 dBA CNEL on the study area roadway segments. Based on the significance criteria in Section 4, the Project-related noise level increases are considered *less than significant* under Opening Year 2022 conditions at the land uses adjacent to roadways conveying Project traffic.

7.4 HORIZON YEAR PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-5 presents the Horizon Year 2040 without Project conditions CNEL noise levels. The without Project exterior noise levels are expected to range from 63.8 to 75.7 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-6 shows the Horizon Year 2040 with Project conditions will range from 64.0 to 75.8 dBA CNEL. As shown on Table 7-9 the Project will generate a noise level increase of up to 1.0 dBA CNEL on the study area roadway segments. Based on the significance criteria in Section 4, the Project-related noise level increases are considered *less than significant* under Horizon Year 2040 conditions at the land uses adjacent to roadways conveying Project traffic.

TABLE 7-7: EXISTING CONDITION OFF-SITE PROJECT-RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	CNEL at Adjacent Land Use (dBA)[1]			Noise-Sensitive Land Use?	Threshold Exceeded?[2]
			Without Project	With Project	Project Addition		
1	Citrus Av.	s/o I-10 Ramps	71.8	72.2	0.4	Yes	No
2	Citrus Av.	s/o Slover Av.	69.3	70.3	0.9	Yes	No
3	Citrus Av.	s/o Santa Ana Av.	68.3	69.7	1.3	No	No
4	Juniper Av.	n/o Santa Ana Av.	63.2	63.4	0.1	Yes	No
5	Juniper Av.	s/o Santa Ana Av.	63.8	64.2	0.4	No	No
6	Sierra Av.	n/o Slover Av.	74.0	74.1	0.1	Yes	No
7	Sierra Av.	s/o Slover Av.	73.7	73.9	0.2	Yes	No
8	Sierra Av.	s/o Santa Ana Av.	73.8	74.2	0.3	Yes	No
9	Sierra Av.	s/o Jurupa Av.	73.8	74.0	0.2	Yes	No
10	Slover Av.	w/o Sierra Av.	71.6	71.6	0.0	Yes	No
11	Santa Ana Av.	e/o Citrus Av.	63.0	63.2	0.1	Yes	No
12	Santa Ana Av.	e/o Juniper Av.	66.7	66.8	0.1	Yes	No
13	Santa Ana Av.	e/o Sierra Av.	66.2	66.9	0.6	Yes	No
14	Jurupa Av.	w/o Cherry Av.	71.5	72.0	0.5	Yes	No
15	Jurupa Av.	e/o Cherry Av.	70.8	71.4	0.6	Yes	No
16	Jurupa Av.	e/o Beech Av.	70.9	71.6	0.6	Yes	No
17	Jurupa Av.	e/o Poplar Av.	71.3	71.9	0.6	Yes	No
18	Jurupa Av.	e/o Citrus Av.	70.8	72.2	1.3	Yes	No
19	Jurupa Av.	e/o Oleander Av.	71.1	72.4	1.3	Yes	No
20	Jurupa Av.	e/o Cypress Av.	71.5	71.5	0.0	Yes	No
21	Jurupa Av.	e/o Juniper Av.	71.2	72.1	0.8	Yes	No
22	Armstrong Rd.	w/o Sierra Av.	71.0	71.2	0.2	Yes	No
23	Armstrong Rd.	w/o 34th St.	72.2	72.4	0.1	Yes	No

[1] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use. Values rounded to the nearest one-tenth.
[2] Significance Criteria (Section 4).

TABLE 7-8: OPENING YEAR OFF-SITE PROJECT-RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	CNEL at Adjacent Land Use (dBA)[1]			Noise-Sensitive Land Use?	Threshold Exceeded?[2]
			Without Project	With Project	Project Addition		
1	Citrus Av.	s/o I-10 Ramps	73.0	73.3	0.3	Yes	No
2	Citrus Av.	s/o Slover Av.	71.1	71.8	0.6	Yes	No
3	Citrus Av.	s/o Santa Ana Av.	69.9	70.9	0.9	No	No
4	Juniper Av.	n/o Santa Ana Av.	63.4	63.6	0.1	Yes	No
5	Juniper Av.	s/o Santa Ana Av.	64.0	64.4	0.3	No	No
6	Sierra Av.	n/o Slover Av.	74.8	74.9	0.1	Yes	No
7	Sierra Av.	s/o Slover Av.	75.0	75.2	0.1	Yes	No
8	Sierra Av.	s/o Santa Ana Av.	74.7	75.0	0.2	Yes	No
9	Sierra Av.	s/o Jurupa Av.	74.6	74.7	0.1	Yes	No
10	Slover Av.	w/o Sierra Av.	72.6	72.6	0.0	Yes	No
11	Santa Ana Av.	e/o Citrus Av.	67.4	67.4	0.0	Yes	No
12	Santa Ana Av.	e/o Juniper Av.	68.7	68.8	0.0	Yes	No
13	Santa Ana Av.	e/o Sierra Av.	67.1	67.6	0.5	Yes	No
14	Jurupa Av.	w/o Cherry Av.	72.8	73.2	0.3	Yes	No
15	Jurupa Av.	e/o Cherry Av.	72.2	72.6	0.4	Yes	No
16	Jurupa Av.	e/o Beech Av.	72.1	72.6	0.4	Yes	No
17	Jurupa Av.	e/o Poplar Av.	72.5	72.9	0.4	Yes	No
18	Jurupa Av.	e/o Citrus Av.	71.6	72.8	1.1	Yes	No
19	Jurupa Av.	e/o Oleander Av.	71.7	72.9	1.1	Yes	No
20	Jurupa Av.	e/o Cypress Av.	72.2	72.2	0.0	Yes	No
21	Jurupa Av.	e/o Juniper Av.	71.9	72.7	0.7	Yes	No
22	Armstrong Rd.	w/o Sierra Av.	71.8	72.0	0.2	Yes	No
23	Armstrong Rd.	w/o 34th St.	73.4	73.5	0.1	Yes	No

[1] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use. Values rounded to the nearest one-tenth.
[2] Significance Criteria (Section 4).

TABLE 7-9: HORIZON YEAR OFF-SITE PROJECT-RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	CNEL at Adjacent Land Use (dBA)[1]			Noise-Sensitive Land Use?	Threshold Exceeded?[2]
			Without Project	With Project	Project Addition		
1	Citrus Av.	s/o I-10 Ramps	73.4	73.7	0.2	Yes	No
2	Citrus Av.	s/o Slover Av.	71.6	72.2	0.6	Yes	No
3	Citrus Av.	s/o Santa Ana Av.	70.3	71.2	0.9	No	No
4	Juniper Av.	n/o Santa Ana Av.	63.8	64.0	0.1	Yes	No
5	Juniper Av.	s/o Santa Ana Av.	64.5	64.8	0.3	No	No
6	Sierra Av.	n/o Slover Av.	75.2	75.3	0.1	Yes	No
7	Sierra Av.	s/o Slover Av.	75.4	75.6	0.1	Yes	No
8	Sierra Av.	s/o Santa Ana Av.	75.1	75.4	0.2	Yes	No
9	Sierra Av.	s/o Jurupa Av.	75.7	75.8	0.1	Yes	No
10	Slover Av.	w/o Sierra Av.	73.0	73.0	0.0	Yes	No
11	Santa Ana Av.	e/o Citrus Av.	67.8	67.8	0.0	Yes	No
12	Santa Ana Av.	e/o Juniper Av.	69.1	69.2	0.0	Yes	No
13	Santa Ana Av.	e/o Sierra Av.	67.5	68.0	0.4	Yes	No
14	Jurupa Av.	w/o Cherry Av.	73.2	73.5	0.3	Yes	No
15	Jurupa Av.	e/o Cherry Av.	72.6	73.0	0.4	Yes	No
16	Jurupa Av.	e/o Beech Av.	72.5	73.0	0.4	Yes	No
17	Jurupa Av.	e/o Poplar Av.	72.9	73.3	0.4	Yes	No
18	Jurupa Av.	e/o Citrus Av.	72.1	73.1	1.0	Yes	No
19	Jurupa Av.	e/o Oleander Av.	72.1	73.2	1.0	Yes	No
20	Jurupa Av.	e/o Cypress Av.	72.6	72.6	0.0	Yes	No
21	Jurupa Av.	e/o Juniper Av.	72.3	73.0	0.6	Yes	No
22	Armstrong Rd.	w/o Sierra Av.	72.2	72.4	0.1	Yes	No
23	Armstrong Rd.	w/o 34th St.	73.8	73.9	0.1	Yes	No

[1] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use. Values rounded to the nearest one-tenth.
[2] Significance Criteria (Section 4).

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8 RECEIVER LOCATIONS

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

Noise-sensitive receivers near the Project site include existing residential homes, Citrus High School, and St. Mary's Church. Other sensitive land uses in the Project study area that are located at greater distances than those identified in this noise study will experience lower noise levels than those presented in this report due to the additional attenuation from distance and the shielding of intervening structures.

R1: Located approximately 70 feet north of the Project site, R1 represents an existing vacant lot and proposed South Fontana Sports Park. A 24-hour noise level measurement was taken near this location, L1, to describe the existing ambient noise environment.

R2: Location R2 represents the existing residential home located approximately 83 feet east of the Project site on Juniper Avenue. A 24-hour noise level measurement was taken near this location, L1, to describe the existing ambient noise environment.

R3: Location R3 represents the existing residential home east of the Project site across Juniper Avenue at roughly 84 feet. A 24-hour noise level measurement was taken near this location, L2, to describe the existing ambient noise environment.

R4: Location R4 represents the residential home located roughly 99 feet east of the Project site on Juniper Avenue. A 24-hour noise level measurement was taken near this location, L3, to describe the existing ambient noise environment.

R5: Location R5 represents the existing outdoor living areas (backyards) of residential homes located roughly 158 feet south of the Project site on Windcrest Drive. A 24-hour noise level measurement was taken near this location, L4, to describe the existing ambient noise environment.

R6: Location R6 represents the existing St. Mary's Church located roughly 84 feet west of the Project site. A 24-hour noise level measurement was taken near this location, L5, to describe the existing ambient noise environment.

R7: Location R7 represents the existing residential home and outdoor living area (backyard) located roughly 10 feet south of the Project site. A 24-hour noise level measurement was taken near this location, L5, to describe the existing ambient noise environment.

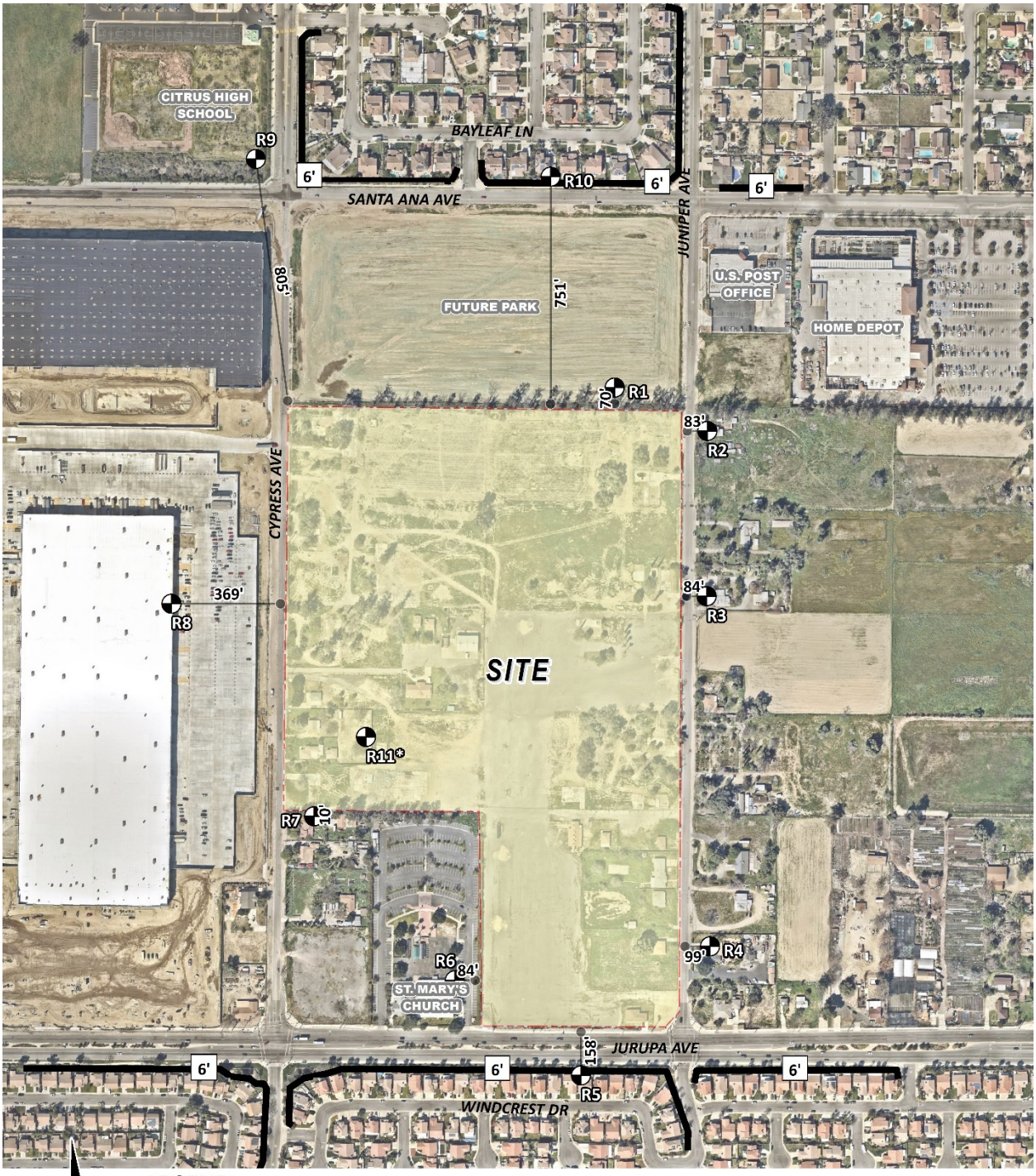
R8: Location R8 represents the existing industrial warehouse under construction located roughly 369 feet west of the Project site. A 24-hour noise level measurement was taken near this location, L6, to describe the existing ambient noise environment.

R9: Location R9 represents the existing Citrus High School outdoor sports field northwest of the Project site at roughly 805 feet. A 24-hour noise level measurement was taken near this location, L9, to describe the existing ambient noise environment.

R10: Location R10 represents the existing outdoor living areas (backyards) of residential homes located roughly 751 feet north of the Project site. A 24-hour noise level measurement was taken near this location, L8, to describe the existing ambient noise environment.

R11: Location R11 represents the existing residential home and outdoor living area (backyard) located roughly 10 feet west of the Project site under interim conditions. Future expansion of the Project site would remove this receiver location, and therefore, it is only identified under interim operational (stationary-source) and construction impact analyses. A 24-hour noise level measurement was taken near this location, L6, to describe the existing ambient noise environment.

EXHIBIT 8-A: RECEIVER LOCATIONS



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9 OPERATIONAL IMPACTS

This section analyzes the potential operational noise impacts due to the Project's stationary noise sources on the off-site noise-sensitive and adjacent industrial use receiver locations identified in Section 8. Exhibit 9-A identifies the receiver locations and noise source locations used to assess the Project-related operational noise levels under Scenario 1 Interim Conditions, and Exhibit 9-B presents the Scenario 2 Expansion Conditions.

9.1 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 roof-top air conditioning units, fire pump emergency diesel generators, parking lot vehicle movements, idling trucks, delivery truck activities, backup alarms, refrigerated containers or reefers, as well as loading and unloading of dry goods all operating continuously. These noise level impacts will likely vary throughout the day.

TABLE 9-1: REFERENCE NOISE LEVEL MEASUREMENTS

Noise Source	Duration (hh:mm:ss)	Ref. Distance (Feet)	Noise Source Height (Feet)	Hourly Activity (Mins)[5]	Reference Noise Level (dBA L_{eq})	
					@ Ref. Dist.	@ 50 Feet
Truck Idle/Reefer Activity[1]	00:14:00	30'	8'	60	70.1	65.7
Roof-Top Air Conditioning Units[2]	96:00:00	5'	25'	39	77.2	57.2
Parking Lot Vehicle Movements[3]	01:00:00	10'	5'	60	52.2	38.2
Fire Pump Diesel Emergency Generator[4]	00:15:00	50'	6'	60	64.9	64.9

[1] As measured by Urban Crossroads, Inc. on 1/7/2015 at the Nature's Best Distribution Facility in the City of Chino.
[2] As measured by Urban Crossroads, Inc. on 7/27/2015 at the Santee Walmart located at 170 Town Center Parkway.
[3] As measured by Urban Crossroads, Inc. on 5/17/2017 at the Panasonic Avionics Corporation parking lot in the City of Lake Forest.
[4] As measured by Urban Crossroads, Inc. on 7/14/2012 of an emergency generator (336 kW) in the City of San Jacinto.
[5] Anticipated duration (minutes within the hour) of noise activity during typical hourly conditions expected at the Project site based on the reference noise level measurement activity.

9.1.1 TRUCK IDLING, LOADING/UNLOADING, BACKUP ALARMS, AND REFRIGERATED CONTAINERS

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

During the 14-minute truck idling/reefer activity reference noise level measurement, approximately 20 delivery trucks were docked, idling, or parked in the northern loading dock area. The truck idling/reefer activity reference noise level measurement was taken in the center of the loading dock activity area and represents multiple concurrent noise sources resulting in a combined noise level of 65.7 dBA L_{eq} at a uniform reference distance of 50 feet.

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

9.1.2 ROOF-TOP AIR CONDITIONING UNITS

To assess the impacts created by the roof-top air conditioning units at the Project buildings, reference noise levels measurements were taken over a four-day total duration at the Santee Walmart on July 27th, 2015. Located at 170 Town Center Parkway in the City of Santee, the noise level measurements describe mechanical roof-top air conditioning units on the roof of an existing Walmart store, in addition to background noise levels from additional roof-top units. The reference noise level represents Lennox SCA120 series 10-ton model packaged air conditioning units. At 5 feet from the closest roof-top air conditioning units, the highest exterior noise level from all four days of the measurement period was measured at 77.2 dBA L_{eq}. Using the uniform reference distance of 50 feet, the noise level is 57.2 dBA L_{eq}. The operating conditions of the reference noise level measurement reflect peak summer cooling requirements with measured temperatures approaching 96 degrees Fahrenheit (°F) with average daytime temperatures of 82°F. The roof-top air condition units were observed to operate the most during the daytime hours for a total of 39 minutes per hour.

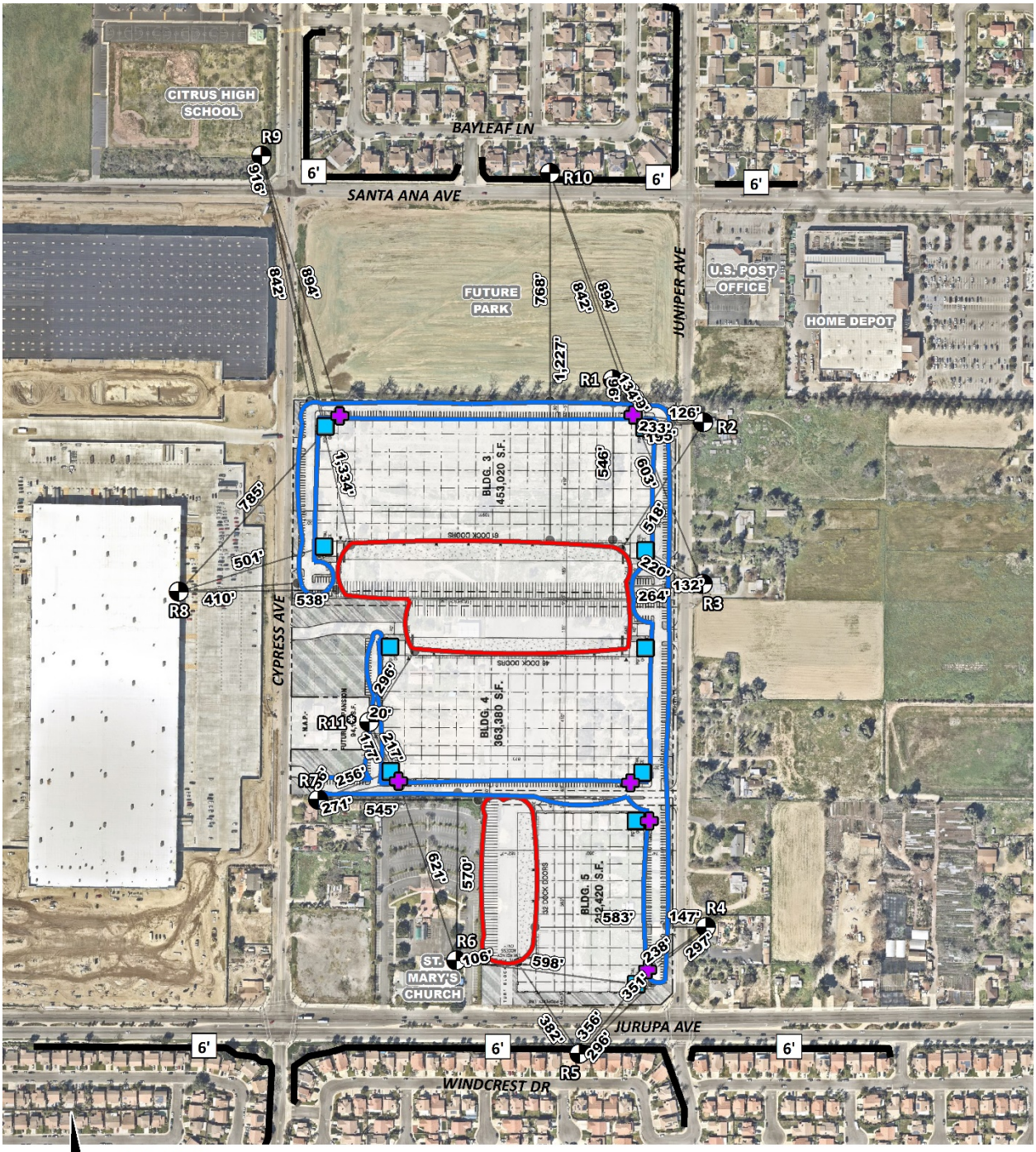
9.1.3 PARKING LOT VEHICLE MOVEMENTS (AUTOS)

To determine the noise levels associated with parking lot vehicle movements, Urban Crossroads collected reference noise level measurements over a 24-hour period on May 17th, 2017 at the parking lot for the Panasonic Avionics Corporation in the City of Lake Forest. The peak hour of activity measured over the 24-hour noise level measurement period occurred between 12:00 p.m. to 1:00 p.m., or the typical lunch hour for employees working in the area. The measured reference noise level at 50 feet from parking lot vehicle movements was measured at 38.2 dBA L_{eq}. The parking lot noise levels are mainly due to cars pulling in and out of spaces during peak lunch hour activity and employees talking. Noise associated with parking lot vehicle movements is expected to operate for the entire hour (60 minutes).

9.1.4 FIRE PUMP DIESEL EMERGENCY GENERATOR

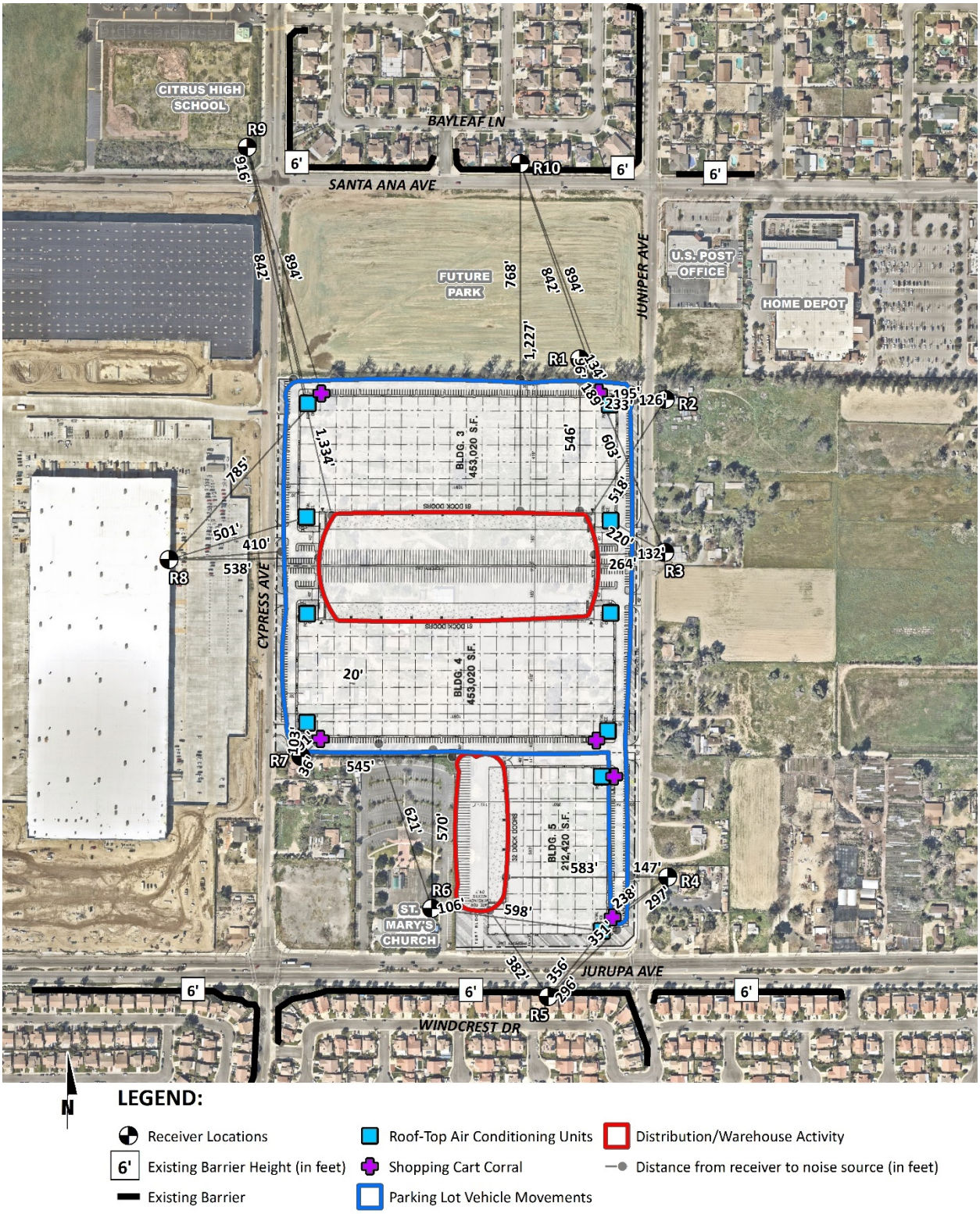
To assess the impacts created by emergency generators at the Project site, a reference noise level measurement was taken on July 14th, 2012 outside of a Dollar General store located at 700 South San Jacinto Avenue. The noise level measurements describe a 336 kilowatt (kW) generator operating at a distance of 50 feet from the reference measurement location with exterior noise levels of 64.9 dBA L_{eq}. For the purpose of this noise analysis, the emergency generator was observed at a height of approximately 6 feet and is expected to operate for approximately 60 minutes during emergency conditions.

EXHIBIT 9-A: PROJECT INTERIM OPERATIONAL CONDITIONS



**Receiver location R11 represents an existing outdoor living area (backyard) of a residential property under interim conditions pending future expansion of the Project site.*

EXHIBIT 9-B: PROJECT EXPANSION OPERATIONAL CONDITIONS



9.2 INTERIM CONDITION PROJECT OPERATIONAL NOISE LEVELS

Based upon the reference noise levels, it is possible to estimate the Project operational stationary-source noise levels at each receiver location. The operational noise level calculations shown on Table 9-2 account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. Hard site conditions are used in the operational noise analysis which result in noise levels that attenuate (or decrease) at a rate of 6 dBA for each doubling of distance from a point source. The basic noise attenuation equation shown below is used to calculate the distance attenuation based on a reference noise level (SPL_1):

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

Where SPL_2 is the resulting noise level after attenuation, SPL_1 is the source noise level, D_2 is the distance to the reference sound pressure level (SPL_1), and D_1 is the distance to the receiver location. Table 9-2 indicates that the unmitigated operational noise levels associated with the roof-top air conditioning units, fire pump emergency diesel generators, parking lot vehicle movements, idling trucks, delivery truck activities, backup alarms, refrigerated containers or reefers, as well as loading and unloading of dry goods are expected to range from 34.8 to 59.2 dBA L_{eq} at nearby receiver locations. The unmitigated operational noise level calculation worksheets are included in Appendix 9.1.

9.3 INTERIM CONDITION 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 City of Fontana exterior noise level standards during daytime (70 dBA L_{eq}) and nighttime (65 dBA L_{eq}) hours at nearby noise-sensitive uses. Table 9-3 shows the operational noise levels associated with Goodman Industrial Park Fontana III Project will satisfy the exterior noise level standards at all nearby noise-sensitive receiver locations. Therefore, the Project-related operational noise level impacts are considered *less than significant* at adjacent uses under Scenario 1 Interim Conditions.

TABLE 9-2: UNMITIGATED INTERIM OPERATIONAL NOISE LEVELS

Receiver Location[1]	Noise Levels by Individual Source[2]				Combined Operational Noise Levels (dBA L_{eq})[3]
	Truck Idle/Reefer Activity	Roof-Top Air Conditioning Unit	Parking Lot Vehicle Movements	Fire Pump Emergency Generator	
R1	26.1	36.3	32.6	56.3	56.4
R2	26.6	35.9	30.2	51.5	51.7
R3	51.2	34.5	29.8	24.5	51.3
R4	25.5	31.1	28.9	51.3	51.4
R5	29.2	31.2	15.8	29.1	34.8
R6	59.1	21.0	17.1	43.0	59.2
R7	44.9	32.7	41.1	50.2	51.8
R8	45.0	25.7	19.9	22.2	45.1
R9	18.4	19.9	13.7	39.9	40.0
R10	19.2	20.2	9.0	34.9	35.2
R11	31.4	37.0	46.2	33.3	47.0

[1] See Exhibit 9-A for the receiver and noise source locations.
[2] Reference noise sources as shown on Table 9-1.
[3] Calculations for each noise source are provided in Appendix 9.1.

TABLE 9-3: UNMITIGATED INTERIM OPERATIONAL NOISE LEVEL COMPLIANCE

Receiver Location[1]	Noise Level at Receiver Locations (dBA L_{eq})[2]	Thresholds at Receiving Land Use (dBA L_{eq})		Threshold Exceeded?[3]	
		Daytime	Nighttime	Daytime	Nighttime
R1	56.4	70	65	No	No
R2	51.7	70	65	No	No
R3	51.3	70	65	No	No
R4	51.4	70	65	No	No
R5	34.8	70	65	No	No
R6	59.2	70	65	No	No
R7	51.8	70	65	No	No
R8	45.1	70	65	No	No
R9	40.0	70	65	No	No
R10	35.2	70	65	No	No
R11	47.0	70	65	No	No

[1] See Exhibit 9-A for the receiver and noise source locations.
[2] Estimated Project operational noise levels as shown on Table 9-2.
[3] Do the estimated Project operational noise levels meet the operational noise level thresholds?
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

9.4 EXPANSION CONDITION PROJECT OPERATIONAL NOISE LEVELS

Table 9-4 indicates that the unmitigated operational noise levels associated with the roof-top air conditioning units, fire pump emergency diesel generators, parking lot vehicle movements, idling trucks, delivery truck activities, backup alarms, refrigerated containers or reefers, as well as loading and unloading of dry goods are expected to range from 34.8 to 60.0 dBA L_{eq} at nearby receiver locations. The unmitigated operational noise level calculation worksheets are included in Appendix 9.1.

9.5 EXPANSION CONDITION 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 City of Fontana exterior noise level standards during daytime (70 dBA L_{eq}) and nighttime (65 dBA L_{eq}) hours at nearby noise-sensitive uses. Table 9-5 shows the operational noise levels associated with Goodman Industrial Park Fontana III Project will satisfy the exterior noise level standards at all nearby noise-sensitive receiver locations. Therefore, the Project-related operational noise level impacts are considered *less than significant* at adjacent uses under Scenario 2 Expansion Conditions.

TABLE 9-4: UNMITIGATED EXPANSION OPERATIONAL NOISE LEVELS

Receiver Location[1]	Noise Levels by Individual Source[2]				Combined Operational Noise Levels (dBA L_{eq})[3]
	Truck Idle/Reefer Activity	Roof-Top Air Conditioning Unit	Parking Lot Vehicle Movements	Fire Pump Emergency Generator	
R1	26.1	36.3	32.6	56.3	56.4
R2	26.6	35.9	30.2	51.5	51.7
R3	51.2	34.5	29.8	24.5	51.3
R4	25.5	31.1	28.9	51.3	51.4
R5	29.2	31.2	15.8	29.1	34.8
R6	59.1	21.0	17.1	43.0	59.2
R7	44.9	43.8	41.1	59.7	60.0
R8	45.0	25.7	19.9	22.2	45.1
R9	18.4	19.9	13.7	39.9	40.0
R10	19.2	20.2	9.0	34.9	35.2
R11	Receiver does not exist under the Project expansion scenario.				

[1] See Exhibit 9-B for the receiver and noise source locations.
[2] Reference noise sources as shown on Table 9-1.
[3] Calculations for each noise source are provided in Appendix 9.1.

TABLE 9-5: UNMITIGATED EXPANSION OPERATIONAL NOISE LEVEL COMPLIANCE

Receiver Location[1]	Noise Level at Receiver Locations (dBA L_{eq})[2]	Thresholds at Receiving Land Use (dBA L_{eq})		Threshold Exceeded?[3]	
		Daytime	Nighttime	Daytime	Nighttime
R1	56.4	70	65	No	No
R2	51.7	70	65	No	No
R3	51.3	70	65	No	No
R4	51.4	70	65	No	No
R5	34.8	70	65	No	No
R6	59.2	70	65	No	No
R7	60.0	70	65	No	No
R8	45.1	70	65	No	No
R9	40.0	70	65	No	No
R10	35.2	70	65	No	No
R11	Receiver does not exist under the Project expansion scenario.				

[1] See Exhibit 9-B for the receiver and noise source locations.
[2] Estimated Project operational noise levels as shown on Table 9-4.
[3] Do the estimated Project operational noise levels meet the operational noise level thresholds?
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

9.6 OPERATIONAL VIBRATION IMPACTS

To assess the potential vibration impacts from truck haul trips associated with operational activities the vibration threshold of 0.2 in/sec PPV is used. Truck vibration levels are dependent on vehicle characteristics, load, speed, and pavement conditions. Typical vibration levels for the Goodman Industrial Park Fontana III heavy truck activity at normal traffic speeds will approach 0.004 in/sec PPV at 25 feet based on the FTA *Transit Noise Impact and Vibration Assessment.* (11) Trucks transiting on site will be travelling at very low speeds so it is expected that delivery truck vibration impacts at nearby receiver locations will satisfy the vibration threshold, and therefore, will be *less than significant*.

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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 activity boundaries in relation to the nearby sensitive receiver locations.

10.1 CONSTRUCTION NOISE LEVELS

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

- Demolition
- Off-Site Improvements
- Grading
- Building Construction
- Paving
- Architectural Coating

This construction noise analysis was prepared using reference noise level measurements taken by Urban Crossroads, Inc. to describe the typical construction activity noise levels for each stage of Project construction. The construction reference noise level measurements represent a list of typical construction activity noise levels. Noise levels generated by heavy construction equipment can range from approximately 68 dBA to in excess of 80 dBA when measured at 50 feet. Hard site conditions are used in the construction noise analysis which result in noise levels that attenuate (or decrease) at a rate of 6 dBA for each doubling of distance from a point source (i.e. construction equipment). For example, a noise level of 80 dBA measured at 50 feet from the noise source to the receiver would be reduced to 74 dBA at 100 feet from the source to the receiver and would be further reduced to 68 dBA at 200 feet from the source to the receiver. The construction stages used in this analysis are consistent with the data used to support the construction emissions in the *Goodman Industrial Park Fontana III Air Quality Impact Analysis* prepared by Urban Crossroads, Inc. (23)

10.2 CONSTRUCTION REFERENCE NOISE LEVELS

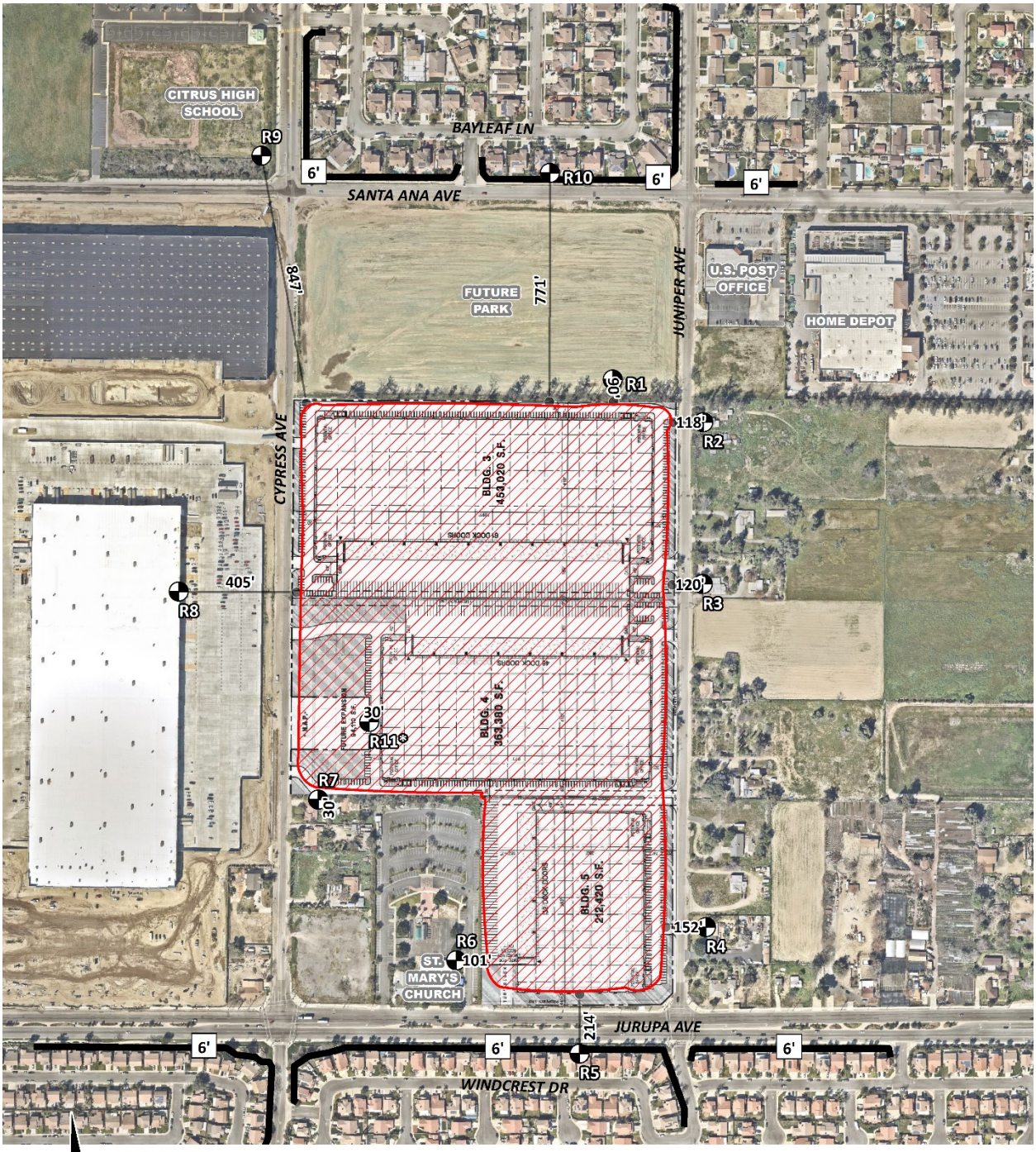
To describe the Project construction noise levels, measurements were collected for similar activities at several construction sites. Table 10-1 provides a summary of the construction reference noise level measurements. Since the reference noise levels were collected at varying distances, all construction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

TABLE 10-1: CONSTRUCTION REFERENCE NOISE LEVELS

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

[1] As measured by Urban Crossroads, Inc. on 10/14/15 at a business park construction site located at the northwest corner of Barranca Parkway and Alton Parkway in the City of Irvine.
[2] As measured by Urban Crossroads, Inc. on 10/20/15 at a construction site located in Rancho Mission Viejo.
[3] As measured by Urban Crossroads, Inc. on 10/20/15 at a residential construction site located in Rancho Mission Viejo.
[4] As measured by Urban Crossroads, Inc. on 10/30/15 during grading operations within an industrial construction site located in the City of Ontario.
[5] Reference noise level measurements were collected from a nighttime concrete pour at an industrial construction site, located at 27334 San Bernardino Avenue in the City of Redlands, between 1:00 a.m. to 2:00 a.m. on 7/1/15.
[6] As measured by Urban Crossroads, Inc. on 9/9/16 during the demolition of an existing parking lot at 41 Corporate Park in Irvine.
[7] Reference noise levels are calculated at 50 feet using a drop off rate of 6 dBA per doubling of distance (point source).

EXHIBIT 10-A: CONSTRUCTION ACTIVITY AND RECEIVER LOCATIONS



**Receiver location R11 represents an existing outdoor living area (backyard) of a residential property under interim conditions pending future expansion of the Project site. Primary construction activities are analyzed at 30 feet from R11.*

10.3 CONSTRUCTION NOISE ANALYSIS

Tables 10-2 to 10-7 show the Project construction stages and the reference construction noise levels used for each stage. Table 10-8 provides a summary of the noise levels from each stage of construction at each of the sensitive receiver locations. Based on the reference construction noise levels, the Project-related construction noise levels when the highest reference noise level is operating at the edge of primary construction activity nearest each sensitive receiver location will range from 33.5 to 77.9 dBA L_{eq} at the sensitive receiver locations, as shown on Table 10-8.

TABLE 10-2: DEMOLITION EQUIPMENT NOISE LEVELS

Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})
Truck Pass-Bys & Dozer Activity	59.2
Dozer Activity	64.2
Forklift, Jackhammer, & Metal Truck Bed Activities	67.9
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	67.9

Noise-Sensitive Receiver Location	Distance to Construction Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	90'	-5.1	0.0	62.8
R2	118'	-7.5	0.0	60.4
R3	120'	-7.6	0.0	60.3
R4	152'	-9.7	0.0	58.2
R5	214'	-12.6	-5.0	50.3
R6	101'	-6.1	0.0	61.8
R7	30'	4.4	0.0	72.3
R8	405'	-18.2	0.0	49.7
R9	847'	-24.6	0.0	43.3
R10	771'	-23.8	-5.0	39.1
R11	30'	4.4	0.0	72.3

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier attenuation from existing barriers in the Project study area.

TABLE 10-3: OFF-SITE IMPROVEMENTS EQUIPMENT NOISE LEVELS

Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})
Truck Pass-Bys & Dozer Activity	59.2
Dozer Activity	64.2
Concrete Mixer Truck Movements	71.2
Concrete Paver Activities	65.6
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	71.2

Noise-Sensitive Receiver Location	Distance to Construction Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	90'	-5.1	0.0	66.1
R2	118'	-7.5	0.0	63.7
R3	120'	-7.6	0.0	63.6
R4	152'	-9.7	0.0	61.5
R5	214'	-12.6	-5.0	53.6
R6	101'	-6.1	0.0	65.1
R7	30'	4.4	0.0	75.6
R8	405'	-18.2	0.0	53.0
R9	847'	-24.6	0.0	46.6
R10	771'	-23.8	-5.0	42.4
R11	30'	4.4	0.0	75.6

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier attenuation from existing barriers in the Project study area.

TABLE 10-4: GRADING EQUIPMENT NOISE LEVELS

Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})
Truck Pass-Bys & Dozer Activity	59.2
Dozer Activity	64.2
Rough Grading Activities	73.5
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	73.5

Noise-Sensitive Receiver Location	Distance to Construction Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	90'	-5.1	0.0	68.4
R2	118'	-7.5	0.0	66.0
R3	120'	-7.6	0.0	65.9
R4	152'	-9.7	0.0	63.8
R5	214'	-12.6	-5.0	55.8
R6	101'	-6.1	0.0	67.4
R7	30'	4.4	0.0	77.9
R8	405'	-18.2	0.0	55.3
R9	847'	-24.6	0.0	48.9
R10	771'	-23.8	-5.0	44.7
R11	30'	4.4	0.0	77.9

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier attenuation from existing barriers in the Project study area.

TABLE 10-5: BUILDING CONSTRUCTION EQUIPMENT NOISE LEVELS

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

Noise-Sensitive Receiver Location	Distance to Construction Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	90'	-5.1	0.0	63.1
R2	118'	-7.5	0.0	60.7
R3	120'	-7.6	0.0	60.6
R4	152'	-9.7	0.0	58.5
R5	214'	-12.6	-5.0	50.5
R6	101'	-6.1	0.0	62.1
R7	30'	4.4	0.0	72.6
R8	405'	-18.2	0.0	50.0
R9	847'	-24.6	0.0	43.6
R10	771'	-23.8	-5.0	39.4
R11	30'	4.4	0.0	72.6

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier attenuation from existing barriers in the Project study area.

TABLE 10-6: PAVING EQUIPMENT NOISE LEVELS

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

Noise-Sensitive Receiver Location	Distance to Construction Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	90'	-5.1	0.0	66.5
R2	118'	-7.5	0.0	64.1
R3	120'	-7.6	0.0	64.0
R4	152'	-9.7	0.0	61.9
R5	214'	-12.6	-5.0	54.0
R6	101'	-6.1	0.0	65.5
R7	30'	4.4	0.0	76.0
R8	405'	-18.2	0.0	53.4
R9	847'	-24.6	0.0	47.0
R10	771'	-23.8	-5.0	42.8
R11	30'	4.4	0.0	76.0

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier attenuation from existing barriers in the Project study area.

TABLE 10-7: ARCHITECTURAL COATING EQUIPMENT NOISE LEVELS

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

Noise-Sensitive Receiver Location	Distance to Construction Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	90'	-5.1	0.0	57.2
R2	118'	-7.5	0.0	54.8
R3	120'	-7.6	0.0	54.7
R4	152'	-9.7	0.0	52.6
R5	214'	-12.6	-5.0	44.6
R6	101'	-6.1	0.0	56.2
R7	30'	4.4	0.0	66.7
R8	405'	-18.2	0.0	44.1
R9	847'	-24.6	0.0	37.7
R10	771'	-23.8	-5.0	33.5
R11	30'	4.4	0.0	66.7

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier attenuation from existing barriers in the Project study area.

TABLE 10-8: UNMITIGATED CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})						
	Demolition	Off-Site Improvements	Grading	Building Construction	Paving	Architectural Coating	Highest Levels[2]
R1	62.8	66.1	68.4	63.1	66.5	57.2	68.4
R2	60.4	63.7	66.0	60.7	64.1	54.8	66.0
R3	60.3	63.6	65.9	60.6	64.0	54.7	65.9
R4	58.2	61.5	63.8	58.5	61.9	52.6	63.8
R5	50.3	53.6	55.8	50.5	54.0	44.6	55.8
R6	61.8	65.1	67.4	62.1	65.5	56.2	67.4
R7	72.3	75.6	77.9	72.6	76.0	66.7	77.9
R8	49.7	53.0	55.3	50.0	53.4	44.1	55.3
R9	43.3	46.6	48.9	43.6	47.0	37.7	48.9
R10	39.1	42.4	44.7	39.4	42.8	33.5	44.7
R11	72.3	75.6	77.9	72.6	76.0	66.7	77.9

[1] Noise receiver locations are shown on Exhibit 10-A.
[2] Estimated construction noise levels during peak operating conditions.

The construction noise analysis shows that the highest construction noise levels will occur when construction activities take place at the closest point from the edge of primary construction activity to each of the nearby receiver locations. As shown on Table 10-8, the unmitigated construction noise levels are expected to range from 33.5 to 77.9 dBA L_{eq} at the nearby receiver locations. Project construction noise levels are considered exempt if activities occur within the hours specified in the City of Fontana Municipal Code, Section 18-63(7) of 7:00 a.m. to 6:00 p.m. on weekdays and between the hours of 8:00 a.m. to 5:00 p.m. on Saturdays.

If Project construction activity occurs outside of the hours specified in the Municipal Code, noise levels shall satisfy the City of Fontana construction noise level thresholds of 70 dBA L_{eq} during the daytime hours and 65 dBA L_{eq} during the nighttime hours. At the time of this analysis, no nighttime Project construction activity was planned.

OFF-SITE CUMULATIVE CONSTRUCTION ACTIVITIES

It is our understanding that construction activities related to a potential expansion of the St. Mary's Church adjacent to the Project site may overlap with Project construction activities. However, at the time of this analysis, the St. Mary's Church construction schedule, stages, and equipment types were unknown. Therefore, some combined construction noise levels may occur at nearby sensitive receiver locations if activities occur simultaneously. However as previously described, Project construction noise levels are considered exempt from the City's noise level limits if activities occur within the City of Fontana's construction hours, and as such, any off-site non-Project-related construction activity noise levels would also be considered exempt if limited to the same hours.

10.4 CONSTRUCTION VIBRATION IMPACTS

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

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

Ground-borne vibration levels resulting from construction activities occurring within the Project site were estimated by data published by the Federal Transit Administration (FTA). Construction activities that would have the potential to generate low levels of ground-borne vibration within the Project site include grading. Using the vibration source level of construction equipment provided on Table 6-8 and the construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts. Table 10-9 presents the expected Project related vibration levels at each of the sensitive receiver locations based on the 0.2 in/sec PPV threshold for vibration.

At distances ranging from 30 to 847 feet from Project construction activity, construction vibration velocity levels are expected to approach 0.07 in/sec PPV. Based on the vibration standards used in this report, the unmitigated Project construction vibration levels will satisfy the 0.2 in/sec PPV threshold at all of the nearby sensitive receiver locations. Therefore, the vibration impacts due to Project construction are considered *less than significant*. Further, vibration levels at the site of the closest sensitive receiver are unlikely to be sustained during the entire construction period but will occur rather only during the times that heavy construction equipment is operating simultaneously adjacent to the Project site perimeter.

TABLE 10-9: UNMITIGATED CONSTRUCTION EQUIPMENT VIBRATION LEVELS

Receiver[1]	Distance to Const. Activity (Feet)	Receiver PPV Levels (in/sec)[2]					Threshold (in/sec PPV)	Threshold Exceeded?[3]
		Small Bulldozer	Jack-hammer	Loaded Trucks	Large Bulldozer	Peak Vibration		
R1	90'	0.000	0.005	0.011	0.013	0.013	0.2	No
R2	118'	0.000	0.003	0.007	0.009	0.009	0.2	No
R3	120'	0.000	0.003	0.007	0.008	0.008	0.2	No
R4	152'	0.000	0.002	0.005	0.006	0.006	0.2	No
R5	214'	0.000	0.001	0.003	0.004	0.004	0.2	No
R6	101'	0.000	0.004	0.009	0.011	0.011	0.2	No
R7	30'	0.002	0.027	0.058	0.068	0.068	0.2	No
R8	405'	0.000	0.001	0.001	0.001	0.001	0.2	No
R9	847'	0.000	0.000	0.000	0.000	0.000	0.2	No
R10	771'	0.000	0.000	0.000	0.001	0.001	0.2	No
R11	30'	0.002	0.027	0.058	0.068	0.068	0.2	No

[1] Receiver locations are shown on Exhibit 10-A.
[2] Based on the Vibration Source Levels of Construction Equipment included on Table 6-8.
[3] Does the peak vibration exceed the vibration thresholds?

11 REFERENCES

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4. **California Department of Transportation Environmental Program.** *Technical Noise Supplement - A Technical Supplement to the Traffic Noise Analysis Protocol.* Sacramento, CA : s.n., September 2013.
5. **Environmental Protection Agency Office of Noise Abatement and Control.** *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.* March 1974. EPA/ONAC 550/9/74-004.
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13. **State of California.** *California Green Building Standards Code.* 2016.
14. **City of Fontana.** *General Plan Noise Element.* November 2018.
15. **Office of Planning and Research.** *State of California General Plan Guidelines.* October 2003.
16. **City of Fontana.** *Zoning and Development Code, Section 30, Article V - Residential Zoning Districts, Division 6 - Performance Standards.*
17. —. *Municipal Code, Chapter 18, Article II - Noise.*
18. **City of Fontana Community Development.** *Noise and Vibration Thresholds of Significance, Confirmation of Noise Impact Analysis Scope for an Industrial Warehouse Project.* May 2019.
19. **American National Standards Institute (ANSI).** *Specification for Sound Level Meters ANSI S1.4-2014/IEC 61672-1:2013.*
20. **U.S. Department of Transportation, Federal Highway Administration.** *FHWA Highway Traffic Noise Prediction Model.* December 1978. FHWA-RD-77-108.
21. **California Department of Transportation Environmental Program, Office of Environmental Engineering.** *Use of California Vehicle Noise Reference Energy Mean Emission Levels (Calveno REMELs) in FHWA Highway Traffic Noise Prediction.* September 1995. TAN 95-03.

22. **California Department of Transportation.** *Traffic Noise Attenuation as a Function of Ground and Vegetation Final Report.* June 1995. FHWA/CA/TL-95/23.

23. **Urban Crossroads, Inc.** *Goodman Industrial Park Fontana III Air Quality Impact Analysis.* June 2019.

12 CERTIFICATION

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

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

EDUCATION

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

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

PROFESSIONAL REGISTRATIONS

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

PROFESSIONAL AFFILIATIONS

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

PROFESSIONAL CERTIFICATIONS

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

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APPENDIX 3.1:

CITY OF FONTANA DEVELOPMENT CODE

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Sec. 30-259. - Noise and vibration.

(a) *Noise levels.* No person shall create or cause to be created any sound which exceeds the noise levels in this section as measured at the property line of any residentially zoned property:

(1) The noise level between 7:00 a.m. and 10:00 p.m. shall not exceed 65 db(A).

(2) The noise level between 10:00 p.m. and 7:00 a.m. shall not exceed 70 db(A).

(b) *Noise measurements.* Noise shall be measured with a sound level meter that meets the standards of the American National Standards Institute (ANSI) Section SI4-1979, Type 1 or Type 2. Noise levels shall be measured using the "A" weighted sound pressure level scale in decibels (reference pressure = 20 micronewtons per meter squared).

(c) *Vibration.* No person shall create or cause to be created any activity which causes a vibration which can be felt beyond the property line of any residentially zoned property with or without the aid of an instrument.

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APPENDIX 5.1:

STUDY AREA PHOTOS

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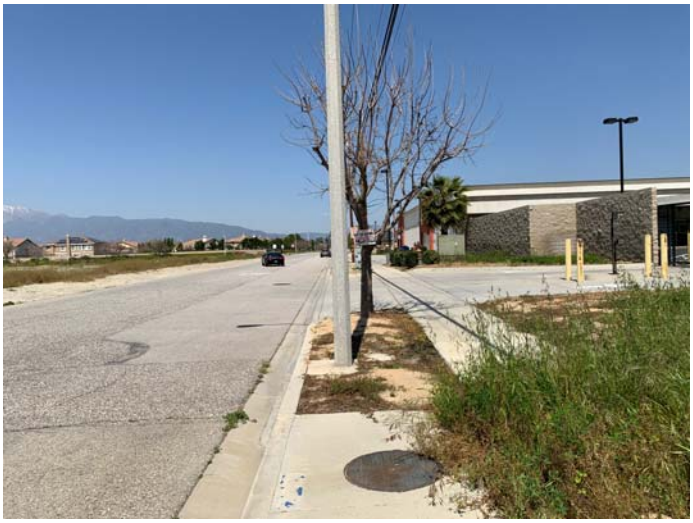
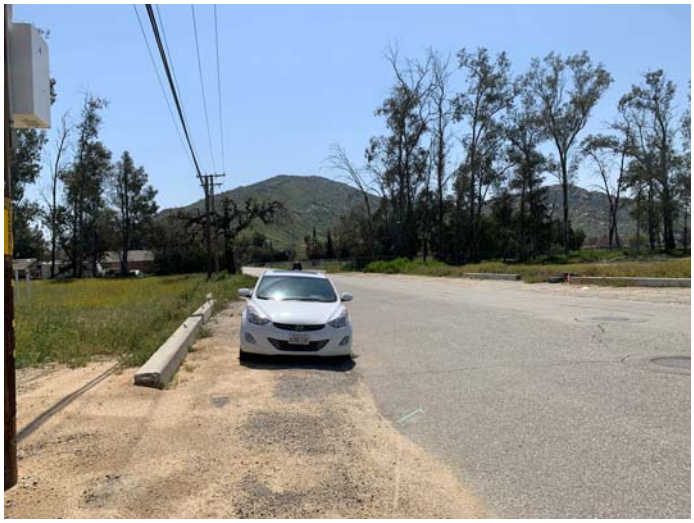
JN:12384 Study Area Photos

L1 East
34, 3' 16.660000", 117, 26' 23.680000"



L1 North
34, 3' 16.720000", 117, 26' 23.710000"



L1 South
34, 3' 16.710000", 117, 26' 23.710000"

L1 West
34, 3' 16.720000", 117, 26' 23.710000"

L2 East
34, 3' 8.530000", 117, 26' 24.010000"

L2 North
34, 3' 8.530000", 117, 26' 24.060000"

JN:12384 Study Area Photos

L2 South
34, 3' 8.500000", 117, 26' 23.980000"

L2 West
34, 3' 8.480000", 117, 26' 24.060000"

L3 East
34, 2' 57.240000", 117, 26' 23.760000"

L3 North
34, 2' 57.350000", 117, 26' 23.730000"

L3 South
34, 2' 57.310000", 117, 26' 23.730000"

L3 West
34, 2' 57.330000", 117, 26' 23.710000"

JN:12384 Study Area Photos

L4 East
34, 2' 52.240000", 117, 26' 27.880000"

L4 North
34, 2' 52.240000", 117, 26' 27.880000"

L4 South
34, 2' 52.240000", 117, 26' 27.850000"

L4 Southwest
34, 2' 52.240000", 117, 26' 27.880000"

L4 West
34, 2' 52.240000", 117, 26' 27.910000"

L5 East
34, 2' 57.530000", 117, 26' 32.520000"

JN:12384 Study Area Photos

L5 North
34, 2' 57.530000", 117, 26' 32.520000"

L5 South
34, 2' 57.510000", 117, 26' 32.500000"

L5 West
34, 2' 57.510000", 117, 26' 32.520000"

L6 East
34, 3' 4.460000", 117, 26' 39.310000"

L6 North
34, 3' 4.460000", 117, 26' 39.330000"

L6 South
34, 3' 4.460000", 117, 26' 39.310000"

JN:12384 Study Area Photos

L6 West
34, 3' 4.460000", 117, 26' 39.360000"

L7 East
34, 3' 18.960000", 117, 26' 39.390000"

L7 North
34, 3' 18.960000", 117, 26' 39.440000"

L7 South
34, 3' 18.960000", 117, 26' 39.360000"

L7 West
34, 3' 18.910000", 117, 26' 39.440000"

L8 East
34, 3' 20.570000", 117, 26' 29.420000"

JN:12384 Study Area Photos

L8 North
34, 3' 20.540000", 117, 26' 29.390000"

L8 South
34, 3' 20.600000", 117, 26' 29.420000"

L8 West
34, 3' 20.600000", 117, 26' 29.390000"

L9 East
34, 3' 27.080000", 117, 26' 41.200000"

L9 North
34, 3' 27.090000", 117, 26' 41.200000"

L9 South
34, 3' 27.060000", 117, 26' 41.200000"

JN:12384 Study Area Photos

L9 West
34, 3' 27.110000", 117, 26' 41.200000"

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APPENDIX 5.2:

LONG-TERM NOISE LEVEL MEASUREMENT WORKSHEETS

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24-Hour Noise Level Measurement Summary

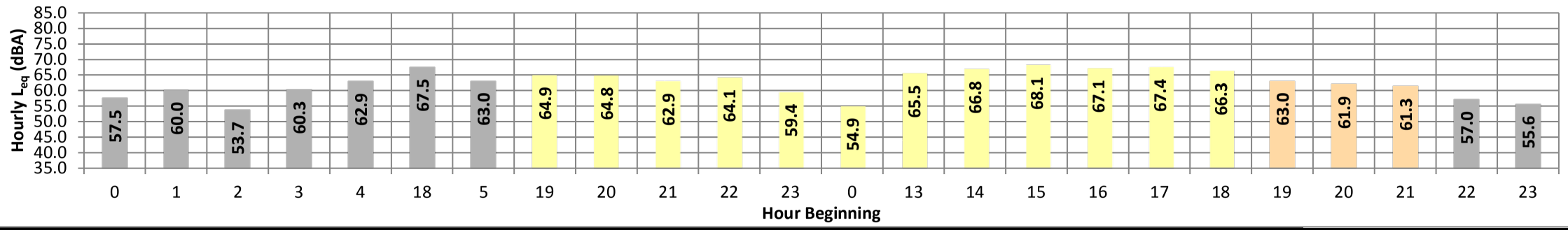
Date: Monday, March 25, 2019
Project: Goodman Industrial Park Fontana III

Location: L1 - Located on Juniper Avenue, northeast of the Project site, near an existing U.S. Post Office and residential home.

Meter: Piccolo I

JN: 12384
Analyst: R. Saber

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	57.5	83.3	42.1	70.0	64.0	59.0	54.0	51.0	49.0	46.0	45.0	44.0	57.5	10.0	67.5
	1	60.0	86.7	44.0	72.0	68.0	56.0	50.0	48.0	47.0	45.0	45.0	44.0	60.0	10.0	70.0
	2	53.7	75.4	44.8	66.0	60.0	52.0	51.0	49.0	48.0	46.0	46.0	45.0	53.7	10.0	63.7
	3	60.3	81.4	47.6	72.0	70.0	64.0	60.0	57.0	53.0	49.0	48.0	48.0	60.3	10.0	70.3
	4	62.9	83.5	50.1	75.0	73.0	68.0	65.0	59.0	57.0	52.0	51.0	50.0	62.9	10.0	72.9
	18	67.5	92.9	47.8	78.0	75.0	72.0	71.0	64.0	56.0	51.0	50.0	49.0	67.5	10.0	77.5
	5	63.0	84.5	51.1	75.0	73.0	68.0	65.0	57.0	55.0	53.0	53.0	51.0	63.0	10.0	73.0
Day	19	64.9	81.4	48.9	75.0	74.0	72.0	70.0	62.0	55.0	51.0	50.0	49.0	64.9	0.0	64.9
	20	64.8	83.5	46.8	76.0	75.0	72.0	69.0	60.0	53.0	49.0	48.0	47.0	64.8	0.0	64.8
	21	62.9	80.0	46.9	74.0	73.0	71.0	68.0	56.0	51.0	48.0	48.0	47.0	62.9	0.0	62.9
	22	64.1	84.1	46.0	76.0	74.0	71.0	68.0	57.0	51.0	48.0	48.0	47.0	64.1	0.0	64.1
	23	59.4	79.8	45.7	72.0	70.0	65.0	61.0	52.0	50.0	47.0	47.0	46.0	59.4	0.0	59.4
	0	54.9	79.9	44.0	66.0	58.0	52.0	51.0	48.0	47.0	45.0	45.0	44.0	54.9	0.0	54.9
	13	65.5	82.5	36.4	77.0	75.0	72.0	71.0	62.0	54.0	47.0	46.0	45.0	65.5	0.0	65.5
	14	66.8	84.2	47.0	77.0	76.0	74.0	72.0	64.0	56.0	50.0	49.0	48.0	66.8	0.0	66.8
	15	68.1	87.7	46.6	78.0	77.0	74.0	73.0	66.0	58.0	49.0	49.0	48.0	68.1	0.0	68.1
	16	67.1	86.4	47.3	77.0	76.0	74.0	72.0	65.0	56.0	50.0	49.0	48.0	67.1	0.0	67.1
	17	67.4	86.2	48.7	77.0	76.0	74.0	72.0	66.0	58.0	51.0	50.0	49.0	67.4	0.0	67.4
	18	66.3	97.2	45.8	75.0	74.0	70.0	68.0	58.0	51.0	48.0	47.0	46.0	66.3	0.0	66.3
Evening	19	63.0	84.9	44.9	75.0	73.0	70.0	67.0	56.0	51.0	48.0	47.0	46.0	63.0	5.0	68.0
	20	61.9	80.3	43.6	74.0	72.0	69.0	67.0	55.0	49.0	46.0	45.0	44.0	61.9	5.0	66.9
	21	61.3	82.0	42.3	74.0	72.0	68.0	64.0	53.0	48.0	44.0	44.0	43.0	61.3	5.0	66.3
Night	22	57.0	76.6	42.5	70.0	67.0	63.0	59.0	49.0	46.0	44.0	44.0	43.0	57.0	10.0	67.0
	23	55.6	78.3	41.5	68.0	62.0	56.0	54.0	51.0	47.0	44.0	43.0	42.0	55.6	10.0	65.6

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	54.9	79.8	36.4	66.0	58.0	52.0	51.0	48.0	47.0	45.0	45.0	44.0
	Max	68.1	97.2	48.9	78.0	77.0	74.0	73.0	66.0	58.0	51.0	50.0	49.0
Energy Average		65.4	Average:		75.0	73.2	70.1	67.9	59.7	53.3	48.6	48.0	47.0
Evening	Min	61.3	80.3	42.3	74.0	72.0	68.0	64.0	53.0	48.0	44.0	44.0	43.0
	Max	63.0	84.9	44.9	75.0	73.0	70.0	67.0	56.0	51.0	48.0	47.0	46.0
Energy Average		62.1	Average:		74.3	72.3	69.0	66.0	54.7	49.3	46.0	45.3	44.3
Night	Min	53.7	75.4	41.5	66.0	60.0	52.0	50.0	48.0	46.0	44.0	43.0	42.0
	Max	67.5	92.9	51.1	78.0	75.0	72.0	71.0	64.0	57.0	53.0	53.0	51.0
Energy Average		61.7	Average:		71.8	68.0	62.0	58.8	53.9	50.9	47.8	47.2	46.2

L_{eq} (dBA)		
24-Hour	Daytime	Nighttime
64.0	64.9	61.7

24-Hour CNEL (dBA)
69.0

24-Hour Noise Level Measurement Summary

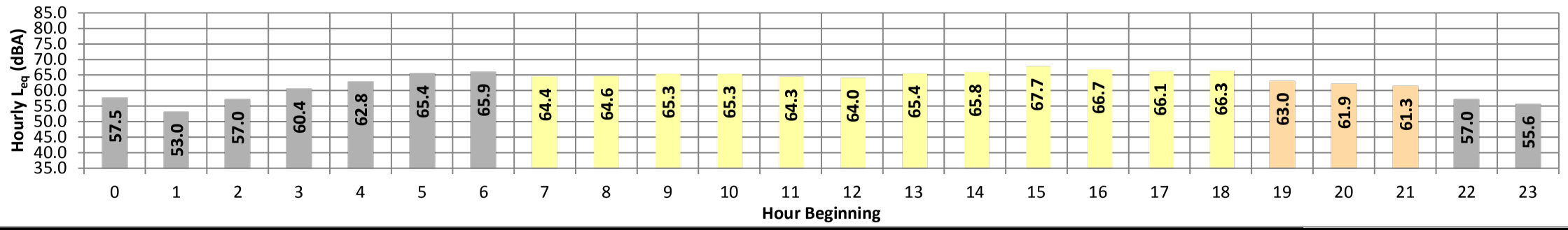
Date: Monday, March 18, 2019
Project: Goodman Industrial Park Fontana III

Location: L2 - Located on Juniper Avenue, on the eastern border of the Project site, near existing rural residential homes.

Meter: Piccolo I

JN: 12384
Analyst: R. Saber

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	57.5	83.3	42.1	70.0	64.0	59.0	54.0	51.0	49.0	46.0	45.0	44.0	57.5	10.0	67.5
	1	53.0	76.1	42.6	65.0	57.0	53.0	52.0	49.0	47.0	44.0	43.0	43.0	53.0	10.0	63.0
	2	57.0	78.0	42.3	70.0	68.0	60.0	57.0	50.0	48.0	45.0	44.0	43.0	57.0	10.0	67.0
	3	60.4	86.8	46.5	72.0	69.0	64.0	60.0	54.0	52.0	49.0	48.0	47.0	60.4	10.0	70.4
	4	62.8	89.3	49.2	75.0	72.0	66.0	62.0	56.0	54.0	52.0	51.0	50.0	62.8	10.0	72.8
	5	65.4	89.7	51.1	76.0	75.0	71.0	69.0	60.0	57.0	54.0	53.0	52.0	65.4	10.0	75.4
	6	65.9	83.3	50.8	77.0	75.0	73.0	71.0	62.0	57.0	54.0	53.0	52.0	65.9	10.0	75.9
Day	7	64.4	88.5	47.8	75.0	74.0	71.0	68.0	59.0	55.0	51.0	50.0	49.0	64.4	0.0	64.4
	8	64.6	81.8	45.7	75.0	74.0	72.0	70.0	61.0	55.0	50.0	49.0	47.0	64.6	0.0	64.6
	9	65.3	91.3	41.5	76.0	74.0	71.0	69.0	59.0	53.0	47.0	46.0	44.0	65.3	0.0	65.3
	10	65.3	85.7	42.0	76.0	75.0	72.0	70.0	62.0	53.0	46.0	45.0	43.0	65.3	0.0	65.3
	11	64.3	83.0	42.1	75.0	74.0	71.0	70.0	60.0	52.0	45.0	44.0	43.0	64.3	0.0	64.3
	12	64.0	80.3	41.6	75.0	74.0	71.0	69.0	59.0	52.0	47.0	46.0	44.0	64.0	0.0	64.0
	13	65.4	86.9	42.5	76.0	75.0	72.0	71.0	60.0	52.0	47.0	46.0	44.0	65.4	0.0	65.4
	14	65.8	82.4	42.5	76.0	75.0	73.0	71.0	63.0	55.0	48.0	47.0	45.0	65.8	0.0	65.8
	15	67.7	87.8	42.3	78.0	76.0	74.0	72.0	66.0	55.0	48.0	47.0	45.0	67.7	0.0	67.7
	16	66.7	87.6	46.0	77.0	75.0	73.0	72.0	64.0	57.0	50.0	49.0	47.0	66.7	0.0	66.7
	17	66.1	89.5	47.8	76.0	75.0	72.0	70.0	62.0	57.0	51.0	50.0	49.0	66.1	0.0	66.1
	18	66.3	97.2	45.8	75.0	74.0	70.0	68.0	58.0	51.0	48.0	47.0	46.0	66.3	0.0	66.3
Evening	19	63.0	84.9	44.9	75.0	73.0	70.0	67.0	56.0	51.0	48.0	47.0	46.0	63.0	5.0	68.0
	20	61.9	80.3	43.6	74.0	72.0	69.0	67.0	55.0	49.0	46.0	45.0	44.0	61.9	5.0	66.9
	21	61.3	82.0	42.3	74.0	72.0	68.0	64.0	53.0	48.0	44.0	44.0	43.0	61.3	5.0	66.3
Night	22	57.0	76.6	42.5	70.0	67.0	63.0	59.0	49.0	46.0	44.0	44.0	43.0	57.0	10.0	67.0
	23	55.6	78.3	41.5	68.0	62.0	56.0	54.0	51.0	47.0	44.0	43.0	42.0	55.6	10.0	65.6

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	64.0	80.3	41.5	75.0	74.0	70.0	68.0	58.0	51.0	45.0	44.0	43.0
	Max	67.7	97.2	47.8	78.0	76.0	74.0	72.0	66.0	57.0	51.0	50.0	49.0
Energy Average		65.6	Average:		75.8	74.6	71.8	70.0	61.1	53.9	48.2	47.2	45.5
Evening	Min	61.3	80.3	42.3	74.0	72.0	68.0	64.0	53.0	48.0	44.0	44.0	43.0
	Max	63.0	84.9	44.9	75.0	73.0	70.0	67.0	56.0	51.0	48.0	47.0	46.0
Energy Average		62.1	Average:		74.3	72.3	69.0	66.0	54.7	49.3	46.0	45.3	44.3
Night	Min	53.0	76.1	41.5	65.0	57.0	53.0	52.0	49.0	46.0	44.0	43.0	42.0
	Max	65.9	89.7	51.1	77.0	75.0	73.0	71.0	62.0	57.0	54.0	53.0	52.0
Energy Average		61.4	Average:		71.4	67.7	62.8	59.8	53.6	50.8	48.0	47.1	46.2

L_{eq} (dBA)		
24-Hour	Daytime	Nighttime
64.1	65.1	61.4

24-Hour CNEL (dBA)
68.8

24-Hour Noise Level Measurement Summary

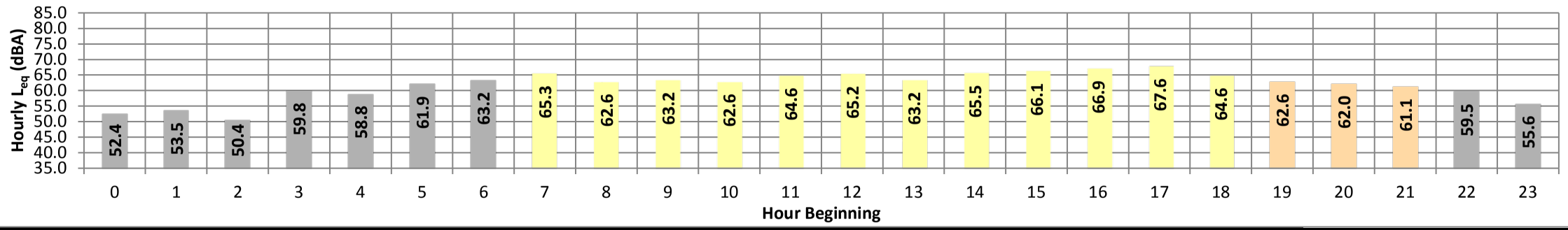
Date: Tuesday, March 26, 2019
Project: Goodman Industrial Park Fontana III

Location: L3 - Located on Juniper Avenue, near the eastern border of the Project site and existing rural residential homes.

Meter: Piccolo I

JN: 12384
Analyst: R. Saber

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	52.4	76.9	41.7	62.0	59.0	55.0	54.0	49.0	46.0	43.0	43.0	42.0	52.4	10.0	62.4
	1	53.5	77.7	42.8	65.0	61.0	55.0	53.0	49.0	47.0	44.0	44.0	43.0	53.5	10.0	63.5
	2	50.4	71.0	42.3	61.0	56.0	53.0	52.0	48.0	45.0	43.0	43.0	42.0	50.4	10.0	60.4
	3	59.8	90.6	41.7	69.0	66.0	60.0	57.0	52.0	49.0	44.0	43.0	42.0	59.8	10.0	69.8
	4	58.8	81.2	45.8	70.0	68.0	63.0	60.0	55.0	52.0	49.0	48.0	46.0	58.8	10.0	68.8
	5	61.9	87.6	49.2	73.0	71.0	65.0	62.0	58.0	55.0	52.0	51.0	50.0	61.9	10.0	71.9
	6	63.2	82.8	50.2	74.0	72.0	70.0	67.0	60.0	57.0	53.0	52.0	51.0	63.2	10.0	73.2
Day	7	65.3	87.7	48.6	76.0	74.0	71.0	69.0	61.0	57.0	53.0	52.0	50.0	65.3	0.0	65.3
	8	62.6	83.0	45.3	73.0	72.0	69.0	67.0	58.0	54.0	49.0	48.0	46.0	62.6	0.0	62.6
	9	63.2	80.6	42.9	74.0	73.0	70.0	68.0	60.0	54.0	48.0	47.0	45.0	63.2	0.0	63.2
	10	62.6	81.8	41.7	74.0	72.0	69.0	67.0	58.0	53.0	46.0	45.0	44.0	62.6	0.0	62.6
	11	64.6	84.6	40.4	75.0	74.0	71.0	69.0	61.0	54.0	48.0	47.0	44.0	64.6	0.0	64.6
	12	65.2	91.3	42.9	75.0	73.0	70.0	69.0	60.0	54.0	48.0	46.0	44.0	65.2	0.0	65.2
	13	63.2	81.5	42.8	74.0	72.0	70.0	68.0	60.0	54.0	49.0	47.0	45.0	63.2	0.0	63.2
	14	65.5	86.1	43.5	76.0	75.0	72.0	70.0	62.0	55.0	49.0	47.0	45.0	65.5	0.0	65.5
	15	66.1	86.8	43.6	76.0	75.0	72.0	70.0	63.0	57.0	49.0	48.0	45.0	66.1	0.0	66.1
	16	66.9	85.5	43.6	77.0	75.0	73.0	72.0	65.0	58.0	50.0	49.0	45.0	66.9	0.0	66.9
	17	67.6	96.3	44.7	76.0	74.0	72.0	70.0	63.0	58.0	53.0	51.0	49.0	67.6	0.0	67.6
	18	64.6	85.9	45.3	75.0	73.0	70.0	69.0	61.0	57.0	51.0	50.0	48.0	64.6	0.0	64.6
Evening	19	62.6	86.3	45.1	73.0	72.0	69.0	67.0	59.0	55.0	50.0	49.0	47.0	62.6	5.0	67.6
	20	62.0	84.3	46.2	73.0	71.0	68.0	66.0	59.0	54.0	50.0	49.0	47.0	62.0	5.0	67.0
	21	61.1	85.7	44.8	72.0	70.0	67.0	65.0	57.0	53.0	48.0	47.0	45.0	61.1	5.0	66.1
Night	22	59.5	76.3	42.5	72.0	70.0	66.0	63.0	56.0	52.0	46.0	45.0	43.0	59.5	10.0	69.5
	23	55.6	75.0	42.8	66.0	64.0	61.0	58.0	53.0	49.0	45.0	44.0	43.0	55.6	10.0	65.6

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	62.6	80.6	40.4	73.0	72.0	69.0	67.0	58.0	53.0	46.0	45.0	44.0
	Max	67.6	96.3	48.6	77.0	75.0	73.0	72.0	65.0	58.0	53.0	52.0	50.0
Energy Average		65.1	Average:		75.1	73.5	70.8	69.0	61.0	55.4	49.4	48.1	45.8
Evening	Min	61.1	84.3	44.8	72.0	70.0	67.0	65.0	57.0	53.0	48.0	47.0	45.0
	Max	62.6	86.3	46.2	73.0	72.0	69.0	67.0	59.0	55.0	50.0	49.0	47.0
Energy Average		61.9	Average:		72.7	71.0	68.0	66.0	58.3	54.0	49.3	48.3	46.3
Night	Min	50.4	71.0	41.7	61.0	56.0	53.0	52.0	48.0	45.0	43.0	43.0	42.0
	Max	63.2	90.6	50.2	74.0	72.0	70.0	67.0	60.0	57.0	53.0	52.0	51.0
Energy Average		59.0	Average:		68.0	65.2	60.9	58.4	53.3	50.2	46.6	45.9	44.7

L_{eq} (dBA)		
24-Hour	*Daytime*	*Nighttime*
63.2	**64.6**	**59.0**

24-Hour CNEL (dBA)
67.2

24-Hour Noise Level Measurement Summary

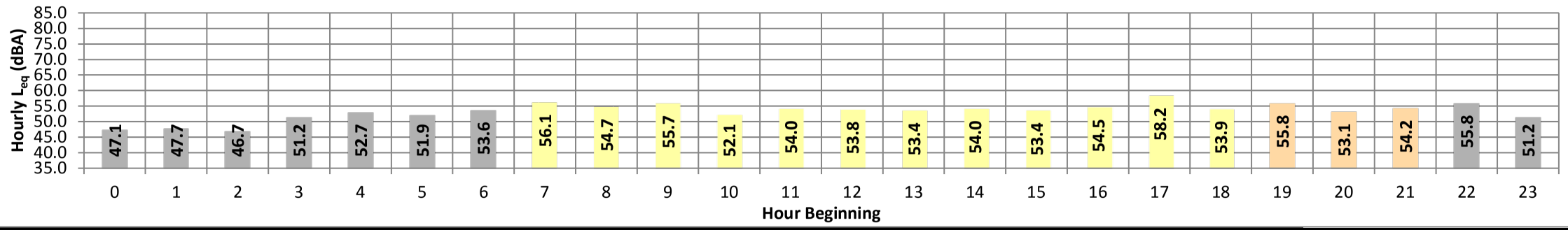
Date: Tuesday, March 26, 2019
Project: Goodman Industrial Park Fontana III

Location: L4 - Located on Windcrest Drive, south of the Project site, within an existing single-family residential neighborhood.

Meter: Piccolo I

JN: 12384
Analyst: R. Saber

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	47.1	70.8	38.8	56.0	53.0	49.0	47.0	44.0	42.0	39.0	39.0	39.0	47.1	10.0	57.1
	1	47.7	69.7	39.0	58.0	50.0	46.0	45.0	43.0	42.0	40.0	40.0	39.0	47.7	10.0	57.7
	2	46.7	66.9	39.0	58.0	52.0	47.0	46.0	43.0	42.0	40.0	39.0	39.0	46.7	10.0	56.7
	3	51.2	72.4	39.0	65.0	62.0	53.0	49.0	45.0	43.0	41.0	40.0	40.0	51.2	10.0	61.2
	4	52.7	70.3	41.8	65.0	63.0	56.0	53.0	49.0	47.0	45.0	44.0	42.0	52.7	10.0	62.7
	5	51.9	69.1	44.4	59.0	56.0	54.0	54.0	52.0	50.0	47.0	46.0	45.0	51.9	10.0	61.9
	6	53.6	70.6	47.2	63.0	59.0	57.0	56.0	53.0	51.0	49.0	48.0	48.0	53.6	10.0	63.6
Day	7	56.1	71.5	45.4	66.0	64.0	61.0	59.0	55.0	53.0	49.0	48.0	46.0	56.1	0.0	56.1
	8	54.7	74.5	42.9	66.0	63.0	59.0	57.0	53.0	49.0	45.0	45.0	44.0	54.7	0.0	54.7
	9	55.7	75.0	41.7	66.0	64.0	61.0	59.0	54.0	50.0	44.0	43.0	42.0	55.7	0.0	55.7
	10	52.1	72.2	39.0	63.0	60.0	56.0	54.0	50.0	47.0	42.0	41.0	40.0	52.1	0.0	52.1
	11	54.0	74.9	39.0	65.0	62.0	59.0	57.0	52.0	48.0	43.0	43.0	41.0	54.0	0.0	54.0
	12	53.8	71.6	39.1	65.0	63.0	58.0	56.0	52.0	49.0	44.0	43.0	41.0	53.8	0.0	53.8
	13	53.4	79.2	39.0	64.0	60.0	56.0	55.0	49.0	46.0	42.0	42.0	40.0	53.4	0.0	53.4
	14	54.0	75.2	40.3	65.0	62.0	58.0	56.0	51.0	48.0	44.0	43.0	41.0	54.0	0.0	54.0
	15	53.4	72.1	39.0	64.0	61.0	58.0	56.0	52.0	49.0	45.0	43.0	42.0	53.4	0.0	53.4
	16	54.5	75.6	41.6	65.0	63.0	59.0	57.0	52.0	49.0	45.0	44.0	42.0	54.5	0.0	54.5
	17	58.2	85.8	42.1	67.0	65.0	61.0	59.0	53.0	50.0	46.0	45.0	44.0	58.2	0.0	58.2
	18	53.9	73.1	42.6	65.0	63.0	59.0	57.0	51.0	49.0	46.0	45.0	44.0	53.9	0.0	53.9
Evening	19	55.8	84.4	43.1	65.0	63.0	58.0	55.0	50.0	48.0	45.0	44.0	43.0	55.8	5.0	60.8
	20	53.1	71.2	40.7	65.0	63.0	59.0	56.0	49.0	47.0	43.0	42.0	40.0	53.1	5.0	58.1
	21	54.2	74.5	39.0	65.0	64.0	62.0	59.0	48.0	46.0	42.0	42.0	40.0	54.2	5.0	59.2
Night	22	55.8	73.1	40.4	68.0	67.0	62.0	59.0	49.0	45.0	43.0	42.0	41.0	55.8	10.0	65.8
	23	51.2	71.4	40.4	63.0	60.0	57.0	54.0	47.0	44.0	41.0	41.0	40.0	51.2	10.0	61.2

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	52.1	71.5	39.0	63.0	60.0	56.0	54.0	49.0	46.0	42.0	41.0	40.0
	Max	58.2	85.8	45.4	67.0	65.0	61.0	59.0	55.0	53.0	49.0	48.0	46.0
Energy Average		54.8	Average:		65.1	62.5	58.8	56.8	52.0	48.9	44.6	43.8	42.3
Evening	Min	53.1	71.2	39.0	65.0	63.0	58.0	55.0	48.0	46.0	42.0	42.0	40.0
	Max	55.8	84.4	43.1	65.0	64.0	62.0	59.0	50.0	48.0	45.0	44.0	43.0
Energy Average		54.5	Average:		65.0	63.3	59.7	56.7	49.0	47.0	43.3	42.7	41.0
Night	Min	46.7	66.9	38.8	56.0	50.0	46.0	45.0	43.0	42.0	39.0	39.0	39.0
	Max	55.8	73.1	47.2	68.0	67.0	62.0	59.0	53.0	51.0	49.0	48.0	48.0
Energy Average		51.8	Average:		61.7	58.0	53.4	51.4	47.2	45.1	42.8	42.1	41.4

L_{eq} (dBA)		
24-Hour	Daytime	Nighttime
53.8	54.7	51.8

24-Hour CNEL (dBA)
59.2

24-Hour Noise Level Measurement Summary

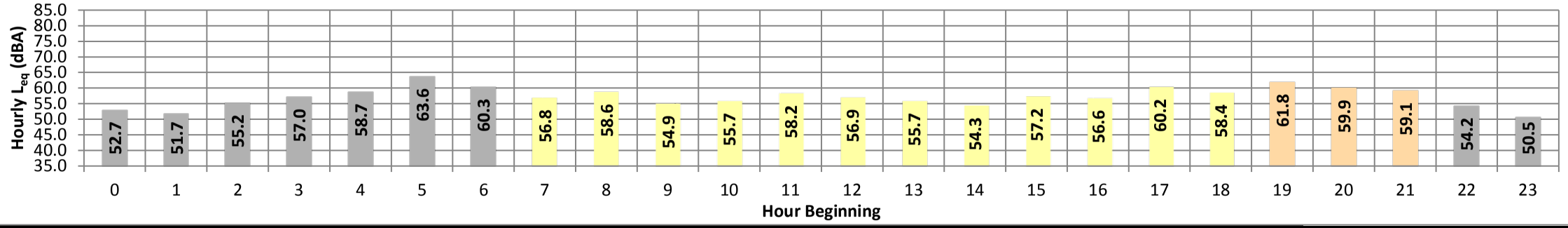
Date: Tuesday, March 26, 2019
Project: Goodman Industrial Park Fontana III

Location: L5 - Located adjacent to St. Mary's Church, near the southwest corner of Project site boundary line.

Meter: Piccolo I

JN: 12384
Analyst: R. Saber

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	52.7	76.4	43.9	64.0	59.0	55.0	53.0	50.0	48.0	45.0	45.0	44.0	52.7	10.0	62.7
	1	51.7	68.9	43.6	62.0	57.0	54.0	53.0	50.0	48.0	45.0	45.0	44.0	51.7	10.0	61.7
	2	55.2	73.1	44.0	68.0	65.0	58.0	56.0	52.0	50.0	47.0	46.0	45.0	55.2	10.0	65.2
	3	57.0	71.4	48.4	68.0	66.0	61.0	59.0	56.0	53.0	50.0	49.0	49.0	57.0	10.0	67.0
	4	58.7	71.3	51.4	65.0	63.0	62.0	61.0	59.0	57.0	54.0	53.0	52.0	58.7	10.0	68.7
	5	63.6	76.7	50.8	73.0	72.0	70.0	69.0	62.0	58.0	55.0	54.0	53.0	63.6	10.0	73.6
	6	60.3	77.4	53.1	69.0	67.0	64.0	62.0	59.0	58.0	55.0	55.0	54.0	60.3	10.0	70.3
Day	7	56.8	72.0	46.7	66.0	64.0	61.0	59.0	56.0	54.0	51.0	50.0	49.0	56.8	0.0	56.8
	8	58.6	80.5	45.8	68.0	66.0	64.0	62.0	56.0	53.0	50.0	49.0	47.0	58.6	0.0	58.6
	9	54.9	78.6	44.9	65.0	63.0	58.0	57.0	53.0	51.0	48.0	47.0	46.0	54.9	0.0	54.9
	10	55.7	71.6	42.9	66.0	64.0	61.0	60.0	54.0	51.0	47.0	46.0	44.0	55.7	0.0	55.7
	11	58.2	75.2	43.4	68.0	67.0	64.0	62.0	56.0	53.0	48.0	47.0	45.0	58.2	0.0	58.2
	12	56.9	71.7	45.0	66.0	65.0	63.0	61.0	56.0	53.0	49.0	48.0	46.0	56.9	0.0	56.9
	13	55.7	73.9	44.2	65.0	62.0	60.0	58.0	54.0	52.0	48.0	47.0	45.0	55.7	0.0	55.7
	14	54.3	74.3	44.0	64.0	61.0	58.0	57.0	54.0	51.0	47.0	46.0	45.0	54.3	0.0	54.3
	15	57.2	76.3	44.0	67.0	65.0	63.0	62.0	56.0	52.0	48.0	47.0	45.0	57.2	0.0	57.2
	16	56.6	74.5	45.0	67.0	65.0	62.0	60.0	55.0	53.0	48.0	48.0	46.0	56.6	0.0	56.6
	17	60.2	79.0	46.6	71.0	69.0	66.0	64.0	58.0	54.0	50.0	49.0	47.0	60.2	0.0	60.2
	18	58.4	81.0	48.3	67.0	66.0	63.0	61.0	57.0	55.0	52.0	51.0	50.0	58.4	0.0	58.4
Evening	19	61.8	83.4	50.2	71.0	69.0	67.0	66.0	61.0	57.0	53.0	52.0	51.0	61.8	5.0	66.8
	20	59.9	75.2	47.2	70.0	68.0	66.0	64.0	58.0	54.0	50.0	49.0	48.0	59.9	5.0	64.9
	21	59.1	76.9	44.8	70.0	69.0	65.0	63.0	54.0	52.0	48.0	47.0	46.0	59.1	5.0	64.1
Night	22	54.2	69.0	44.3	65.0	63.0	59.0	57.0	52.0	50.0	47.0	46.0	45.0	54.2	10.0	64.2
	23	50.5	72.0	43.6	57.0	55.0	53.0	52.0	50.0	48.0	46.0	45.0	44.0	50.5	10.0	60.5

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	54.3	71.6	42.9	64.0	61.0	58.0	57.0	53.0	51.0	47.0	46.0	44.0
	Max	60.2	81.0	48.3	71.0	69.0	66.0	64.0	58.0	55.0	52.0	51.0	50.0
Energy Average		57.3	Average:		66.7	64.8	61.9	60.3	55.4	52.7	48.8	47.9	46.3
Evening	Min	59.1	75.2	44.8	70.0	68.0	65.0	63.0	54.0	52.0	48.0	47.0	46.0
	Max	61.8	83.4	50.2	71.0	69.0	67.0	66.0	61.0	57.0	53.0	52.0	51.0
Energy Average		60.4	Average:		70.3	68.7	66.0	64.3	57.7	54.3	50.3	49.3	48.3
Night	Min	50.5	68.9	43.6	57.0	55.0	53.0	52.0	50.0	48.0	45.0	45.0	44.0
	Max	63.6	77.4	53.1	73.0	72.0	70.0	69.0	62.0	58.0	55.0	55.0	54.0
Energy Average		58.0	Average:		65.7	63.0	59.6	58.0	54.4	52.2	49.3	48.7	47.8

L_{eq} (dBA)		
24-Hour	Daytime	Nighttime
58.1	58.1	58.0

24-Hour CNEL (dBA)
64.8

24-Hour Noise Level Measurement Summary

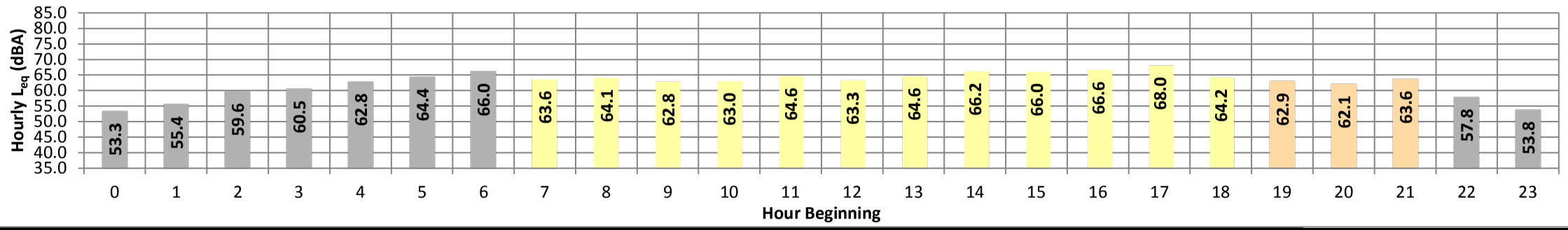
Date: Tuesday, March 26, 2019
Project: Goodman Industrial Park Fontana III

Location: L6 - Located on Cypress Avenue, on the western boundary of the Project site, near existing rural-residential homes.

Meter: Piccolo I

JN: 12384
Analyst: R. Saber

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	53.3	74.6	41.0	67.0	64.0	54.0	50.0	45.0	44.0	42.0	42.0	41.0	53.3	10.0	63.3
	1	55.4	78.5	40.1	69.0	66.0	57.0	52.0	46.0	44.0	41.0	41.0	41.0	55.4	10.0	65.4
	2	59.6	82.0	42.5	72.0	70.0	65.0	60.0	49.0	46.0	44.0	43.0	43.0	59.6	10.0	69.6
	3	60.5	81.5	45.6	73.0	71.0	67.0	64.0	53.0	50.0	47.0	47.0	46.0	60.5	10.0	70.5
	4	62.8	80.4	47.0	73.0	72.0	70.0	68.0	58.0	53.0	49.0	48.0	47.0	62.8	10.0	72.8
	5	64.4	83.1	46.9	75.0	73.0	71.0	69.0	61.0	56.0	52.0	51.0	50.0	64.4	10.0	74.4
	6	66.0	84.0	49.5	77.0	74.0	72.0	70.0	64.0	57.0	52.0	51.0	50.0	66.0	10.0	76.0
Day	7	63.6	82.7	43.4	74.0	72.0	70.0	69.0	61.0	53.0	48.0	46.0	44.0	63.6	0.0	63.6
	8	64.1	85.9	42.3	74.0	72.0	70.0	69.0	62.0	53.0	46.0	45.0	43.0	64.1	0.0	64.1
	9	62.8	80.8	41.3	73.0	72.0	69.0	68.0	60.0	51.0	45.0	44.0	43.0	62.8	0.0	62.8
	10	63.0	79.1	41.2	73.0	72.0	69.0	68.0	62.0	53.0	46.0	45.0	43.0	63.0	0.0	63.0
	11	64.6	87.7	41.9	74.0	72.0	70.0	68.0	62.0	53.0	45.0	44.0	43.0	64.6	0.0	64.6
	12	63.3	84.1	41.2	73.0	72.0	70.0	69.0	62.0	54.0	46.0	44.0	42.0	63.3	0.0	63.3
	13	64.6	82.3	42.2	74.0	72.0	70.0	69.0	64.0	55.0	45.0	44.0	43.0	64.6	0.0	64.6
	14	66.2	83.2	41.3	75.0	74.0	72.0	71.0	66.0	57.0	46.0	44.0	42.0	66.2	0.0	66.2
	15	66.0	91.9	41.3	74.0	73.0	71.0	70.0	66.0	58.0	46.0	45.0	43.0	66.0	0.0	66.0
	16	66.6	88.4	43.4	75.0	73.0	71.0	70.0	66.0	60.0	48.0	47.0	45.0	66.6	0.0	66.6
	17	68.0	97.4	43.5	75.0	73.0	71.0	70.0	65.0	57.0	47.0	46.0	45.0	68.0	0.0	68.0
	18	64.2	84.6	44.5	73.0	72.0	70.0	69.0	64.0	54.0	47.0	46.0	45.0	64.2	0.0	64.2
Evening	19	62.9	85.1	45.2	73.0	72.0	69.0	68.0	59.0	51.0	47.0	46.0	45.0	62.9	5.0	67.9
	20	62.1	82.5	43.0	72.0	71.0	69.0	67.0	60.0	50.0	45.0	44.0	43.0	62.1	5.0	67.1
	21	63.6	92.8	41.1	73.0	71.0	69.0	66.0	57.0	47.0	42.0	42.0	41.0	63.6	5.0	68.6
Night	22	57.8	82.4	39.6	70.0	67.0	64.0	61.0	50.0	45.0	42.0	42.0	41.0	57.8	10.0	67.8
	23	53.8	79.6	39.5	67.0	63.0	53.0	49.0	44.0	43.0	41.0	41.0	39.0	53.8	10.0	63.8

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	62.8	79.1	41.2	73.0	72.0	69.0	68.0	60.0	51.0	45.0	44.0	42.0
	Max	68.0	97.4	44.5	75.0	74.0	72.0	71.0	66.0	60.0	48.0	47.0	45.0
Energy Average		65.0	Average:		73.9	72.4	70.3	69.2	63.3	54.8	46.3	45.0	43.4
Evening	Min	62.1	82.5	41.1	72.0	71.0	69.0	66.0	57.0	47.0	42.0	42.0	41.0
	Max	63.6	92.8	45.2	73.0	72.0	69.0	68.0	60.0	51.0	47.0	46.0	45.0
Energy Average		62.9	Average:		72.7	71.3	69.0	67.0	58.7	49.3	44.7	44.0	43.0
Night	Min	53.3	74.6	39.5	67.0	63.0	53.0	49.0	44.0	43.0	41.0	41.0	39.0
	Max	66.0	84.0	49.5	77.0	74.0	72.0	70.0	64.0	57.0	52.0	51.0	50.0
Energy Average		61.3	Average:		71.4	68.9	63.7	60.3	52.2	48.7	45.6	45.1	44.2

L_{eq} (dBA)		
24-Hour	Daytime	Nighttime
63.7	64.7	61.3

24-Hour CNEL (dBA)
68.7

24-Hour Noise Level Measurement Summary

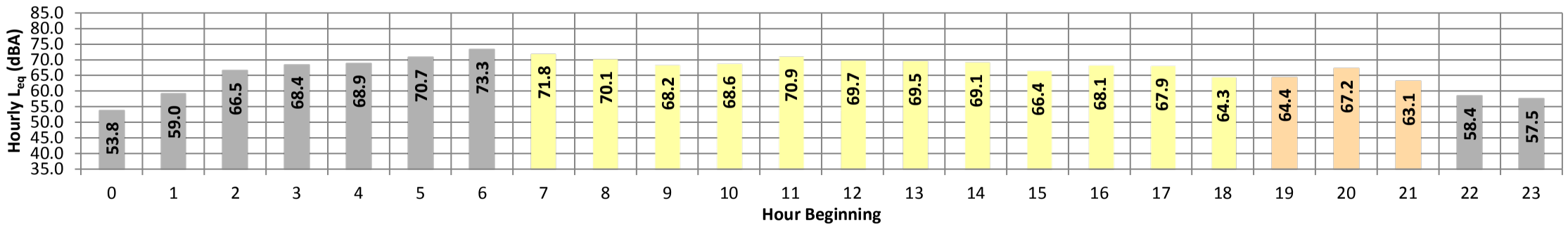
Date: Tuesday, March 26, 2019
Project: Goodman Industrial Park Fontana III

Location: L7 - Located on Cypress Avenue, on the western border of the Project site, near an industrial construction site.

Meter: Piccolo I

JN: 12384
Analyst: R. Saber

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	53.8	73.4	39.0	68.0	65.0	55.0	50.0	46.0	44.0	41.0	40.0	40.0	53.8	10.0	63.8
	1	59.0	79.7	41.9	70.0	68.0	64.0	64.0	53.0	48.0	44.0	43.0	42.0	59.0	10.0	69.0
	2	66.5	87.1	63.0	75.0	73.0	69.0	67.0	64.0	64.0	63.0	63.0	63.0	66.5	10.0	76.5
	3	68.4	86.3	63.4	80.0	77.0	72.0	70.0	65.0	64.0	64.0	64.0	64.0	68.4	10.0	78.4
	4	68.9	88.4	63.4	79.0	76.0	73.0	71.0	67.0	64.0	64.0	64.0	63.0	68.9	10.0	78.9
	5	70.7	88.1	62.2	82.0	80.0	75.0	73.0	68.0	65.0	64.0	64.0	64.0	70.7	10.0	80.7
	6	73.3	96.2	64.5	83.0	81.0	78.0	76.0	71.0	69.0	67.0	66.0	65.0	73.3	10.0	83.3
Day	7	71.8	88.6	63.2	81.0	80.0	77.0	75.0	70.0	67.0	65.0	64.0	63.0	71.8	0.0	71.8
	8	70.1	91.8	62.6	80.0	76.0	72.0	71.0	68.0	66.0	64.0	63.0	63.0	70.1	0.0	70.1
	9	68.2	85.0	60.7	75.0	74.0	72.0	70.0	68.0	66.0	64.0	64.0	63.0	68.2	0.0	68.2
	10	68.6	85.2	63.9	75.0	74.0	72.0	71.0	68.0	67.0	65.0	65.0	64.0	68.6	0.0	68.6
	11	70.9	90.8	61.9	78.0	76.0	74.0	73.0	69.0	67.0	65.0	65.0	64.0	70.9	0.0	70.9
	12	69.7	91.9	63.5	77.0	75.0	72.0	71.0	68.0	67.0	65.0	65.0	64.0	69.7	0.0	69.7
	13	69.5	85.5	60.5	76.0	74.0	73.0	72.0	70.0	68.0	65.0	64.0	63.0	69.5	0.0	69.5
	14	69.1	87.1	43.0	77.0	75.0	73.0	71.0	69.0	66.0	56.0	51.0	45.0	69.1	0.0	69.1
	15	66.4	87.8	41.9	75.0	73.0	71.0	70.0	66.0	61.0	49.0	46.0	43.0	66.4	0.0	66.4
	16	68.1	91.7	41.3	77.0	75.0	72.0	71.0	67.0	61.0	48.0	45.0	43.0	68.1	0.0	68.1
	17	67.9	90.5	42.6	78.0	75.0	71.0	70.0	66.0	59.0	47.0	45.0	43.0	67.9	0.0	67.9
	18	64.3	84.1	43.5	73.0	72.0	70.0	69.0	65.0	56.0	46.0	45.0	44.0	64.3	0.0	64.3
Evening	19	64.4	90.9	43.9	74.0	72.0	69.0	68.0	62.0	54.0	46.0	46.0	45.0	64.4	5.0	69.4
	20	67.2	97.2	41.9	74.0	72.0	70.0	68.0	62.0	51.0	45.0	44.0	43.0	67.2	5.0	72.2
	21	63.1	86.3	39.3	74.0	72.0	69.0	67.0	57.0	47.0	42.0	41.0	40.0	63.1	5.0	68.1
Night	22	58.4	81.7	39.0	69.0	68.0	65.0	63.0	52.0	46.0	42.0	41.0	40.0	58.4	10.0	68.4
	23	57.5	87.5	38.9	67.0	64.0	56.0	51.0	45.0	43.0	41.0	40.0	39.0	57.5	10.0	67.5

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	64.3	84.1	41.3	73.0	72.0	70.0	69.0	65.0	56.0	46.0	45.0	43.0
	Max	71.8	91.9	63.9	81.0	80.0	77.0	75.0	70.0	68.0	65.0	65.0	64.0
Energy Average		69.1	Average:		76.8	74.9	72.4	71.2	67.8	64.3	58.3	56.8	55.2
Evening	Min	63.1	86.3	39.3	74.0	72.0	69.0	67.0	57.0	47.0	42.0	41.0	40.0
	Max	67.2	97.2	43.9	74.0	72.0	70.0	68.0	62.0	54.0	46.0	46.0	45.0
Energy Average		65.2	Average:		74.0	72.0	69.3	67.7	60.3	50.7	44.3	43.7	42.7
Night	Min	53.8	73.4	38.9	67.0	64.0	55.0	50.0	45.0	43.0	41.0	40.0	39.0
	Max	73.3	96.2	64.5	83.0	81.0	78.0	76.0	71.0	69.0	67.0	66.0	65.0
Energy Average		67.8	Average:		74.8	72.4	67.4	65.0	59.0	56.3	54.4	53.9	53.3

L_{eq} (dBA)		
24-Hour	Daytime	Nighttime
68.3	68.6	67.8

24-Hour CNEL (dBA)
74.5

24-Hour Noise Level Measurement Summary

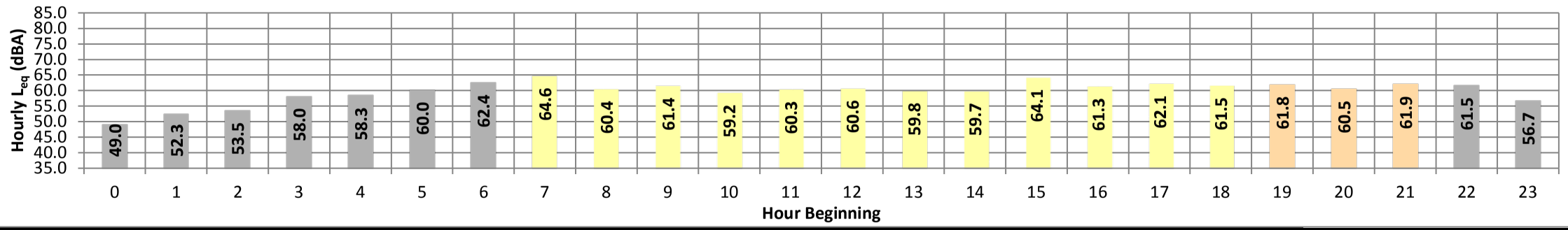
Date: Tuesday, March 26, 2019
Project: Goodman Industrial Park Fontana III

Location: L8 - Located on Santa Ana Avenue near existing residential homes and a vacant lot.

Meter: Piccolo I

JN: 12384
Analyst: R. Saber

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	49.0	71.1	43.4	55.0	52.0	50.0	49.0	47.0	46.0	44.0	44.0	43.0	49.0	10.0	59.0
	1	52.3	72.4	43.0	65.0	61.0	52.0	49.0	46.0	45.0	44.0	43.0	43.0	52.3	10.0	62.3
	2	53.5	75.4	44.0	66.0	61.0	53.0	51.0	49.0	47.0	45.0	45.0	44.0	53.5	10.0	63.5
	3	58.0	75.9	46.9	71.0	69.0	63.0	59.0	53.0	50.0	48.0	48.0	47.0	58.0	10.0	68.0
	4	58.3	74.5	50.9	70.0	68.0	63.0	60.0	55.0	53.0	52.0	52.0	51.0	58.3	10.0	68.3
	5	60.0	80.0	50.1	70.0	69.0	66.0	64.0	56.0	54.0	52.0	51.0	50.0	60.0	10.0	70.0
	6	62.4	81.8	52.0	72.0	70.0	68.0	67.0	60.0	56.0	54.0	53.0	53.0	62.4	10.0	72.4
Day	7	64.6	85.7	51.9	75.0	73.0	70.0	69.0	63.0	58.0	54.0	53.0	52.0	64.6	0.0	64.6
	8	60.4	77.5	47.2	71.0	69.0	67.0	65.0	58.0	53.0	50.0	50.0	48.0	60.4	0.0	60.4
	9	61.4	76.9	46.9	72.0	70.0	68.0	66.0	60.0	53.0	49.0	48.0	48.0	61.4	0.0	61.4
	10	59.2	76.5	44.9	69.0	67.0	65.0	64.0	57.0	51.0	48.0	47.0	45.0	59.2	0.0	59.2
	11	60.3	76.6	44.8	70.0	69.0	66.0	65.0	60.0	53.0	47.0	47.0	46.0	60.3	0.0	60.3
	12	60.6	76.3	43.6	71.0	70.0	67.0	65.0	59.0	52.0	47.0	46.0	45.0	60.6	0.0	60.6
	13	59.8	79.0	45.7	70.0	68.0	66.0	64.0	59.0	52.0	48.0	47.0	46.0	59.8	0.0	59.8
	14	59.7	79.6	46.8	70.0	67.0	65.0	64.0	58.0	52.0	49.0	48.0	47.0	59.7	0.0	59.7
	15	64.1	93.7	42.6	72.0	70.0	66.0	65.0	60.0	54.0	46.0	45.0	44.0	64.1	0.0	64.1
	16	61.3	77.6	42.1	71.0	69.0	67.0	65.0	61.0	55.0	46.0	45.0	43.0	61.3	0.0	61.3
	17	62.1	80.3	44.1	71.0	70.0	68.0	67.0	62.0	56.0	47.0	46.0	45.0	62.1	0.0	62.1
	18	61.5	76.9	45.3	70.0	69.0	67.0	66.0	62.0	55.0	48.0	47.0	45.0	61.5	0.0	61.5
Evening	19	61.8	84.1	47.2	73.0	71.0	67.0	66.0	59.0	52.0	48.0	48.0	47.0	61.8	5.0	66.8
	20	60.5	79.8	47.4	72.0	69.0	66.0	65.0	58.0	52.0	49.0	48.0	48.0	60.5	5.0	65.5
	21	61.9	81.8	46.2	73.0	71.0	69.0	67.0	57.0	50.0	48.0	47.0	47.0	61.9	5.0	66.9
Night	22	61.5	80.0	44.0	73.0	71.0	68.0	66.0	54.0	49.0	46.0	45.0	44.0	61.5	10.0	71.5
	23	56.7	72.2	44.0	69.0	67.0	63.0	60.0	51.0	48.0	46.0	45.0	45.0	56.7	10.0	66.7

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	59.2	76.3	42.1	69.0	67.0	65.0	64.0	57.0	51.0	46.0	45.0	43.0
	Max	64.6	93.7	51.9	75.0	73.0	70.0	69.0	63.0	58.0	54.0	53.0	52.0
Energy Average		61.6	Average:		71.0	69.3	66.8	65.4	59.9	53.7	48.3	47.4	46.2
Evening	Min	60.5	79.8	46.2	72.0	69.0	66.0	65.0	57.0	50.0	48.0	47.0	47.0
	Max	61.9	84.1	47.4	73.0	71.0	69.0	67.0	59.0	52.0	49.0	48.0	48.0
Energy Average		61.4	Average:		72.7	70.3	67.3	66.0	58.0	51.3	48.3	47.7	47.3
Night	Min	49.0	71.1	43.0	55.0	52.0	50.0	49.0	46.0	45.0	44.0	43.0	43.0
	Max	62.4	81.8	52.0	73.0	71.0	68.0	67.0	60.0	56.0	54.0	53.0	53.0
Energy Average		58.5	Average:		67.9	65.3	60.7	58.3	52.3	49.8	47.9	47.3	46.7

L_{eq} (dBA)		
24-Hour	Daytime	Nighttime
60.6	61.6	58.5

24-Hour CNEL (dBA)

66.0

24-Hour Noise Level Measurement Summary

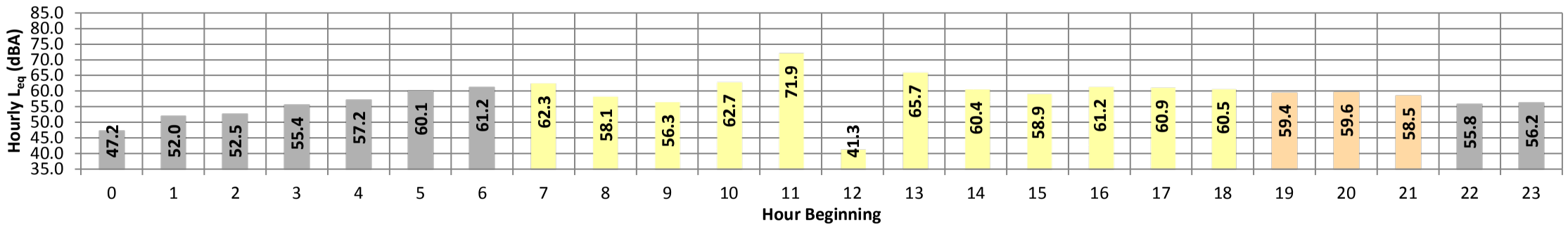
Date: Wednesday, April 10, 2019
Project: Goodman Industrial Park Fontana III

Location: L9 - Located within the Citrus High School parking lot, west of Cypress Avenue near existing residential homes, north of the Project Site.

Meter: Piccolo I

JN: 12384
Analyst: R. Saber

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	47.2	65.8	40.4	58.0	55.0	51.0	48.0	45.0	43.0	41.0	41.0	40.0	47.2	10.0	57.2
	1	52.0	67.2	41.7	60.0	59.0	56.0	54.0	52.0	50.0	46.0	44.0	42.0	52.0	10.0	62.0
	2	52.5	70.3	44.8	62.0	59.0	56.0	54.0	52.0	50.0	48.0	47.0	46.0	52.5	10.0	62.5
	3	55.4	71.9	46.2	67.0	64.0	60.0	58.0	53.0	50.0	48.0	47.0	46.0	55.4	10.0	65.4
	4	57.2	72.8	46.0	68.0	66.0	63.0	61.0	55.0	52.0	49.0	48.0	47.0	57.2	10.0	67.2
	5	60.1	76.3	49.2	69.0	67.0	65.0	64.0	60.0	55.0	51.0	51.0	50.0	60.1	10.0	70.1
	6	61.2	81.7	47.1	71.0	69.0	65.0	64.0	60.0	56.0	50.0	49.0	48.0	61.2	10.0	71.2
Day	7	62.3	85.5	48.0	71.0	69.0	66.0	65.0	62.0	59.0	53.0	51.0	49.0	62.3	0.0	62.3
	8	58.1	77.2	46.3	69.0	67.0	63.0	61.0	57.0	53.0	48.0	48.0	47.0	58.1	0.0	58.1
	9	56.3	73.6	45.9	67.0	65.0	61.0	59.0	55.0	51.0	48.0	47.0	46.0	56.3	0.0	56.3
	10	62.7	79.6	35.7	73.0	72.0	71.0	69.0	58.0	54.0	48.0	47.0	45.0	62.7	0.0	62.7
	11	71.9	86.3	51.1	79.0	78.0	76.0	75.0	72.0	70.0	64.0	61.0	56.0	71.9	0.0	71.9
	12	41.3	70.9	35.7	49.0	43.0	40.0	38.0	35.0	35.0	35.0	35.0	35.0	41.3	0.0	41.3
	13	65.7	86.9	35.7	80.0	78.0	67.0	61.0	35.0	35.0	35.0	35.0	35.0	65.7	0.0	65.7
	14	60.4	76.0	49.9	70.0	68.0	65.0	64.0	59.0	56.0	53.0	52.0	51.0	60.4	0.0	60.4
	15	58.9	74.5	50.4	68.0	66.0	63.0	61.0	58.0	56.0	53.0	52.0	51.0	58.9	0.0	58.9
	16	61.2	77.6	47.5	73.0	71.0	67.0	64.0	59.0	56.0	52.0	51.0	50.0	61.2	0.0	61.2
	17	60.9	77.0	49.2	71.0	69.0	66.0	64.0	59.0	57.0	52.0	51.0	50.0	60.9	0.0	60.9
	18	60.5	77.5	47.8	71.0	69.0	66.0	63.0	59.0	56.0	51.0	50.0	49.0	60.5	0.0	60.5
Evening	19	59.4	78.0	45.7	70.0	68.0	64.0	62.0	58.0	54.0	49.0	48.0	47.0	59.4	5.0	64.4
	20	59.6	78.9	43.6	70.0	69.0	65.0	63.0	58.0	53.0	48.0	46.0	44.0	59.6	5.0	64.6
	21	58.5	73.6	41.6	69.0	67.0	64.0	62.0	57.0	52.0	44.0	43.0	42.0	58.5	5.0	63.5
Night	22	55.8	73.0	41.6	68.0	66.0	62.0	59.0	52.0	46.0	43.0	42.0	42.0	55.8	10.0	65.8
	23	56.2	79.1	41.5	69.0	66.0	62.0	59.0	50.0	45.0	42.0	42.0	41.0	56.2	10.0	66.2

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	41.3	70.9	35.7	49.0	43.0	40.0	38.0	35.0	35.0	35.0	35.0	35.0
	Max	71.9	86.9	51.1	80.0	78.0	76.0	75.0	72.0	70.0	64.0	61.0	56.0
Energy Average		63.9	Average:		70.1	67.9	64.3	62.0	55.7	53.2	49.3	48.3	47.0
Evening	Min	58.5	73.6	41.6	69.0	67.0	64.0	62.0	57.0	52.0	44.0	43.0	42.0
	Max	59.6	78.9	45.7	70.0	69.0	65.0	63.0	58.0	54.0	49.0	48.0	47.0
Energy Average		59.2	Average:		69.7	68.0	64.3	62.3	57.7	53.0	47.0	45.7	44.3
Night	Min	47.2	65.8	40.4	58.0	55.0	51.0	48.0	45.0	43.0	41.0	41.0	40.0
	Max	61.2	81.7	49.2	71.0	69.0	65.0	64.0	60.0	56.0	51.0	51.0	50.0
Energy Average		56.9	Average:		65.8	63.4	60.0	57.9	53.2	49.7	46.4	45.7	44.7

L_{eq} (dBA)		
24-Hour	Daytime	Nighttime
61.8	63.3	56.9

24-Hour CNEL (dBA)
65.3

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APPENDIX 5.3:

SHORT-TERM NOISE LEVEL MEASUREMENT DATA

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Summary - With Aircraft 01

File Name on Meter	LxT_Data.090
File Name on PC	SLM_0001146_LxT_Data_090.00.ldbin
Serial Number	0001146
Model	SoundTrack LxT®
Firmware Version	2.301
User	R.Saber
Location	Fontana
Job Description	12384
Note	

Measurement

Description	
Start	2019-04-09 11:22:50
Stop	2019-04-09 11:25:06
Duration	00:02:16.0
Run Time	00:02:16.0
Pause	00:00:00.0
Pre Calibration	2019-04-08 08:55:23
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamp	PRMLxT1
Microphone Correction	Off
Integration Method	Exponential
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	A Weighting
OBA Max Spectrum	Bin Max
Overload	145.0 dB

	A	**C**	**Z**	
Under Range Peak	101.2	98.2	**103.2**	dB
Under Range Limit	**37.6**	35.6	43.6	dB
Noise Floor	24.8	25.3	32.8	dB

Results

LA_{Seq}	60.5 dB		
LASE	81.9 dB		
EAS	17.032 µPa²h		
EAS8	3.607 mPa²h		
EAS40	18.034 mPa²h		
$LZ_{Speak\ (max)}$	2019-04-09 11:24:13	94.9	dB
LAS_{max}	2019-04-09 11:24:07	70.5	dB
LAS_{min}	2019-04-09 11:22:50	48.0	dB
SEA	-99.9 dB		

Summary - With Aircraft 02

File Name on Meter	LxT_Data.091
File Name on PC	SLM_0001146_LxT_Data_091.00.ldbin
Serial Number	0001146
Model	SoundTrack LxT®
Firmware Version	2.301
User	R.Saber
Location	Fontana
Job Description	12384
Note	

Measurement

Description	
Start	2019-04-09 11:25:21
Stop	2019-04-09 11:26:36
Duration	00:01:15.2
Run Time	00:01:15.2
Pause	00:00:00.0
Pre Calibration	2019-04-08 08:55:23
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamp	PRMLxT1
Microphone Correction	Off
Integration Method	Exponential
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	A Weighting
OBA Max Spectrum	Bin Max
Overload	145.0 dB

	A	**C**	**Z**	
Under Range Peak	101.2	98.2	**103.2**	dB
Under Range Limit	**37.6**	35.6	43.6	dB
Noise Floor	24.8	25.3	32.8	dB

Results

LA_{Seq}	62.0 dB		
LASE	80.7 dB		
EAS	13.180 µPa²h		
EAS8	5.048 mPa²h		
EAS40	25.238 mPa²h		
$LZ_{Speak\ (max)}$	2019-04-09 11:26:18	99.5 dB	
LAS_{max}	2019-04-09 11:25:55	69.8 dB	
LAS_{min}	2019-04-09 11:25:23	53.0 dB	
SEA	-99.9 dB		

Summary

File Name on Meter	LxT_Data.092
File Name on PC	SLM_0001146_LxT_Data_092.00.ldbin
Serial Number	0001146
Model	SoundTrack LxT®
Firmware Version	2.301
User	R.Saber
Location	Fontana
Job Description	12384
Note	

Measurement

Description		
Start	2019-04-09	11:26:42
Stop	2019-04-09	11:27:34
Duration		00:00:52.5
Run Time		00:00:52.5
Pause		00:00:00.0
Pre Calibration	2019-04-08	08:55:23
Post Calibration		None
Calibration Deviation		---

Overall Settings

RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamp	PRMLxT1
Microphone Correction	Off
Integration Method	Exponential
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	A Weighting
OBA Max Spectrum	Bin Max
Overload	145.0 dB

	A	**C**	**Z**	
Under Range Peak	101.2	98.2	**103.2**	dB
Under Range Limit	**37.6**	35.6	43.6	dB
Noise Floor	24.8	25.3	32.8	dB

Results

LA_{Seq}		58.3	dB	
LASE		75.5	dB	
EAS		3.980	µPa²h	
EAS8		2.184	mPa²h	
EAS40		10.918	mPa²h	
$LZ_{Speak\ (max)}$	2019-04-09 11:27:13		98.4	dB
LAS_{max}	2019-04-09 11:27:27		66.6	dB
LAS_{min}	2019-04-09 11:26:59		50.5	dB
SEA		-99.9	dB	

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APPENDIX 7.1:

OFF-SITE TRAFFIC NOISE LEVEL CONTOURS

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Citrus Av.
Road Segment: s/o I-10 Ramps
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,431 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,443 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.84	-0.03	-1.20	-4.71	0.000	0.000
Medium Trucks:	79.45	-14.28	-0.01	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-14.63	-0.01	-1.20	-5.30	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.1	67.2	65.4	59.4	68.0	68.6
Medium Trucks:	64.0	62.4	56.1	54.5	63.0	63.2
Heavy Trucks:	68.4	67.0	58.0	59.2	67.6	67.7
Vehicle Noise:	72.4	70.8	66.5	63.0	71.5	71.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	82	178	383	825
CNEL:	87	188	405	872

Wednesday, June 05, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Citrus Av.
Road Segment: s/o Slover Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,722 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,272 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-0.48	1.42	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-16.61	1.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.96	1.46	-1.20	-5.47	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.3	64.4	62.6	56.5	65.2	65.8
Medium Trucks:	61.4	59.9	53.5	52.0	60.4	60.6
Heavy Trucks:	66.3	64.9	55.8	57.1	65.4	65.6
Vehicle Noise:	69.9	68.3	63.8	60.5	69.0	69.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	39	85	182	392
CNEL:	41	89	192	414

Wednesday, June 05, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Citrus Av.
Road Segment: s/o Santa Ana Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,160 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,016 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-1.46	1.42	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-17.58	1.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-17.93	1.46	-1.20	-5.47	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.3	63.4	61.6	55.6	64.2	64.8
Medium Trucks:	60.4	58.9	52.5	51.0	59.4	59.7
Heavy Trucks:	65.3	63.9	54.9	56.1	64.5	64.6
Vehicle Noise:	69.0	67.3	62.9	59.5	68.0	68.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	34	73	157	338
CNEL:	36	77	165	356

Wednesday, June 05, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Juniper Av.
Road Segment: n/o Santa Ana Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,451 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	245 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	14 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	34.0 feet
Centerline Dist. to Observer:	34.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	33.645
Medium Trucks:	33.381
Heavy Trucks:	33.407

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-7.63	2.48	-1.20	-4.53	0.000	0.000
Medium Trucks:	77.72	-23.76	2.53	-1.20	-4.86	0.000	0.000
Heavy Trucks:	82.99	-24.11	2.52	-1.20	-5.67	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.2	58.3	56.5	50.4	59.1	59.7
Medium Trucks:	55.3	53.8	47.4	45.9	54.3	54.6
Heavy Trucks:	60.2	58.8	49.8	51.0	59.4	59.5
Vehicle Noise:	63.8	62.2	57.7	54.4	62.9	63.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	11	25	53	114
CNEL:	12	26	56	120

Wednesday, June 05, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Juniper Av.
Road Segment: s/o Santa Ana Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,807 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	281 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	14 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	34.0 feet
Centerline Dist. to Observer:	34.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	33.645
Medium Trucks:	33.381
Heavy Trucks:	33.407

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-7.04	2.48	-1.20	*-4.53*	0.000	0.000
Medium Trucks:	77.72	-23.17	2.53	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	82.99	-23.52	2.52	-1.20	*-5.67*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.7	58.8	57.1	51.0	59.6	60.3
Medium Trucks:	55.9	54.4	48.0	46.5	54.9	55.2
Heavy Trucks:	60.8	59.4	50.3	51.6	59.9	60.1
Vehicle Noise:	64.4	62.8	58.3	55.0	63.5	63.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	12	27	58	125
CNEL:	13	28	61	131

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Sierra Av.
Road Segment: n/o Slover Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	51,993 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,199 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	5.63	-0.03	-1.20	*-4.71*	0.000	0.000
Medium Trucks:	77.72	-10.49	-0.01	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-10.84	-0.01	-1.20	*-5.30*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.9	69.0	67.2	61.2	69.8	70.4
Medium Trucks:	66.0	64.5	58.1	56.6	65.1	65.3
Heavy Trucks:	70.9	69.5	60.5	61.7	70.1	70.2
Vehicle Noise:	74.6	73.0	68.5	65.1	73.6	74.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	115	248	534	1,150
CNEL:	121	261	563	1,213

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Sierra Av.
Road Segment: s/o Slover Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,623 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,962 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	2.22	-0.03	-1.20	*-4.71*	0.000	0.000
Medium Trucks:	81.00	-13.91	-0.01	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-14.25	-0.01	-1.20	*-5.30*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.2	69.3	67.5	61.5	70.1	70.7
Medium Trucks:	65.9	64.4	58.0	56.5	64.9	65.2
Heavy Trucks:	69.9	68.5	59.5	60.7	69.1	69.2
Vehicle Noise:	74.3	72.6	68.6	64.8	73.3	73.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	110	236	509	1,096
CNEL:	116	250	539	1,161

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Sierra Av.
Road Segment: s/o Santa Ana Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,692 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,069 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	2.38	-0.03	-1.20	*-4.71*	0.000	0.000
Medium Trucks:	81.00	-13.75	-0.01	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-14.10	-0.01	-1.20	*-5.30*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.3	69.5	67.7	61.6	70.3	70.9
Medium Trucks:	66.0	64.5	58.2	56.6	65.1	65.3
Heavy Trucks:	70.1	68.6	59.6	60.9	69.2	69.3
Vehicle Noise:	74.4	72.8	68.7	65.0	73.5	73.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	112	242	521	1,122
CNEL:	119	256	552	1,189

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Sierra Av.
Road Segment: s/o Jurupa Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,654 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,465 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	1.01	-0.03	-1.20	-4.71	0.000	0.000
Medium Trucks:	82.40	-15.12	-0.01	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-15.47	-0.01	-1.20	-5.30	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.6	69.7	67.9	61.8	70.5	71.1
Medium Trucks:	66.1	64.6	58.2	56.7	65.1	65.4
Heavy Trucks:	69.7	68.3	59.3	60.5	68.9	69.0
Vehicle Noise:	74.4	72.8	68.8	64.9	73.4	73.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	112	241	520	1,119
CNEL:	119	256	552	1,188

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Slover Av.
Road Segment: w/o Sierra Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	19,017 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,902 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	59 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	52.0 feet
Centerline Dist. to Observer:	52.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.113
Medium Trucks:	42.908
Heavy Trucks:	42.928

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.75	0.86	-1.20	-4.66	0.000	0.000
Medium Trucks:	79.45	-15.37	0.89	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-15.72	0.89	-1.20	-5.41	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.9	67.0	65.2	59.2	67.8	68.4
Medium Trucks:	63.8	62.3	55.9	54.4	62.8	63.0
Heavy Trucks:	68.2	66.8	57.8	59.0	67.4	67.5
Vehicle Noise:	72.2	70.6	66.3	62.8	71.3	71.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	63	136	293	631
CNEL:	67	144	310	667

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Santa Ana Av.
Road Segment: e/o Citrus Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,979 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	298 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-6.78	1.42	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-22.91	1.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-23.26	1.46	-1.20	-5.47	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.9	58.1	56.3	50.2	58.9	59.5
Medium Trucks:	55.1	53.6	47.2	45.6	54.1	54.3
Heavy Trucks:	60.0	58.6	49.5	50.8	59.1	59.3
Vehicle Noise:	63.6	62.0	57.5	54.2	62.7	63.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	15	32	69	149
CNEL:	16	34	73	157

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Santa Ana Av.
Road Segment: e/o Juniper Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,907 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	691 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-3.13	1.42	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-19.26	1.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-19.61	1.46	-1.20	-5.47	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.6	61.7	59.9	53.9	62.5	63.1
Medium Trucks:	58.7	57.2	50.8	49.3	57.8	58.0
Heavy Trucks:	63.6	62.2	53.2	54.4	62.8	62.9
Vehicle Noise:	67.3	65.7	61.2	57.8	66.3	66.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	26	56	121	261
CNEL:	28	59	128	275

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Santa Ana Av.
Road Segment: e/o Sierra Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,283 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	628 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-3.54	1.42	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-19.67	1.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-20.02	1.46	-1.20	-5.47	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.2	61.3	59.5	53.5	62.1	62.7
Medium Trucks:	58.3	56.8	50.4	48.9	57.4	57.6
Heavy Trucks:	63.2	61.8	52.8	54.0	62.4	62.5
Vehicle Noise:	66.9	65.2	60.8	57.4	65.9	66.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	25	53	114	245
CNEL:	26	56	120	259

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Jurupa Av.
Road Segment: w/o Cherry Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	19,886 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,989 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.95	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-15.18	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-15.53	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.8	66.9	65.1	59.1	67.7	68.3
Medium Trucks:	63.7	62.2	55.8	54.3	62.7	63.0
Heavy Trucks:	68.1	66.7	57.7	58.9	67.3	67.4
Vehicle Noise:	72.2	70.5	66.3	62.7	71.2	71.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	72	155	333	718
CNEL:	76	164	353	760

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Jurupa Av.
Road Segment: e/o Cherry Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,755 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,676 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.20	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-15.92	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-16.27	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.0	66.1	64.4	58.3	67.0	67.6
Medium Trucks:	62.9	61.4	55.1	53.5	62.0	62.2
Heavy Trucks:	67.4	66.0	56.9	58.2	66.5	66.7
Vehicle Noise:	71.4	69.8	65.5	61.9	70.4	70.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	64	138	297	641
CNEL:	68	146	315	678

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Jurupa Av.
Road Segment: e/o Beech Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,357 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,736 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.36	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-15.77	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-16.12	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.2	66.3	64.5	58.5	67.1	67.7
Medium Trucks:	63.1	61.6	55.2	53.7	62.1	62.4
Heavy Trucks:	67.5	66.1	57.1	58.3	66.7	66.8
Vehicle Noise:	71.6	69.9	65.7	62.1	70.6	70.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	66	141	305	656
CNEL:	69	149	322	694

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Jurupa Av.
Road Segment: e/o Poplar Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	18,883 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,888 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.72	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-15.40	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-15.75	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.6	66.7	64.9	58.8	67.5	68.1
Medium Trucks:	63.5	61.9	55.6	54.0	62.5	62.7
Heavy Trucks:	67.9	66.5	57.5	58.7	67.1	67.2
Vehicle Noise:	71.9	70.3	66.0	62.5	70.9	71.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	69	150	322	694
CNEL:	73	158	341	734

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Jurupa Av.
Road Segment: e/o Citrus Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,856 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,686 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.23	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-15.90	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-16.25	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.1	66.2	64.4	58.4	67.0	67.6
Medium Trucks:	63.0	61.5	55.1	53.6	62.0	62.2
Heavy Trucks:	67.4	66.0	57.0	58.2	66.6	66.7
Vehicle Noise:	71.4	69.8	65.5	62.0	70.5	70.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	64	139	299	643
CNEL:	68	147	316	680

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Jurupa Av.
Road Segment: e/o Oleander Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,780 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,778 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.46	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-15.66	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-16.01	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.3	66.4	64.6	58.6	67.2	67.8
Medium Trucks:	63.2	61.7	55.3	53.8	62.2	62.5
Heavy Trucks:	67.6	66.2	57.2	58.4	66.8	66.9
Vehicle Noise:	71.7	70.0	65.8	62.2	70.7	71.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	67	144	309	667
CNEL:	70	152	327	705

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Jurupa Av.
Road Segment: e/o Cypress Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	19,790 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,979 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.93	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-15.20	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-15.55	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.8	66.9	65.1	59.1	67.7	68.3
Medium Trucks:	63.7	62.2	55.8	54.2	62.7	62.9
Heavy Trucks:	68.1	66.7	57.7	58.9	67.3	67.4
Vehicle Noise:	72.1	70.5	66.2	62.7	71.2	71.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	72	154	332	716
CNEL:	76	163	351	757

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project | Project Name: Goodman III
Road Name: Jurupa Av. | Job Number: 12384
Road Segment: e/o Juniper Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	18,605 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,861 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.66	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-15.47	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-15.82	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.5	66.6	64.8	58.8	67.4	68.0
Medium Trucks:	63.4	61.9	55.5	54.0	62.4	62.7
Heavy Trucks:	67.8	66.4	57.4	58.6	67.0	67.1
Vehicle Noise:	71.9	70.2	66.0	62.4	70.9	71.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	69	148	319	687
CNEL:	73	157	337	727

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project | Project Name: Goodman III
Road Name: Armstrong Rd. | Job Number: 12384
Road Segment: w/o Sierra Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,072 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,307 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.59	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-14.53	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-14.88	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.2	66.3	64.6	58.5	67.1	67.7
Medium Trucks:	63.1	61.6	55.2	53.7	62.2	62.4
Heavy Trucks:	67.6	66.1	57.1	58.4	66.7	66.8
Vehicle Noise:	71.6	69.9	65.7	62.1	70.6	71.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	65	140	301	648
CNEL:	69	148	318	685

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project | Project Name: Goodman III
Road Name: Armstrong Rd. | Job Number: 12384
Road Segment: w/o 34th St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,547 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,055 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.81	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-13.31	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-13.66	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.5	67.6	65.8	59.7	68.4	69.0
Medium Trucks:	64.3	62.8	56.5	54.9	63.4	63.6
Heavy Trucks:	68.8	67.4	58.3	59.6	67.9	68.1
Vehicle Noise:	72.8	71.2	66.9	63.3	71.8	72.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	78	168	363	781
CNEL:	83	178	383	826

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project | Project Name: Goodman III
Road Name: Citrus Av. | Job Number: 12384
Road Segment: s/o I-10 Ramps

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,920 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,492 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.03%
Medium Trucks:	84.8%	4.9%	10.3%	2.40%
Heavy Trucks:	86.5%	2.7%	10.8%	2.57%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.91	-0.03	-1.20	-4.71	0.000	0.000
Medium Trucks:	79.45	-14.06	-0.01	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-13.78	-0.01	-1.20	-5.30	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.1	67.2	65.5	59.4	68.0	68.6
Medium Trucks:	64.2	62.7	56.3	54.8	63.2	63.5
Heavy Trucks:	69.3	67.8	58.8	60.1	68.4	68.5
Vehicle Noise:	72.8	71.2	66.7	63.4	71.9	72.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	88	190	409	880
CNEL:	93	200	431	928

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Citrus Av.
Road Segment: s/o Slover Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,293 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,329 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	94.32%
Medium Trucks:	84.8%	4.9%	10.3%	2.52%
Heavy Trucks:	86.5%	2.7%	10.8%	3.16%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-0.34	1.42	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-16.07	1.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-15.10	1.46	-1.20	-5.47	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.4	64.5	62.7	56.7	65.3	65.9
Medium Trucks:	61.9	60.4	54.0	52.5	61.0	61.2
Heavy Trucks:	68.2	66.7	57.7	58.9	67.3	67.4
Vehicle Noise:	70.9	69.4	64.3	61.5	70.0	70.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	46	99	213	460
CNEL:	48	104	224	482

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Citrus Av.
Road Segment: s/o Santa Ana Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,516 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,052 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.60%
Medium Trucks:	84.8%	4.9%	10.3%	2.69%
Heavy Trucks:	86.5%	2.7%	10.8%	3.71%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-1.39	1.42	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-16.81	1.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-15.41	1.46	-1.20	-5.47	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.3	63.4	61.7	55.6	64.2	64.8
Medium Trucks:	61.2	59.7	53.3	51.7	60.2	60.4
Heavy Trucks:	67.8	66.4	57.4	58.6	67.0	67.1
Vehicle Noise:	70.3	68.8	63.5	60.9	69.4	69.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	42	90	195	419
CNEL:	44	94	203	438

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Juniper Av.
Road Segment: n/o Santa Ana Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,658 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	266 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	14 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	34.0 feet
Centerline Dist. to Observer:	34.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.87%
Medium Trucks:	84.8%	4.9%	10.3%	2.15%
Heavy Trucks:	86.5%	2.7%	10.8%	1.98%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	33.645
Medium Trucks:	33.381
Heavy Trucks:	33.407

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-7.26	2.48	-1.20	-4.53	0.000	0.000
Medium Trucks:	77.72	-23.76	2.53	-1.20	-4.86	0.000	0.000
Heavy Trucks:	82.99	-24.11	2.52	-1.20	-5.67	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.5	58.6	56.9	50.8	59.4	60.0
Medium Trucks:	55.3	53.8	47.4	45.9	54.3	54.6
Heavy Trucks:	60.2	58.8	49.8	51.0	59.4	59.5
Vehicle Noise:	64.0	62.4	58.0	54.5	63.0	63.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	12	25	54	117
CNEL:	12	27	57	123

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Juniper Av.
Road Segment: s/o Santa Ana Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	340 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	14 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	34.0 feet
Centerline Dist. to Observer:	34.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	96.30%
Medium Trucks:	84.8%	4.9%	10.3%	1.92%
Heavy Trucks:	86.5%	2.7%	10.8%	1.78%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	33.645
Medium Trucks:	33.381
Heavy Trucks:	33.407

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-6.18	2.48	-1.20	-4.53	0.000	0.000
Medium Trucks:	77.72	-23.17	2.53	-1.20	-4.86	0.000	0.000
Heavy Trucks:	82.99	-23.52	2.52	-1.20	-5.67	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.6	59.7	57.9	51.9	60.5	61.1
Medium Trucks:	55.9	54.4	48.0	46.5	54.9	55.2
Heavy Trucks:	60.8	59.4	50.3	51.6	59.9	60.1
Vehicle Noise:	64.8	63.2	59.0	55.4	63.8	64.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	13	28	61	132
CNEL:	14	30	65	140

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project | Project Name: Goodman III
Road Name: Sierra Av. | Job Number: 12384
Road Segment: n/o Slover Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	52,415 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,242 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.33%
Medium Trucks:	84.8%	4.9%	10.3%	2.36%
Heavy Trucks:	86.5%	2.7%	10.8%	2.31%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	5.66	-0.03	-1.20	-4.71	0.000	0.000
Medium Trucks:	77.72	-10.40	-0.01	-1.20	-4.88	0.000	0.000
Heavy Trucks:	82.99	-10.49	-0.01	-1.20	-5.30	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.9	69.0	67.3	61.2	69.8	70.4
Medium Trucks:	66.1	64.6	58.2	56.7	65.2	65.4
Heavy Trucks:	71.3	69.9	60.8	62.1	70.4	70.6
Vehicle Noise:	74.8	73.1	68.6	65.3	73.8	74.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	118	255	549	1,183
CNEL:	125	268	578	1,246

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project | Project Name: Goodman III
Road Name: Sierra Av. | Job Number: 12384
Road Segment: s/o Slover Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,949 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,995 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.17%
Medium Trucks:	84.8%	4.9%	10.3%	2.39%
Heavy Trucks:	86.5%	2.7%	10.8%	2.44%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	2.25	-0.03	-1.20	-4.71	0.000	0.000
Medium Trucks:	81.00	-13.75	-0.01	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-13.66	-0.01	-1.20	-5.30	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.2	69.3	67.6	61.5	70.1	70.7
Medium Trucks:	66.0	64.5	58.2	56.6	65.1	65.3
Heavy Trucks:	70.5	69.1	60.1	61.3	69.7	69.8
Vehicle Noise:	74.6	72.9	68.7	65.1	73.6	73.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	114	246	530	1,142
CNEL:	121	260	561	1,208

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project | Project Name: Goodman III
Road Name: Sierra Av. | Job Number: 12384
Road Segment: s/o Santa Ana Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,877 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,088 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	94.99%
Medium Trucks:	84.8%	4.9%	10.3%	2.43%
Heavy Trucks:	86.5%	2.7%	10.8%	2.57%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	2.38	-0.03	-1.20	-4.71	0.000	0.000
Medium Trucks:	81.00	-13.54	-0.01	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-13.29	-0.01	-1.20	-5.30	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.4	69.5	67.7	61.6	70.3	70.9
Medium Trucks:	66.3	64.7	58.4	56.8	65.3	65.5
Heavy Trucks:	70.9	69.5	60.4	61.7	70.0	70.2
Vehicle Noise:	74.8	73.1	68.8	65.3	73.8	74.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	118	255	550	1,185
CNEL:	125	270	581	1,252

Wednesday, June 05, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project | Project Name: Goodman III
Road Name: Sierra Av. | Job Number: 12384
Road Segment: s/o Jurupa Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,760 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,476 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.17%
Medium Trucks:	84.8%	4.9%	10.3%	2.40%
Heavy Trucks:	86.5%	2.7%	10.8%	2.44%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	1.01	-0.03	-1.20	-4.71	0.000	0.000
Medium Trucks:	82.40	-14.98	-0.01	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-14.91	-0.01	-1.20	-5.30	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.6	69.7	67.9	61.8	70.5	71.1
Medium Trucks:	66.2	64.7	58.4	56.8	65.3	65.5
Heavy Trucks:	70.3	68.9	59.8	61.1	69.4	69.6
Vehicle Noise:	74.7	73.0	68.9	65.2	73.7	74.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	116	250	538	1,159
CNEL:	123	265	570	1,228

Wednesday, June 05, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Slover Av.
Road Segment: w/o Sierra Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	19,058 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,906 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	59 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	52.0 feet
Centerline Dist. to Observer:	52.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.53%
Medium Trucks:	84.8%	4.9%	10.3%	2.32%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.113
Medium Trucks:	42.908
Heavy Trucks:	42.928

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.76	0.86	-1.20	-4.66	0.000	0.000
Medium Trucks:	79.45	-15.37	0.89	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-15.72	0.89	-1.20	-5.41	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.9	67.0	65.2	59.2	67.8	68.4
Medium Trucks:	63.8	62.3	55.9	54.4	62.8	63.0
Heavy Trucks:	68.2	66.8	57.8	59.0	67.4	67.5
Vehicle Noise:	72.2	70.6	66.3	62.8	71.3	71.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	63	136	293	631
CNEL:	67	144	310	668

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Santa Ana Av.
Road Segment: e/o Citrus Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,255 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	325 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.90%
Medium Trucks:	84.8%	4.9%	10.3%	2.13%
Heavy Trucks:	86.5%	2.7%	10.8%	1.97%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-6.38	1.42	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-22.91	1.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-23.26	1.46	-1.20	-5.47	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.4	58.5	56.7	50.6	59.3	59.9
Medium Trucks:	55.1	53.6	47.2	45.6	54.1	54.3
Heavy Trucks:	60.0	58.6	49.5	50.8	59.1	59.3
Vehicle Noise:	63.8	62.2	57.8	54.3	62.8	63.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	15	33	71	153
CNEL:	16	35	75	162

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Santa Ana Av.
Road Segment: e/o Juniper Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,293 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	729 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.76%
Medium Trucks:	84.8%	4.9%	10.3%	2.21%
Heavy Trucks:	86.5%	2.7%	10.8%	2.04%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-2.89	1.42	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-19.26	1.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-19.61	1.46	-1.20	-5.47	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.8	61.9	60.2	54.1	62.8	63.4
Medium Trucks:	58.7	57.2	50.8	49.3	57.8	58.0
Heavy Trucks:	63.6	62.2	53.2	54.4	62.8	62.9
Vehicle Noise:	67.4	65.8	61.4	57.9	66.4	66.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	27	57	123	265
CNEL:	28	60	130	280

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Santa Ana Av.
Road Segment: e/o Sierra Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,529 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	653 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	94.88%
Medium Trucks:	84.8%	4.9%	10.3%	2.41%
Heavy Trucks:	86.5%	2.7%	10.8%	2.71%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-3.41	1.42	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-19.36	1.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-18.84	1.46	-1.20	-5.47	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.3	61.4	59.7	53.6	62.2	62.8
Medium Trucks:	58.6	57.1	50.7	49.2	57.7	57.9
Heavy Trucks:	64.4	63.0	53.9	55.2	63.6	63.7
Vehicle Noise:	67.5	65.9	61.1	58.1	66.6	66.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	27	58	126	271
CNEL:	28	61	132	285

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Jurupa Av.
Road Segment: w/o Cherry Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,258 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,026 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	94.85%
Medium Trucks:	84.8%	4.9%	10.3%	2.45%
Heavy Trucks:	86.5%	2.7%	10.8%	2.70%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.00	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-14.89	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-14.45	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.8	66.9	65.2	59.1	67.7	68.4
Medium Trucks:	64.0	62.5	56.1	54.6	63.0	63.3
Heavy Trucks:	69.2	67.8	58.8	60.0	68.4	68.5
Vehicle Noise:	72.7	71.0	66.5	63.2	71.7	72.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	78	168	362	779
CNEL:	82	177	381	821

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Jurupa Av.
Road Segment: e/o Cherry Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,147 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,715 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	94.70%
Medium Trucks:	84.8%	4.9%	10.3%	2.47%
Heavy Trucks:	86.5%	2.7%	10.8%	2.83%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.27	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-15.57	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-14.98	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.1	66.2	64.4	58.4	67.0	67.6
Medium Trucks:	63.3	61.8	55.4	53.9	62.3	62.6
Heavy Trucks:	68.7	67.3	58.2	59.5	67.8	68.0
Vehicle Noise:	72.0	70.4	65.8	62.6	71.1	71.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	71	152	328	708
CNEL:	74	160	346	745

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Jurupa Av.
Road Segment: e/o Beech Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,756 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,776 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	94.69%
Medium Trucks:	84.8%	4.9%	10.3%	2.47%
Heavy Trucks:	86.5%	2.7%	10.8%	2.83%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.42	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-15.41	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-14.82	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.3	66.4	64.6	58.5	67.2	67.8
Medium Trucks:	63.5	61.9	55.6	54.0	62.5	62.7
Heavy Trucks:	68.8	67.4	58.4	59.6	68.0	68.1
Vehicle Noise:	72.2	70.6	65.9	62.8	71.2	71.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	72	156	336	725
CNEL:	76	164	354	763

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Jurupa Av.
Road Segment: e/o Poplar Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	19,349 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,935 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	94.71%
Medium Trucks:	84.8%	4.9%	10.3%	2.47%
Heavy Trucks:	86.5%	2.7%	10.8%	2.82%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.79	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-15.05	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-14.47	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.6	66.7	65.0	58.9	67.5	68.1
Medium Trucks:	63.8	62.3	55.9	54.4	62.9	63.1
Heavy Trucks:	69.2	67.8	58.7	60.0	68.3	68.5
Vehicle Noise:	72.6	70.9	66.3	63.1	71.6	71.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	77	165	356	766
CNEL:	81	174	374	807

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Jurupa Av.
Road Segment: e/o Citrus Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,678 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,768 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.49%
Medium Trucks:	84.8%	4.9%	10.3%	2.69%
Heavy Trucks:	86.5%	2.7%	10.8%	3.81%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.34	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-15.06	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-13.55	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.2	66.3	64.5	58.5	67.1	67.7
Medium Trucks:	63.8	62.3	55.9	54.4	62.8	63.1
Heavy Trucks:	70.1	68.7	59.7	60.9	69.3	69.4
Vehicle Noise:	72.8	71.3	66.2	63.4	71.9	72.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	80	173	373	803
CNEL:	84	181	390	841

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Jurupa Av.
Road Segment: e/o Oleander Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	18,602 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,860 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.59%
Medium Trucks:	84.8%	4.9%	10.3%	2.67%
Heavy Trucks:	86.5%	2.7%	10.8%	3.73%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.57	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-14.87	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-13.42	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.4	66.5	64.7	58.7	67.3	67.9
Medium Trucks:	64.0	62.5	56.1	54.6	63.0	63.3
Heavy Trucks:	70.2	68.8	59.8	61.0	69.4	69.5
Vehicle Noise:	73.0	71.4	66.4	63.6	72.1	72.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	82	177	382	824
CNEL:	86	186	401	863

Wednesday, June 05, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Jurupa Av.
Road Segment: e/o Cypress Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	19,928 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,993 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.55%
Medium Trucks:	84.8%	4.9%	10.3%	2.31%
Heavy Trucks:	86.5%	2.7%	10.8%	2.14%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.96	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-15.20	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-15.55	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.8	66.9	65.1	59.1	67.7	68.3
Medium Trucks:	63.7	62.2	55.8	54.2	62.7	62.9
Heavy Trucks:	68.1	66.7	57.7	58.9	67.3	67.4
Vehicle Noise:	72.1	70.5	66.3	62.7	71.2	71.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	72	155	333	718
CNEL:	76	163	352	759

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Jurupa Av.
Road Segment: e/o Juniper Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	18,937 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,894 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	94.21%
Medium Trucks:	84.8%	4.9%	10.3%	2.58%
Heavy Trucks:	86.5%	2.7%	10.8%	3.21%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	0.68	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-14.95	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-14.00	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.5	66.6	64.9	58.8	67.4	68.0
Medium Trucks:	63.9	62.4	56.0	54.5	63.0	63.2
Heavy Trucks:	69.7	68.2	59.2	60.5	68.8	68.9
Vehicle Noise:	72.7	71.1	66.3	63.3	71.8	72.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	79	170	367	790
CNEL:	83	179	385	830

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Armstrong Rd.
Road Segment: w/o Sierra Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,178 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,318 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.14%
Medium Trucks:	84.8%	4.9%	10.3%	2.40%
Heavy Trucks:	86.5%	2.7%	10.8%	2.46%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.60	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-14.38	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-14.29	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.2	66.3	64.6	58.5	67.1	67.7
Medium Trucks:	63.3	61.8	55.4	53.9	62.3	62.5
Heavy Trucks:	68.2	66.7	57.7	59.0	67.3	67.4
Vehicle Noise:	71.9	70.2	65.8	62.4	70.9	71.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	68	146	314	676
CNEL:	71	154	331	713

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Armstrong Rd.
Road Segment: w/o 34th St.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,653 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,065 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.24%
Medium Trucks:	84.8%	4.9%	10.3%	2.38%
Heavy Trucks:	86.5%	2.7%	10.8%	2.38%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.82	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-13.20	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-13.21	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.5	67.6	65.8	59.7	68.4	69.0
Medium Trucks:	64.4	62.9	56.6	55.0	63.5	63.7
Heavy Trucks:	69.2	67.8	58.8	60.0	68.4	68.5
Vehicle Noise:	73.0	71.4	67.0	63.6	72.0	72.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	81	174	375	807
CNEL:	85	184	395	852

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY Without Project
Road Name: Citrus Av.
Road Segment: s/o I-10 Ramps
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,009 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,201 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	3.02	-0.03	-1.20	-4.71	0.000	0.000
Medium Trucks:	79.45	-13.11	-0.01	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-13.46	-0.01	-1.20	-5.30	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.2	68.3	66.6	60.5	69.1	69.8
Medium Trucks:	65.1	63.6	57.3	55.7	64.2	64.4
Heavy Trucks:	69.6	68.2	59.1	60.4	68.7	68.9
Vehicle Noise:	73.6	72.0	67.7	64.1	72.6	73.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	99	213	458	987
CNEL:	104	225	485	1,044

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY Without Project
Road Name: Citrus Av.
Road Segment: s/o Slover Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	19,389 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,939 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	1.35	1.42	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-14.78	1.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-15.13	1.46	-1.20	-5.47	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.1	66.2	64.4	58.4	67.0	67.6
Medium Trucks:	63.2	61.7	55.3	53.8	62.2	62.5
Heavy Trucks:	68.1	66.7	57.7	58.9	67.3	67.4
Vehicle Noise:	71.8	70.1	65.7	62.3	70.8	71.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	52	112	241	520
CNEL:	55	118	254	548

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY Without Project | Project Name: Goodman III
Road Name: Citrus Av. | Job Number: 12384
Road Segment: s/o Santa Ana Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,528 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,453 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	0.10	1.42	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-16.03	1.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.38	1.46	-1.20	-5.47	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.8	64.9	63.2	57.1	65.7	66.3
Medium Trucks:	61.9	60.4	54.1	52.5	61.0	61.2
Heavy Trucks:	66.9	65.4	56.4	57.7	66.0	66.1
Vehicle Noise:	70.5	68.9	64.4	61.1	69.5	69.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	43	92	199	429
CNEL:	45	97	210	452

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY Without Project | Project Name: Goodman III
Road Name: Juniper Av. | Job Number: 12384
Road Segment: n/o Santa Ana Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,568 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	257 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	14 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	34.0 feet
Centerline Dist. to Observer:	34.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	33.645
Medium Trucks:	33.381
Heavy Trucks:	33.407

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-7.43	2.48	-1.20	-4.53	0.000	0.000
Medium Trucks:	77.72	-23.56	2.53	-1.20	-4.86	0.000	0.000
Heavy Trucks:	82.99	-23.91	2.52	-1.20	-5.67	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.4	58.5	56.7	50.6	59.3	59.9
Medium Trucks:	55.5	54.0	47.6	46.1	54.5	54.8
Heavy Trucks:	60.4	59.0	50.0	51.2	59.6	59.7
Vehicle Noise:	64.0	62.4	58.0	54.6	63.1	63.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	12	25	55	117
CNEL:	12	27	58	124

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY Without Project | Project Name: Goodman III
Road Name: Juniper Av. | Job Number: 12384
Road Segment: s/o Santa Ana Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,925 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	293 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	14 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	34.0 feet
Centerline Dist. to Observer:	34.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	33.645
Medium Trucks:	33.381
Heavy Trucks:	33.407

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-6.86	2.48	-1.20	-4.53	0.000	0.000
Medium Trucks:	77.72	-22.99	2.53	-1.20	-4.86	0.000	0.000
Heavy Trucks:	82.99	-23.34	2.52	-1.20	-5.67	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.9	59.0	57.3	51.2	59.8	60.4
Medium Trucks:	56.1	54.5	48.2	46.6	55.1	55.3
Heavy Trucks:	61.0	59.6	50.5	51.8	60.1	60.3
Vehicle Noise:	64.6	63.0	58.5	55.2	63.6	64.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	13	28	59	128
CNEL:	14	29	63	135

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY Without Project | Project Name: Goodman III
Road Name: Sierra Av. | Job Number: 12384
Road Segment: n/o Slover Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	62,368 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	6,237 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	6.42	-0.03	-1.20	-4.71	0.000	0.000
Medium Trucks:	77.72	-9.70	-0.01	-1.20	-4.88	0.000	0.000
Heavy Trucks:	82.99	-10.05	-0.01	-1.20	-5.30	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.7	69.8	68.0	62.0	70.6	71.2
Medium Trucks:	66.8	65.3	58.9	57.4	65.9	66.1
Heavy Trucks:	71.7	70.3	61.3	62.5	70.9	71.0
Vehicle Noise:	75.4	73.7	69.3	65.9	74.4	74.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	130	280	603	1,298
CNEL:	137	295	636	1,370

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY Without Project
Road Name: Sierra Av.
Road Segment: s/o Slover Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	40,332 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,033 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	3.56	-0.03	-1.20	-4.71	0.000	0.000
Medium Trucks:	81.00	-12.57	-0.01	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-12.91	-0.01	-1.20	-5.30	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.5	70.6	68.9	62.8	71.4	72.0
Medium Trucks:	67.2	65.7	59.4	57.8	66.3	66.5
Heavy Trucks:	71.3	69.8	60.8	62.0	70.4	70.5
Vehicle Noise:	75.6	74.0	69.9	66.1	74.6	75.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	135	290	625	1,346
CNEL:	143	307	662	1,427

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY Without Project
Road Name: Sierra Av.
Road Segment: s/o Santa Ana Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	37,429 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,743 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	3.24	-0.03	-1.20	-4.71	0.000	0.000
Medium Trucks:	81.00	-12.89	-0.01	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-13.24	-0.01	-1.20	-5.30	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.2	70.3	68.5	62.5	71.1	71.7
Medium Trucks:	66.9	65.4	59.0	57.5	66.0	66.2
Heavy Trucks:	70.9	69.5	60.5	61.7	70.1	70.2
Vehicle Noise:	75.3	73.6	69.6	65.8	74.3	74.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	128	276	595	1,281
CNEL:	136	292	630	1,357

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY Without Project
Road Name: Sierra Av.
Road Segment: s/o Jurupa Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,166 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,917 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	1.74	-0.03	-1.20	-4.71	0.000	0.000
Medium Trucks:	82.40	-14.39	-0.01	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-14.74	-0.01	-1.20	-5.30	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.3	70.4	68.6	62.6	71.2	71.8
Medium Trucks:	66.8	65.3	58.9	57.4	65.9	66.1
Heavy Trucks:	70.5	69.0	60.0	61.2	69.6	69.7
Vehicle Noise:	75.2	73.5	69.6	65.7	74.2	74.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	125	270	581	1,252
CNEL:	133	286	617	1,329

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY Without Project
Road Name: Slover Av.
Road Segment: w/o Sierra Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,939 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,394 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	59 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	52.0 feet
Centerline Dist. to Observer:	52.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.113
Medium Trucks:	42.908
Heavy Trucks:	42.928

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.75	0.86	-1.20	-4.66	0.000	0.000
Medium Trucks:	79.45	-14.37	0.89	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-14.72	0.89	-1.20	-5.41	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.9	68.0	66.2	60.2	68.8	69.4
Medium Trucks:	64.8	63.3	56.9	55.4	63.8	64.0
Heavy Trucks:	69.2	67.8	58.8	60.0	68.4	68.5
Vehicle Noise:	73.2	71.6	67.3	63.8	72.3	72.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	74	158	341	736
CNEL:	78	168	361	778

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY Without Project
Road Name: Santa Ana Av.
Road Segment: e/o Citrus Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,143 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	814 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-2.42	1.42	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-18.54	1.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-18.89	1.46	-1.20	-5.47	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.3	62.4	60.7	54.6	63.2	63.8
Medium Trucks:	59.4	57.9	51.6	50.0	58.5	58.7
Heavy Trucks:	64.4	62.9	53.9	55.1	63.5	63.6
Vehicle Noise:	68.0	66.4	61.9	58.5	67.0	67.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	29	63	135	291
CNEL:	31	66	143	307

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY Without Project
Road Name: Santa Ana Av.
Road Segment: e/o Juniper Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,082 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,108 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-1.08	1.42	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-17.21	1.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-17.56	1.46	-1.20	-5.47	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.7	63.8	62.0	55.9	64.6	65.2
Medium Trucks:	60.8	59.3	52.9	51.4	59.8	60.0
Heavy Trucks:	65.7	64.3	55.2	56.5	64.8	65.0
Vehicle Noise:	69.3	67.7	63.2	59.9	68.4	68.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	36	77	166	358
CNEL:	38	81	175	377

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY Without Project
Road Name: Santa Ana Av.
Road Segment: e/o Sierra Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,608 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	761 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-2.71	1.42	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-18.84	1.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-19.19	1.46	-1.20	-5.47	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.0	62.1	60.4	54.3	62.9	63.5
Medium Trucks:	59.1	57.6	51.3	49.7	58.2	58.4
Heavy Trucks:	64.1	62.6	53.6	54.9	63.2	63.3
Vehicle Noise:	67.7	66.1	61.6	58.3	66.7	67.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	28	60	129	279
CNEL:	29	63	136	294

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY Without Project
Road Name: Jurupa Av.
Road Segment: w/o Cherry Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,415 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,642 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.18	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-13.95	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-14.29	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.0	68.1	66.4	60.3	68.9	69.5
Medium Trucks:	64.9	63.4	57.0	55.5	64.0	64.2
Heavy Trucks:	69.4	67.9	58.9	60.2	68.5	68.6
Vehicle Noise:	73.4	71.7	67.5	63.9	72.4	72.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	87	187	403	868
CNEL:	92	198	426	918

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY Without Project
Road Name: Jurupa Av.
Road Segment: e/o Cherry Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,104 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,310 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.60	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-14.53	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-14.88	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.4	67.5	65.8	59.7	68.3	69.0
Medium Trucks:	64.3	62.8	56.5	54.9	63.4	63.6
Heavy Trucks:	68.8	67.4	58.3	59.6	67.9	68.1
Vehicle Noise:	72.8	71.2	66.9	63.3	71.8	72.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	79	171	369	794
CNEL:	84	181	390	839

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY Without Project
Road Name: Jurupa Av.
Road Segment: e/o Beech Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	22,807 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,281 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.54	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-14.58	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-14.93	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.4	67.5	65.7	59.7	68.3	68.9
Medium Trucks:	64.3	62.8	56.4	54.9	63.3	63.6
Heavy Trucks:	68.7	67.3	58.3	59.5	67.9	68.0
Vehicle Noise:	72.7	71.1	66.9	63.3	71.8	72.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	79	170	365	787
CNEL:	83	179	386	832

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY Without Project
Road Name: Jurupa Av.
Road Segment: e/o Poplar Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,624 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,462 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.88	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-14.25	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-14.60	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.7	67.8	66.1	60.0	68.6	69.2
Medium Trucks:	64.6	63.1	56.7	55.2	63.7	63.9
Heavy Trucks:	69.1	67.6	58.6	59.9	68.2	68.3
Vehicle Noise:	73.1	71.4	67.2	63.6	72.1	72.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	83	178	385	828
CNEL:	88	189	407	876

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY Without Project
Road Name: Jurupa Av.
Road Segment: e/o Citrus Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,399 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,040 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.06	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-15.07	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-15.42	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.9	67.0	65.2	59.2	67.8	68.4
Medium Trucks:	63.8	62.3	55.9	54.4	62.8	63.1
Heavy Trucks:	68.2	66.8	57.8	59.0	67.4	67.5
Vehicle Noise:	72.3	70.6	66.4	62.8	71.3	71.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	73	157	339	731
CNEL:	77	166	359	773

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY Without Project
Road Name: Jurupa Av.
Road Segment: e/o Oleander Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,774 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,077 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.14	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-14.99	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-15.34	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.0	67.1	65.3	59.3	67.9	68.5
Medium Trucks:	63.9	62.4	56.0	54.5	62.9	63.2
Heavy Trucks:	68.3	66.9	57.9	59.1	67.5	67.6
Vehicle Noise:	72.3	70.7	66.4	62.9	71.4	71.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	74	159	343	740
CNEL:	78	168	363	782

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY Without Project
Road Name: Jurupa Av.
Road Segment: e/o Cypress Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,022 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,302 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.58	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-14.54	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-14.89	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.4	67.5	65.8	59.7	68.3	68.9
Medium Trucks:	64.3	62.8	56.4	54.9	63.4	63.6
Heavy Trucks:	68.8	67.3	58.3	59.6	67.9	68.0
Vehicle Noise:	72.8	71.1	66.9	63.3	71.8	72.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	79	171	368	792
CNEL:	84	180	389	837

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY Without Project
Road Name: Jurupa Av.
Road Segment: e/o Juniper Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,640 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,164 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.32	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-14.81	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-15.16	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.2	67.3	65.5	59.4	68.1	68.7
Medium Trucks:	64.0	62.5	56.2	54.6	63.1	63.3
Heavy Trucks:	68.5	67.1	58.0	59.3	67.6	67.8
Vehicle Noise:	72.5	70.9	66.6	63.1	71.5	71.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	76	164	353	760
CNEL:	80	173	373	804

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY Without Project
Road Name: Armstrong Rd.
Road Segment: w/o Sierra Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,766 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,777 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.40	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-13.73	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-14.08	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.0	67.1	65.4	59.3	67.9	68.5
Medium Trucks:	63.9	62.4	56.1	54.5	63.0	63.2
Heavy Trucks:	68.4	67.0	57.9	59.2	67.5	67.6
Vehicle Noise:	72.4	70.7	66.5	62.9	71.4	71.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	73	158	340	733
CNEL:	78	167	360	775

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY Without Project | Project Name: Goodman III
Road Name: Armstrong Rd. | Job Number: 12384
Road Segment: w/o 34th St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	39,977 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,998 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	3.98	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-12.15	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-12.50	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.6	68.7	67.0	60.9	69.5	70.1
Medium Trucks:	65.5	64.0	57.6	56.1	64.5	64.8
Heavy Trucks:	70.0	68.5	59.5	60.7	69.1	69.2
Vehicle Noise:	74.0	72.3	68.1	64.5	73.0	73.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	93	201	434	935
CNEL:	99	213	459	988

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY With Project | Project Name: Goodman III
Road Name: Citrus Av. | Job Number: 12384
Road Segment: s/o I-10 Ramps

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,498 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,250 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.14%
Medium Trucks:	84.8%	4.9%	10.3%	2.39%
Heavy Trucks:	86.5%	2.7%	10.8%	2.47%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	3.06	-0.03	-1.20	-4.71	0.000	0.000
Medium Trucks:	79.45	-12.94	-0.01	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-12.79	-0.01	-1.20	-5.30	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.3	68.4	66.6	60.6	69.2	69.8
Medium Trucks:	65.3	63.8	57.4	55.9	64.3	64.6
Heavy Trucks:	70.2	68.8	59.8	61.0	69.4	69.5
Vehicle Noise:	73.9	72.3	67.9	64.5	73.0	73.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	104	224	482	1,038
CNEL:	110	236	508	1,096

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY With Project | Project Name: Goodman III
Road Name: Citrus Av. | Job Number: 12384
Road Segment: s/o Slover Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	19,960 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,996 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	94.72%
Medium Trucks:	84.8%	4.9%	10.3%	2.46%
Heavy Trucks:	86.5%	2.7%	10.8%	2.82%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	1.44	1.42	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-14.42	1.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-13.82	1.46	-1.20	-5.47	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.2	66.3	64.5	58.5	67.1	67.7
Medium Trucks:	63.6	62.0	55.7	54.1	62.6	62.8
Heavy Trucks:	69.4	68.0	59.0	60.2	68.6	68.7
Vehicle Noise:	72.5	70.9	66.0	63.0	71.5	71.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	58	125	269	579
CNEL:	61	131	282	608

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY With Project | Project Name: Goodman III
Road Name: Citrus Av. | Job Number: 12384
Road Segment: s/o Santa Ana Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,884 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,488 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	94.16%
Medium Trucks:	84.8%	4.9%	10.3%	2.58%
Heavy Trucks:	86.5%	2.7%	10.8%	3.25%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	0.14	1.42	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-15.48	1.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-14.47	1.46	-1.20	-5.47	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.9	65.0	63.2	57.2	65.8	66.4
Medium Trucks:	62.5	61.0	54.6	53.1	61.5	61.8
Heavy Trucks:	68.8	67.4	58.3	59.6	67.9	68.0
Vehicle Noise:	71.5	69.9	64.9	62.1	70.6	70.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	50	108	233	502
CNEL:	53	113	244	526

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY With Project
Road Name: Juniper Av.
Road Segment: n/o Santa Ana Av.

Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,775 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	277 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	14 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	34.0 feet
Centerline Dist. to Observer:	34.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	95.85%
Medium Trucks:	84.8%	4.9%	10.3%	2.16%
Heavy Trucks:	86.5%	2.7%	10.8%	1.99%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	33.645
Medium Trucks:	33.381
Heavy Trucks:	33.407

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-7.08	2.48	-1.20	*-4.53*	0.000	0.000
Medium Trucks:	77.72	-23.56	2.53	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	82.99	-23.91	2.52	-1.20	*-5.67*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.7	58.8	57.0	51.0	59.6	60.2
Medium Trucks:	55.5	54.0	47.6	46.1	54.5	54.8
Heavy Trucks:	60.4	59.0	50.0	51.2	59.6	59.7
Vehicle Noise:	64.2	62.6	58.2	54.7	63.2	63.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	12	26	56	120
CNEL:	13	27	59	127

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY With Project
Road Name: Juniper Av.
Road Segment: s/o Santa Ana Av.

Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,518 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	352 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	14 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	34.0 feet
Centerline Dist. to Observer:	34.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	96.27%
Medium Trucks:	84.8%	4.9%	10.3%	1.94%
Heavy Trucks:	86.5%	2.7%	10.8%	1.79%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	33.645
Medium Trucks:	33.381
Heavy Trucks:	33.407

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-6.03	2.48	-1.20	*-4.53*	0.000	0.000
Medium Trucks:	77.72	-22.99	2.53	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	82.99	-23.34	2.52	-1.20	*-5.67*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.8	59.9	58.1	52.0	60.7	61.3
Medium Trucks:	56.1	54.5	48.2	46.6	55.1	55.3
Heavy Trucks:	61.0	59.6	50.5	51.8	60.1	60.3
Vehicle Noise:	65.0	63.3	59.2	55.5	64.0	64.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	14	29	63	136
CNEL:	14	31	67	143

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY With Project
Road Name: Sierra Av.
Road Segment: n/o Slover Av.

Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	62,790 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	6,279 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	95.36%
Medium Trucks:	84.8%	4.9%	10.3%	2.35%
Heavy Trucks:	86.5%	2.7%	10.8%	2.29%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	6.45	-0.03	-1.20	*-4.71*	0.000	0.000
Medium Trucks:	77.72	-9.63	-0.01	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-9.76	-0.01	-1.20	*-5.30*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.7	69.8	68.1	62.0	70.6	71.2
Medium Trucks:	66.9	65.4	59.0	57.5	65.9	66.2
Heavy Trucks:	72.0	70.6	61.6	62.8	71.2	71.3
Vehicle Noise:	75.5	73.9	69.4	66.1	74.6	74.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	133	286	617	1,329
CNEL:	140	302	650	1,401

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY With Project
Road Name: Sierra Av.
Road Segment: s/o Slover Av.

Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	40,658 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,066 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	95.26%
Medium Trucks:	84.8%	4.9%	10.3%	2.37%
Heavy Trucks:	86.5%	2.7%	10.8%	2.36%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	3.59	-0.03	-1.20	*-4.71*	0.000	0.000
Medium Trucks:	81.00	-12.45	-0.01	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-12.47	-0.01	-1.20	*-5.30*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	72.6	70.7	68.9	62.8	71.5	72.1
Medium Trucks:	67.3	65.8	59.5	57.9	66.4	66.6
Heavy Trucks:	71.7	70.3	61.2	62.5	70.8	71.0
Vehicle Noise:	75.8	74.2	70.0	66.4	74.8	75.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	139	299	644	1,388
CNEL:	147	316	682	1,469

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY With Project
Road Name: Sierra Av.
Road Segment: s/o Santa Ana Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	37,614 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,761 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.09%
Medium Trucks:	84.8%	4.9%	10.3%	2.41%
Heavy Trucks:	86.5%	2.7%	10.8%	2.50%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	3.24	-0.03	-1.20	-4.71	0.000	0.000
Medium Trucks:	81.00	-12.71	-0.01	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-12.57	-0.01	-1.20	-5.30	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.2	70.3	68.5	62.5	71.1	71.7
Medium Trucks:	67.1	65.6	59.2	57.7	66.1	66.4
Heavy Trucks:	71.6	70.2	61.1	62.4	70.8	70.9
Vehicle Noise:	75.6	73.9	69.7	66.1	74.6	75.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	134	289	622	1,339
CNEL:	142	305	657	1,416

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY With Project
Road Name: Sierra Av.
Road Segment: s/o Jurupa Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,272 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,927 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.22%
Medium Trucks:	84.8%	4.9%	10.3%	2.39%
Heavy Trucks:	86.5%	2.7%	10.8%	2.39%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	1.74	-0.03	-1.20	-4.71	0.000	0.000
Medium Trucks:	82.40	-14.27	-0.01	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-14.26	-0.01	-1.20	-5.30	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.3	70.4	68.6	62.6	71.2	71.8
Medium Trucks:	66.9	65.4	59.1	57.5	66.0	66.2
Heavy Trucks:	70.9	69.5	60.5	61.7	70.1	70.2
Vehicle Noise:	75.3	73.7	69.6	65.9	74.4	74.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	129	278	598	1,289
CNEL:	137	294	634	1,367

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY With Project
Road Name: Slover Av.
Road Segment: w/o Sierra Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,980 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,398 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	59 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	52.0 feet
Centerline Dist. to Observer:	52.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.53%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.113
Medium Trucks:	42.908
Heavy Trucks:	42.928

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.76	0.86	-1.20	-4.66	0.000	0.000
Medium Trucks:	79.45	-14.37	0.89	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-14.72	0.89	-1.20	-5.41	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.9	68.0	66.2	60.2	68.8	69.4
Medium Trucks:	64.8	63.3	56.9	55.4	63.8	64.0
Heavy Trucks:	69.2	67.8	58.8	60.0	68.4	68.5
Vehicle Noise:	73.2	71.6	67.3	63.8	72.3	72.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	74	159	342	736
CNEL:	78	168	361	778

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY With Project
Road Name: Santa Ana Av.
Road Segment: e/o Citrus Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,419 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	842 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.67%
Medium Trucks:	84.8%	4.9%	10.3%	2.25%
Heavy Trucks:	86.5%	2.7%	10.8%	2.08%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-2.27	1.42	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-18.54	1.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-18.89	1.46	-1.20	-5.47	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.5	62.6	60.8	54.7	63.4	64.0
Medium Trucks:	59.4	57.9	51.6	50.0	58.5	58.7
Heavy Trucks:	64.4	62.9	53.9	55.1	63.5	63.6
Vehicle Noise:	68.1	66.4	62.0	58.6	67.1	67.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	29	63	137	294
CNEL:	31	67	144	311

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY With Project
Road Name: Santa Ana Av.
Road Segment: e/o Juniper Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,468 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,147 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	95.67%
Medium Trucks:	84.8%	4.9%	10.3%	2.25%
Heavy Trucks:	86.5%	2.7%	10.8%	2.08%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-0.92	1.42	-1.20	*-4.63*	0.000	0.000
Medium Trucks:	77.72	-17.21	1.46	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	82.99	-17.56	1.46	-1.20	*-5.47*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.8	63.9	62.1	56.1	64.7	65.3
Medium Trucks:	60.8	59.3	52.9	51.4	59.8	60.0
Heavy Trucks:	65.7	64.3	55.2	56.5	64.8	65.0
Vehicle Noise:	69.4	67.8	63.4	59.9	68.4	68.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	36	78	168	362
CNEL:	38	82	177	382

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY With Project
Road Name: Santa Ana Av.
Road Segment: e/o Sierra Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,854 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	785 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	94.99%
Medium Trucks:	84.8%	4.9%	10.3%	2.40%
Heavy Trucks:	86.5%	2.7%	10.8%	2.62%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-2.60	1.42	-1.20	*-4.63*	0.000	0.000
Medium Trucks:	77.72	-18.58	1.46	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	82.99	-18.20	1.46	-1.20	*-5.47*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.1	62.2	60.5	54.4	63.0	63.6
Medium Trucks:	59.4	57.9	51.5	50.0	58.4	58.7
Heavy Trucks:	65.1	63.6	54.6	55.8	64.2	64.3
Vehicle Noise:	68.2	66.6	61.9	58.8	67.3	67.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	30	65	141	303
CNEL:	32	69	148	318

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY With Project
Road Name: Jurupa Av.
Road Segment: w/o Cherry Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,787 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,679 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	95.01%
Medium Trucks:	84.8%	4.9%	10.3%	2.42%
Heavy Trucks:	86.5%	2.7%	10.8%	2.57%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	2.22	0.58	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	79.45	-13.73	0.61	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-13.46	0.61	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.1	68.2	66.4	60.3	69.0	69.6
Medium Trucks:	65.1	63.6	57.3	55.7	64.2	64.4
Heavy Trucks:	70.2	68.8	59.7	61.0	69.3	69.5
Vehicle Noise:	73.8	72.1	67.7	64.3	72.8	73.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	92	199	429	924
CNEL:	97	210	452	974

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY With Project
Road Name: Jurupa Av.
Road Segment: e/o Cherry Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,496 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,350 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	94.92%
Medium Trucks:	84.8%	4.9%	10.3%	2.43%
Heavy Trucks:	86.5%	2.7%	10.8%	2.65%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	1.65	0.58	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	79.45	-14.27	0.61	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-13.90	0.61	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.5	67.6	65.8	59.8	68.4	69.0
Medium Trucks:	64.6	63.1	56.7	55.2	63.6	63.9
Heavy Trucks:	69.8	68.3	59.3	60.6	68.9	69.0
Vehicle Noise:	73.3	71.6	67.1	63.8	72.3	72.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	85	184	397	854
CNEL:	90	194	418	900

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY With Project
Road Name: Jurupa Av.
Road Segment: e/o Beech Av.

Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,206 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,321 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	94.89%
Medium Trucks:	84.8%	4.9%	10.3%	2.44%
Heavy Trucks:	86.5%	2.7%	10.8%	2.67%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.59	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-14.31	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-13.91	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.4	67.5	65.8	59.7	68.3	68.9
Medium Trucks:	64.6	63.0	56.7	55.1	63.6	63.8
Heavy Trucks:	69.8	68.3	59.3	60.5	68.9	69.0
Vehicle Noise:	73.2	71.6	67.1	63.8	72.3	72.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	85	183	395	850
CNEL:	90	193	416	896

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY With Project
Road Name: Jurupa Av.
Road Segment: e/o Poplar Av.

Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,090 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,509 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	94.90%
Medium Trucks:	84.8%	4.9%	10.3%	2.43%
Heavy Trucks:	86.5%	2.7%	10.8%	2.67%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.93	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-13.98	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-13.58	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.8	67.9	66.1	60.1	68.7	69.3
Medium Trucks:	64.9	63.4	57.0	55.5	63.9	64.2
Heavy Trucks:	70.1	68.7	59.6	60.9	69.2	69.4
Vehicle Noise:	73.6	71.9	67.4	64.1	72.6	72.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	89	193	415	895
CNEL:	94	203	438	943

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY With Project
Road Name: Jurupa Av.
Road Segment: e/o Citrus Av.

Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,221 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,122 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.83%
Medium Trucks:	84.8%	4.9%	10.3%	2.63%
Heavy Trucks:	86.5%	2.7%	10.8%	3.54%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.15	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-14.37	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-13.08	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.0	67.1	65.3	59.3	67.9	68.5
Medium Trucks:	64.5	63.0	56.6	55.1	63.5	63.8
Heavy Trucks:	70.6	69.2	60.1	61.4	69.7	69.9
Vehicle Noise:	73.5	71.9	66.9	64.0	72.5	72.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	88	190	409	882
CNEL:	92	199	429	925

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY With Project
Road Name: Jurupa Av.
Road Segment: e/o Oleander Av.

Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,596 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,160 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.86%
Medium Trucks:	84.8%	4.9%	10.3%	2.63%
Heavy Trucks:	86.5%	2.7%	10.8%	3.51%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.23	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-14.30	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-13.04	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.1	67.2	65.4	59.4	68.0	68.6
Medium Trucks:	64.6	63.1	56.7	55.1	63.6	63.8
Heavy Trucks:	70.6	69.2	60.2	61.4	69.8	69.9
Vehicle Noise:	73.5	71.9	67.0	64.1	72.6	72.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	89	192	413	890
CNEL:	93	201	433	933

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY With Project
Road Name: Jurupa Av.
Road Segment: e/o Cypress Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,160 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,316 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.55%
Medium Trucks:	84.8%	4.9%	10.3%	2.32%
Heavy Trucks:	86.5%	2.7%	10.8%	2.14%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.61	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-14.54	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-14.89	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.5	67.6	65.8	59.7	68.4	69.0
Medium Trucks:	64.3	62.8	56.4	54.9	63.4	63.6
Heavy Trucks:	68.8	67.3	58.3	59.6	67.9	68.0
Vehicle Noise:	72.8	71.2	66.9	63.3	71.8	72.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	79	171	368	794
CNEL:	84	181	389	839

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY With Project
Road Name: Jurupa Av.
Road Segment: e/o Juniper Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,972 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,197 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	94.39%
Medium Trucks:	84.8%	4.9%	10.3%	2.55%
Heavy Trucks:	86.5%	2.7%	10.8%	3.06%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.33	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-14.36	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-13.56	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.2	67.3	65.5	59.5	68.1	68.7
Medium Trucks:	64.5	63.0	56.6	55.1	63.5	63.8
Heavy Trucks:	70.1	68.7	59.6	60.9	69.3	69.4
Vehicle Noise:	73.3	71.7	66.9	63.9	72.3	72.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	86	185	398	858
CNEL:	90	194	419	902

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY With Project
Road Name: Armstrong Rd.
Road Segment: w/o Sierra Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,872 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,787 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.21%
Medium Trucks:	84.8%	4.9%	10.3%	2.39%
Heavy Trucks:	86.5%	2.7%	10.8%	2.40%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.40	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-13.60	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-13.58	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.0	67.1	65.4	59.3	67.9	68.5
Medium Trucks:	64.0	62.5	56.2	54.6	63.1	63.3
Heavy Trucks:	68.9	67.5	58.4	59.7	68.0	68.1
Vehicle Noise:	72.6	71.0	66.6	63.2	71.6	72.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	76	164	353	759
CNEL:	80	173	372	802

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY With Project
Road Name: Armstrong Rd.
Road Segment: w/o 34th St.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	40,083 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,008 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.30%
Medium Trucks:	84.8%	4.9%	10.3%	2.37%
Heavy Trucks:	86.5%	2.7%	10.8%	2.33%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	3.98	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-12.06	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-12.14	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.6	68.7	67.0	60.9	69.5	70.1
Medium Trucks:	65.6	64.1	57.7	56.2	64.6	64.9
Heavy Trucks:	70.3	68.9	59.9	61.1	69.5	69.6
Vehicle Noise:	74.1	72.5	68.1	64.7	73.2	73.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	96	206	445	958
CNEL:	101	218	470	1,012

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY Without Project
Road Name: Citrus Av.
Road Segment: s/o I-10 Ramps
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	35,210 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,521 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	3.43	-0.03	-1.20	-4.71	0.000	0.000
Medium Trucks:	79.45	-12.70	-0.01	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-13.05	-0.01	-1.20	-5.30	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.7	68.8	67.0	60.9	69.6	70.2
Medium Trucks:	65.5	64.0	57.7	56.1	64.6	64.8
Heavy Trucks:	70.0	68.6	59.5	60.8	69.1	69.3
Vehicle Noise:	74.0	72.4	68.1	64.5	73.0	73.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	105	227	488	1,052
CNEL:	111	240	516	1,112

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY Without Project
Road Name: Citrus Av.
Road Segment: s/o Slover Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,328 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,133 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	1.76	1.42	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-14.36	1.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-14.71	1.46	-1.20	-5.47	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.5	66.6	64.8	58.8	67.4	68.0
Medium Trucks:	63.6	62.1	55.7	54.2	62.7	62.9
Heavy Trucks:	68.5	67.1	58.1	59.3	67.7	67.8
Vehicle Noise:	72.2	70.5	66.1	62.7	71.2	71.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	55	119	257	554
CNEL:	58	126	271	584

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY Without Project
Road Name: Citrus Av.
Road Segment: s/o Santa Ana Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,981 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,598 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	0.51	1.42	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-15.62	1.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-15.97	1.46	-1.20	-5.47	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.2	65.3	63.6	57.5	66.1	66.8
Medium Trucks:	62.4	60.9	54.5	52.9	61.4	61.6
Heavy Trucks:	67.3	65.9	56.8	58.1	66.4	66.6
Vehicle Noise:	70.9	69.3	64.8	61.5	70.0	70.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	46	98	212	457
CNEL:	48	104	224	482

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY Without Project
Road Name: Juniper Av.
Road Segment: n/o Santa Ana Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,825 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	283 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	14 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	34.0 feet
Centerline Dist. to Observer:	34.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	33.645
Medium Trucks:	33.381
Heavy Trucks:	33.407

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-7.01	2.48	-1.20	-4.53	0.000	0.000
Medium Trucks:	77.72	-23.14	2.53	-1.20	-4.86	0.000	0.000
Heavy Trucks:	82.99	-23.49	2.52	-1.20	-5.67	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.8	58.9	57.1	51.1	59.7	60.3
Medium Trucks:	55.9	54.4	48.0	46.5	54.9	55.2
Heavy Trucks:	60.8	59.4	50.4	51.6	60.0	60.1
Vehicle Noise:	64.5	62.8	58.4	55.0	63.5	63.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	13	27	58	125
CNEL:	13	28	61	132

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY Without Project
Road Name: Juniper Av.
Road Segment: s/o Santa Ana Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,289 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	329 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	14 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	34.0 feet
Centerline Dist. to Observer:	34.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	33.645
Medium Trucks:	33.381
Heavy Trucks:	33.407

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-6.35	2.48	-1.20	-4.53	0.000	0.000
Medium Trucks:	77.72	-22.48	2.53	-1.20	-4.86	0.000	0.000
Heavy Trucks:	82.99	-22.83	2.52	-1.20	-5.67	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.4	59.5	57.8	51.7	60.3	60.9
Medium Trucks:	56.6	55.1	48.7	47.1	55.6	55.8
Heavy Trucks:	61.5	60.1	51.0	52.3	60.6	60.8
Vehicle Noise:	65.1	63.5	59.0	55.7	64.2	64.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	14	30	64	139
CNEL:	15	31	68	146

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY Without Project
Road Name: Sierra Av.
Road Segment: n/o Slover Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	68,605 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	6,861 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	6.84	-0.03	-1.20	-4.71	0.000	0.000
Medium Trucks:	77.72	-9.29	-0.01	-1.20	-4.88	0.000	0.000
Heavy Trucks:	82.99	-9.64	-0.01	-1.20	-5.30	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.1	70.2	68.5	62.4	71.0	71.6
Medium Trucks:	67.2	65.7	59.3	57.8	66.3	66.5
Heavy Trucks:	72.1	70.7	61.7	62.9	71.3	71.4
Vehicle Noise:	75.8	74.2	69.7	66.3	74.8	75.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	138	298	642	1,384
CNEL:	146	314	677	1,459

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY Without Project
Road Name: Sierra Av.
Road Segment: s/o Slover Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	44,365 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,437 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	3.98	-0.03	-1.20	-4.71	0.000	0.000
Medium Trucks:	81.00	-12.15	-0.01	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-12.50	-0.01	-1.20	-5.30	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.9	71.1	69.3	63.2	71.9	72.5
Medium Trucks:	67.6	66.1	59.8	58.2	66.7	66.9
Heavy Trucks:	71.7	70.2	61.2	62.5	70.8	70.9
Vehicle Noise:	76.0	74.4	70.3	66.6	75.1	75.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	143	309	666	1,435
CNEL:	152	327	706	1,520

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY Without Project
Road Name: Sierra Av.
Road Segment: s/o Santa Ana Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	41,172 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,117 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	3.65	-0.03	-1.20	-4.71	0.000	0.000
Medium Trucks:	81.00	-12.48	-0.01	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-12.82	-0.01	-1.20	-5.30	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.6	70.7	69.0	62.9	71.5	72.1
Medium Trucks:	67.3	65.8	59.4	57.9	66.4	66.6
Heavy Trucks:	71.3	69.9	60.9	62.1	70.5	70.6
Vehicle Noise:	75.7	74.1	70.0	66.2	74.7	75.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	136	294	634	1,365
CNEL:	145	312	671	1,446

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY Without Project | Project Name: Goodman III
Road Name: Sierra Av. | Job Number: 12384
Road Segment: s/o Jurupa Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	37,879 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,788 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	2.88	-0.03	-1.20	-4.71	0.000	0.000
Medium Trucks:	82.40	-13.25	-0.01	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-13.60	-0.01	-1.20	-5.30	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	73.4	71.5	69.8	63.7	72.3	72.9
Medium Trucks:	67.9	66.4	60.1	58.5	67.0	67.2
Heavy Trucks:	71.6	70.2	61.1	62.4	70.7	70.9
Vehicle Noise:	76.3	74.6	70.7	66.8	75.3	75.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	149	321	692	1,490
CNEL:	158	341	734	1,582

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY Without Project | Project Name: Goodman III
Road Name: Slover Av. | Job Number: 12384
Road Segment: w/o Sierra Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,333 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,633 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	59 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	52.0 feet
Centerline Dist. to Observer:	52.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.113
Medium Trucks:	42.908
Heavy Trucks:	42.928

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.17	0.86	-1.20	-4.66	0.000	0.000
Medium Trucks:	79.45	-13.96	0.89	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-14.31	0.89	-1.20	-5.41	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.3	68.4	66.6	60.6	69.2	69.8
Medium Trucks:	65.2	63.7	57.3	55.8	64.2	64.5
Heavy Trucks:	69.6	68.2	59.2	60.4	68.8	68.9
Vehicle Noise:	73.7	72.0	67.8	64.2	72.7	73.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	78	169	364	784
CNEL:	83	179	385	829

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY Without Project | Project Name: Goodman III
Road Name: Santa Ana Av. | Job Number: 12384
Road Segment: e/o Citrus Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,957 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	896 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-2.00	1.42	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-18.13	1.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-18.48	1.46	-1.20	-5.47	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.7	62.8	61.1	55.0	63.6	64.2
Medium Trucks:	59.8	58.3	52.0	50.4	58.9	59.1
Heavy Trucks:	64.8	63.3	54.3	55.6	63.9	64.0
Vehicle Noise:	68.4	66.8	62.3	59.0	67.4	67.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	31	67	144	311
CNEL:	33	71	152	328

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY Without Project | Project Name: Goodman III
Road Name: Santa Ana Av. | Job Number: 12384
Road Segment: e/o Juniper Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,191 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,219 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-0.66	1.42	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-16.79	1.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-17.14	1.46	-1.20	-5.47	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.1	64.2	62.4	56.3	65.0	65.6
Medium Trucks:	61.2	59.7	53.3	51.8	60.2	60.5
Heavy Trucks:	66.1	64.7	55.7	56.9	65.3	65.4
Vehicle Noise:	69.7	68.1	63.7	60.3	68.8	69.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	38	82	177	381
CNEL:	40	87	187	402

Wednesday, June 05, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY Without Project | Project Name: Goodman III
Road Name: Santa Ana Av. | Job Number: 12384
Road Segment: e/o Sierra Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,368 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	837 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-2.30	1.42	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-18.43	1.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-18.78	1.46	-1.20	-5.47	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.4	62.5	60.8	54.7	63.3	63.9
Medium Trucks:	59.5	58.0	51.7	50.1	58.6	58.8
Heavy Trucks:	64.5	63.1	54.0	55.3	63.6	63.7
Vehicle Noise:	68.1	66.5	62.0	58.7	67.1	67.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	30	64	138	297
CNEL:	31	67	145	313

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY Without Project | Project Name: Goodman III
Road Name: Jurupa Av. | Job Number: 12384
Road Segment: w/o Cherry Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,057 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,906 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.60	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-13.53	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-13.88	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.4	68.5	66.8	60.7	69.3	69.9
Medium Trucks:	65.3	63.8	57.5	55.9	64.4	64.6
Heavy Trucks:	69.8	68.4	59.3	60.6	68.9	69.1
Vehicle Noise:	73.8	72.2	67.9	64.3	72.8	73.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	93	199	429	925
CNEL:	98	211	454	978

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY Without Project | Project Name: Goodman III
Road Name: Jurupa Av. | Job Number: 12384
Road Segment: e/o Cherry Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,414 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,541 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.01	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-14.11	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-14.46	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.9	68.0	66.2	60.1	68.8	69.4
Medium Trucks:	64.7	63.2	56.9	55.3	63.8	64.0
Heavy Trucks:	69.2	67.8	58.7	60.0	68.3	68.5
Vehicle Noise:	73.2	71.6	67.3	63.8	72.2	72.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	85	182	393	846
CNEL:	89	193	415	895

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY Without Project | Project Name: Goodman III
Road Name: Jurupa Av. | Job Number: 12384
Road Segment: e/o Beech Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,087 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,509 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.96	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-14.17	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-14.52	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.8	67.9	66.1	60.1	68.7	69.3
Medium Trucks:	64.7	63.2	56.8	55.3	63.7	64.0
Heavy Trucks:	69.1	67.7	58.7	59.9	68.3	68.4
Vehicle Noise:	73.2	71.5	67.3	63.7	72.2	72.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	84	181	389	839
CNEL:	89	191	412	887

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY Without Project
Road Name: Jurupa Av.
Road Segment: e/o Poplar Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	27,087 vehicles	*Autos:*	15
Peak Hour Percentage:	10%	*Medium Trucks (2 Axles):*	15
Peak Hour Volume:	2,709 vehicles	*Heavy Trucks (3+ Axles):*	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	80 feet		

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Site Data		***Noise Source Elevations (in feet)***		
Barrier Height:	**0.0 feet**	*Autos:*	0.000	
Barrier Type (0-Wall, 1-Berm):	0.0	*Medium Trucks:*	2.297	
Centerline Dist. to Barrier:	60.0 feet	*Heavy Trucks:*	8.004	*Grade Adjustment:* 0.0
Centerline Dist. to Observer:	60.0 feet			
Barrier Distance to Observer:	0.0 feet	***Lane Equivalent Distance (in feet)***		
Observer Height (Above Pad):	5.0 feet	*Autos:*	45.000	
Pad Elevation:	0.0 feet	*Medium Trucks:*	44.803	
Road Elevation:	0.0 feet	*Heavy Trucks:*	44.822	
Road Grade:	0.0%			
Left View:	-90.0 degrees			
Right View:	90.0 degrees			

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.29	0.58	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	79.45	-13.84	0.61	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-14.19	0.61	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.1	68.2	66.5	60.4	69.0	69.6
Medium Trucks:	65.0	63.5	57.2	55.6	64.1	64.3
Heavy Trucks:	69.5	68.1	59.0	60.3	68.6	68.7
Vehicle Noise:	73.5	71.8	67.6	64.0	72.5	72.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	88	190	410	883
CNEL:	93	201	433	933

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY Without Project
Road Name: Jurupa Av.
Road Segment: e/o Citrus Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	22,439 vehicles	*Autos:*	15
Peak Hour Percentage:	10%	*Medium Trucks (2 Axles):*	15
Peak Hour Volume:	2,244 vehicles	*Heavy Trucks (3+ Axles):*	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	80 feet		

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Site Data		***Noise Source Elevations (in feet)***		
Barrier Height:	**0.0 feet**	*Autos:*	0.000	
Barrier Type (0-Wall, 1-Berm):	0.0	*Medium Trucks:*	2.297	
Centerline Dist. to Barrier:	60.0 feet	*Heavy Trucks:*	8.004	*Grade Adjustment:* 0.0
Centerline Dist. to Observer:	60.0 feet			
Barrier Distance to Observer:	0.0 feet	***Lane Equivalent Distance (in feet)***		
Observer Height (Above Pad):	5.0 feet	*Autos:*	45.000	
Pad Elevation:	0.0 feet	*Medium Trucks:*	44.803	
Road Elevation:	0.0 feet	*Heavy Trucks:*	44.822	
Road Grade:	0.0%			
Left View:	-90.0 degrees			
Right View:	90.0 degrees			

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.47	0.58	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	79.45	-14.65	0.61	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-15.00	0.61	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.3	67.4	65.7	59.6	68.2	68.8
Medium Trucks:	64.2	62.7	56.3	54.8	63.3	63.5
Heavy Trucks:	68.7	67.2	58.2	59.5	67.8	67.9
Vehicle Noise:	72.7	71.0	66.8	63.2	71.7	72.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	78	168	361	779
CNEL:	82	177	382	823

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY Without Project
Road Name: Jurupa Av.
Road Segment: e/o Oleander Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	22,851 vehicles	*Autos:*	15
Peak Hour Percentage:	10%	*Medium Trucks (2 Axles):*	15
Peak Hour Volume:	2,285 vehicles	*Heavy Trucks (3+ Axles):*	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	80 feet		

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Site Data		***Noise Source Elevations (in feet)***		
Barrier Height:	**0.0 feet**	*Autos:*	0.000	
Barrier Type (0-Wall, 1-Berm):	0.0	*Medium Trucks:*	2.297	
Centerline Dist. to Barrier:	60.0 feet	*Heavy Trucks:*	8.004	*Grade Adjustment:* 0.0
Centerline Dist. to Observer:	60.0 feet			
Barrier Distance to Observer:	0.0 feet	***Lane Equivalent Distance (in feet)***		
Observer Height (Above Pad):	5.0 feet	*Autos:*	45.000	
Pad Elevation:	0.0 feet	*Medium Trucks:*	44.803	
Road Elevation:	0.0 feet	*Heavy Trucks:*	44.822	
Road Grade:	0.0%			
Left View:	-90.0 degrees			
Right View:	90.0 degrees			

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.55	0.58	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	79.45	-14.57	0.61	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-14.92	0.61	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.4	67.5	65.7	59.7	68.3	68.9
Medium Trucks:	64.3	62.8	56.4	54.9	63.3	63.6
Heavy Trucks:	68.7	67.3	58.3	59.5	67.9	68.0
Vehicle Noise:	72.8	71.1	66.9	63.3	71.8	72.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	79	170	366	788
CNEL:	83	180	387	833

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY Without Project
Road Name: Jurupa Av.
Road Segment: e/o Cypress Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	25,325 vehicles	*Autos:*	15
Peak Hour Percentage:	10%	*Medium Trucks (2 Axles):*	15
Peak Hour Volume:	2,533 vehicles	*Heavy Trucks (3+ Axles):*	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	80 feet		

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Site Data		***Noise Source Elevations (in feet)***		
Barrier Height:	**0.0 feet**	*Autos:*	0.000	
Barrier Type (0-Wall, 1-Berm):	0.0	*Medium Trucks:*	2.297	
Centerline Dist. to Barrier:	60.0 feet	*Heavy Trucks:*	8.004	*Grade Adjustment:* 0.0
Centerline Dist. to Observer:	60.0 feet			
Barrier Distance to Observer:	0.0 feet	***Lane Equivalent Distance (in feet)***		
Observer Height (Above Pad):	5.0 feet	*Autos:*	45.000	
Pad Elevation:	0.0 feet	*Medium Trucks:*	44.803	
Road Elevation:	0.0 feet	*Heavy Trucks:*	44.822	
Road Grade:	0.0%			
Left View:	-90.0 degrees			
Right View:	90.0 degrees			

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.00	0.58	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	79.45	-14.13	0.61	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-14.48	0.61	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.8	67.9	66.2	60.1	68.7	69.4
Medium Trucks:	64.7	63.2	56.9	55.3	63.8	64.0
Heavy Trucks:	69.2	67.8	58.7	60.0	68.3	68.5
Vehicle Noise:	73.2	71.6	67.3	63.7	72.2	72.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	84	182	392	844
CNEL:	89	192	414	892

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY Without Project | Project Name: Goodman III
Road Name: Jurupa Av. | Job Number: 12384
Road Segment: e/o Juniper Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,804 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,380 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	1.73	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-14.40	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-14.75	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.6	67.7	65.9	59.9	68.5	69.1
Medium Trucks:	64.5	63.0	56.6	55.0	63.5	63.7
Heavy Trucks:	68.9	67.5	58.5	59.7	68.1	68.2
Vehicle Noise:	72.9	71.3	67.0	63.5	72.0	72.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	81	174	376	810
CNEL:	86	184	397	856

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY Without Project | Project Name: Goodman III
Road Name: Armstrong Rd. | Job Number: 12384
Road Segment: w/o Sierra Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,543 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,054 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.81	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-13.31	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-13.66	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.5	67.6	65.8	59.7	68.4	69.0
Medium Trucks:	64.3	62.8	56.5	54.9	63.4	63.6
Heavy Trucks:	68.8	67.4	58.3	59.6	67.9	68.1
Vehicle Noise:	72.8	71.2	66.9	63.3	71.8	72.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	78	168	363	781
CNEL:	83	178	383	826

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY Without Project | Project Name: Goodman III
Road Name: Armstrong Rd. | Job Number: 12384
Road Segment: w/o 34th St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	43,974 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,397 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	59.0 feet
Centerline Dist. to Observer:	59.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.52%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	54.129
Medium Trucks:	53.966
Heavy Trucks:	53.982

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	4.40	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-11.73	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-12.08	-0.60	-1.20	-5.35	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.0	69.1	67.4	61.3	69.9	70.5
Medium Trucks:	65.9	64.4	58.0	56.5	65.0	65.2
Heavy Trucks:	70.4	68.9	59.9	61.2	69.5	69.6
Vehicle Noise:	74.4	72.7	68.5	64.9	73.4	73.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	100	215	462	996
CNEL:	105	227	489	1,053

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY With Project | Project Name: Goodman III
Road Name: Citrus Av. | Job Number: 12384
Road Segment: s/o I-10 Ramps

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	35,699 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,570 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.18%
Medium Trucks:	84.8%	4.9%	10.3%	2.38%
Heavy Trucks:	86.5%	2.7%	10.8%	2.44%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	3.47	-0.03	-1.20	-4.71	0.000	0.000
Medium Trucks:	79.45	-12.54	-0.01	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-12.44	-0.01	-1.20	-5.30	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.7	68.8	67.0	61.0	69.6	70.2
Medium Trucks:	65.7	64.2	57.8	56.3	64.7	65.0
Heavy Trucks:	70.6	69.2	60.1	61.4	69.8	69.9
Vehicle Noise:	74.3	72.7	68.3	64.9	73.3	73.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	110	237	511	1,102
CNEL:	116	250	540	1,162

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY With Project
Road Name: Citrus Av.
Road Segment: s/o Slover Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,899 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,190 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	94.79%
Medium Trucks:	84.8%	4.9%	10.3%	2.45%
Heavy Trucks:	86.5%	2.7%	10.8%	2.76%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	1.85	1.42	-1.20	*-4.63*	0.000	0.000
Medium Trucks:	77.72	-14.03	1.46	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	82.99	-13.51	1.46	-1.20	*-5.47*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.6	66.7	64.9	58.9	67.5	68.1
Medium Trucks:	63.9	62.4	56.1	54.5	63.0	63.2
Heavy Trucks:	69.7	68.3	59.3	60.5	68.9	69.0
Vehicle Noise:	72.8	71.2	66.4	63.4	71.9	72.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	61	132	284	611
CNEL:	64	138	298	642

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY With Project
Road Name: Citrus Av.
Road Segment: s/o Santa Ana Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,337 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,634 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	94.28%
Medium Trucks:	84.8%	4.9%	10.3%	2.56%
Heavy Trucks:	86.5%	2.7%	10.8%	3.16%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	0.55	1.42	-1.20	*-4.63*	0.000	0.000
Medium Trucks:	77.72	-15.11	1.46	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	82.99	-14.20	1.46	-1.20	*-5.47*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	67.3	65.4	63.6	57.6	66.2	66.8
Medium Trucks:	62.9	61.4	55.0	53.4	61.9	62.1
Heavy Trucks:	69.0	67.6	58.6	59.8	68.2	68.3
Vehicle Noise:	71.9	70.3	65.2	62.4	70.9	71.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	53	114	245	528
CNEL:	55	119	257	554

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY With Project
Road Name: Juniper Av.
Road Segment: n/o Santa Ana Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,032 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	303 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	14 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	34.0 feet
Centerline Dist. to Observer:	34.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	95.83%
Medium Trucks:	84.8%	4.9%	10.3%	2.17%
Heavy Trucks:	86.5%	2.7%	10.8%	2.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	33.645
Medium Trucks:	33.381
Heavy Trucks:	33.407

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-6.69	2.48	-1.20	*-4.53*	0.000	0.000
Medium Trucks:	77.72	-23.14	2.53	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	82.99	-23.49	2.52	-1.20	*-5.67*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.1	59.2	57.4	51.4	60.0	60.6
Medium Trucks:	55.9	54.4	48.0	46.5	54.9	55.2
Heavy Trucks:	60.8	59.4	50.4	51.6	60.0	60.1
Vehicle Noise:	64.6	63.0	58.6	55.1	63.6	64.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	13	28	59	128
CNEL:	13	29	63	135

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY With Project
Road Name: Juniper Av.
Road Segment: s/o Santa Ana Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,882 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	388 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	14 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	34.0 feet
Centerline Dist. to Observer:	34.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	96.20%
Medium Trucks:	84.8%	4.9%	10.3%	1.97%
Heavy Trucks:	86.5%	2.7%	10.8%	1.82%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	33.645
Medium Trucks:	33.381
Heavy Trucks:	33.407

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-5.60	2.48	-1.20	*-4.53*	0.000	0.000
Medium Trucks:	77.72	-22.48	2.53	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	82.99	-22.83	2.52	-1.20	*-5.67*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.2	60.3	58.5	52.5	61.1	61.7
Medium Trucks:	56.6	55.1	48.7	47.1	55.6	55.8
Heavy Trucks:	61.5	60.1	51.0	52.3	60.6	60.8
Vehicle Noise:	65.5	63.8	59.6	56.0	64.5	64.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	15	31	68	146
CNEL:	15	33	72	154

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY With Project | Project Name: Goodman III
Road Name: Sierra Av. | Job Number: 12384
Road Segment: n/o Slover Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	69,027 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	6,903 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.38%
Medium Trucks:	84.8%	4.9%	10.3%	2.35%
Heavy Trucks:	86.5%	2.7%	10.8%	2.27%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	6.86	-0.03	-1.20	-4.71	0.000	0.000
Medium Trucks:	77.72	-9.22	-0.01	-1.20	-4.88	0.000	0.000
Heavy Trucks:	82.99	-9.37	-0.01	-1.20	-5.30	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.1	70.2	68.5	62.4	71.0	71.6
Medium Trucks:	67.3	65.8	59.4	57.9	66.3	66.6
Heavy Trucks:	72.4	71.0	62.0	63.2	71.6	71.7
Vehicle Noise:	75.9	74.3	69.8	66.5	75.0	75.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	141	304	656	1,413
CNEL:	149	321	691	1,489

Wednesday, June 05, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY With Project | Project Name: Goodman III
Road Name: Sierra Av. | Job Number: 12384
Road Segment: s/o Slover Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	44,691 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,469 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.29%
Medium Trucks:	84.8%	4.9%	10.3%	2.37%
Heavy Trucks:	86.5%	2.7%	10.8%	2.34%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	4.00	-0.03	-1.20	-4.71	0.000	0.000
Medium Trucks:	81.00	-12.05	-0.01	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-12.09	-0.01	-1.20	-5.30	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	73.0	71.1	69.3	63.3	71.9	72.5
Medium Trucks:	67.7	66.2	59.9	58.3	66.8	67.0
Heavy Trucks:	72.1	70.7	61.6	62.9	71.2	71.4
Vehicle Noise:	76.2	74.6	70.4	66.7	75.2	75.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	148	318	685	1,475
CNEL:	156	336	725	1,561

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY With Project | Project Name: Goodman III
Road Name: Sierra Av. | Job Number: 12384
Road Segment: s/o Santa Ana Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	41,357 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,136 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.13%
Medium Trucks:	84.8%	4.9%	10.3%	2.41%
Heavy Trucks:	86.5%	2.7%	10.8%	2.47%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	3.65	-0.03	-1.20	-4.71	0.000	0.000
Medium Trucks:	81.00	-12.32	-0.01	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-12.21	-0.01	-1.20	-5.30	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.6	70.7	69.0	62.9	71.5	72.1
Medium Trucks:	67.5	66.0	59.6	58.1	66.5	66.8
Heavy Trucks:	72.0	70.5	61.5	62.8	71.1	71.2
Vehicle Noise:	76.0	74.3	70.1	66.5	75.0	75.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	142	306	660	1,422
CNEL:	150	324	698	1,503

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY With Project | Project Name: Goodman III
Road Name: Sierra Av. | Job Number: 12384
Road Segment: s/o Jurupa Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	37,985 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,798 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	88 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	66.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.29%
Medium Trucks:	84.8%	4.9%	10.3%	2.37%
Heavy Trucks:	86.5%	2.7%	10.8%	2.34%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	49.447
Medium Trucks:	49.268
Heavy Trucks:	49.285

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	2.88	-0.03	-1.20	-4.71	0.000	0.000
Medium Trucks:	82.40	-13.16	-0.01	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-13.23	-0.01	-1.20	-5.30	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	73.4	71.5	69.8	63.7	72.3	72.9
Medium Trucks:	68.0	66.5	60.2	58.6	67.1	67.3
Heavy Trucks:	72.0	70.5	61.5	62.8	71.1	71.2
Vehicle Noise:	76.4	74.8	70.8	67.0	75.5	75.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	152	328	708	1,525
CNEL:	162	348	750	1,617

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY With Project
Road Name: Slover Av.
Road Segment: w/o Sierra Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,374 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,637 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	59 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	52.0 feet
Centerline Dist. to Observer:	52.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.53%
Medium Trucks:	84.8%	4.9%	10.3%	2.33%
Heavy Trucks:	86.5%	2.7%	10.8%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.113
Medium Trucks:	42.908
Heavy Trucks:	42.928

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.18	0.86	-1.20	-4.66	0.000	0.000
Medium Trucks:	79.45	-13.96	0.89	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-14.31	0.89	-1.20	-5.41	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.3	68.4	66.6	60.6	69.2	69.8
Medium Trucks:	65.2	63.7	57.3	55.8	64.2	64.5
Heavy Trucks:	69.6	68.2	59.2	60.4	68.8	68.9
Vehicle Noise:	73.7	72.0	67.8	64.2	72.7	73.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	78	169	364	784
CNEL:	83	179	385	829

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY With Project
Road Name: Santa Ana Av.
Road Segment: e/o Citrus Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,233 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	923 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.65%
Medium Trucks:	84.8%	4.9%	10.3%	2.26%
Heavy Trucks:	86.5%	2.7%	10.8%	2.09%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-1.87	1.42	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-18.13	1.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-18.48	1.46	-1.20	-5.47	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.9	63.0	61.2	55.1	63.8	64.4
Medium Trucks:	59.8	58.3	52.0	50.4	58.9	59.1
Heavy Trucks:	64.8	63.3	54.3	55.6	63.9	64.0
Vehicle Noise:	68.5	66.8	62.4	59.0	67.5	67.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	31	68	145	313
CNEL:	33	71	153	331

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY With Project
Road Name: Santa Ana Av.
Road Segment: e/o Juniper Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,577 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,258 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.66%
Medium Trucks:	84.8%	4.9%	10.3%	2.26%
Heavy Trucks:	86.5%	2.7%	10.8%	2.08%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-0.52	1.42	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-16.79	1.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-17.14	1.46	-1.20	-5.47	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.2	64.3	62.5	56.5	65.1	65.7
Medium Trucks:	61.2	59.7	53.3	51.8	60.2	60.5
Heavy Trucks:	66.1	64.7	55.7	56.9	65.3	65.4
Vehicle Noise:	69.8	68.2	63.8	60.4	68.8	69.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	38	83	179	385
CNEL:	41	88	189	406

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY With Project
Road Name: Santa Ana Av.
Road Segment: e/o Sierra Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,614 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	861 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	46.0 feet
Centerline Dist. to Observer:	46.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.03%
Medium Trucks:	84.8%	4.9%	10.3%	2.39%
Heavy Trucks:	86.5%	2.7%	10.8%	2.58%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	39.560
Medium Trucks:	39.336
Heavy Trucks:	39.358

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-2.20	1.42	-1.20	-4.63	0.000	0.000
Medium Trucks:	77.72	-18.19	1.46	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-17.86	1.46	-1.20	-5.47	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.5	62.6	60.9	54.8	63.4	64.0
Medium Trucks:	59.8	58.3	51.9	50.4	58.8	59.1
Heavy Trucks:	65.4	64.0	54.9	56.2	64.5	64.7
Vehicle Noise:	68.6	67.0	62.3	59.2	67.6	68.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	32	69	149	320
CNEL:	34	73	156	337

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY With Project
Road Name: Jurupa Av.
Road Segment: w/o Cherry Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,429 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,943 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.06%
Medium Trucks:	84.8%	4.9%	10.3%	2.41%
Heavy Trucks:	86.5%	2.7%	10.8%	2.53%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.63	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-13.33	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-13.12	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.5	68.6	66.8	60.8	69.4	70.0
Medium Trucks:	65.5	64.0	57.7	56.1	64.6	64.8
Heavy Trucks:	70.5	69.1	60.1	61.3	69.7	69.8
Vehicle Noise:	74.2	72.5	68.1	64.7	73.2	73.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	98	211	454	979
CNEL:	103	222	479	1,032

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY With Project
Road Name: Jurupa Av.
Road Segment: e/o Cherry Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,806 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,581 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	94.98%
Medium Trucks:	84.8%	4.9%	10.3%	2.42%
Heavy Trucks:	86.5%	2.7%	10.8%	2.60%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.06	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-13.88	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-13.57	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.9	68.0	66.2	60.2	68.8	69.4
Medium Trucks:	65.0	63.5	57.1	55.6	64.0	64.3
Heavy Trucks:	70.1	68.7	59.6	60.9	69.2	69.4
Vehicle Noise:	73.6	72.0	67.5	64.2	72.7	73.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	90	195	420	905
CNEL:	95	205	443	954

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY With Project
Road Name: Jurupa Av.
Road Segment: e/o Beech Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,486 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,549 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	94.94%
Medium Trucks:	84.8%	4.9%	10.3%	2.43%
Heavy Trucks:	86.5%	2.7%	10.8%	2.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.00	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-13.92	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-13.58	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.8	67.9	66.2	60.1	68.7	69.4
Medium Trucks:	64.9	63.4	57.1	55.5	64.0	64.2
Heavy Trucks:	70.1	68.7	59.6	60.9	69.2	69.4
Vehicle Noise:	73.6	72.0	67.5	64.2	72.6	73.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	90	194	418	900
CNEL:	95	204	440	949

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY With Project
Road Name: Jurupa Av.
Road Segment: e/o Poplar Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,553 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,755 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	94.95%
Medium Trucks:	84.8%	4.9%	10.3%	2.42%
Heavy Trucks:	86.5%	2.7%	10.8%	2.62%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.34	0.58	-1.20	-4.69	0.000	0.000
Medium Trucks:	79.45	-13.59	0.61	-1.20	-4.88	0.000	0.000
Heavy Trucks:	84.25	-13.25	0.61	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.2	68.3	66.5	60.5	69.1	69.7
Medium Trucks:	65.3	63.8	57.4	55.9	64.3	64.6
Heavy Trucks:	70.4	69.0	60.0	61.2	69.6	69.7
Vehicle Noise:	73.9	72.3	67.8	64.5	73.0	73.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	95	204	440	947
CNEL:	100	215	463	998

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY With Project
Road Name: Jurupa Av.
Road Segment: e/o Citrus Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,261 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,326 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.98%
Medium Trucks:	84.8%	4.9%	10.3%	2.60%
Heavy Trucks:	86.5%	2.7%	10.8%	3.42%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	1.56	0.58	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	79.45	-14.01	0.61	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-12.84	0.61	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.4	67.5	65.7	59.7	68.3	68.9
Medium Trucks:	64.8	63.3	57.0	55.4	63.9	64.1
Heavy Trucks:	70.8	69.4	60.4	61.6	70.0	70.1
Vehicle Noise:	73.8	72.2	67.3	64.4	72.8	73.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	93	199	430	925
CNEL:	97	209	451	971

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY With Project
Road Name: Jurupa Av.
Road Segment: e/o Oleander Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,673 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,367 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	94.01%
Medium Trucks:	84.8%	4.9%	10.3%	2.60%
Heavy Trucks:	86.5%	2.7%	10.8%	3.39%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	1.64	0.58	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	79.45	-13.95	0.61	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-12.79	0.61	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.5	67.6	65.8	59.8	68.4	69.0
Medium Trucks:	64.9	63.4	57.0	55.5	64.0	64.2
Heavy Trucks:	70.9	69.5	60.4	61.7	70.0	70.1
Vehicle Noise:	73.8	72.2	67.3	64.4	72.9	73.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	93	201	434	934
CNEL:	98	211	455	981

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY With Project
Road Name: Jurupa Av.
Road Segment: e/o Cypress Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,463 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,546 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	95.54%
Medium Trucks:	84.8%	4.9%	10.3%	2.32%
Heavy Trucks:	86.5%	2.7%	10.8%	2.14%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	2.02	0.58	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	79.45	-14.13	0.61	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-14.48	0.61	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.9	68.0	66.2	60.1	68.8	69.4
Medium Trucks:	64.7	63.2	56.9	55.3	63.8	64.0
Heavy Trucks:	69.2	67.8	58.7	60.0	68.3	68.5
Vehicle Noise:	73.2	71.6	67.3	63.7	72.2	72.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	85	182	392	846
CNEL:	89	193	415	894

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY With Project
Road Name: Jurupa Av.
Road Segment: e/o Juniper Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,136 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,414 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	80 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

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

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	94.49%
Medium Trucks:	84.8%	4.9%	10.3%	2.53%
Heavy Trucks:	86.5%	2.7%	10.8%	2.98%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	45.000
Medium Trucks:	44.803
Heavy Trucks:	44.822

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	1.74	0.58	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	79.45	-13.99	0.61	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-13.27	0.61	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.6	67.7	65.9	59.9	68.5	69.1
Medium Trucks:	64.9	63.4	57.0	55.5	63.9	64.2
Heavy Trucks:	70.4	69.0	59.9	61.2	69.5	69.7
Vehicle Noise:	73.6	72.0	67.3	64.2	72.7	73.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	91	195	420	905
CNEL:	95	205	442	952

Wednesday, June 05, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY With Project
Road Name: Armstrong Rd.
Road Segment: w/o Sierra Av.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	30,649 vehicles	*Autos:*	15
Peak Hour Percentage:	10%	*Medium Trucks (2 Axles):*	15
Peak Hour Volume:	3,065 vehicles	*Heavy Trucks (3+ Axles):*	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	48 feet		

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.24%
Medium Trucks:	84.8%	4.9%	10.3%	2.38%
Heavy Trucks:	86.5%	2.7%	10.8%	2.38%

Site Data		***Noise Source Elevations (in feet)***			
Barrier Height:	**0.0 feet**	*Autos:*	0.000		
Barrier Type (0-Wall, 1-Berm):	0.0	*Medium Trucks:*	2.297		
Centerline Dist. to Barrier:	59.0 feet	*Heavy Trucks:*	8.004	*Grade Adjustment:*	0.0
Centerline Dist. to Observer:	59.0 feet				
Barrier Distance to Observer:	0.0 feet	***Lane Equivalent Distance (in feet)***			
Observer Height (Above Pad):	5.0 feet	*Autos:*	54.129		
Pad Elevation:	0.0 feet	*Medium Trucks:*	53.966		
Road Elevation:	0.0 feet	*Heavy Trucks:*	53.982		
Road Grade:	0.0%				
Left View:	-90.0 degrees				
Right View:	90.0 degrees				

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	2.81	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	79.45	-13.20	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-13.21	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.5	67.6	65.8	59.7	68.4	69.0
Medium Trucks:	64.4	62.9	56.6	55.0	63.5	63.7
Heavy Trucks:	69.2	67.8	58.8	60.0	68.4	68.5
Vehicle Noise:	73.0	71.4	67.0	63.6	72.0	72.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	81	174	374	807
CNEL:	85	183	395	852

Wednesday, June 05, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY With Project
Road Name: Armstrong Rd.
Road Segment: w/o 34th St.
Project Name: Goodman III
Job Number: 12384

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	44,080 vehicles	*Autos:*	15
Peak Hour Percentage:	10%	*Medium Trucks (2 Axles):*	15
Peak Hour Volume:	4,408 vehicles	*Heavy Trucks (3+ Axles):*	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	48 feet		

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.32%
Medium Trucks:	84.8%	4.9%	10.3%	2.37%
Heavy Trucks:	86.5%	2.7%	10.8%	2.31%

Site Data		***Noise Source Elevations (in feet)***			
Barrier Height:	**0.0 feet**	*Autos:*	0.000		
Barrier Type (0-Wall, 1-Berm):	0.0	*Medium Trucks:*	2.297		
Centerline Dist. to Barrier:	59.0 feet	*Heavy Trucks:*	8.004	*Grade Adjustment:*	0.0
Centerline Dist. to Observer:	59.0 feet				
Barrier Distance to Observer:	0.0 feet	***Lane Equivalent Distance (in feet)***			
Observer Height (Above Pad):	5.0 feet	*Autos:*	54.129		
Pad Elevation:	0.0 feet	*Medium Trucks:*	53.966		
Road Elevation:	0.0 feet	*Heavy Trucks:*	53.982		
Road Grade:	0.0%				
Left View:	-90.0 degrees				
Right View:	90.0 degrees				

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	4.40	-0.62	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	79.45	-11.65	-0.60	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-11.76	-0.60	-1.20	*-5.35*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.0	69.1	67.4	61.3	69.9	70.5
Medium Trucks:	66.0	64.5	58.1	56.6	65.0	65.3
Heavy Trucks:	70.7	69.3	60.2	61.5	69.8	70.0
Vehicle Noise:	74.5	72.9	68.6	65.1	73.6	73.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	102	219	473	1,019
CNEL:	108	232	499	1,076

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APPENDIX 9.1:

OPERATIONAL NOISE LEVEL CALCULATIONS

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STATIONARY SOURCE NOISE PREDICTION MODEL 6/4/2019

Observer Location: **R1** *Project Name:* Goodman III
Source: Truck Idle/Reefer Activity *Job Number:* 12384
Condition: Operational - Interim *Analyst:* A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	546.0	feet	***Barrier Height:***	**45.0**	**feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	8.0	feet
Barrier Distance to Observer:	536.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	70.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	546.0	-25.2	-25.2	-25.2	-25.2	-25.2	-25.2
Shielding (Barrier Attenuation)	10.0	-18.8	-18.8	-18.8	-18.8	-18.8	-18.8
Raw (Distance + Barrier)		26.1	-44.0	-44.0	-44.0	-44.0	-44.0
60 Minute Hourly Adjustment		**26.1**	**-44.0**	**-44.0**	**-44.0**	**-44.0**	**-44.0**

STATIONARY SOURCE NOISE PREDICTION MODEL 6/4/2019

Observer Location: **R1** *Project Name:* Goodman III
Source: Roof-Top Air Conditioning Unit *Job Number:* 12384
Condition: Operational - Interim *Analyst:* A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	189.0	feet	***Barrier Height:***	**45.0**	**feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	179.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	45.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	189.0	-31.5	-31.5	-31.5	-31.5	-31.5	-31.5
Shielding (Barrier Attenuation)	10.0	-7.5	-7.5	-7.5	-7.5	-7.5	-7.5
Raw (Distance + Barrier)		38.2	-39.0	-39.0	-39.0	-39.0	-39.0
39 Minute Hourly Adjustment		**36.3**	**-40.9**	**-40.9**	**-40.9**	**-40.9**	**-40.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R1**
Source: Parking Lot Vehicle Movements
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	96.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	96.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	96.0	-19.6	-19.6	-19.6	-19.6	-19.6	-19.6
Shielding (Barrier Attenuation)	96.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		32.6	-19.6	-19.6	-19.6	-19.6	-19.6
60 Minute Hourly Adjustment		**32.6**	**-19.6**	**-19.6**	**-19.6**	**-19.6**	**-19.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R2**
Source: Truck Idle/Reefer Activity
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	518.0 feet	***Barrier Height:***	**45.0 feet**
Noise Distance to Barrier:	10.0 feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	508.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	70.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	518.0	-24.7	-24.7	-24.7	-24.7	-24.7	-24.7
Shielding (Barrier Attenuation)	10.0	-18.8	-18.8	-18.8	-18.8	-18.8	-18.8
Raw (Distance + Barrier)		26.6	-43.5	-43.5	-43.5	-43.5	-43.5
60 Minute Hourly Adjustment		**26.6**	**-43.5**	**-43.5**	**-43.5**	**-43.5**	**-43.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R2**
Source: Roof-Top Air Conditioning Unit
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	195.0	feet	***Barrier Height:***	**45.0 feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	185.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	45.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	195.0	-31.8	-31.8	-31.8	-31.8	-31.8	-31.8
Shielding (Barrier Attenuation)	10.0	-7.6	-7.6	-7.6	-7.6	-7.6	-7.6
Raw (Distance + Barrier)		37.8	-39.4	-39.4	-39.4	-39.4	-39.4
39 Minute Hourly Adjustment		**35.9**	**-41.3**	**-41.3**	**-41.3**	**-41.3**	**-41.3**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R2**
Source: Parking Lot Vehicle Movements
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	126.0	feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	126.0	feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	126.0	-22.0	-22.0	-22.0	-22.0	-22.0	-22.0
Shielding (Barrier Attenuation)	126.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		30.2	-22.0	-22.0	-22.0	-22.0	-22.0
60 Minute Hourly Adjustment		**30.2**	**-22.0**	**-22.0**	**-22.0**	**-22.0**	**-22.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R3**
Source: Truck Idle/Reefer Activity
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	264.0	feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	264.0	feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	70.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	264.0	-18.9	-18.9	-18.9	-18.9	-18.9	-18.9
Shielding (Barrier Attenuation)	264.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		51.2	-18.9	-18.9	-18.9	-18.9	-18.9
60 Minute Hourly Adjustment		**51.2**	**-18.9**	**-18.9**	**-18.9**	**-18.9**	**-18.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R3**
Source: Roof-Top Air Conditioning Unit
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	220.0	feet	***Barrier Height:***	**45.0 feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	210.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	45.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	220.0	-32.9	-32.9	-32.9	-32.9	-32.9	-32.9
Shielding (Barrier Attenuation)	10.0	-7.9	-7.9	-7.9	-7.9	-7.9	-7.9
Raw (Distance + Barrier)		36.4	-40.8	-40.8	-40.8	-40.8	-40.8
39 Minute Hourly Adjustment		**34.5**	**-42.7**	**-42.7**	**-42.7**	**-42.7**	**-42.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R3**
Source: Parking Lot Vehicle Movements
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	132.0	feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	132.0	feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	132.0	-22.4	-22.4	-22.4	-22.4	-22.4	-22.4
Shielding (Barrier Attenuation)	132.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		29.8	-22.4	-22.4	-22.4	-22.4	-22.4
60 Minute Hourly Adjustment		**29.8**	**-22.4**	**-22.4**	**-22.4**	**-22.4**	**-22.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R4**
Source: Truck Idle/Reefer Activity
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	583.0	feet	***Barrier Height:***	**45.0 feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	573.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	70.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	583.0	-25.8	-25.8	-25.8	-25.8	-25.8	-25.8
Shielding (Barrier Attenuation)	10.0	-18.8	-18.8	-18.8	-18.8	-18.8	-18.8
Raw (Distance + Barrier)		25.5	-44.6	-44.6	-44.6	-44.6	-44.6
60 Minute Hourly Adjustment		**25.5**	**-44.6**	**-44.6**	**-44.6**	**-44.6**	**-44.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R4**
Source: Roof-Top Air Conditioning Unit
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	297.0	feet	***Barrier Height:***	**45.0 feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	287.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	45.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	297.0	-35.5	-35.5	-35.5	-35.5	-35.5	-35.5
Shielding (Barrier Attenuation)	10.0	-8.7	-8.7	-8.7	-8.7	-8.7	-8.7
Raw (Distance + Barrier)		33.0	-44.2	-44.2	-44.2	-44.2	-44.2
39 Minute Hourly Adjustment		**31.1**	**-46.1**	**-46.1**	**-46.1**	**-46.1**	**-46.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R4**
Source: Parking Lot Vehicle Movements
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	147.0	feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	147.0	feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

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

STATIONARY SOURCE NOISE PREDICTION MODEL 6/4/2019

Observer Location: **R5** *Project Name:* Goodman III
Source: Truck Idle/Reefer Activity *Job Number:* 12384
Condition: Operational - Interim *Analyst:* A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	382.0	feet	***Barrier Height:***	**45.0**	**feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	8.0	feet
Barrier Distance to Observer:	372.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	70.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	382.0	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1
Shielding (Barrier Attenuation)	10.0	-18.8	-18.8	-18.8	-18.8	-18.8	-18.8
Raw (Distance + Barrier)		29.2	-40.9	-40.9	-40.9	-40.9	-40.9
60 Minute Hourly Adjustment		**29.2**	**-40.9**	**-40.9**	**-40.9**	**-40.9**	**-40.9**

STATIONARY SOURCE NOISE PREDICTION MODEL 6/4/2019

Observer Location: **R5** *Project Name:* Goodman III
Source: Roof-Top Air Conditioning Unit *Job Number:* 12384
Condition: Operational - Interim *Analyst:* A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	296.0	feet	***Barrier Height:***	**45.0**	**feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	286.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	45.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	296.0	-35.4	-35.4	-35.4	-35.4	-35.4	-35.4
Shielding (Barrier Attenuation)	10.0	-8.7	-8.7	-8.7	-8.7	-8.7	-8.7
Raw (Distance + Barrier)		33.1	-44.1	-44.1	-44.1	-44.1	-44.1
39 Minute Hourly Adjustment		**31.2**	**-46.0**	**-46.0**	**-46.0**	**-46.0**	**-46.0**

STATIONARY SOURCE NOISE PREDICTION MODEL 6/4/2019

Observer Location: **R5**
Source: Parking Lot Vehicle Movements
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	351.0	feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	341.0	feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	10.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	351.0	-30.9	-30.9	-30.9	-30.9	-30.9	-30.9
Shielding (Barrier Attenuation)	341.0	-5.5	-5.5	-5.5	-5.5	-5.5	-5.5
Raw (Distance + Barrier)		15.8	-36.4	-36.4	-36.4	-36.4	-36.4
60 Minute Hourly Adjustment		**15.8**	**-36.4**	**-36.4**	**-36.4**	**-36.4**	**-36.4**

STATIONARY SOURCE NOISE PREDICTION MODEL 6/4/2019

Observer Location: **R6**
Source: Truck Idle/Reefer Activity
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	106.0	feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	106.0	feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	70.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	106.0	-11.0	-11.0	-11.0	-11.0	-11.0	-11.0
Shielding (Barrier Attenuation)	106.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		59.1	-11.0	-11.0	-11.0	-11.0	-11.0
60 Minute Hourly Adjustment		**59.1**	**-11.0**	**-11.0**	**-11.0**	**-11.0**	**-11.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R6**
Source: Roof-Top Air Conditioning Unit
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	598.0	feet	***Barrier Height:***	**45.0**	**feet**
Noise Distance to Barrier:	400.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	198.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	45.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	598.0	-41.6	-41.6	-41.6	-41.6	-41.6	-41.6
Shielding (Barrier Attenuation)	400.0	-12.7	-12.7	-12.7	-12.7	-12.7	-12.7
Raw (Distance + Barrier)		22.9	-54.3	-54.3	-54.3	-54.3	-54.3
39 Minute Hourly Adjustment		**21.0**	**-56.2**	**-56.2**	**-56.2**	**-56.2**	**-56.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R6**
Source: Parking Lot Vehicle Movements
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	570.0	feet	***Barrier Height:***	**0.0**	**feet**
Noise Distance to Barrier:	570.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	570.0	-35.1	-35.1	-35.1	-35.1	-35.1	-35.1
Shielding (Barrier Attenuation)	570.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		17.1	-35.1	-35.1	-35.1	-35.1	-35.1
60 Minute Hourly Adjustment		**17.1**	**-35.1**	**-35.1**	**-35.1**	**-35.1**	**-35.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R7**
Source: Truck Idle/Reefer Activity
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	545.0	feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	545.0	feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	70.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	545.0	-25.2	-25.2	-25.2	-25.2	-25.2	-25.2
Shielding (Barrier Attenuation)	545.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		44.9	-25.2	-25.2	-25.2	-25.2	-25.2
60 Minute Hourly Adjustment		**44.9**	**-25.2**	**-25.2**	**-25.2**	**-25.2**	**-25.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R7**
Source: Roof-Top Air Conditioning Unit
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	256.0	feet	***Barrier Height:***	**45.0 feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	246.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	45.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	256.0	-34.2	-34.2	-34.2	-34.2	-34.2	-34.2
Shielding (Barrier Attenuation)	10.0	-8.4	-8.4	-8.4	-8.4	-8.4	-8.4
Raw (Distance + Barrier)		34.6	-42.6	-42.6	-42.6	-42.6	-42.6
39 Minute Hourly Adjustment		**32.7**	**-44.5**	**-44.5**	**-44.5**	**-44.5**	**-44.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R7**
Source: Parking Lot Vehicle Movements
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	36.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	36.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	36.0	-11.1	-11.1	-11.1	-11.1	-11.1	-11.1
Shielding (Barrier Attenuation)	36.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		41.1	-11.1	-11.1	-11.1	-11.1	-11.1
60 Minute Hourly Adjustment		**41.1**	**-11.1**	**-11.1**	**-11.1**	**-11.1**	**-11.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R8**
Source: Truck Idle/Reefer Activity
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	538.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	538.0 feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	70.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	538.0	-25.1	-25.1	-25.1	-25.1	-25.1	-25.1
Shielding (Barrier Attenuation)	538.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		45.0	-25.1	-25.1	-25.1	-25.1	-25.1
60 Minute Hourly Adjustment		**45.0**	**-25.1**	**-25.1**	**-25.1**	**-25.1**	**-25.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R8**
Source: Roof-Top Air Conditioning Unit
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	501.0	feet	***Barrier Height:***	**45.0 feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	491.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	45.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	501.0	-40.0	-40.0	-40.0	-40.0	-40.0	-40.0
Shielding (Barrier Attenuation)	10.0	-9.6	-9.6	-9.6	-9.6	-9.6	-9.6
Raw (Distance + Barrier)		27.6	-49.6	-49.6	-49.6	-49.6	-49.6
39 Minute Hourly Adjustment		**25.7**	**-51.5**	**-51.5**	**-51.5**	**-51.5**	**-51.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R8**
Source: Parking Lot Vehicle Movements
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	410.0	feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	410.0	feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	410.0	-32.3	-32.3	-32.3	-32.3	-32.3	-32.3
Shielding (Barrier Attenuation)	410.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		19.9	-32.3	-32.3	-32.3	-32.3	-32.3
60 Minute Hourly Adjustment		**19.9**	**-32.3**	**-32.3**	**-32.3**	**-32.3**	**-32.3**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R9**
Source: Truck Idle/Reefer Activity
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,334.0	feet	***Barrier Height:***	**45.0**	**feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	8.0	feet
Barrier Distance to Observer:	1,324.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	70.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,334.0	-33.0	-33.0	-33.0	-33.0	-33.0	-33.0
Shielding (Barrier Attenuation)	10.0	-18.7	-18.7	-18.7	-18.7	-18.7	-18.7
Raw (Distance + Barrier)		18.4	-51.7	-51.7	-51.7	-51.7	-51.7
60 Minute Hourly Adjustment		**18.4**	**-51.7**	**-51.7**	**-51.7**	**-51.7**	**-51.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R9**
Source: Roof-Top Air Conditioning Unit
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	916.0	feet	***Barrier Height:***	**45.0**	**feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	906.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	45.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	916.0	-45.3	-45.3	-45.3	-45.3	-45.3	-45.3
Shielding (Barrier Attenuation)	10.0	-10.1	-10.1	-10.1	-10.1	-10.1	-10.1
Raw (Distance + Barrier)		21.8	-55.4	-55.4	-55.4	-55.4	-55.4
39 Minute Hourly Adjustment		**19.9**	**-57.3**	**-57.3**	**-57.3**	**-57.3**	**-57.3**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R9**
Source: Parking Lot Vehicle Movements
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	842.0	feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	842.0	feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	842.0	-38.5	-38.5	-38.5	-38.5	-38.5	-38.5
Shielding (Barrier Attenuation)	842.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		13.7	-38.5	-38.5	-38.5	-38.5	-38.5
60 Minute Hourly Adjustment		**13.7**	**-38.5**	**-38.5**	**-38.5**	**-38.5**	**-38.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R10**
Source: Truck Idle/Reefer Activity
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,227.0	feet	***Barrier Height:***	**45.0 feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	1,217.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	70.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,227.0	-32.2	-32.2	-32.2	-32.2	-32.2	-32.2
Shielding (Barrier Attenuation)	10.0	-18.7	-18.7	-18.7	-18.7	-18.7	-18.7
Raw (Distance + Barrier)		19.2	-50.9	-50.9	-50.9	-50.9	-50.9
60 Minute Hourly Adjustment		**19.2**	**-50.9**	**-50.9**	**-50.9**	**-50.9**	**-50.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R10**
Source: Roof-Top Air Conditioning Unit
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	894.0	feet	***Barrier Height:***	**45.0 feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	884.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	45.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	894.0	-45.0	-45.0	-45.0	-45.0	-45.0	-45.0
Shielding (Barrier Attenuation)	10.0	-10.1	-10.1	-10.1	-10.1	-10.1	-10.1
Raw (Distance + Barrier)		22.1	-55.1	-55.1	-55.1	-55.1	-55.1
39 Minute Hourly Adjustment		**20.2**	**-57.0**	**-57.0**	**-57.0**	**-57.0**	**-57.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R10**
Source: Parking Lot Vehicle Movements
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	768.0	feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	758.0	feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	10.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	768.0	-37.7	-37.7	-37.7	-37.7	-37.7	-37.7
Shielding (Barrier Attenuation)	758.0	-5.5	-5.5	-5.5	-5.5	-5.5	-5.5
Raw (Distance + Barrier)		9.0	-43.2	-43.2	-43.2	-43.2	-43.2
60 Minute Hourly Adjustment		**9.0**	**-43.2**	**-43.2**	**-43.2**	**-43.2**	**-43.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R11**
Source: Truck Idle/Reefer Activity
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	296.0	feet	***Barrier Height:***	**45.0**	**feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	8.0	feet
Barrier Distance to Observer:	286.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	70.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	296.0	-19.9	-19.9	-19.9	-19.9	-19.9	-19.9
Shielding (Barrier Attenuation)	10.0	-18.8	-18.8	-18.8	-18.8	-18.8	-18.8
Raw (Distance + Barrier)		31.4	-38.7	-38.7	-38.7	-38.7	-38.7
60 Minute Hourly Adjustment		**31.4**	**-38.7**	**-38.7**	**-38.7**	**-38.7**	**-38.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R11**
Source: Roof-Top Air Conditioning Unit
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	177.0	feet	***Barrier Height:***	**45.0**	**feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	167.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	45.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	177.0	-31.0	-31.0	-31.0	-31.0	-31.0	-31.0
Shielding (Barrier Attenuation)	10.0	-7.3	-7.3	-7.3	-7.3	-7.3	-7.3
Raw (Distance + Barrier)		38.9	-38.3	-38.3	-38.3	-38.3	-38.3
39 Minute Hourly Adjustment		**37.0**	**-40.2**	**-40.2**	**-40.2**	**-40.2**	**-40.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R11**
Source: Parking Lot Vehicle Movements
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	20.0	feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	20.0	feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	20.0	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0
Shielding (Barrier Attenuation)	20.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		46.2	-6.0	-6.0	-6.0	-6.0	-6.0
60 Minute Hourly Adjustment		**46.2**	**-6.0**	**-6.0**	**-6.0**	**-6.0**	**-6.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R1**
Source: Fire Pump Emergency Generator
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	134.0	feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	134.0	feet	*Noise Source Height:*	6.0 feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	64.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	134.0	-8.6	-8.6	-8.6	-8.6	-8.6	-8.6
Shielding (Barrier Attenuation)	134.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		56.3	-8.6	-8.6	-8.6	-8.6	-8.6
60 Minute Hourly Adjustment		**56.3**	**-8.6**	**-8.6**	**-8.6**	**-8.6**	**-8.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R2**
Source: Fire Pump Emergency Generator
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	233.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	233.0 feet	*Noise Source Height:*	6.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	64.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	233.0	-13.4	-13.4	-13.4	-13.4	-13.4	-13.4
Shielding (Barrier Attenuation)	233.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		51.5	-13.4	-13.4	-13.4	-13.4	-13.4
60 Minute Hourly Adjustment		**51.5**	**-13.4**	**-13.4**	**-13.4**	**-13.4**	**-13.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R3**
Source: Fire Pump Emergency Generator
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	603.0 feet	***Barrier Height:***	**45.0 feet**
Noise Distance to Barrier:	10.0 feet	*Noise Source Height:*	6.0 feet
Barrier Distance to Observer:	593.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	64.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	603.0	-21.6	-21.6	-21.6	-21.6	-21.6	-21.6
Shielding (Barrier Attenuation)	10.0	-18.8	-18.8	-18.8	-18.8	-18.8	-18.8
Raw (Distance + Barrier)		24.5	-40.4	-40.4	-40.4	-40.4	-40.4
60 Minute Hourly Adjustment		**24.5**	**-40.4**	**-40.4**	**-40.4**	**-40.4**	**-40.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R4**
Source: Fire Pump Emergency Generator
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	238.0	feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	238.0	feet	*Noise Source Height:*	6.0 feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	64.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	238.0	-13.6	-13.6	-13.6	-13.6	-13.6	-13.6
Shielding (Barrier Attenuation)	238.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		51.3	-13.6	-13.6	-13.6	-13.6	-13.6
60 Minute Hourly Adjustment		**51.3**	**-13.6**	**-13.6**	**-13.6**	**-13.6**	**-13.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R5**
Source: Fire Pump Emergency Generator
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	356.0	feet	***Barrier Height:***	**45.0 feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	6.0 feet
Barrier Distance to Observer:	346.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	64.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	356.0	-17.0	-17.0	-17.0	-17.0	-17.0	-17.0
Shielding (Barrier Attenuation)	10.0	-18.8	-18.8	-18.8	-18.8	-18.8	-18.8
Raw (Distance + Barrier)		29.1	-35.8	-35.8	-35.8	-35.8	-35.8
60 Minute Hourly Adjustment		**29.1**	**-35.8**	**-35.8**	**-35.8**	**-35.8**	**-35.8**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R6**
Source: Fire Pump Emergency Generator
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	621.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	621.0 feet	*Noise Source Height:*	6.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	64.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	621.0	-21.9	-21.9	-21.9	-21.9	-21.9	-21.9
Shielding (Barrier Attenuation)	621.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		43.0	-21.9	-21.9	-21.9	-21.9	-21.9
60 Minute Hourly Adjustment		**43.0**	**-21.9**	**-21.9**	**-21.9**	**-21.9**	**-21.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R7**
Source: Fire Pump Emergency Generator
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	271.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	271.0 feet	*Noise Source Height:*	6.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	64.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	271.0	-14.7	-14.7	-14.7	-14.7	-14.7	-14.7
Shielding (Barrier Attenuation)	271.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		50.2	-14.7	-14.7	-14.7	-14.7	-14.7
60 Minute Hourly Adjustment		**50.2**	**-14.7**	**-14.7**	**-14.7**	**-14.7**	**-14.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R8**
Source: Fire Pump Emergency Generator
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	785.0	feet	***Barrier Height:***	**45.0 feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	6.0 feet
Barrier Distance to Observer:	775.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	64.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	785.0	-23.9	-23.9	-23.9	-23.9	-23.9	-23.9
Shielding (Barrier Attenuation)	10.0	-18.8	-18.8	-18.8	-18.8	-18.8	-18.8
Raw (Distance + Barrier)		22.2	-42.7	-42.7	-42.7	-42.7	-42.7
60 Minute Hourly Adjustment		**22.2**	**-42.7**	**-42.7**	**-42.7**	**-42.7**	**-42.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R9**
Source: Fire Pump Emergency Generator
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	894.0	feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	894.0	feet	*Noise Source Height:*	6.0 feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	64.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	894.0	-25.0	-25.0	-25.0	-25.0	-25.0	-25.0
Shielding (Barrier Attenuation)	894.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		39.9	-25.0	-25.0	-25.0	-25.0	-25.0
60 Minute Hourly Adjustment		**39.9**	**-25.0**	**-25.0**	**-25.0**	**-25.0**	**-25.0**

STATIONARY SOURCE NOISE PREDICTION MODEL 6/4/2019

Observer Location: **R10**
Source: Fire Pump Emergency Generator
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	842.0	feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	832.0	feet	*Noise Source Height:*	6.0 feet
Barrier Distance to Observer:	10.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	64.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	842.0	-24.5	-24.5	-24.5	-24.5	-24.5	-24.5
Shielding (Barrier Attenuation)	832.0	-5.5	-5.5	-5.5	-5.5	-5.5	-5.5
Raw (Distance + Barrier)		34.9	-30.0	-30.0	-30.0	-30.0	-30.0
60 Minute Hourly Adjustment		**34.9**	**-30.0**	**-30.0**	**-30.0**	**-30.0**	**-30.0**

STATIONARY SOURCE NOISE PREDICTION MODEL 6/4/2019

Observer Location: **R11**
Source: Fire Pump Emergency Generator
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	217.0	feet	***Barrier Height:***	**45.0 feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	6.0 feet
Barrier Distance to Observer:	207.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	64.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	217.0	-12.7	-12.7	-12.7	-12.7	-12.7	-12.7
Shielding (Barrier Attenuation)	10.0	-18.9	-18.9	-18.9	-18.9	-18.9	-18.9
Raw (Distance + Barrier)		33.3	-31.6	-31.6	-31.6	-31.6	-31.6
60 Minute Hourly Adjustment		**33.3**	**-31.6**	**-31.6**	**-31.6**	**-31.6**	**-31.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R1**
Source: Truck Idle/Reefer Activity
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	546.0	feet	***Barrier Height:***	**45.0 feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	536.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	70.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	546.0	-25.2	-25.2	-25.2	-25.2	-25.2	-25.2
Shielding (Barrier Attenuation)	10.0	-18.8	-18.8	-18.8	-18.8	-18.8	-18.8
Raw (Distance + Barrier)		26.1	-44.0	-44.0	-44.0	-44.0	-44.0
60 Minute Hourly Adjustment		**26.1**	**-44.0**	**-44.0**	**-44.0**	**-44.0**	**-44.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R1**
Source: Roof-Top Air Conditioning Unit
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	189.0	feet	***Barrier Height:***	**45.0 feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	179.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	45.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	189.0	-31.5	-31.5	-31.5	-31.5	-31.5	-31.5
Shielding (Barrier Attenuation)	10.0	-7.5	-7.5	-7.5	-7.5	-7.5	-7.5
Raw (Distance + Barrier)		38.2	-39.0	-39.0	-39.0	-39.0	-39.0
39 Minute Hourly Adjustment		**36.3**	**-40.9**	**-40.9**	**-40.9**	**-40.9**	**-40.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R1**
Source: Parking Lot Vehicle Movements
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	96.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	96.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	96.0	-19.6	-19.6	-19.6	-19.6	-19.6	-19.6
Shielding (Barrier Attenuation)	96.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		32.6	-19.6	-19.6	-19.6	-19.6	-19.6
60 Minute Hourly Adjustment		**32.6**	**-19.6**	**-19.6**	**-19.6**	**-19.6**	**-19.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R2**
Source: Truck Idle/Reefer Activity
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	518.0 feet	***Barrier Height:***	**45.0 feet**
Noise Distance to Barrier:	10.0 feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	508.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	70.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	518.0	-24.7	-24.7	-24.7	-24.7	-24.7	-24.7
Shielding (Barrier Attenuation)	10.0	-18.8	-18.8	-18.8	-18.8	-18.8	-18.8
Raw (Distance + Barrier)		26.6	-43.5	-43.5	-43.5	-43.5	-43.5
60 Minute Hourly Adjustment		**26.6**	**-43.5**	**-43.5**	**-43.5**	**-43.5**	**-43.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R2**
Source: Roof-Top Air Conditioning Unit
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	195.0	feet	***Barrier Height:***	**45.0**	**feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	185.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	45.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	195.0	-31.8	-31.8	-31.8	-31.8	-31.8	-31.8
Shielding (Barrier Attenuation)	10.0	-7.6	-7.6	-7.6	-7.6	-7.6	-7.6
Raw (Distance + Barrier)		37.8	-39.4	-39.4	-39.4	-39.4	-39.4
39 Minute Hourly Adjustment		**35.9**	**-41.3**	**-41.3**	**-41.3**	**-41.3**	**-41.3**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R2**
Source: Parking Lot Vehicle Movements
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	126.0	feet	***Barrier Height:***	**0.0**	**feet**
Noise Distance to Barrier:	126.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	126.0	-22.0	-22.0	-22.0	-22.0	-22.0	-22.0
Shielding (Barrier Attenuation)	126.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		30.2	-22.0	-22.0	-22.0	-22.0	-22.0
60 Minute Hourly Adjustment		**30.2**	**-22.0**	**-22.0**	**-22.0**	**-22.0**	**-22.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R3**
Source: Truck Idle/Reefer Activity
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	264.0	feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	264.0	feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	70.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	264.0	-18.9	-18.9	-18.9	-18.9	-18.9	-18.9
Shielding (Barrier Attenuation)	264.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		51.2	-18.9	-18.9	-18.9	-18.9	-18.9
60 Minute Hourly Adjustment		**51.2**	**-18.9**	**-18.9**	**-18.9**	**-18.9**	**-18.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R3**
Source: Roof-Top Air Conditioning Unit
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	220.0	feet	***Barrier Height:***	**45.0 feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	210.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	45.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	220.0	-32.9	-32.9	-32.9	-32.9	-32.9	-32.9
Shielding (Barrier Attenuation)	10.0	-7.9	-7.9	-7.9	-7.9	-7.9	-7.9
Raw (Distance + Barrier)		36.4	-40.8	-40.8	-40.8	-40.8	-40.8
39 Minute Hourly Adjustment		**34.5**	**-42.7**	**-42.7**	**-42.7**	**-42.7**	**-42.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R3**
Source: Parking Lot Vehicle Movements
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	132.0	feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	132.0	feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	132.0	-22.4	-22.4	-22.4	-22.4	-22.4	-22.4
Shielding (Barrier Attenuation)	132.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		29.8	-22.4	-22.4	-22.4	-22.4	-22.4
60 Minute Hourly Adjustment		**29.8**	**-22.4**	**-22.4**	**-22.4**	**-22.4**	**-22.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R4**
Source: Truck Idle/Reefer Activity
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	583.0	feet	***Barrier Height:***	**45.0 feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	573.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	70.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	583.0	-25.8	-25.8	-25.8	-25.8	-25.8	-25.8
Shielding (Barrier Attenuation)	10.0	-18.8	-18.8	-18.8	-18.8	-18.8	-18.8
Raw (Distance + Barrier)		25.5	-44.6	-44.6	-44.6	-44.6	-44.6
60 Minute Hourly Adjustment		**25.5**	**-44.6**	**-44.6**	**-44.6**	**-44.6**	**-44.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R4**
Source: Roof-Top Air Conditioning Unit
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	297.0	feet	***Barrier Height:***	**45.0 feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	287.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	45.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	297.0	-35.5	-35.5	-35.5	-35.5	-35.5	-35.5
Shielding (Barrier Attenuation)	10.0	-8.7	-8.7	-8.7	-8.7	-8.7	-8.7
Raw (Distance + Barrier)		33.0	-44.2	-44.2	-44.2	-44.2	-44.2
39 Minute Hourly Adjustment		**31.1**	**-46.1**	**-46.1**	**-46.1**	**-46.1**	**-46.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R4**
Source: Parking Lot Vehicle Movements
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	147.0	feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	147.0	feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

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

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R5**
Source: Truck Idle/Reefer Activity
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	382.0	feet	***Barrier Height:***	**45.0**	**feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	8.0	feet
Barrier Distance to Observer:	372.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	70.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	382.0	-22.1	-22.1	-22.1	-22.1	-22.1	-22.1
Shielding (Barrier Attenuation)	10.0	-18.8	-18.8	-18.8	-18.8	-18.8	-18.8
Raw (Distance + Barrier)		29.2	-40.9	-40.9	-40.9	-40.9	-40.9
60 Minute Hourly Adjustment		**29.2**	**-40.9**	**-40.9**	**-40.9**	**-40.9**	**-40.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R5**
Source: Roof-Top Air Conditioning Unit
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	296.0	feet	***Barrier Height:***	**45.0**	**feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	286.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	45.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	296.0	-35.4	-35.4	-35.4	-35.4	-35.4	-35.4
Shielding (Barrier Attenuation)	10.0	-8.7	-8.7	-8.7	-8.7	-8.7	-8.7
Raw (Distance + Barrier)		33.1	-44.1	-44.1	-44.1	-44.1	-44.1
39 Minute Hourly Adjustment		**31.2**	**-46.0**	**-46.0**	**-46.0**	**-46.0**	**-46.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R5**
Source: Parking Lot Vehicle Movements
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	351.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	341.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	10.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	351.0	-30.9	-30.9	-30.9	-30.9	-30.9	-30.9
Shielding (Barrier Attenuation)	341.0	-5.5	-5.5	-5.5	-5.5	-5.5	-5.5
Raw (Distance + Barrier)		15.8	-36.4	-36.4	-36.4	-36.4	-36.4
60 Minute Hourly Adjustment		**15.8**	**-36.4**	**-36.4**	**-36.4**	**-36.4**	**-36.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R6**
Source: Truck Idle/Reefer Activity
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	106.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	106.0 feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	70.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	106.0	-11.0	-11.0	-11.0	-11.0	-11.0	-11.0
Shielding (Barrier Attenuation)	106.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		59.1	-11.0	-11.0	-11.0	-11.0	-11.0
60 Minute Hourly Adjustment		**59.1**	**-11.0**	**-11.0**	**-11.0**	**-11.0**	**-11.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R6**
Source: Roof-Top Air Conditioning Unit
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	598.0	feet	***Barrier Height:***	**45.0 feet**
Noise Distance to Barrier:	400.0	feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	198.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	45.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	598.0	-41.6	-41.6	-41.6	-41.6	-41.6	-41.6
Shielding (Barrier Attenuation)	400.0	-12.7	-12.7	-12.7	-12.7	-12.7	-12.7
Raw (Distance + Barrier)		22.9	-54.3	-54.3	-54.3	-54.3	-54.3
39 Minute Hourly Adjustment		**21.0**	**-56.2**	**-56.2**	**-56.2**	**-56.2**	**-56.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R6**
Source: Parking Lot Vehicle Movements
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	570.0	feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	570.0	feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	570.0	-35.1	-35.1	-35.1	-35.1	-35.1	-35.1
Shielding (Barrier Attenuation)	570.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		17.1	-35.1	-35.1	-35.1	-35.1	-35.1
60 Minute Hourly Adjustment		**17.1**	**-35.1**	**-35.1**	**-35.1**	**-35.1**	**-35.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R7**
Source: Truck Idle/Reefer Activity
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	545.0	feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	545.0	feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	70.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	545.0	-25.2	-25.2	-25.2	-25.2	-25.2	-25.2
Shielding (Barrier Attenuation)	545.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		44.9	-25.2	-25.2	-25.2	-25.2	-25.2
60 Minute Hourly Adjustment		**44.9**	**-25.2**	**-25.2**	**-25.2**	**-25.2**	**-25.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R7**
Source: Roof-Top Air Conditioning Unit
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	103.0	feet	***Barrier Height:***	**45.0 feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	93.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	45.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	103.0	-26.3	-26.3	-26.3	-26.3	-26.3	-26.3
Shielding (Barrier Attenuation)	10.0	-5.2	-5.2	-5.2	-5.2	-5.2	-5.2
Raw (Distance + Barrier)		45.7	-31.5	-31.5	-31.5	-31.5	-31.5
39 Minute Hourly Adjustment		**43.8**	**-33.4**	**-33.4**	**-33.4**	**-33.4**	**-33.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R7**
Source: Parking Lot Vehicle Movements
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	36.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	36.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	36.0	-11.1	-11.1	-11.1	-11.1	-11.1	-11.1
Shielding (Barrier Attenuation)	36.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		41.1	-11.1	-11.1	-11.1	-11.1	-11.1
60 Minute Hourly Adjustment		**41.1**	**-11.1**	**-11.1**	**-11.1**	**-11.1**	**-11.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R8**
Source: Truck Idle/Reefer Activity
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	538.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	538.0 feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	70.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	538.0	-25.1	-25.1	-25.1	-25.1	-25.1	-25.1
Shielding (Barrier Attenuation)	538.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		45.0	-25.1	-25.1	-25.1	-25.1	-25.1
60 Minute Hourly Adjustment		**45.0**	**-25.1**	**-25.1**	**-25.1**	**-25.1**	**-25.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R8**
Source: Roof-Top Air Conditioning Unit
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	501.0	feet	***Barrier Height:***	**45.0**	**feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	491.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	45.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	501.0	-40.0	-40.0	-40.0	-40.0	-40.0	-40.0
Shielding (Barrier Attenuation)	10.0	-9.6	-9.6	-9.6	-9.6	-9.6	-9.6
Raw (Distance + Barrier)		27.6	-49.6	-49.6	-49.6	-49.6	-49.6
39 Minute Hourly Adjustment		**25.7**	**-51.5**	**-51.5**	**-51.5**	**-51.5**	**-51.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R8**
Source: Parking Lot Vehicle Movements
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	410.0	feet	***Barrier Height:***	**0.0**	**feet**
Noise Distance to Barrier:	410.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	410.0	-32.3	-32.3	-32.3	-32.3	-32.3	-32.3
Shielding (Barrier Attenuation)	410.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		19.9	-32.3	-32.3	-32.3	-32.3	-32.3
60 Minute Hourly Adjustment		**19.9**	**-32.3**	**-32.3**	**-32.3**	**-32.3**	**-32.3**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R9**
Source: Truck Idle/Reefer Activity
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,334.0	feet	***Barrier Height:***	**45.0**	**feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	8.0	feet
Barrier Distance to Observer:	1,324.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	70.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,334.0	-33.0	-33.0	-33.0	-33.0	-33.0	-33.0
Shielding (Barrier Attenuation)	10.0	-18.7	-18.7	-18.7	-18.7	-18.7	-18.7
Raw (Distance + Barrier)		18.4	-51.7	-51.7	-51.7	-51.7	-51.7
60 Minute Hourly Adjustment		**18.4**	**-51.7**	**-51.7**	**-51.7**	**-51.7**	**-51.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R9**
Source: Roof-Top Air Conditioning Unit
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	916.0	feet	***Barrier Height:***	**45.0**	**feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	906.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	45.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	916.0	-45.3	-45.3	-45.3	-45.3	-45.3	-45.3
Shielding (Barrier Attenuation)	10.0	-10.1	-10.1	-10.1	-10.1	-10.1	-10.1
Raw (Distance + Barrier)		21.8	-55.4	-55.4	-55.4	-55.4	-55.4
39 Minute Hourly Adjustment		**19.9**	**-57.3**	**-57.3**	**-57.3**	**-57.3**	**-57.3**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R9**
Source: Parking Lot Vehicle Movements
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	842.0	feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	842.0	feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	842.0	-38.5	-38.5	-38.5	-38.5	-38.5	-38.5
Shielding (Barrier Attenuation)	842.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		13.7	-38.5	-38.5	-38.5	-38.5	-38.5
60 Minute Hourly Adjustment		**13.7**	**-38.5**	**-38.5**	**-38.5**	**-38.5**	**-38.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R10**
Source: Truck Idle/Reefer Activity
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,227.0	feet	***Barrier Height:***	**45.0 feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	1,217.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	70.1	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	1,227.0	-32.2	-32.2	-32.2	-32.2	-32.2	-32.2
Shielding (Barrier Attenuation)	10.0	-18.7	-18.7	-18.7	-18.7	-18.7	-18.7
Raw (Distance + Barrier)		19.2	-50.9	-50.9	-50.9	-50.9	-50.9
60 Minute Hourly Adjustment		**19.2**	**-50.9**	**-50.9**	**-50.9**	**-50.9**	**-50.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R10**
Source: Roof-Top Air Conditioning Unit
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	894.0	feet	***Barrier Height:***	**45.0**	**feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	884.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	45.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	894.0	-45.0	-45.0	-45.0	-45.0	-45.0	-45.0
Shielding (Barrier Attenuation)	10.0	-10.1	-10.1	-10.1	-10.1	-10.1	-10.1
Raw (Distance + Barrier)		22.1	-55.1	-55.1	-55.1	-55.1	-55.1
39 Minute Hourly Adjustment		**20.2**	**-57.0**	**-57.0**	**-57.0**	**-57.0**	**-57.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R10**
Source: Parking Lot Vehicle Movements
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	768.0	feet	***Barrier Height:***	**6.0**	**feet**
Noise Distance to Barrier:	758.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	10.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	768.0	-37.7	-37.7	-37.7	-37.7	-37.7	-37.7
Shielding (Barrier Attenuation)	758.0	-5.5	-5.5	-5.5	-5.5	-5.5	-5.5
Raw (Distance + Barrier)		9.0	-43.2	-43.2	-43.2	-43.2	-43.2
60 Minute Hourly Adjustment		**9.0**	**-43.2**	**-43.2**	**-43.2**	**-43.2**	**-43.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R1**
Source: Fire Pump Emergency Generator
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	134.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	134.0 feet	*Noise Source Height:*	6.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	64.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	134.0	-8.6	-8.6	-8.6	-8.6	-8.6	-8.6
Shielding (Barrier Attenuation)	134.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		56.3	-8.6	-8.6	-8.6	-8.6	-8.6
60 Minute Hourly Adjustment		**56.3**	**-8.6**	**-8.6**	**-8.6**	**-8.6**	**-8.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R2**
Source: Fire Pump Emergency Generator
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	233.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	233.0 feet	*Noise Source Height:*	6.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	64.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	233.0	-13.4	-13.4	-13.4	-13.4	-13.4	-13.4
Shielding (Barrier Attenuation)	233.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		51.5	-13.4	-13.4	-13.4	-13.4	-13.4
60 Minute Hourly Adjustment		**51.5**	**-13.4**	**-13.4**	**-13.4**	**-13.4**	**-13.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R3**
Source: Fire Pump Emergency Generator
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	603.0	feet	***Barrier Height:***	**45.0 feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	6.0 feet
Barrier Distance to Observer:	593.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	64.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	603.0	-21.6	-21.6	-21.6	-21.6	-21.6	-21.6
Shielding (Barrier Attenuation)	10.0	-18.8	-18.8	-18.8	-18.8	-18.8	-18.8
Raw (Distance + Barrier)		24.5	-40.4	-40.4	-40.4	-40.4	-40.4
60 Minute Hourly Adjustment		**24.5**	**-40.4**	**-40.4**	**-40.4**	**-40.4**	**-40.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R4**
Source: Fire Pump Emergency Generator
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	238.0	feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	238.0	feet	*Noise Source Height:*	6.0 feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	64.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	238.0	-13.6	-13.6	-13.6	-13.6	-13.6	-13.6
Shielding (Barrier Attenuation)	238.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		51.3	-13.6	-13.6	-13.6	-13.6	-13.6
60 Minute Hourly Adjustment		**51.3**	**-13.6**	**-13.6**	**-13.6**	**-13.6**	**-13.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R5**
Source: Fire Pump Emergency Generator
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	356.0	feet	***Barrier Height:***	**45.0 feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	6.0 feet
Barrier Distance to Observer:	346.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	64.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	356.0	-17.0	-17.0	-17.0	-17.0	-17.0	-17.0
Shielding (Barrier Attenuation)	10.0	-18.8	-18.8	-18.8	-18.8	-18.8	-18.8
Raw (Distance + Barrier)		29.1	-35.8	-35.8	-35.8	-35.8	-35.8
60 Minute Hourly Adjustment		**29.1**	**-35.8**	**-35.8**	**-35.8**	**-35.8**	**-35.8**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R6**
Source: Fire Pump Emergency Generator
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	621.0	feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	621.0	feet	*Noise Source Height:*	6.0 feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	64.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	621.0	-21.9	-21.9	-21.9	-21.9	-21.9	-21.9
Shielding (Barrier Attenuation)	621.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		43.0	-21.9	-21.9	-21.9	-21.9	-21.9
60 Minute Hourly Adjustment		**43.0**	**-21.9**	**-21.9**	**-21.9**	**-21.9**	**-21.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R7**
Source: Fire Pump Emergency Generator
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	91.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	91.0 feet	*Noise Source Height:*	6.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	64.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	91.0	-5.2	-5.2	-5.2	-5.2	-5.2	-5.2
Shielding (Barrier Attenuation)	91.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		59.7	-5.2	-5.2	-5.2	-5.2	-5.2
60 Minute Hourly Adjustment		**59.7**	**-5.2**	**-5.2**	**-5.2**	**-5.2**	**-5.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R8**
Source: Fire Pump Emergency Generator
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	785.0 feet	***Barrier Height:***	**45.0 feet**
Noise Distance to Barrier:	10.0 feet	*Noise Source Height:*	6.0 feet
Barrier Distance to Observer:	775.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	64.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	785.0	-23.9	-23.9	-23.9	-23.9	-23.9	-23.9
Shielding (Barrier Attenuation)	10.0	-18.8	-18.8	-18.8	-18.8	-18.8	-18.8
Raw (Distance + Barrier)		22.2	-42.7	-42.7	-42.7	-42.7	-42.7
60 Minute Hourly Adjustment		**22.2**	**-42.7**	**-42.7**	**-42.7**	**-42.7**	**-42.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R9**
Source: Fire Pump Emergency Generator
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	894.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	894.0 feet	*Noise Source Height:*	6.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	64.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	894.0	-25.0	-25.0	-25.0	-25.0	-25.0	-25.0
Shielding (Barrier Attenuation)	894.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		39.9	-25.0	-25.0	-25.0	-25.0	-25.0
60 Minute Hourly Adjustment		**39.9**	**-25.0**	**-25.0**	**-25.0**	**-25.0**	**-25.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

6/4/2019

Observer Location: **R10**
Source: Fire Pump Emergency Generator
Condition: Operational - Interim

Project Name: Goodman III
Job Number: 12384
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	842.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	832.0 feet	*Noise Source Height:*	6.0 feet
Barrier Distance to Observer:	10.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

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

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	50.0	64.9	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	842.0	-24.5	-24.5	-24.5	-24.5	-24.5	-24.5
Shielding (Barrier Attenuation)	832.0	-5.5	-5.5	-5.5	-5.5	-5.5	-5.5
Raw (Distance + Barrier)		34.9	-30.0	-30.0	-30.0	-30.0	-30.0
60 Minute Hourly Adjustment		**34.9**	**-30.0**	**-30.0**	**-30.0**	**-30.0**	**-30.0**

APPENDIX 10.1:

CONSTRUCTION NOISE ASSESSMENT

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260 E. Baker St. | Suite 200 | Costa Mesa, CA 92626 | (949) 660-1994
urbanxroads.com

September 4, 2019

Ms. Tracy Zinn
T&B Planning
17542 17th St. #100
Tustin, CA 92780

SUBJECT: GOODMAN INDUSTRIAL PARK FONTANA III CONSTRUCTION NOISE ASSESSMENT

Dear Ms. Tracy Zinn:

Urban Crossroads, Inc. is pleased to submit this Construction Noise Assessment for the Goodman Industrial Park Fontana III ("Project"), which is located north of Jurupa Avenue, between Cypress Avenue and Juniper Avenue, in the City of Fontana. The purpose of the Construction Noise Assessment is to describe the potential construction noise levels associated with simultaneous construction of the both the Project and the planned construction activities at the neighboring St. Mary's Church.

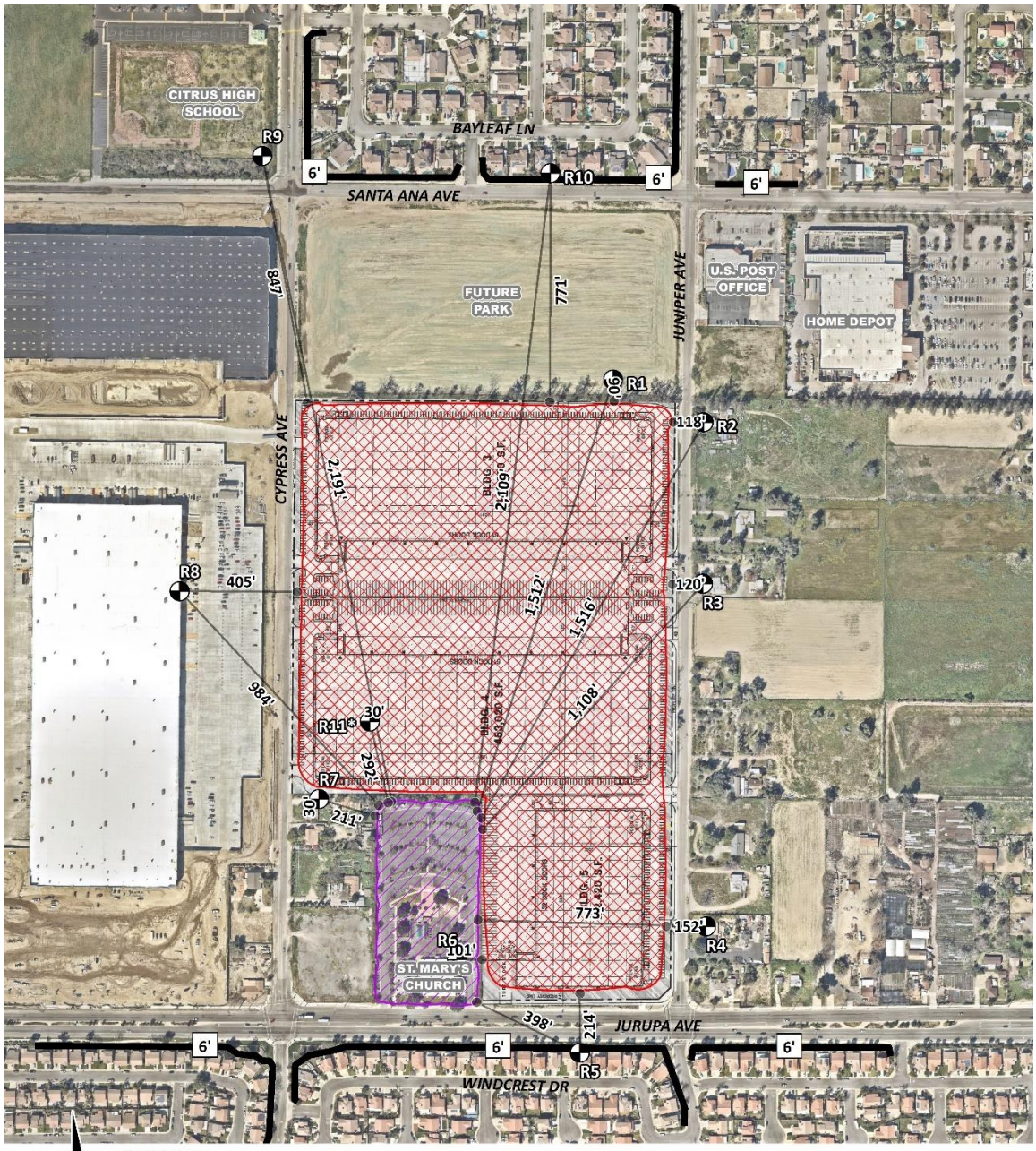
Construction activities are expected to create temporary and intermittent high-level noise conditions at receivers surrounding the Project site. Using the sample reference noise levels shown on Table 1 to represent the construction activities, this analysis estimates the Project-related construction noise levels at nearby sensitive receiver locations as shown on Exhibit A. To present a conservative approach, the highest measured reference noise level of each piece of equipment is used to describe the noise impacts in this assessment.

TABLE 1: REFERENCE CONSTRUCTION NOISE LEVELS

ID	Noise Source	Duration (h:mm:ss)	Reference Distance From Source (Feet)	Reference Noise Levels @ Reference Distance (dBA L_{eq})	Reference Noise Levels @ 50 Feet (dBA L_{eq})[3]
1	Truck Pass-Bys & Dozer Activity[1]	0:01:15	30'	63.6	59.2
2	Dozer Activity[1]	0:01:00	30'	68.6	64.2
3	Rough Grading Activities[2]	0:05:00	30'	77.9	73.5

[1] As measured by Urban Crossroads, Inc. on 10/14/15 at a business park construction site located at the northwest corner of Barranca Parkway and Alton Parkway in the City of Irvine.
[2] As measured by Urban Crossroads, Inc. on 10/20/15 at a construction site located in Rancho Mission Viejo.
[3] Reference noise levels are calculated at 50 feet using a drop off rate of 6 dBA per doubling of distance (point source).

EXHIBIT A: CONSTRUCTION ACTIVITY AND RECEIVER LOCATIONS



GOODMAN INDUSTRIAL PARK FONTANA III CONSTRUCTION NOISE ANALYSIS

The June 2019 Goodman Industrial Park Fontana III Noise Impact Analysis (1) evaluated the potential impacts resulting from the short-term construction activities. This includes a combination of trucks, power tools, concrete mixers, and portable generators that when combined can reach high levels. The analysis described the potential construction impacts for six different stages of activity. Table 2 presents the highest Project construction noise levels associated with grading activities.

TABLE 2: GOODMAN INDUSTRIAL HIGHEST CONSTRUCTION NOISE LEVELS

Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})
Truck Pass-Bys & Dozer Activity	59.2
Dozer Activity	64.2
Rough Grading Activities	73.5
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	73.5

Noise-Sensitive Receiver Location	Distance to Construction Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	90'	-5.1	0.0	68.4
R2	118'	-7.5	0.0	66.0
R3	120'	-7.6	0.0	65.9
R4	152'	-9.7	0.0	63.8
R5	214'	-12.6	-5.0	55.8
R6	101'	-6.1	0.0	67.4
R7	30'	4.4	0.0	77.9
R8	405'	-18.2	0.0	55.3
R9	847'	-24.6	0.0	48.9
R10	771'	-23.8	-5.0	44.7
R11	30'	4.4	0.0	77.9

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier attenuation from existing barriers in the Project study area.

Based on the reference construction noise levels shown on Table 1, the Project-related construction noise levels when the highest reference noise level is operating at the edge of primary construction

activity nearest each sensitive receiver location will range from 44.7 to 77.9 dBA L_{eq} at the sensitive receiver locations, as shown on Table 2.

ST. MARY'S CHURCH CONSTRUCTION NOISE ANALYSIS

Using the same reference noise levels and grading construction equipment outlined in Tables 1 and 2, Table 3 presents a summary of the potential construction activities associated with St. Mary's Church. Table 3 shows that construction noise levels associated with the St. Mary's Church are estimated to range from 43.8 to 67.4 dBA dBA L_{eq} at the sensitive receiver locations.

TABLE 3: ST. MARY'S CHURCH HIGHEST CONSTRUCTION NOISE LEVELS

Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})
Truck Pass-Bys & Dozer Activity	59.2
Dozer Activity	64.2
Rough Grading Activities	73.5
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	73.5

Noise-Sensitive Receiver Location	Distance to Construction Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	1,512'	-29.6	0.0	43.9
R2	1,516'	-29.6	0.0	43.8
R3	1,108'	-26.9	0.0	46.6
R4	773'	-23.8	0.0	49.7
R5	398'	-18.0	-5.0	50.4
R6	101'	-6.1	0.0	67.4
R7	211'	-12.5	0.0	61.0
R8	984'	-25.9	0.0	47.6
R9	847'	-24.6	0.0	48.9
R10	771'	-23.8	-5.0	44.7
R11	292'	-15.3	0.0	58.1

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier attenuation from existing barriers in the Project study area.

SIMULTANEOUS CONSTRUCTION NOISE LEVELS

To assess the potential worst-case construction noise levels with simultaneous construction of both the Project and St. Mary's Church, the noise levels for both have been estimated at each of the sensitive receiver locations. Table 4 presents the simultaneous noise levels associated with the cumulative combined and concurrent construction activities.

TABLE 4: CUMULATIVE CONSTRUCTION NOISE LEVELS

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})			Cumulative Construction Increase
	Goodman Industrial	St. Mary's Church	Combined Total	
R1	68.4	43.9	68.4	0.0
R2	66.0	43.8	66.0	0.0
R3	65.9	46.6	65.9	0.1
R4	63.8	49.7	64.0	0.2
R5	55.8	50.4	56.9	1.1
R6	67.4	67.4	70.4	3.0
R7	77.9	61.0	78.0	0.1
R8	55.3	47.6	56.0	0.7
R9	48.9	48.9	51.9	3.0
R10	44.7	44.7	47.7	3.0
R11	77.9	58.1	77.9	0.0

[1] Noise receiver locations are shown on Exhibit A.
[2] Estimated construction noise levels during peak operating conditions.

Table 4 suggests that the cumulative construction noise levels impacts associated will approach 3.0 dBA Leq at the sensitive receiver locations. A change of 3 dBA are considered *barely perceptible*, and changes of 5 dBA are considered *readily perceptible*. (2)

CONCLUSIONS

Construction activities are expected to create temporary and intermittent high-level noise conditions at receivers surrounding the Project site. The analysis suggests that receiver locations R6, R9 and R10 may experience cumulative construction noise level increases approaching a *barely perceptible* 3 dBA. However, a closer review of the analysis shows that R6 represents the source of construction at St. Mary's Church. Receiver locations R9 and R10 are located over 700 feet from St. Mary's Church and while the cumulative contribution is estimated at 3 dBA Leq the actual noise levels are well below the existing ambient noise conditions. The combined exterior noise levels at nearest residential receiver R5 are estimated at 56.9 dBA Leq. The expected cumulative construction noise levels at receiver R5 will likely be overshadowed by the background traffic noise from Jurupa Avenue.

If you have any questions, please contact me directly at (949) 336-5979.

Respectfully submitted,

URBAN CROSSROADS, INC.

Bill Lawson, P.E., INCE
Principal

REFERENCES

1. **Urban Crossroads, Inc.** *Goodman Industrial Park Fontana III.* June 13, 2019.
2. **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.