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FIRST INDUSTRIAL LOGISTICS II

NOISE IMPACT ANALYSIS

CITY OF MORENO VALLEY, CALIFORNIA

October 31, 2012

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FIRST INLAND LOGISTICS II
NOISE IMPACT ANALYSIS
CITY OF MORENO VALLEY, CALIFORNIA

1.0 INTRODUCTION

This noise analysis has been completed to determine the noise impacts associated with the development of the proposed First Inland Logistics II ("Project"). This noise study briefly describes the proposed project, provides information regarding noise fundamentals, describes the local regulatory setting, identifies the study methods and procedures for traffic noise analysis, and evaluates the future off-site exterior noise environment. Included in this study is an analysis of the potential off-site project-related noise impacts, and the predicted future noise environment that can be expected with normal project operational activities.

1.1 SITE LOCATION AND STUDY AREA

The proposed First Inland Logistics II is generally located on the northwest corner of Perris Boulevard and Nandina Avenue in the City of Moreno Valley as shown on Exhibit 1-A. The existing development near the project site contains a mix of land use that includes noise sensitive single-family rural residential, industrial, office and warehouse activities. The March Air Reserve Base is located approximately one mile west of the Project Site.

1.2 PROJECT DESCRIPTION

The proposed Project is subject to the Moreno Valley Industrial Area Plan (MVIAP), which designates the property as Industrial. In 2008, the City of Moreno Valley approved Tentative Parcel Map No. 35859 (PA07-0165) and two Building Plot Plans (PA07-1066 and PA07-0167) that covered the southern portion of the Project site and additional land area located to the immediate east. That approved project consisted of a 700,000 square foot warehouse building east of the currently proposed Project site and an 180,000 square foot warehouse building on the southern portion of the currently proposed Project site. Currently, the building to the east is constructed at 691,960 square feet. The building approved for the southern portion of the currently proposed Project site is not constructed and the site contains a truck trailer parking yard, approved by the City of Moreno Valley as an interim use in 2011 (PA11-0011). In September 2012, the City of Moreno Valley approved revised PA11-0011 to extend the interim truck trailer parking yard to the northern portion of the Project site.

This study evaluates a newly-submitted application for development of the 17.3-acre Project site with a "high cube" industrial warehouse building containing 400,130 square feet. The Project is anticipated to be built and occupied by late 2013. The preliminary site plan for the proposed First Inland Logistics II is shown on Exhibit 1-B.

EXHIBIT 1-A

LOCATION MAP

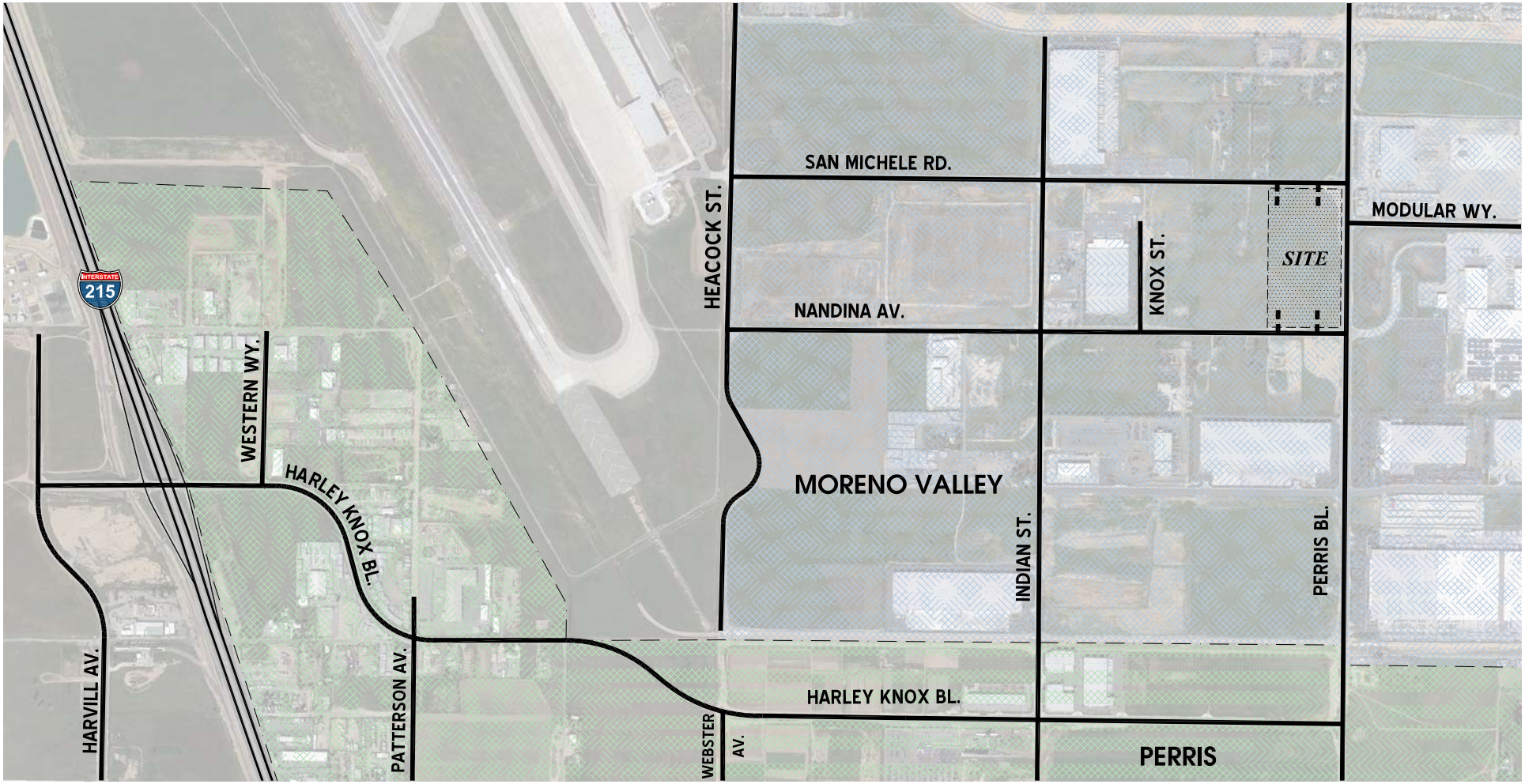

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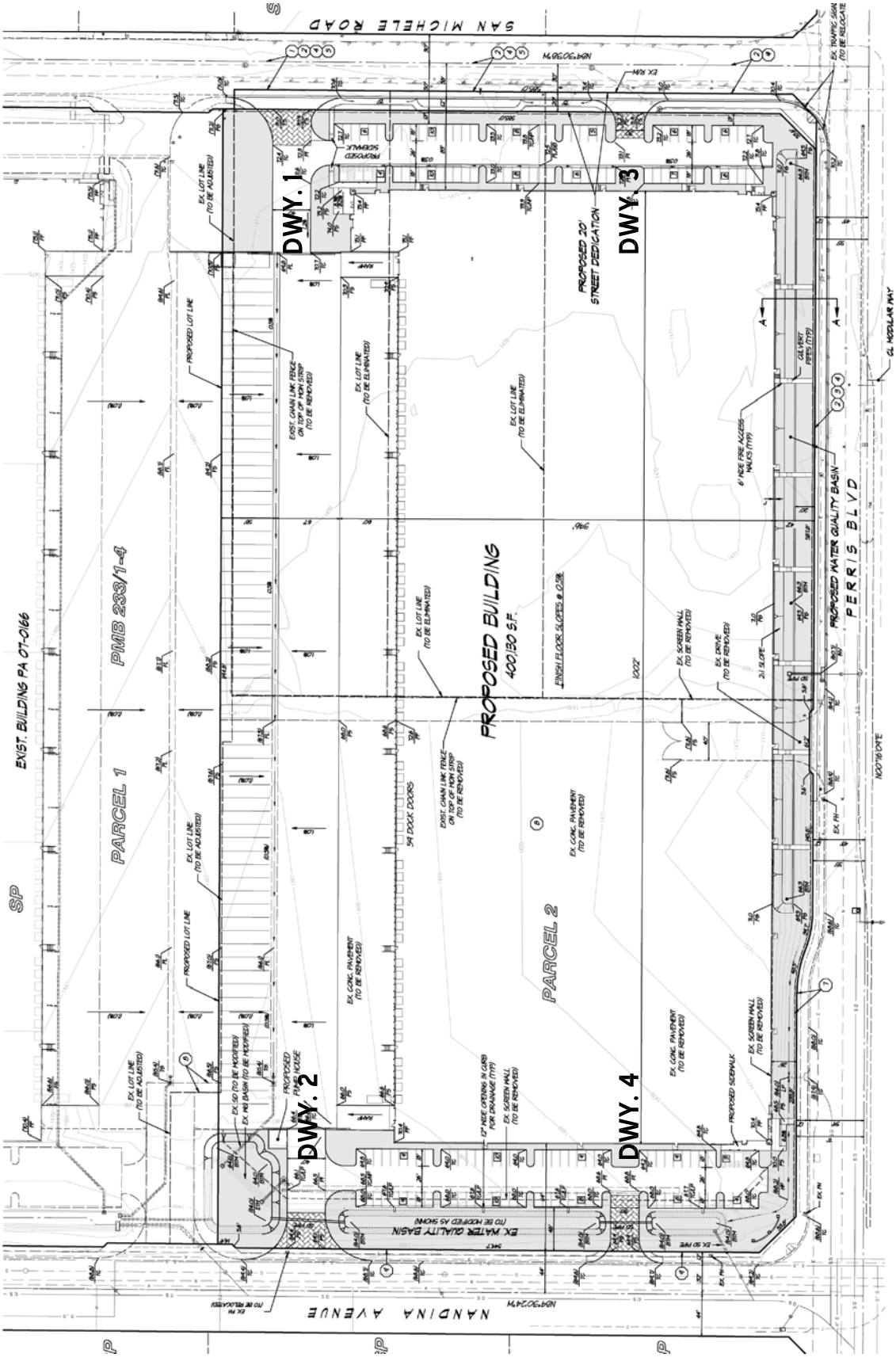
EXHIBIT 1-B

PRELIMINARY SITE PLAN



2.0 NOISE 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.

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. 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.

2.2 NOISE DESCRIPTORS

Environmental noise descriptors are generally based on averages, rather than instantaneous, noise levels. The most commonly used figure is the equivalent level (Leq). Equivalent sound levels are not measured directly but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level (Leq) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. In addition, the hourly Leq is the noise metric used to collect short-term noise level measurement samples and to estimate the 24-hour Community Noise Equivalent Levels (CNEL).

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 Leq sound levels in the evening from 7 p.m. to 10 p.m., and the addition of 10 decibels to dBA Leq sound levels at night between 10 p.m. and 7 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 particular time, but rather represents the total sound exposure.

EXHIBIT 2-A

TYPICAL NOISE LEVELS AND THEIR SUBJECTIVE LOUDNESS AND EFFECTS

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: NOISE TECHNICAL SUPPLEMENT BY CALTRANS

2.3 TRAFFIC NOISE PREDICTION

According to the *Highway Traffic Noise Analysis and Abatement Policy and Guidance,* provided by the Federal Highway Administration, the level of traffic noise depends on three primary factors: (1) the volume of the traffic, (2) the speed of the traffic, and (3) the vehicle mix within the flow of traffic. Generally, the loudness of traffic noise is increased by heavier traffic volumes, higher speeds, and a greater number of trucks. A doubling of the traffic volume, assuming that the speed and vehicle mix do not change, results in a noise level increase of 3 dBA. The vehicle mix on a given roadway may also have an effect on community noise levels. As the number of medium and heavy trucks increases and becomes a larger percentage of the vehicle mix, adjacent noise level impacts will increase. Vehicle noise is a combination of the noise produced by the engine, exhaust, and tires on the roadway.

2.4 NOISE CONTROL

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

2.5 GROUND ABSORPTION

To account for the ground-effect attenuation (absorption), two types of site conditions are commonly used in traffic noise models, soft site and hard site conditions. Soft site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. A drop-off rate of 4.5 dBA per doubling of distance is typically observed over soft ground with landscaping, as compared with a 3.0 dBA drop-off rate over hard ground such as asphalt, concrete, stone and very hard packed earth. Based on our experience, soft site conditions better reflect the predicted noise levels. In addition, Caltrans' research has shown that the use of soft site conditions is more appropriate for the application of the FHWA traffic noise prediction model used in this analysis.

2.6 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 view of the noise source.

2.7 COMMUNITY RESPONSE TO NOISE

Approximately ten (10) 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 25 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.

Despite this variability in behavior on an individual level, the population as a whole can be expected to exhibit the following responses to changes in noise levels. An increase or decrease of 1.0 dBA cannot be perceived except in carefully controlled laboratory experiments. A 3.0 dBA increase may be perceptible outside of the laboratory. An increase of 5.0 dBA is often necessary before any noticeable change in community response (i.e., complaints) would be expected.

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

- Fear associated with noise producing activities;
- Socio-economic status and educational level of the receptor;
- Noise receptor's perception that they are being unfairly treated;
- Attitudes regarding the usefulness of the noise-producing activity;
- Receptor's belief that the noise source can be controlled.

Recent studies have shown that changes in long-term noise levels are noticeable, and are responded to by people. For example, about ten (10) percent of the people exposed to traffic noise of 60 dBA will report being highly annoyed with the noise, and each increase of one (1) dBA is associated with approximately two (2) percent more people being highly annoyed. When traffic noise exceeds 60 dBA or aircraft noise exceeds 55 dBA, people begin complaining. Group or legal actions to stop the noise should be expected to begin at traffic noise levels near 70 dBA and aircraft noise levels near 60 dBA.

2.8 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 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.

3.0 REGULATORY SETTING

Local noise guidelines are often based on the broader guidelines established by state and federal agencies. This section describes the regulatory setting for the proposed First Inland Logistics II.

3.1 STATE OF CALIFORNIA NOISE REQUIREMENTS

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared according to guidelines adopted by the Governor's Office of Planning and Research. 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. Under CEQA, a project has a potentially significant impact if the project exposes people to noise levels in excess of thresholds, which can include standards established in the local general plan or noise ordinance.

3.2 CITY OF MORENO VALLEY NOISE ELEMENT

The City Noise Element typically provides the standards for land use compatibility for community noise exposure. However, the City of Moreno Valley General Plan does not include a noise element or specific transportation related noise standards. Rather, noise is considered in the Environmental Safety section of the General Plan Safety Element included in Appendix 3.1. 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 the purpose of this analysis, the transportation noise criteria are derived from standards contained in the General Plan Guidelines, a publication of the California Office of Planning and Research. These land use / noise compatibility standards included on Figure 2 in Appendix 3.2 are used by many California cities and counties and specify the maximum noise levels allowable for new developments impacted by transportation noise sources

The purpose of the transportation noise criteria is to protect, create, and maintain an environment free from noise and vibration that may jeopardize the health or welfare of sensitive receptors, or degrade quality of life. For the nearby noise sensitive areas, the exterior noise levels should generally remain below 65 dBA CNEL and for interior areas the noise levels must remain below 45 dBA CNEL.

3.3 CITY OF MORENO VALLEY MUNICIPAL CODE STANDARDS

The Project operational noise impacts are governed by the City of Moreno Valley Municipal Code, Title 11, Chapter 11, Regulation (Sections 11.80.010 through 11.80.060). These limits are used to describe the time-varying character of the stationary source operational noise levels and they do not compare with the 24-hour total sound exposure transportation related CNEL noise level limits.

3.3.1 OPERATIONAL NOISE STANDARDS

The Noise Ordinance included in the City of Moreno Valley Municipal Code provides performance standards and noise control guidelines for determining and mitigating non-transportation or stationary noise source impacts from operations at private properties.

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

Table 11.80.030-02, Maximum Sound Levels (in dBA) For Source Land Uses, shows that the daytime and nighttime standards for commercial uses the levels are 65 dBA and 60 dBA, respectively. The City of Moreno Valley Noise Ordinance is included in Appendix 3.3.

3.3.2 CONSTRUCTION NOISE STANDARDS

The City of Moreno Valley has set restrictions to control noise impacts associated with the construction of the proposed project. According to Section 11.80.030.D.7, Construction and Demolitions, it states: NO person shall operate or cause operation of any tools or equipment used in construction, drilling, repair, alteration or demolition work between the hours of eight p.m. and seven a.m. the following day such that the sound there from creates a noise disturbance, except for emergency work by public service utilities or for other work approved by the city manager or designee.

In addition to the hours of operations limitations provided in the Noise Ordinance, Section 11.80.030 (C.), Non-impulsive Sound Decibel Limits states the following: No person shall maintain, create, operate or cause to be operated on private property any source of sound in such a manner as to create any non-impulsive sound which exceeds the limits set forth for the source land use category in Table 11.80.030-2 when measured at a distance of two hundred (200) feet or more from the real property line of the source of the sound, if the sound occurs on privately owned property, or from the source of the sound, if the sound

occurs on public right-of-way, public space or other publicly owned property. Any source of sound in violation of this subsection shall be deemed prima facie to be a noise disturbance.

The City of Moreno Valley Municipal Code does not specifically address construction noise limits; however, it does provide noise level limits for the source land use category when measured at a distance of 200 feet. Since the source land use is other than residential, 65 dBA Leq at a distance of 200 feet is used as the limit for this analysis to assess the construction noise level impacts.

3.4 SIGNIFICANCE CRITERIA

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

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- A substantial permanent increase in ambient noise levels in the Project vicinity above existing levels without the proposed Project; or
- A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above noise levels existing without the proposed Project.

Under CEQA, consideration must be given to the magnitude of the increase, the existing ambient noise levels and the location of noise-sensitive receptors in order to determine if a noise increase represents a significant adverse environmental effect. The Federal Highway Administration and Caltrans both identify changes in noise levels of greater than 3 dBA as "barely perceptible," while changes of 5 dBA are considered "readily perceptible." In a community situation, the noise exposure is extended over a long time period, and changes in noise levels occur over a period of years.

For the purpose of this analysis, the level at which changes in community noise levels become discernible is likely to be some value greater than 1 dBA, and 3 dBA appears to be appropriate for most people. Noise impacts shall be considered significant if any of the following occur as a result of the proposed development:

1. Project related noise levels exceed applicable City standards.
2. Ambient conditions are below applicable standards, and project-generated noise at receptor land uses would result in:
    - An exceedance of the suggested land uses/noise compatibility guidelines for surface transportation sources (mobile sources); or

- An exceedance of the exterior noise standards defined in the City of Moreno Valley Noise Ordinance (area/stationary sources);

3. If ambient noise conditions exceed applicable Noise Standards and project-generated noise would create a “barely perceptible” 3 dBA or greater permanent increase in ambient exterior noise levels.

4. If project-related construction activities occur on any weekday outside the hours of eight p.m. and seven a.m. the following day such that the sound there from creates a noise disturbance, except for emergency work by public service utilities or for other work approved by the city manager or designee or exceeds 65 dBA Leq at a distance of 200 feet during the approved daytime hours.

4.0 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, four (4) long-term 24-hour measurements were taken at locations in the Project study area. Exhibit 4-A provides the boundaries of the Project study area and the noise level measurement locations. The noise level measurements were recorded by Urban Crossroads, Inc. on Thursday, October 25th, 2012. Appendix 4.1 includes study area photos.

4.1 MEASUREMENT PROCEDURE AND CRITERIA

The long-term 24-hour noise readings were recorded using four (4) Quest DL Pro data logging Type 2 noise dosimeters. All noise meters were programmed in "fast" mode to record noise levels in "A" weighted form. The sound level meters and microphone were equipped with a windscreen during all measurements. The Quest DL noise dosimeters were calibrated using a Quest QC-10 calibrator. All noise level measurement equipment meets American National Standards Institute (ANSI) specifications for sound level meters (Standard S1.4-1983).

4.2 NOISE MEASUREMENT LOCATIONS

The long-term 24-hour noise level measurements were generally positioned at the nearest noise sensitive receptor locations to assess the existing ambient hourly noise levels surrounding the project site. Collecting reference ambient noise level measurements at the nearby sensitive receptor locations allows for a comparison of the before and after project noise levels. It is important to note that the primary noise source for all the long-term reference noise level measurements was the traffic noise from the neighboring roadways. To assess the project study area noise levels the following noise measurement locations were selected:

- Noise measurement location L1 was located approximately 85 feet east of Perris Boulevard and 165 feet north of Rivard Road. Near the residential tract to the north.
- Noise measurement location L2 was taken Located next to a house roughly 100 feet north of the project boundary along San Michele Road and 660 feet west of Perris Boulevard.
- Noise measurement location L3 was taken Located approximately 140 feet east of the project boundary on the southeast corner of Perris Boulevard and Modular Way.
- Noise measurement location L4 was located near a house approximately 100 feet south of the project boundary along Nandina Avenue and 760 feet west of Perris Boulevard.
- Noise measurement location L5 was located on the east project driveway 140 feet west of Perris Boulevard and 325 feet south of Modular Way.

EXHIBIT 4-A

NOISE MEASUREMENT LOCATIONS

N

LEGEND:

(L5) = LONG-TERM, 24-HOUR, NOISE MEASUREMENT LOCATION

4.3 NOISE MEASUREMENT RESULTS

The results of the noise level measurements are presented in Table 4-1. Table 4-1 provides the energy (logarithmic) average daytime (7 am to 10 pm) and nighttime (10 pm to 7 am) hourly noise levels at each noise level measurement location. For comparison purposes, the average hourly Leq noise levels are shown on Table 4-1 in addition to the overall 24-hour CNEL noise levels. The actual hourly noise levels with the appropriate time of day noise penalties that were used to calculate the CNEL are provided in Appendix 4.2.

The energy average hourly daytime noise levels range from 55.9 dBA Leq at noise level measurement location L2 to 63.0 dBA Leq at noise level measurement location L1. The nighttime energy average hourly noise levels range from 53.5 Leq dBA at location L2 to 58.8 dBA Leq at location L3. The CNEL noise level measurements with the appropriate time of day corrections produced noise levels ranging from 61.4 dBA CNEL at location L4 to 67.3 dBA CNEL at location L1.

The results of the noise level measurements show that the unmitigated ambient noise levels in the study area near Perris Boulevard currently exceed the City of Moreno Valley transportation related exterior noise levels of 65 dBA CNEL defined in the General Plan for residential land uses. The background ambient noise levels in the project study area are dominated by the transportation related noise associated with the arterial roadway network.

Table 4-1

Long-Term (Ambient) Noise Level Measurements

Observer Location[1]	Date	Description	Hourly Noise Level (Leq dBA)[2]		CNEL
			Daytime (7am to 10pm)	Nighttime (10pm to 7am)	
L1	10/25/2012	Located approximately 85 feet east of Perris Boulevard and 165 feet north of Rivard Road. Near the residential tract to the north.	63.0	58.8	67.3
L2	10/25/2012	Located next to a house roughly 100 feet north of the project boundary along San Michele Road and 660 feet west of Perris Boulevard.	55.9	53.5	61.7
L3	10/25/2012	Located approximately 140 feet east of the project boundary on the southeast corner of Perris Boulevard and Modular Way.	62.3	58.8	66.9
L4	10/25/2012	Located near a house approximately 100 feet south of the project boundary along Nandina Avenue and 760 feet west of Perris Boulevard.	56.1	53.6	61.4
L5	10/25/2012	Located on the east project driveway 140 feet west of Perris Boulevard and 325 feet south of Modular Way.	58.4	54.2	62.6

[1] See Exhibit 4-A for the noise measurement locations.

[2] Energy (logarithmic) average hourly noise levels. The long-term noise level measurements printouts are included in Appendix 4.1.

5.0 METHODS AND PROCEDURES

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

5.1 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 (the "FHWA Model"). The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). 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.

5.2 TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 5-1 presents the off-site roadway parameters used to assess the off-site transportation noise impacts. Table 5-1 identifies the 28 study area roadway segments, the functional roadway classifications according to the City of Moreno Valley General Plan Circulation Element, the number of lanes and the vehicle speeds. For the purpose of this analysis, soft site conditions were used to analyze the traffic noise impacts for the project study area.

The Existing and Year 2017 average daily traffic volumes used for this study and presented in Table 5-2 were provided by the *First Inland Logistics II Traffic Impact Analysis* prepared by Urban Crossroads, Inc. in October 2012. Table 5-3 presents the hourly traffic flow distributions (vehicle mix) used for this analysis. The vehicle mix provides the hourly distribution percentages of automobile, medium trucks and heavy trucks for input into the FHWA Noise Prediction Model.

Table 5-1

Off-Site Roadway Parameters

ID	Roadway	Segment	Roadway Section[1]	Vehicle Speed (MPH)
1	Harley Knox Boulevard	West of I-215 Freeway	4D	55
2	Harley Knox Boulevard	I-215 SB Ramps to I-215 NB Ramps	4D	55
3	Harley Knox Boulevard	I-215 NB Ramps to Western Way	4U	45
4	Harley Knox Boulevard	East of Western Way	4U	45
5	Harley Knox Boulevard	West of Patterson Avenue	4U	45
6	Harley Knox Boulevard	East of Patterson Avenue	2D	45
7	Harley Knox Boulevard	West of Indian Street	4D	55
8	Harley Knox Boulevard	East of Indian Street	4D	55
9	Western Way	North of Harley Knox Boulevard	2U	40
10	Patterson Avenue	North of Harley Knox Boulevard	2U	40
11	Patterson Avenue	South of Harley Knox Boulevard	2U	40
12	Indian Street	North of Nandina Avenue	2D	45
13	Indian Street	South of Nandina Avenue	4D	55
14	Indian Street	North of Harley Knox Boulevard	4D	55
15	Indian Street	South of Harley Knox Boulevard	4D	55
16	Knox Street	North of Nandina Avenue	2D	45
18	Perris Boulevard	South of San Michele Road	4D	55
19	Perris Boulevard	North of Nandina Avenue	4D	55
20	Perris Boulevard	South of Nandina Avenue	4D	55
21	San Michele Road	West of Driveway 1	2D	45
22	San Michele Road	Driveway 1 to Driveway 3	2D	45
23	San Michele Road	Driveway 3 to Perris Boulevard	2D	45
24	Nandina Avenue	West of Indian Street	2U	40
25	Nandina Avenue	Indian Street to Knox Street	2D	45
26	Nandina Avenue	Knox Street to Driveway 2	2D	45
27	Nandina Avenue	Driveway 2 to Driveway 4	2U	40
28	Nandina Avenue	Driveway 4 to Perris Boulevard	2U	40

[1] Source: First Inland Logistics II Traffic Impact Analysis by Urban Crossroads, Inc. in October 2012.

Table 5-2

Average Daily Traffic Volumes

ID	Roadway	Segment	Average Daily Traffic			
			Existing		Year 2017	
			No Project	With Project	No Project	With Project
1	Harley Knox Boulevard	West of I-215 Freeway	7,884	7,884	13,255	13,255
2	Harley Knox Boulevard	I-215 SB Ramps to I-215 NB Ramps	10,824	11,358	24,732	25,266
3	Harley Knox Boulevard	I-215 NB Ramps to Western Way	14,844	15,751	36,174	37,081
4	Harley Knox Boulevard	East of Western Way	14,052	14,959	35,300	36,207
5	Harley Knox Boulevard	West of Patterson Avenue	13,992	14,899	35,233	36,140
6	Harley Knox Boulevard	East of Patterson Avenue	13,152	14,073	34,418	35,339
7	Harley Knox Boulevard	West of Indian Street	11,592	12,512	32,697	33,617
8	Harley Knox Boulevard	East of Indian Street	5,856	5,856	10,811	10,811
9	Western Way	North of Harley Knox Boulevard	1,200	1,200	1,325	1,325
10	Patterson Avenue	North of Harley Knox Boulevard	132	132	154	154
11	Patterson Avenue	South of Harley Knox Boulevard	1,236	1,250	1,485	1,499
12	Indian Street	North of Nandina Avenue	3,672	3,950	14,862	15,140
13	Indian Street	South of Nandina Avenue	6,168	7,141	20,893	21,867
14	Indian Street	North of Harley Knox Boulevard	7,572	8,545	22,312	23,286
15	Indian Street	South of Harley Knox Boulevard	1,428	1,481	5,278	5,332
16	Knox Street	North of Nandina Avenue	324	324	834	834
18	Perris Boulevard	South of San Michele Road	16,932	16,998	26,870	26,938
19	Perris Boulevard	North of Nandina Avenue	19,962	19,759	29,920	29,986
20	Perris Boulevard	South of Nandina Avenue	19,956	19,984	29,209	29,233
21	San Michele Road	West of Driveway 1	3,444	3,902	5,729	6,007
22	San Michele Road	Driveway 1 to Driveway 3	3,444	3,396	5,477	5,477
23	San Michele Road	Driveway 3 to Perris Boulevard	3,444	3,496	5,530	5,584
24	Nandina Avenue	West of Indian Street	1,236	1,236	6,224	6,224
25	Nandina Avenue	Indian Street to Knox Street	2,340	3,035	5,600	6,296
26	Nandina Avenue	Knox Street to Driveway 2	1,608	2,303	4,343	5,038
27	Nandina Avenue	Driveway 2 to Driveway 4	1,068	1,072	3,463	3,491
28	Nandina Avenue	Driveway 4 to Perris Boulevard	1,068	1,135	3,489	3,555

[1] Traffic volumes according to the First Inland Logistics II Traffic Impact Analysis by Urban Crossroads, Inc. in October 2012.

Table 5-3

Hourly Traffic Flow Distribution [1]

Motor-Vehicle Type	Daytime (7 am to 7 pm)	Evening (7 pm to 10 pm)	Night (10 pm to 7 am)	Total % Traffic Flow
City Roadways				
Automobiles	77.5%	12.9%	9.6%	97.42%
Medium Trucks	84.8%	4.9%	10.3%	1.84%
Heavy Trucks	86.5%	2.7%	10.8%	0.74%

[1] Typical Southern California Vehicle Mix.

6.0 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 First Inland Logistics II Traffic Impact Analysis. Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway. Traffic noise contour boundaries are typically calculated at distances of 100 feet from a roadway centerline. Noise contours were developed for the following traffic scenarios:

- Existing Without / With Project: This scenario refers to the existing present-day noise conditions, without the project and with the construction of the proposed project.

- Year (2017) Without / With Project: This scenario refers to the background noise conditions at future Year 2017 with and without the proposed project. This scenario corresponds to 2017 conditions, and includes all cumulative projects identified in the Traffic Impact Analysis.

6.1 OFF-SITE TRAFFIC NOISE CONTOURS

To quantify the Project's traffic noise impacts on the surrounding off-site areas, the changes in traffic noise levels on 28 roadway segments surrounding the Project were calculated based on the changes in the average daily traffic volumes. The off-site noise contours were used to assess the Project's incremental off-site traffic-related noise impacts at land uses adjacent to roadways conveying project traffic. The off-site traffic noise contour worksheets are included in Appendix 6.1.

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, 60 and 55 dBA noise levels. The distance from the centerline of the roadway to the CNEL contour boundaries for roadways in the proposed Project's vicinity are presented in Tables 6-1 through 6-4. The noise contours do not take into account the effect of any existing noise barriers or topography that may affect ambient noise levels. In addition, since the noise contours reflect modeling of vehicular noise along area roadways, they appropriately do not reflect noise contribution from the surrounding commercial and industrial uses or railroad activities within the project study area.

Table 6-1

Existing Without Project Conditions Noise Contours

ID	Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet)			
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
1	Harley Knox Boulevard	West of I-215 Freeway	63.2	RW	76	164	353
2	Harley Knox Boulevard	I-215 SB Ramps to I-215 NB Ramps	64.6	RW	94	202	436
3	Harley Knox Boulevard	I-215 NB Ramps to Western Way	63.8	RW	83	178	384
4	Harley Knox Boulevard	East of Western Way	63.5	RW	80	172	370
5	Harley Knox Boulevard	West of Patterson Avenue	63.5	RW	80	171	369
6	Harley Knox Boulevard	East of Patterson Avenue	63.2	RW	76	163	351
7	Harley Knox Boulevard	West of Indian Street	64.9	RW	98	212	457
8	Harley Knox Boulevard	East of Indian Street	61.9	RW	62	134	290
9	Western Way	North of Harley Knox Boulevard	51.5	RW	RW	RW	58
10	Patterson Avenue	North of Harley Knox Boulevard	41.9	RW	RW	RW	RW
11	Patterson Avenue	South of Harley Knox Boulevard	51.6	RW	RW	RW	59
12	Indian Street	North of Nandina Avenue	57.6	RW	RW	70	150
13	Indian Street	South of Nandina Avenue	62.2	RW	65	139	300
14	Indian Street	North of Harley Knox Boulevard	63.0	RW	74	160	344
15	Indian Street	South of Harley Knox Boulevard	55.8	RW	RW	RW	113
16	Knox Street	North of Nandina Avenue	47.1	RW	RW	RW	RW
18	Perris Boulevard	South of San Michele Road	66.5	59	127	273	588
19	Perris Boulevard	North of Nandina Avenue	67.3	66	141	304	656
20	Perris Boulevard	South of Nandina Avenue	67.3	66	141	304	656
21	San Michele Road	West of Driveway 1	57.4	RW	RW	67	144
22	San Michele Road	Driveway 1 to Driveway 3	57.4	RW	RW	67	144
23	San Michele Road	Driveway 3 to Perris Boulevard	57.4	RW	RW	67	144
24	Nandina Avenue	West of Indian Street	51.6	RW	RW	RW	59
25	Nandina Avenue	Indian Street to Knox Street	55.7	RW	RW	RW	111
26	Nandina Avenue	Knox Street to Driveway 2	54.1	RW	RW	RW	86
27	Nandina Avenue	Driveway 2 to Driveway 4	51.0	RW	RW	RW	RW
28	Nandina Avenue	Driveway 4 to Perris Boulevard	51.0	RW	RW	RW	RW

[1] "RW" = Location of the respective noise contour falls within the right-of-way of the road

Table 6-2

Existing With Project Conditions Noise Contours

ID	Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet)			
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
1	Harley Knox Boulevard	West of I-215 Freeway	63.2	RW	76	164	353
2	Harley Knox Boulevard	I-215 SB Ramps to I-215 NB Ramps	64.8	RW	97	209	450
3	Harley Knox Boulevard	I-215 NB Ramps to Western Way	64.0	RW	86	185	399
4	Harley Knox Boulevard	East of Western Way	63.8	RW	83	179	386
5	Harley Knox Boulevard	West of Patterson Avenue	63.8	RW	83	179	385
6	Harley Knox Boulevard	East of Patterson Avenue	63.5	RW	79	170	367
7	Harley Knox Boulevard	West of Indian Street	65.2	RW	104	223	480
8	Harley Knox Boulevard	East of Indian Street	61.9	RW	62	134	290
9	Western Way	North of Harley Knox Boulevard	51.5	RW	RW	RW	58
10	Patterson Avenue	North of Harley Knox Boulevard	41.9	RW	RW	RW	RW
11	Patterson Avenue	South of Harley Knox Boulevard	51.7	RW	RW	RW	60
12	Indian Street	North of Nandina Avenue	58.0	RW	RW	73	157
13	Indian Street	South of Nandina Avenue	62.8	RW	71	153	331
14	Indian Street	North of Harley Knox Boulevard	63.6	RW	80	173	373
15	Indian Street	South of Harley Knox Boulevard	56.0	RW	RW	RW	116
16	Knox Street	North of Nandina Avenue	47.1	RW	RW	RW	RW
18	Perris Boulevard	South of San Michele Road	66.6	59	127	274	589
19	Perris Boulevard	North of Nandina Avenue	67.2	65	140	302	651
20	Perris Boulevard	South of Nandina Avenue	67.3	66	141	305	656
21	San Michele Road	West of Driveway 1	57.9	RW	RW	72	156
22	San Michele Road	Driveway 1 to Driveway 3	57.4	RW	RW	66	142
23	San Michele Road	Driveway 3 to Perris Boulevard	57.4	RW	RW	67	145
24	Nandina Avenue	West of Indian Street	51.6	RW	RW	RW	59
25	Nandina Avenue	Indian Street to Knox Street	56.8	RW	RW	61	132
26	Nandina Avenue	Knox Street to Driveway 2	55.6	RW	RW	RW	110
27	Nandina Avenue	Driveway 2 to Driveway 4	51.0	RW	RW	RW	RW
28	Nandina Avenue	Driveway 4 to Perris Boulevard	51.2	RW	RW	RW	56

[1] "RW" = Location of the respective noise contour falls within the right-of-way of the road

Table 6-3

Year 2017 Without Project Conditions Noise Contours

ID	Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet)			
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
1	Harley Knox Boulevard	West of I-215 Freeway	65.5	RW	108	232	499
2	Harley Knox Boulevard	I-215 SB Ramps to I-215 NB Ramps	68.2	76	163	351	757
3	Harley Knox Boulevard	I-215 NB Ramps to Western Way	67.6	70	150	323	695
4	Harley Knox Boulevard	East of Western Way	67.5	68	147	317	684
5	Harley Knox Boulevard	West of Patterson Avenue	67.5	68	147	317	683
6	Harley Knox Boulevard	East of Patterson Avenue	67.4	67	144	309	666
7	Harley Knox Boulevard	West of Indian Street	69.4	91	196	423	911
8	Harley Knox Boulevard	East of Indian Street	64.6	RW	94	202	436
9	Western Way	North of Harley Knox Boulevard	51.9	RW	RW	RW	62
10	Patterson Avenue	North of Harley Knox Boulevard	42.5	RW	RW	RW	RW
11	Patterson Avenue	South of Harley Knox Boulevard	52.4	RW	RW	RW	67
12	Indian Street	North of Nandina Avenue	63.7	RW	82	177	381
13	Indian Street	South of Nandina Avenue	67.5	68	146	314	676
14	Indian Street	North of Harley Knox Boulevard	67.7	71	152	328	706
15	Indian Street	South of Harley Knox Boulevard	61.5	RW	58	125	270
16	Knox Street	North of Nandina Avenue	51.2	RW	RW	RW	56
18	Perris Boulevard	South of San Michele Road	68.5	80	172	371	800
19	Perris Boulevard	North of Nandina Avenue	69.0	86	185	399	859
20	Perris Boulevard	South of Nandina Avenue	68.9	85	182	392	845
21	San Michele Road	West of Driveway 1	59.6	RW	RW	94	202
22	San Michele Road	Driveway 1 to Driveway 3	59.4	RW	RW	91	196
23	San Michele Road	Driveway 3 to Perris Boulevard	59.4	RW	RW	91	197
24	Nandina Avenue	West of Indian Street	58.6	RW	RW	81	174
25	Nandina Avenue	Indian Street to Knox Street	59.5	RW	RW	92	199
26	Nandina Avenue	Knox Street to Driveway 2	58.4	RW	RW	78	168
27	Nandina Avenue	Driveway 2 to Driveway 4	56.1	RW	RW	55	118
28	Nandina Avenue	Driveway 4 to Perris Boulevard	56.1	RW	RW	55	119

[1] "RW" = Location of the respective noise contour falls within the right-of-way of the road

Table 6-4

Year 2017 With Project Conditions Noise Contours

ID	Road	Segment	CNEL at 100 Feet (dBA)	Distance to Contour (Feet)			
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
1	Harley Knox Boulevard	West of I-215 Freeway	65.5	RW	108	232	499
2	Harley Knox Boulevard	I-215 SB Ramps to I-215 NB Ramps	68.3	77	165	356	768
3	Harley Knox Boulevard	I-215 NB Ramps to Western Way	67.7	71	152	328	707
4	Harley Knox Boulevard	East of Western Way	67.6	70	150	323	696
5	Harley Knox Boulevard	West of Patterson Avenue	67.6	69	150	323	695
6	Harley Knox Boulevard	East of Patterson Avenue	67.5	68	146	315	678
7	Harley Knox Boulevard	West of Indian Street	69.5	93	200	431	928
8	Harley Knox Boulevard	East of Indian Street	64.6	RW	94	202	436
9	Western Way	North of Harley Knox Boulevard	51.9	RW	RW	RW	62
10	Patterson Avenue	North of Harley Knox Boulevard	42.5	RW	RW	RW	RW
11	Patterson Avenue	South of Harley Knox Boulevard	52.4	RW	RW	RW	67
12	Indian Street	North of Nandina Avenue	63.8	RW	83	179	385
13	Indian Street	South of Nandina Avenue	67.6	70	150	324	697
14	Indian Street	North of Harley Knox Boulevard	67.9	73	157	337	727
15	Indian Street	South of Harley Knox Boulevard	61.5	RW	59	126	272
16	Knox Street	North of Nandina Avenue	51.2	RW	RW	RW	56
18	Perris Boulevard	South of San Michele Road	68.6	80	173	372	801
19	Perris Boulevard	North of Nandina Avenue	69.0	86	185	399	860
20	Perris Boulevard	South of Nandina Avenue	68.9	85	182	393	846
21	San Michele Road	West of Driveway 1	59.8	RW	RW	97	208
22	San Michele Road	Driveway 1 to Driveway 3	59.4	RW	RW	91	196
23	San Michele Road	Driveway 3 to Perris Boulevard	59.5	RW	RW	92	198
24	Nandina Avenue	West of Indian Street	58.6	RW	RW	81	174
25	Nandina Avenue	Indian Street to Knox Street	60.0	RW	RW	100	215
26	Nandina Avenue	Knox Street to Driveway 2	59.0	RW	RW	86	185
27	Nandina Avenue	Driveway 2 to Driveway 4	56.1	RW	RW	55	119
28	Nandina Avenue	Driveway 4 to Perris Boulevard	56.2	RW	RW	56	120

[1] "RW" = Location of the respective noise contour falls within the right-of-way of the road

6.2 EXISTING PROJECT OFF-SITE TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 6-5 presents a comparison of the existing without and with project conditions CNEL noise levels. Table 6-1 shows that the unmitigated exterior noise levels are expected to range from 41.9 to 67.3 dBA CNEL at 100 feet from each roadway's centerline. Table 6-2 presents the existing with project conditions unmitigated noise contours that are expected to range from 41.9 to 67.3 dBA CNEL at 100 feet from the roadway centerline. As shown on Table 6-5 the Project is expected to generate an unmitigated exterior noise level increase ranging from 0.0 dBA CNEL to 1.6 dBA CNEL. Table 6-5 shows that the off-site study area roadway segments on Brodiaea Avenue will not experience a readily perceptible noise level increase above 3.0 dBA CNEL. Based on the thresholds of significance, the proposed project will not create a significant off-site traffic noise level impact on the study area roadway segments for existing conditions.

6.3 YEAR 2017 PROJECT OFF-SITE TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 6-6 presents a comparison of the Year 2017 without and with project conditions CNEL noise levels. Table 6-3 shows that the unmitigated exterior noise levels are expected to range from 42.5 to 69.4 dBA CNEL at 100 feet from each roadway's centerline. Table 6-4 presents the Year 2017 with project conditions unmitigated noise contours that are expected to range from 42.5 to 69.5 dBA CNEL at 100 feet from the roadway centerline. As shown on Table 6-6 the Project is expected to generate an unmitigated exterior noise level increase ranging from 0.0 dBA CNEL to 0.6 dBA CNEL. Based on the thresholds of significance, the proposed project will not create a significant off-site traffic noise level impact on the study area roadway segments for Year 2017 conditions.

6.4 OFF-SITE TRANSPORTATION RELATED PROJECT NOISE IMPACTS

Project-related vehicular source noise may affect permanent and on-going ambient noise conditions and would not be considered a temporary or periodic noise impact. Applying the Thresholds of Significance discussed in Section 3.4 of this report, the proposed project will not create a significant off-site traffic noise level impact on the study area roadway segments for Existing or Year 2017 conditions and, therefore, no mitigation is required.

Table 6-5

Existing Off-Site Project Related Traffic Noise Impacts

ID	Road	Segment	CNEL at 100 Feet (dBA)			Potential Significant Impact?[1]
			No Project	With Project	Project Addition	
1	Harley Knox Boulevard	West of I-215 Freeway	63.2	63.2	0.0	No
2	Harley Knox Boulevard	I-215 SB Ramps to I-215 NB Ramps	64.6	64.8	0.2	No
3	Harley Knox Boulevard	I-215 NB Ramps to Western Way	63.8	64.0	0.3	No
4	Harley Knox Boulevard	East of Western Way	63.5	63.8	0.3	No
5	Harley Knox Boulevard	West of Patterson Avenue	63.5	63.8	0.3	No
6	Harley Knox Boulevard	East of Patterson Avenue	63.2	63.5	0.3	No
7	Harley Knox Boulevard	West of Indian Street	64.9	65.2	0.3	No
8	Harley Knox Boulevard	East of Indian Street	61.9	61.9	0.0	No
9	Western Way	North of Harley Knox Boulevard	51.5	51.5	0.0	No
10	Patterson Avenue	North of Harley Knox Boulevard	41.9	41.9	0.0	No
11	Patterson Avenue	South of Harley Knox Boulevard	51.6	51.7	0.0	No
12	Indian Street	North of Nandina Avenue	57.6	58.0	0.3	No
13	Indian Street	South of Nandina Avenue	62.2	62.8	0.6	No
14	Indian Street	North of Harley Knox Boulevard	63.0	63.6	0.5	No
15	Indian Street	South of Harley Knox Boulevard	55.8	56.0	0.2	No
16	Knox Street	North of Nandina Avenue	47.1	47.1	0.0	No
18	Perris Boulevard	South of San Michele Road	66.5	66.6	0.0	No
19	Perris Boulevard	North of Nandina Avenue	67.3	67.2	0.0	No
20	Perris Boulevard	South of Nandina Avenue	67.3	67.3	0.0	No
21	San Michele Road	West of Driveway 1	57.4	57.9	0.5	No
22	San Michele Road	Driveway 1 to Driveway 3	57.4	57.4	0.0	No
23	San Michele Road	Driveway 3 to Perris Boulevard	57.4	57.4	0.1	No
24	Nandina Avenue	West of Indian Street	51.6	51.6	0.0	No
25	Nandina Avenue	Indian Street to Knox Street	55.7	56.8	1.1	No
26	Nandina Avenue	Knox Street to Driveway 2	54.1	55.6	1.6	No
27	Nandina Avenue	Driveway 2 to Driveway 4	51.0	51.0	0.0	No
28	Nandina Avenue	Driveway 4 to Perris Boulevard	51.0	51.2	0.3	No

[1] A significant impact occurs when the noise level exceeds 65 dBA CNEL and the project generates a noise level increase of greater than 3.0 dBA.

Table 6-6

Year 2017 Off-Site Project Related Traffic Noise Impacts

ID	Road	Segment	CNEL at 100 Feet (dBA)			Potential Significant Impact?[1]
			No Project	With Project	Project Addition	
1	Harley Knox Boulevard	West of I-215 Freeway	65.5	65.5	0.0	No
2	Harley Knox Boulevard	I-215 SB Ramps to I-215 NB Ramps	68.2	68.3	0.1	No
3	Harley Knox Boulevard	I-215 NB Ramps to Western Way	67.6	67.7	0.1	No
4	Harley Knox Boulevard	East of Western Way	67.5	67.6	0.1	No
5	Harley Knox Boulevard	West of Patterson Avenue	67.5	67.6	0.1	No
6	Harley Knox Boulevard	East of Patterson Avenue	67.4	67.5	0.1	No
7	Harley Knox Boulevard	West of Indian Street	69.4	69.5	0.1	No
8	Harley Knox Boulevard	East of Indian Street	64.6	64.6	0.0	No
9	Western Way	North of Harley Knox Boulevard	51.9	51.9	0.0	No
10	Patterson Avenue	North of Harley Knox Boulevard	42.5	42.5	0.0	No
11	Patterson Avenue	South of Harley Knox Boulevard	52.4	52.4	0.0	No
12	Indian Street	North of Nandina Avenue	63.7	63.8	0.1	No
13	Indian Street	South of Nandina Avenue	67.5	67.6	0.2	No
14	Indian Street	North of Harley Knox Boulevard	67.7	67.9	0.2	No
15	Indian Street	South of Harley Knox Boulevard	61.5	61.5	0.0	No
16	Knox Street	North of Nandina Avenue	51.2	51.2	0.0	No
18	Perris Boulevard	South of San Michele Road	68.5	68.6	0.0	No
19	Perris Boulevard	North of Nandina Avenue	69.0	69.0	0.0	No
20	Perris Boulevard	South of Nandina Avenue	68.9	68.9	0.0	No
21	San Michele Road	West of Driveway 1	59.6	59.8	0.2	No
22	San Michele Road	Driveway 1 to Driveway 3	59.4	59.4	0.0	No
23	San Michele Road	Driveway 3 to Perris Boulevard	59.4	59.5	0.0	No
24	Nandina Avenue	West of Indian Street	58.6	58.6	0.0	No
25	Nandina Avenue	Indian Street to Knox Street	59.5	60.0	0.5	No
26	Nandina Avenue	Knox Street to Driveway 2	58.4	59.0	0.6	No
27	Nandina Avenue	Driveway 2 to Driveway 4	56.1	56.1	0.0	No
28	Nandina Avenue	Driveway 4 to Perris Boulevard	56.1	56.2	0.1	No

[1] A significant impact occurs when the noise level exceeds 65 dBA CNEL and the project generates a noise level increase of greater than 3.0 dBA.

7.0 OFF-SITE OPERATIONAL NOISE IMPACTS

This section analyzes the potential operational noise impacts resulting from the proposed Project. The off-site stationary source noise impacts associated with the operation of the Project will include idling trucks, delivery truck activities, and roof-top air conditioning units.

To estimate the project operational noise impacts, reference noise level measurements were collected from similar types of activities to represent the expected noise levels associated with the development of the Project. The reference noise levels were positioned on the Project site and were then used in combination with the existing topography to estimate the operational noise level impacts at a distance of 200 feet.

7.1 PROJECT RELATED STATIONARY SOURCE NOISE REGULATIONS

The Noise Ordinance included in the City of Moreno Valley Municipal Code provides performance standards and noise control guidelines for determining and mitigating non-transportation or stationary noise source impacts from operations at private properties.

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

Table 11.80.030-02, Maximum Sound Levels (in dBA) For Source Land Uses, shows that the daytime and nighttime standards for commercial uses the levels are 65 dBA and 60 dBA, respectively.

7.2 REFERENCE NOISE LEVELS

To estimate the project off-site 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 7-1 used to estimate the project operational noise impacts.

It is important to note that the following projected noise levels assume the worst-case noise environment with the loading docks, semi-truck movements, and roof-top air conditioning units all operating simultaneously. In reality, these noise level impacts will vary throughout the day.

Table 7-1

Reference Noise Level Measurements[1]

Noise Source	Duration (mm:ss)[4]	Distance From Source (Feet)	Noise Source Height (Feet)	Drop-Off Rate[5] (Leq dBA)	Noise Level (Leq dBA)
Loading Dock Activities[1]	1:00	20.0	8.0	6.0	77.3
Truck Pass-By[2]	1:00	30.0	8.0	6.0	69.5
Air Condenser Units[3]	-	10.0	5.0	6.0	73.0

[1] As measured by Urban Crossroads, Inc. on 4/14/11.

[2] As measured by Urban Crossroads, Inc. on 4/14/11.

[3] Data provided by the Krack Technical Bulletin: 0607_469 Rev 0509

[4] Noise measurement duration is consistent will approximate time for each event to occur.

[5] Noise level (dBA) drop-off rate per doubling of distance.

7.2.1 LOADING DOCK ACTIVITIES

In order to evaluate the noise impacts associated with tractor trailer (truck) unloading/loading activities, reference noise level measurements were taken at the Huntington Beach Walmart located at the southwest corner of Goldenwest Street and Edinger Avenue by Urban Crossroads Inc. on April 14, 2011. The primary noise generated by tractor trailer unloading is the noise of the truck arriving, backing into the dock area, detaching the cab, attaching the cab to the empty trailer, and exiting the loading dock. Because the trailer seals to the loading dock, employees unload the tractor trailer from the inside of the store. The receiving crew places a 20' long rolling conveyor assembly inside the trailer to roll merchandise (on pallets or in boxes) into the store. The unmitigated noise level was measured at 77.3 dBA Leq at a distance of 20 feet from the tractor trailer.

7.2.2 TRUCK PASS-BY

In order to evaluate the noise impacts associated with truck (tractor trailer) pass-bys along the western property line, reference noise level measurements were taken at the Huntington Beach Walmart by Urban Crossroads Inc. on April 14, 2011. The measurement included the exiting of the tractor trailer. The unmitigated noise level was measured at 69.5 dBA Leq at a distance of 30 feet from the tractor trailer.

7.2.3 AIR CONDENSER UNITS

Rooftop mechanical ventilation units will be installed on the proposed industrial buildings located within the project site. To assess the mechanical ventilation system (packaged heat pump) noise impacts, typical outdoor sound power levels were provided by Trane. The noise ratings provided by Trane indicated that the packaged heat pumps will produce unmitigated noise levels ranging from 75 to 82 dBA when measured at a distance of 3 feet.

To predict the worst-case future noise environment, a continuous reference noise level of 73 dBA at 10 feet was used to represent the roof-top mechanical ventilation system. Even though the mechanical ventilation system will cycle on and off throughout the day, this approach presents the worst-case noise condition. In addition, these units have been designed to provide cooling during the peak summer daytime periods, and it is unlikely that all the units will be operating continuously throughout the noise sensitive nighttime periods.

7.3 PROJECT ONLY OPERATIONAL NOISE LEVELS

Based upon the reference noise levels provided on Table 7-1, , it is possible to estimate the stationary source noise levels from the proposed project at a distance 200 feet from the property line as required by the City of Moreno Valley Municipal Code. The noise level estimates were calculated based on the

project's site plan showing the spatial relationship between the potential on-site noise sources and the closest property line

Table 7-2 presents the unmitigated exterior noise levels associated with the proposed First Inland Logistics II at a distance 200 feet from the property line. Table 7-2 indicates that the unmitigated hourly noise levels are expected to range from 31.4 to 53.0 dBA Leq. The expected operational noise level impacts associated with the proposed First Inland Logistics II are below the daytime and nighttime exterior noise level standards for commercial uses of 65 dBA Leq ad 60 dBA Leq, respectively and, therefore, create a less than significant noise level impact.

7.4 OPERATIONAL NOISE MITIGATION

As shown on Table 7-2, the routine operation of the project during normal operation will not exceed the City's standards for stationary noise impacts. To further reduce potential operational noise levels received at adjacent residential land uses, it is recommended that the Lead Agency require the following as project Conditions of Approval:

1. All trucks, tractors, and forklifts shall be operated with proper operating and well maintained mufflers.
2. Maintain quality pavement conditions that are free of bumps to minimize truck noise.
3. The truck access gates and loading docks within the truck court on the project site shall be posted with signs which state:
    - Truck drivers shall turn off engines when not in use;
    - Diesel trucks servicing the Project shall not idle for more than five (5) minutes; and
    - Post telephone numbers of the building facilities manager to report violations.

Table 7-2

Project Only Stationary Source Impact Noise Level Projections

Noise Source	Reference Noise Level Distance (Feet)	Reference Noise Level (dBA)	Distance From Source To Property Line (Feet)	Source Noise Level At Property Line (dBA)	Reference Noise Level At 200 Feet From Property Line
Loading Dock Activities	20'	77.3	60.0	67.8	47.8
Truck Pass-By	30'	69.5	30.0	69.5	53.0
Air Condenser Units	10'	73.0	60.0	57.4	31.4
Overall Unmittigated Noise Level At 200 Feet From Property Line:					**54.2**

8.0 OFF-SITE CONSTRUCTION NOISE IMPACTS

This section analyzes potential noise and vibration impacts resulting from the short-term off-site construction related impacts associated with the development of the proposed First Inland Logistics II.

8.1 CITY OF MORENO VALLEY CONSTRUCTION NOISE STANDARDS

The City of Moreno Valley Municipal Code does not specifically address construction noise, it does provide noise level limits for the source land use category when measured at a distance of 200 feet. Since the source land use is other than residential, the 65 dBA Leq at a distance of 200 feet is used as the limit for this analysis to assess the First Inland Logistics II construction noise level impacts.

The City of Moreno Valley has set restrictions to control noise impacts associated with the construction of the proposed project. According to Section 11.80.030.D.7, Construction and Demolitions: NO person shall operate or cause operation of any tools or equipment used in construction, drilling, repair, alteration or demolition work between the hours of eight p.m. and seven a.m. the following day such that the sound there from creates a noise disturbance, except for emergency work by public service utilities or for other work approved by the city manager or designee.

8.2 CONSTRUCTION ACTIVITIES

Construction noise represents a short-term impact on the ambient noise levels. Noise generated by construction equipment, including trucks, power tools, concrete mixers and portable generators can reach high levels. Project construction is expected to occur in six (6) stages: demolition, site preparation, grading, building construction, paving, and architectural coating.

8.3 CONSTRUCTION REFERENCE NOISE LEVELS

In January 2006, the Federal Highway Administration (FHWA) published a national database of construction equipment reference noise emission levels. The database, as shown in Appendix 8.1, provides a comprehensive list of the noise generating characteristics for specific types of construction equipment. In addition, the database provides an acoustical usage factor to estimate the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation.

Noise levels generated by heavy construction equipment can range from approximately 70 dBA to noise levels in excess of 100 dBA when measured at 50 feet. However, these noise levels diminish with distance from the construction site at a rate of 6 dBA per doubling of distance. For example, a noise level of 78 dBA measured at 50 feet from the noise source to the receptor would be reduced to 72 dBA at 100 feet from the source to the receptor, and would be further reduced to 66 dBA at 200 feet from the source to

the receptor.

The construction noise levels including the number and mix of construction equipment by construction phase are consistent with the data used to support the construction emissions in the First Inland Logistics II Air Quality Impact Analysis. The short-term construction noise levels for each stage of construction were calculated and are summarized below.

8.3.1 DEMOLITION

Table 8-1 shows that during the short-term demolition stage of construction, the unmitigated exterior noise levels at a distance of 200 feet is estimated at 74.4 dBA Leq.

8.3.2 SITE PREPARATION

Noise impacts from grading activity will result from both on-road and off-road heavy equipment operating during this stage of construction. Table 8-2 shows that during the short-term grading stage of construction, noise levels at a distance of 200 feet are estimated at 87.1 dBA Leq.

8.3.3 GRADING

Noise impacts associated with the grading work will result in construction related noise levels of 87.8 dBA Leq at a distance of 200 feet as shown on Table 8-3.

8.3.4 BUILDING CONSTRUCTION

Building construction activity will result in noise level impacts from heavy equipment that will be operational during the physical building construction. Table 8-4 shows that during the short-term building construction stage of construction, noise levels are estimated at 83.2 dBA Leq at a distance of 200 feet.

8.3.5 PAVING

Paving activities include the movement of any remaining material as well as necessary curb and gutter work, road base material placement and blacktop. Table 8-5 shows that during the short-term paving stage of construction, noise levels at nearby noise sensitive uses are estimated at 80.9 dBA Leq at a distance of 200 feet.

Table 8-1

Demolition Construction Noise Levels[1]

Equipment Type	Quantity	Usage Factor[2]	Hours Of Operation[3]	Reference Noise Level @ 50 Feet (Lmax dBA)	Cumulative Level @ 200 Feet (dBA)
Concrete/Industrial Saw	1	20%	1.6	90.0	71.0
Rubber Tired Dozers	2	40%	3.2	79.0	66.0
Excavators	3	40%	3.2	81.0	69.8
Crushing/Processing	1	15%	1.2	83.0	62.7
Cumulative Hourly Noise Levels 200 Feet (Leq dBA)					74.4
Distance to 65 dBA Leq Contour (Feet)					593

[1] Source: FHWA's Roadway Construction Noise Model, January 2006.

[2] Estimates the fraction of time each piece of equipment is operating at full power during a construction operation.

[3] Represents the actual hours of peak construction equipment activity out of a typical 8 hour workday.

Table 8-2

Site Preparation Construction Noise Levels[1]

Equipment Type	Quantity	Usage Factor[2]	Hours Of Operation[3]	Reference Noise Level @ 50 Feet (Lmax dBA)	Cumulative Level @ 200 Feet (dBA)
Water Trucks	3	40%	3.2	78.0	78.8
Scrapers	2	40%	3.2	85.0	84.0
Graders	1	40%	3.2	85.0	81.0
Rubber Tired Dozers	1	40%	3.2	79.0	63.0
Tractors/Loaders/Backhoes	2	40%	3.2	78.0	77.0
Cumulative Hourly Noise Levels 200 Feet (Leq dBA)					87.1
Distance to 65 dBA Leq Contour (Feet)					2,534

[1] Source: FHWA's Roadway Construction Noise Model, January 2006.

[2] Estimates the fraction of time each piece of equipment is operating at full power during a construction operation.

[3] Represents the actual hours of peak construction equipment activity out of a typical 8 hour workday.

Table 8-3

Grading Construction Noise Levels[1]

Equipment Type	Quantity	Usage Factor[2]	Hours Of Operation[3]	Reference Noise Level @ 50 Feet (Lmax dBA)	Cumulative Level @ 200 Feet (dBA)
Water Trucks	3	40%	3.2	78.0	78.8
Scrapers	2	40%	3.2	85.0	84.0
Graders	1	40%	3.2	85.0	81.0
Rubber Tired Dozers	1	40%	3.2	79.0	63.0
Excavator	2	40%	3.2	81.0	80.0
Tractors/Loaders/Backhoes	2	40%	3.2	78.0	77.0
Cumulative Hourly Noise Levels 200 Feet (Leq dBA)					87.8
Distance to 65 dBA Leq Contour (Feet)					2,774

[1] Source: FHWA's Roadway Construction Noise Model, January 2006.

[2] Estimates the fraction of time each piece of equipment is operating at full power during a construction operation.

[3] Represents the actual hours of peak construction equipment activity out of a typical 8 hour workday.

Table 8-4

Building Construction Noise Levels[1]

Equipment Type	Quantity	Usage Factor[2]	Hours Of Operation[3]	Reference Noise Level @ 50 Feet (Lmax dBA)	Cumulative Level @ 200 Feet (dBA)
Tractors/Loaders/Backhoes	3	40%	3.2	78.0	78.8
Forklifts	3	20%	1.6	75.0	72.8
Cranes	2	16%	1.3	81.0	76.1
Generator Sets	1	50%	4.0	81.0	78.0
Welders	1	40%	3.2	74.0	70.0
Cumulative Hourly Noise Levels 200 Feet (Leq dBA)					83.2
Distance to 65 dBA Leq Contour (Feet)					1,622

[1] Source: FHWA's Roadway Construction Noise Model, January 2006.

[2] Estimates the fraction of time each piece of equipment is operating at full power during a construction operation.

[3] Represents the actual hours of peak construction equipment activity out of a typical 8 hour workday.

Table 8-5

Paving Construction Noise Levels[1]

Equipment Type	Quantity	Usage Factor[2]	Hours Of Operation[3]	Reference Noise Level @ 50 Feet (Lmax dBA)	Cumulative Level @ 200 Feet (dBA)
Pavers	2	50%	4.0	77.0	77.0
Paving Equipment	2	40%	3.2	76.0	75.0
Rollers	2	20%	1.6	80.0	76.0
Cumulative Hourly Noise Levels 200 Feet (Leq dBA)					80.9
Distance to 65 dBA Leq Contour (Feet)					1,242

[1] Source: FHWA's Roadway Construction Noise Model, January 2006.

[2] Estimates the fraction of time each piece of equipment is operating at full power during a construction operation.

[3] Represents the actual hours of peak construction equipment activity out of a typical 8 hour workday.

8.3.6 ARCHITECTURAL COATING

Table 8-6 shows that during the short-term architectural coating stage of construction, noise levels at a distance of 200 feet are estimated at 74.0 dBA Leq.

8.4 CONSTRUCTION NOISE IMPACT REDUCTION PRACTICES

Based on the six (6) phases of construction related noise impacts, the noise impacts associated with the proposed First Inland Logistics II are expected to create temporary high-level noise impacts at receptors surrounding the project site when certain activities occur near the project property line. Though construction noise is temporary, intermittent and of short duration, and will not present any long-term impacts, the following practices would reduce any noise level increases produced by the construction equipment to the nearby noise sensitive residential land uses.

- During all project site construction, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the project site.

- The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise sensitive receptors nearest the project site during all project construction.

- The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment. Haul routes shall not pass sensitive land uses or residential dwellings.

8.5 CONSTRUCTION VIBRATION IMPACTS

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures and soil type. Construction vibration is generally associated with pile driving and rock blasting. Occasionally large bulldozers and loaded trucks can cause perceptible vibration levels at close proximity. To control short-term construction vibration related impacts, Section 9.10.170 of the City of Moreno Valley Noise Ordinance states that "No vibration shall be permitted which can be felt at or beyond the property line. (Ord. 359, 1992)"

According to the Transportation and Construction-Induced Vibration Guidance Manual prepared for Caltrans, ground-borne vibration from construction activities and equipment such as such as D-8 and D-9 Caterpillars bulldozers, earthmovers and haul trucks at distances of 10 feet do not create vibration amplitudes that causes structural damage to nearby structures. Since the proposed project is not

Table 8-6

Architectural Coating Noise Levels[1]

Equipment Type	Quantity	Usage Factor[2]	Hours Of Operation[3]	Reference Noise Level @ 50 Feet (Lmax dBA)	Cumulative Level @ 200 Feet (dBA)
Air Compressors	1	40%	3.2	78.0	74.0
Cumulative Hourly Noise Levels 200 Feet (Leq dBA)					74.0
Distance to 65 dBA Leq Contour (Feet)					565

[1] Source: FHWA's Roadway Construction Noise Model, January 2006.

[2] Estimates the fraction of time each piece of equipment is operating at full power during a construction operation.

[3] Represents the actual hours of peak construction equipment activity out of a typical 8 hour workday.

expected to employ any pile driving or rock blasting equipment and with the nearest receivers located over 50 feet from the nearest point of construction activities, impacts from groundborne vibration are anticipated to be less-than-significant.

In addition to the construction related activities, operational activities at the proposed project site will not include nor require equipment, facilities, or activities that would result in perceptible ground-borne vibration, thus creating no ground borne vibration impacts.

APPENDIX 3.1

City of Moreno Valley Safety Element

also promoted by way of educational programs.

Between July of 2004 and June of 2005, animal services staff responded to 17,077 calls for service. Animal services also returned 1,290 lost pets to their owners and arranged for the adoption of 2,034 pets.

Moreno Valley Animal Shelter

6.3.2 Issues and Opportunities

Irrespective of the efforts of Animal Services and other organizations dedicated to reducing the population of unwanted pets, a large number of unwanted pets are produced every year. Unfortunately, the number of unwanted animals far surpasses the capacity of the shelter and the number of good homes available for adoption.

The need for animal services is expected to grow in proportion to the rate of growth in the local community.

B. ENVIRONMENTAL SAFETY

6.4 NOISE

6.4.1 Background

Noise has long been an accepted part of modern civilization, but excessive noise has become an important environmental concern. Excessive noise can disturb the peace and quiet of neighborhoods. Excessive noise can cause physical and psychological responses. Temporary reactions include, but are not limited to, constriction of blood vessels, secretion of saliva and gastric fluids, changes in heart rate and a feeling of anxiety and discomfort.

Three effects of noise that are of particular concern are interference with speech, interruption of sleep and hearing loss. Sleep interruption can occur when the intruding noise exceeds 45 decibels. Speech interference becomes a problem when the intruding noise is above 60 decibels. Hearing loss can begin to occur with sustained noise levels above 75 decibels.

Section 1092 of Title 25, Chapter 1, Subchapter 1, Article 4, of the California Administrative Code includes noise insulation standards for new multi-family structures (hotels, motels, apartments, condominiums, and other attached dwellings) located within the 60 CNEL contour adjacent to roads, railroads, rapid transit lines, airports or industrial areas. An acoustic analysis is required showing that these multi-family units have been designed to limit interior noise levels with doors and windows closed to 45 CNEL in any habitable room. Title 21 of the California Administration Code (Subchapter 6, Article 2, Section 5014) also specifies that noise levels in all habitable rooms do not exceed 45 CNEL.

6.4.2 Noise Fundamentals

Noise levels are measured on a logarithmic scale in decibels. The measurements are then weighted and added over a specified time period to reflect not only the magnitude of the sound, but also its duration, frequencyand time of occurrence. In this manner, various acoustical scales and units of measurement have been developed such as: equivalent sound levels (Leq), day-night average sound levels (Ldn), Community Noise Equivalent Levels (CNEL's), and

Single Event Noise Exposure Levels (SENEL's).

A-weighted decibels (dBA) approximate the subjective response of the human ear to noise by discriminating against the very low and high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies audible to the human ear. The decibel scale has a value of 1.0 dBA at the threshold of hearing and 140 dBA at the threshold of pain. Each increase of 10 decibels indicates a ten-fold sound energy increase, which is perceived by the human ear as being roughly twice as loud.

Examples of the decibel level of various noise sources are the quiet rustle of leaves (10 dBA), a soft whisper (20 to 30 dBA) and the hum of a small electric clock (40 dBA). Additional examples include the ambient noise in a house kitchen (50dBA), normal conversation at 5 feet (55 dBA) and a busy street at 50 feet (75 dBA).

Day-night average sound levels (Ldn) are a measure of cumulative noise exposure. The Ldn value results from a summation of hourly noise levels over a 24-hour time period with an increased weighting factor applied to the period between 10:00 PM and 7:00 AM. This takes into account the fact that noise that occurs during normal sleeping hours is more annoying. Community Noise Equivalent Levels (CNEL's) is a measure similar to Ldn except it includes an additional penalty for noise that occurs between 7 p.m. and 10 p.m. CNEL values are typically less than one decibel higher than Ldn values.

The Single Event Noise Exposure Level (SENEL) is the appropriate rating scale for a single noise occurrence. The SENEL, given in decibels, is the noise exposure level of a single event measured over the time interval between the initial and final times for which it exceeds the threshold noise level.

For a "line source" of noise such as a heavily traveled roadway, the noise level drops off at a nominal rate of 3.0 decibels for each doubling of distance between the noise source and noise receiver. Environmental factors such as the wind, temperature, the characteristics of the ground (hard or soft) and the air (relative humidity), the presence of grass, shrubs and trees, combine to increase the actual attenuation achieved outside laboratory conditions to 4.5 decibels per doubling of distance. Thus, a noise level of 74.5 decibels at 50 feet from the highway centerline would attenuate to 70.0 decibels at 100 feet, 65.5 decibels at 200 feet, and so forth.

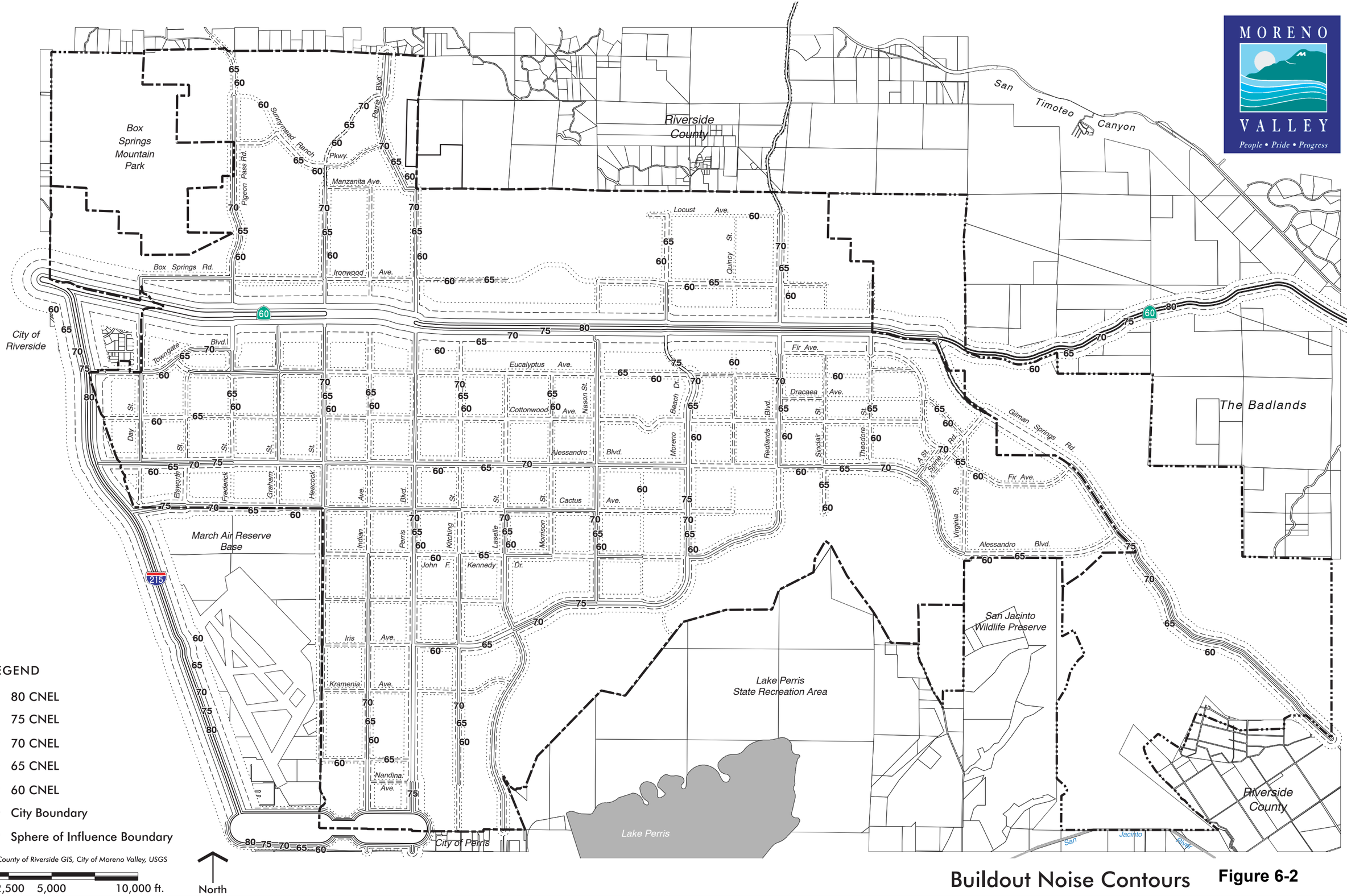
In an area, which is relatively flat and free of barriers, the sound level resulting from a single "point source" drops by 6 decibels for each doubling of distance. This applies to fixed noise sources such as industrial sources and mobile noise sources that are temporarily stationary such as idling trucks.

Important noise sources within the study area include industrial and utility uses, mechanical equipment, loud speakers, aircraft and motor vehicles. Noise levels adjacent to roadways vary with the volume of traffic, the mean vehicular speed, the truck mix and the road cross-section. High traffic volumes and speed along State route 60 and arterial roadways contribute to high noise levels. Noise levels due to air traffic from the joint-use airport at March depend on aircraft characteristics, the number, path, elevation and duration of flights as well as the time of day that flights take place.

The results of the noise analysis prepared for the environmental impact report for the General Plan Update is shown in Figure 6-2. Figure 6-2 can be used as a general guide to determine potential "worst case" future noise levels for planning and design purposes.

6.4.3 Community Responses to Noise

People in general cannot perceive an increase or decrease of 1.0 dBA except in carefully controlled laboratory experiments. A



LEGEND

- 80 CNEL
- 75 CNEL
- 70 CNEL
- 65 CNEL
- 60 CNEL
- City Boundary
- Sphere of Influence Boundary

Sources: County of Riverside GIS, City of Moreno Valley, USGS

0 2,500 5,000 10,000 ft.

North

Buildout Noise Contours

Figure 6-2

3.0 dBA increase is considered noticeable outside of the laboratory. An increase of 5.0 dBA is often necessary before any noticeable change in community response (i.e. complaints) would be expected.

Studies have shown that people respond to changes in long-term noise levels. About 10 percent of the people exposed to traffic noise of 60 Ldn will report being highly annoyed with the noise and 2 percent more people become highly annoyed with each unit of Ldn increase in traffic noise. When traffic noise exceeds 60 Ldn or aircraft noise exceeds 55 Ldn, people begin complaining. Group and legal actions to stop the noise may occur at traffic noise levels near 70 Ldn and aircraft noise levels near 65 Ldn.

Approximately 10 percent of the population has such a low tolerance for noise that they object to any noise not of their own making. Consequently, even in the quietest environment, some complaints will occur. Another 25 percent of the population will not complain even in very severe noise environments. Thus, a variety of reactions can be expected.

6.4.4. Planning and Design Considerations

There are many mechanisms available to control noise in the community. A noise ordinance can be adopted to control noise sources, but the best way to minimize the adverse effects of noise is through planning and design.

Planning noise compatible land uses near existing or projected high noise levels is an effective technique. Certain land uses are more compatible with noise than others. Schools, hospitals, churches and single-family residences are relatively sensitive to noise. Multiple-family residential uses are less sensitive to noise than single-family residential uses. Commercial, office and industrial uses are relatively noise tolerant. Where possible, the land use plan places noise tolerant uses within areas impacted by noise from State Route 60, arterial streets and aircraft over flights. The historical land use pattern and other community needs made it impractical to avoid all noise conflicts through land use planning.

Acoustic site planning, architectural design, acoustic construction techniques and noise barriers are effective methods for reducing noise impacts. Acoustic site planning involves the arrangement of lots, buildings, berms and walls to minimize noise conflicts and impacts. Sound walls and berming are often used as sound barriers between residential uses and nonresidential noise sources, such as commercial uses, industrial uses, freeways and other major roadways.

Acoustic architectural design involves the incorporation of noise attenuation strategies in the design of individual structures. Building heights, room arrangements, window size and placement, balcony and courtyard design can be adjusted to shield noise sensitive activities from intrusive sound levels.
Acoustic construction is the treatment of various parts of a building to reduce interior noise levels. Acoustic wall design, doors, ceilings and floors, as well as dense building materials and acoustic windows (double-paned, thick, non-openable, or small windows) are all available options.

6.5 GEOLOGIC HAZARDS

6.5.1 Background

Most of the Moreno Valley study area lies at the eastern margin of a block of the earth's crust known as the “Perris Block.” The Perris Block is a mass of granitic rock, generally bounded by the San Jacinto fault, the Elsinore fault, and the Santa Ana River. The Perris Block has had an apparent history of vertical land movements of several thousand feet.

APPENDIX 3.2

General Plan Guidelines

APPENDIX C

Guidelines for the Preparation and Content of the Noise Element of the General Plan

The noise element of the general plan provides a basis for comprehensive local programs to control and abate environmental noise and to protect citizens from excessive exposure. The fundamental goals of the noise element are:

- To provide sufficient information concerning the community noise environment so that noise may be effectively considered in the land use planning process. In so doing, the necessary groundwork will have been developed so that a community noise ordinance may be utilized to resolve noise complaints.
- To develop strategies for abating excessive noise exposure through cost-effective mitigating measures in combination with zoning, as appropriate, to avoid incompatible land uses.
- To protect those existing regions of the planning area whose noise environments are deemed acceptable and also those locations throughout the community deemed "noise sensitive."
- To utilize the definition of the community noise environment in the form of CNEL or Ldn noise contours as provided in the noise element for local compliance with the State Noise Insulation Standards. These standards require specified levels of outdoor to indoor noise reduction for new multifamily residential constructions in areas where the outdoor noise exposure exceeds CNEL (or Ldn) 60 dB.

The 1976 edition of the *Noise Element Guidelines*, prepared by the California Department of Health Services (DHS), was a result of SB 860 (Beilenson, 1975), which became effective January 1, 1976. SB 860, among other things, revised and clarified the requirements for the noise element of each city and county general plan and gave DHS the authority to issue guidelines for compliance thereto. Compliance with the 1976 version of these guidelines was mandated only for those noise elements that were not submitted to the Office of Planning and Research by the effective date of SB 860 and to subsequent revisions of previously submitted noise elements.

A comparison between the 1976 *Noise Element Guidelines* and this revised edition will not reveal substantial changes. The basic methodology advanced by that previous edition remains topical. Where necessary, code references have been updated and the text revised to reflect statutory changes.

DEFINITIONS

Decibel, dB: A unit of measurement describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).

A-Weighted Level: The sound level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear and gives good correlation with subjective reactions to noise.

L10: The A-weighted sound level that is exceeded ten percent of the sample time. Similarly, L50, L90, etc.

Leq: Equivalent energy level. The sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample period. Leq is typically computed over 1-, 8-, and 24-hour sample periods.

CNEL: Community Noise Equivalent Level. The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five decibels to sound levels in the evening from 7 p.m. to 10 p.m. and after addition of 10 decibels to sound levels in the night from 10 p.m. to 7 a.m.

Ldn: Day-Night Average Level. The average equivalent A-weighted sound level during a 24-hour day, obtained after the addition of 10 decibels to sound levels in the night after 10 p.m. and before 7 a.m. (Note: CNEL and Ldn represent daily levels of noise exposure averaged on an annual or daily basis, while Leq represents the equivalent energy noise exposure for a shorter time period, typically one hour.)

Noise Contours: Lines drawn about a noise source indicating equal levels of noise exposure. CNEL and Ldn are the metrics utilized herein to describe annoyance due to noise and to establish land use planning criteria for noise.

Ambient Noise: The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

Intrusive Noise: That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence, and tonal or informational content as well as the prevailing noise level.

Noisiness Zones: Defined areas within a community wherein the ambient noise levels are generally similar (within a range of 5 dB, for example). Typically, all other things being equal, sites within any given noise zone will be of comparable proximity to major noise sources. Noise contours define different noisiness zones.

NOISE ELEMENT REQUIREMENTS

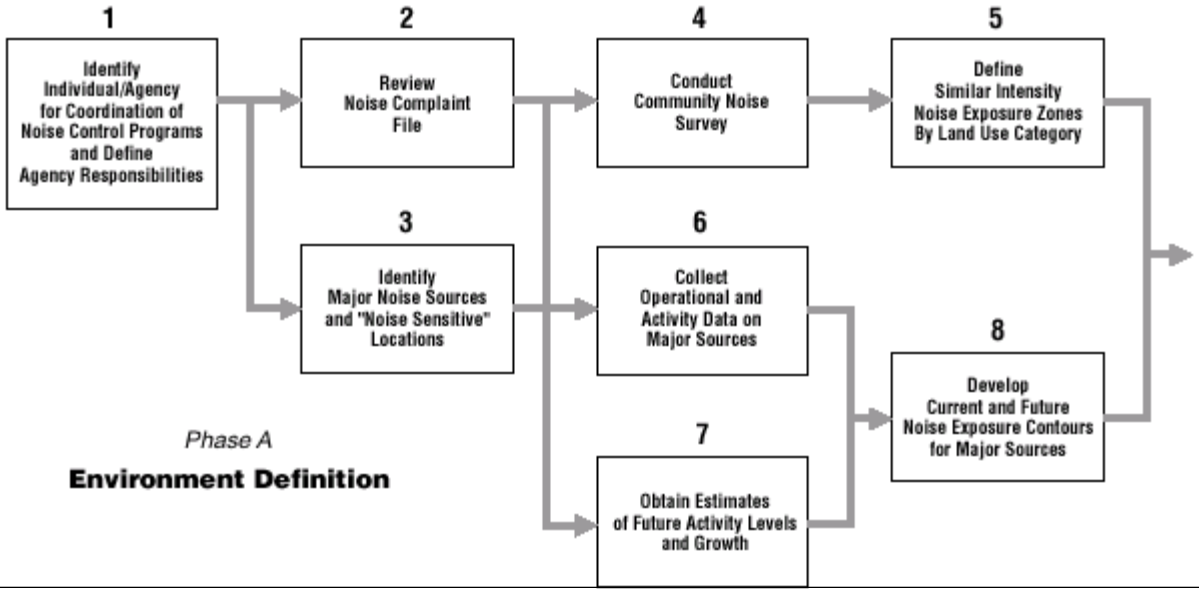
Government Code Section 65302(f): A noise element shall identify and appraise noise problems in the community. The noise element shall recognize the guidelines established by the Office of Noise Control in the State Department of Health Services and shall analyze and quantify, to the extent practicable, as determined by the legislative body, current and projected noise levels for all of the following sources:

1. Highways and freeways.
2. Primary arterials and major local streets.
3. Passenger and freight on-line railroad operations and ground rapid transit systems.
4. Commercial, general aviation, heliport, helistop, and military airport operations, aircraft overflights, jet engine test stands, and all other ground facilities and maintenance functions related to airport operation.
5. Local industrial plants, including, but not limited to, railroad classification yards.
6. Other ground stationary sources identified by local agencies as contributing to the community noise environment.

Noise contours shall be shown for all of these sources and stated in terms of community noise equivalent level (CNEL) or day-night average level (Ldn). The noise contours shall be prepared on the basis of noise monitoring or following generally accepted noise modeling techniques for the various sources identified in paragraphs (1) to (6), inclusive.

The noise contours shall be used as a guide for establishing a pattern of land uses in the land use element that minimizes the exposure of community residents to excessive noise.

Figure 1A



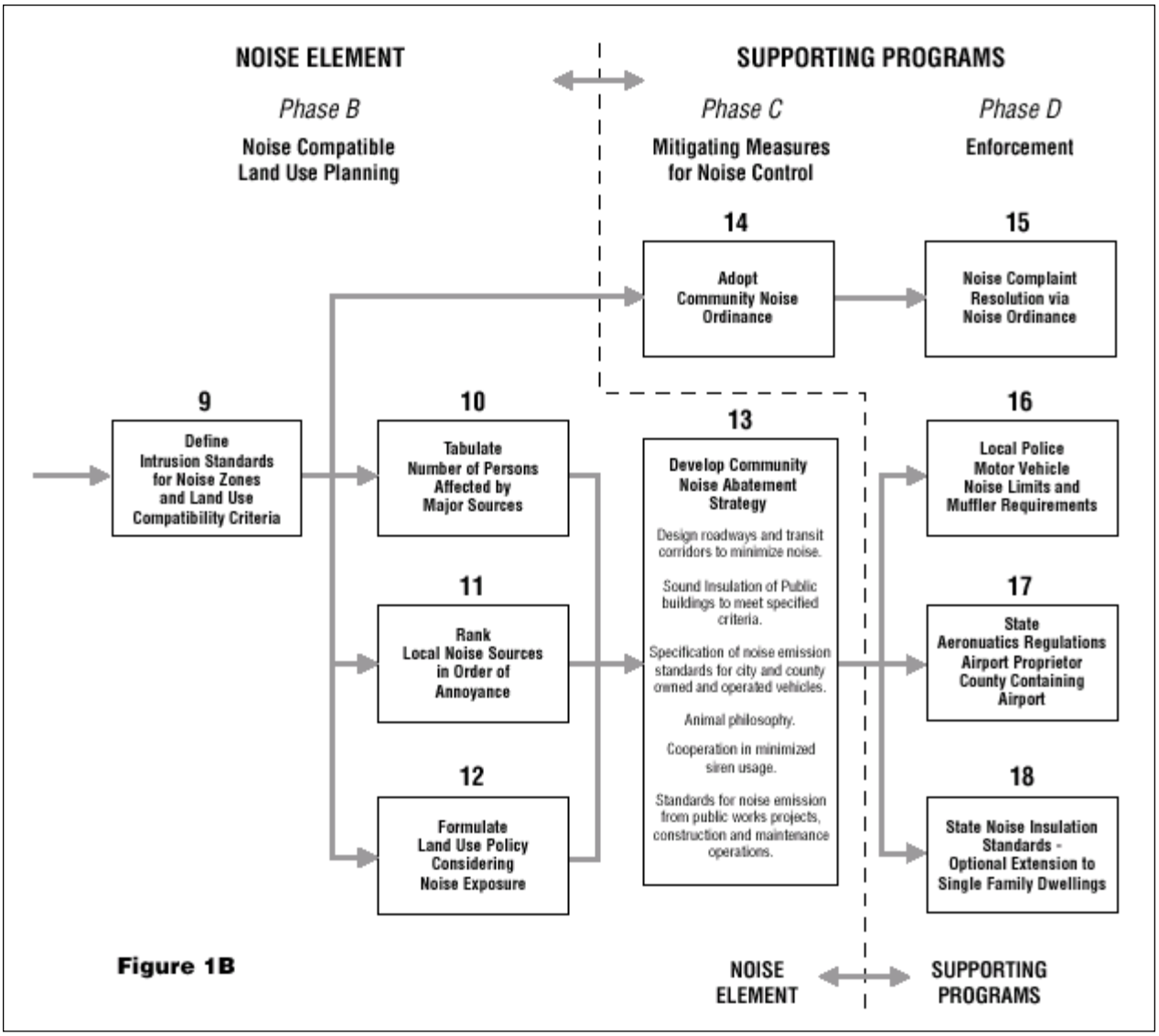


Figure 1B

The noise element shall include implementation measures and possible solutions that address existing and foreseeable noise problems, if any. The adopted noise element shall serve as a guideline for compliance with the state's noise insulation standards.

NOISE ELEMENT DEVELOPMENT PROCESS

The sequential steps for development of a noise element as an integral part of a community's total noise control program are illustrated in the flow diagrams of figures 1A and 1B. The concept presented herein utilizes the noise element as the central focus of the community's program and provides the groundwork for all subsequent enforcement efforts. The process may be described in terms of four phases:

Phase A: Noise Environment Definition

Phase B: Noise-Compatible Land Use Planning

Phase C: Noise Mitigation Measures

Phase D: Enforcement

These phases encompass a total of eighteen defined tasks, the first thirteen of which relate directly to the statutory requirements contained in Government Code §65302(f). The remainder relate to critical supportive programs (noise ordinances, etc.). Citations from §65302(f) are contained within quotation marks.

Phase A: Noise Environment Definition

The purpose of this phase is to adequately identify and appraise the existing and future noise environment of the community in terms of Community Noise Equivalent Level (CNEL) or Day-Night Average Level

(Ldn) noise contours for each major noise source and to divide the city or county into noise zones for subsequent noise ordinance application.

Step 1:

Identify a specific individual or lead agency within the local government to be responsible for coordination of local noise control activities. This individual or agency should be responsible for coordinating all intergovernmental activities and subsequent enforcement efforts.

Step 2:

Review noise complaint files as compiled by all local agencies (police, animal control, health, airport, traffic department, etc.) in order to assess the following:

1. Location and types of major offending noise sources.
2. Noise-sensitive areas and land uses.
3. Community attitudes towards specific sources of noise pollution.
4. Degree of severity of noise problems in the community.
5. Relative significance of noise as a pollutant.

Step 3:

Specifically identify major sources of community noise based upon the review of complaint files and interagency discussion and the following statutory subjects:

1. Highways and freeways.
2. Primary arterials and major local streets.
3. Passenger and freight on-line railroad operations and ground rapid transit systems.
4. Commercial, general aviation, heliport, helistop, and military airport operations, aircraft overflights, jet engine test stands, and all other ground facilities and maintenance functions related to airport operation.
5. Local industrial plants, including, but not limited to, railroad classification yards.
6. Other ground stationary noise sources identified by local agencies as contributing to the community noise environment. (§65302(f))

In addition, the land uses and areas within the community that are noise sensitive should be identified at the same time.

Step 4:

Given the identification of major noise sources and an indication of the community's attitude toward noise pollution (when available), it is advisable to conduct a community noise survey. The purposes of the survey are threefold:

First and foremost, to define by measurement the current noise levels at those sites deemed noise sources and to establish noise level contours around them. The noise contours must be expressed in terms of CNEL or Ldn.

Second, the collected data will form the basis for an analysis of noise exposure from major sources.

Finally, the survey should define the existing ambient noise level throughout the community. Intrusive noises over and above this general predetermined ambient level may then be controlled through implementation of a noise ordinance.

Step 5:

Given the definition of existing ambient noise levels throughout the community, one may proceed with a classification of the community into broad regions of generally consistent land uses and similar noise environments. Because these regions will be varying distances from identified major noise sources, the relative levels of environmental noise will be different from one another. Therefore, subsequent enforcement efforts and mitigating measures may be oriented towards maintaining quiet areas and improving noisy ones.

Step 6:

Directing attention once again to the major noise sources previously identified, it is essential to gather operations and activity data in order to proceed with the analytical noise exposure prediction. This data is somewhat source-specific but generally should consist of the following information and be supplied by the owner/operator of the source:

1. Average daily level of activity (traffic volume, flights per day, hours of operation, etc.).
2. Distribution of activity over day and night time periods, days of the week, and seasonal variations.
3. Average noise level emitted by the source at various levels of activity.
4. Precise source location and proximity to noise-impacted land uses.
5. Composition of noise sources (percentage of trucks on highway, aircraft fleet mix, industrial machinery type, etc.).

Step 7:

In addition to collecting data on the variables affecting noise-source emission for the existing case, future values for these parameters need to be assessed. This is best accomplished by correlating the noise element with other general plan elements (i.e. land use, circulation, housing, etc.) and regional transportation plans and by coordination with other responsible agencies (Airport Land Use Commission, Caltrans, etc.).

Step 8:

Analytical noise exposure modeling techniques may be utilized to develop source-specific noise contours around major noise sources in the community.

"The noise contours shall be prepared on the basis of noise monitoring or following generally accepted noise modeling techniques..." (§65302(f))

Simplified noise prediction methodologies are available through the Department of Health Services for highway and freeway noise, railroad noise, simple fixed stationary and industrial sites, and general aviation aircraft (with less than twenty percent commercial jet aircraft activity—two engine jet only). Noise contours for larger airport facilities and major industrial sites are sufficiently complex that they must be developed via sophisticated computer techniques available through recognized acoustical consulting firms. (Airport contours generally have already been developed in accordance with requirements promulgated by Caltrans' Division of Aeronautics: Noise Standards, Title 21, Section 5000, et seq., California Code of Regulations.)

Although considerable effort may go into developing noise contours that, in some instances, utilize rather sophisticated digital programming techniques, the present state of the art is such that their accuracy is usually no better than +/- 3 dB. In fact, the accuracy of the noise exposure prediction decreases with increasing distance from the noise source. In the near vicinity of the source, prediction accuracy may be within the range of +/- 1 dB, while at greater distances this may deteriorate to +/- 5 dB or more. At greater distances, meteorological and topographic effects, typically not totally accounted for in most models, may have significant influence. Thus, while dealing with the concept of noise contours, it is best not to think of them as absolute lines of demarcation on a map (such as topographical contours), but rather as bands of similar noise exposure.

In addition to assessment of the present-day noise environment, it is recommended that the noise exposure data be projected through the time horizon of the general plan. The noise element should be updated and corrected every five years, or sooner as is necessary, and, at that time, the forecasted noise exposure should be projected an additional five years.

Phase B: Noise-Compatible Land Use Planning

A noise planning policy needs to be rather flexible and dynamic to reflect not only technological advances in noise control, but also economic constraints governing application of noise-control technology and anticipated regional growth and demands of the community. In the final analysis, each community must decide the level of noise exposure its residents are willing to tolerate within a limited range of values below the known levels of health impairment.

Step 9:

Given the definition of the existing and forecasted noise environment provided by the Phase A efforts, the locality preparing the noise element must now approach the problem of defining how much noise is too much. Guidelines for noise-compatible land use are presented in Figure 2. The adjustment factors given in Table 1 may be used in order to arrive at noise-acceptability standards that reflect the noise-control goals of the community, the particular community's sensitivity to noise (as determined in Step 2), and the community's assessment of the relative importance of noise pollution.

Step 10:

As a prerequisite to establishing an effective noise-control program, it is essential to know, in quantitative terms, the extent of noise problems in the community. This is best accomplished by determining, for each major noise source around which noise contours have been developed, the number of community residents exposed and to what extent. It is also useful to identify those noise-sensitive land uses whose noise exposure exceeds the recommended standards given in Figure 2. The exposure inventory can be accomplished by using recent census data, adjusted for regional growth, and tabulating the population census blocks within given noise contours.

Step 11:

Once the noise exposure inventory is completed, the relative significance of specific noise sources in the community (in terms of population affected) will become apparent. The local agencies involved may wish to use this information to orient their noise-control and abatement efforts to achieve the most good. Clearly, control of certain major offending sources will be be-

yond the jurisdiction of local agencies; however, recognition of these limitations should prompt more effective land use planning strategies.

Step 12:

A major objective of the noise element is to utilize this information to ensure noise-compatible land use planning:

"The noise contours shall be used as a guide for establishing a pattern of land uses in the land use element that minimizes the exposure of community residents to excessive noise." (§65302(f))

The intent of such planning is to:

(1) Maintain those areas deemed acceptable in terms of noise exposure.

(2) Use zoning or other land use controls in areas with excessive noise exposure to limit uses to those which are noise compatible and to restrict other, less compatible uses.

Phase C: Noise Mitigation Measures

Step 13:

Based upon the relative importance of noise sources in order of community impact and local attitudes towards these sources, "[t]he noise element shall include implementation measures and possible solutions that address existing and foreseeable noise problems, if any" (§65302(f)).

Selection of these noise-mitigating measures should be coordinated through all local agencies in order to be most effective. Minimization of noise emissions from all local government-controlled or sanctioned activities should be a priority item. This includes low noise specifications for new city or county owned and operated vehicles (and noise reduction retrofitting where economically possible) and noise emission limits on public works projects. Local governments should insure that public buildings (especially schools) are sufficiently insulated to allow their intended function to be uninterrupted by exterior noise. Local agencies can work with state and federal bodies to minimize transportation noise, primarily through transitway design, location, or configuration modifications.

Additional measures might include such policies as limitation of siren usage by police, fire, and ambulance units within populated areas. Animal control units may be encouraged to minimize barking dog complaints through use of an improved public relations campaign termed "Animal Philosophy." This involves working with pet owners to determine why the dog barks and attempting solutions rather than just issuing citations. Local zoning and subdivision ordinances may require the use of noise-reducing building materials or the installation of sound-insulating walls along major roads in new construction and subdivisions.

In general, local noise reduction programs need to address the problems specific to each community, with the ultimate goals being the reduction of complaint frequency and the provision of a healthful noise environment for all residents of the community.

The remaining steps are beyond the scope of the noise element requirements, but pertain to coordination with other state noise-control programs and achievement of the goals set forth in the noise element through development of an active local noise-control effort.

Step 14:

While the noise element identifies problem areas and seeks to develop medium- and long-range solutions to them, a community noise ordinance is the only viable instrument for short-term or immediate solutions to intrusive noise. A model noise ordinance that can be tailored to the specific needs of a given community by simply incorporating those sections deemed most applicable has been developed by the Department of Health Services. The model ordinance also suggests a cure for non-stationary or transient types of noise events, for which noise contours are generally meaningless.

Phase D: Enforcement

To adequately carry out the programs identified in the noise element and to comply with state requirements for certain other noise-control programs, specific enforcement programs are recommended at the local level.

Step 15:

Adopt and apply a community noise ordinance for resolution of noise complaints.

Step 16:

Recent studies have shown that the most objectionable feature of traffic noise is the sound produced by vehicles equipped with illegal or faulty exhaust systems. In addition, such hot rod vehicles are often operated in a manner that causes tire squeal and excessively loud exhaust noise. There are a number of statewide vehicle noise regulations that can be enforced by local authorities as well as the California Highway Patrol. Specifically, Sections 23130, 23130.5, 27150, 27151,

and 38275 of the California Vehicle Code, as well as excessive speed laws, may be applied to curtail this problem. Both the Highway Patrol and the Department of Health Services (through local health departments) are available to aid local authorities in code enforcement and training pursuant to proper vehicle sound-level measurements.

Step 17:

Commercial and public airports operating under a permit from Caltrans' Aeronautics Program are required to comply with both state aeronautics standards governing aircraft noise and all applicable legislation governing the formation and activities of a local Airport Land Use Commission (ALUC). The function of the ALUC is, among other things, to develop a plan for noise-compatible land use in the immediate proximity of the airport. The local general plan must be reviewed for compatibility with this Airport Land Use Plan and amended if necessary (Public Utilities Code §21676). Therefore, the developers of the noise element will need to coordinate their activities with the local ALUC to

FIGURE 2

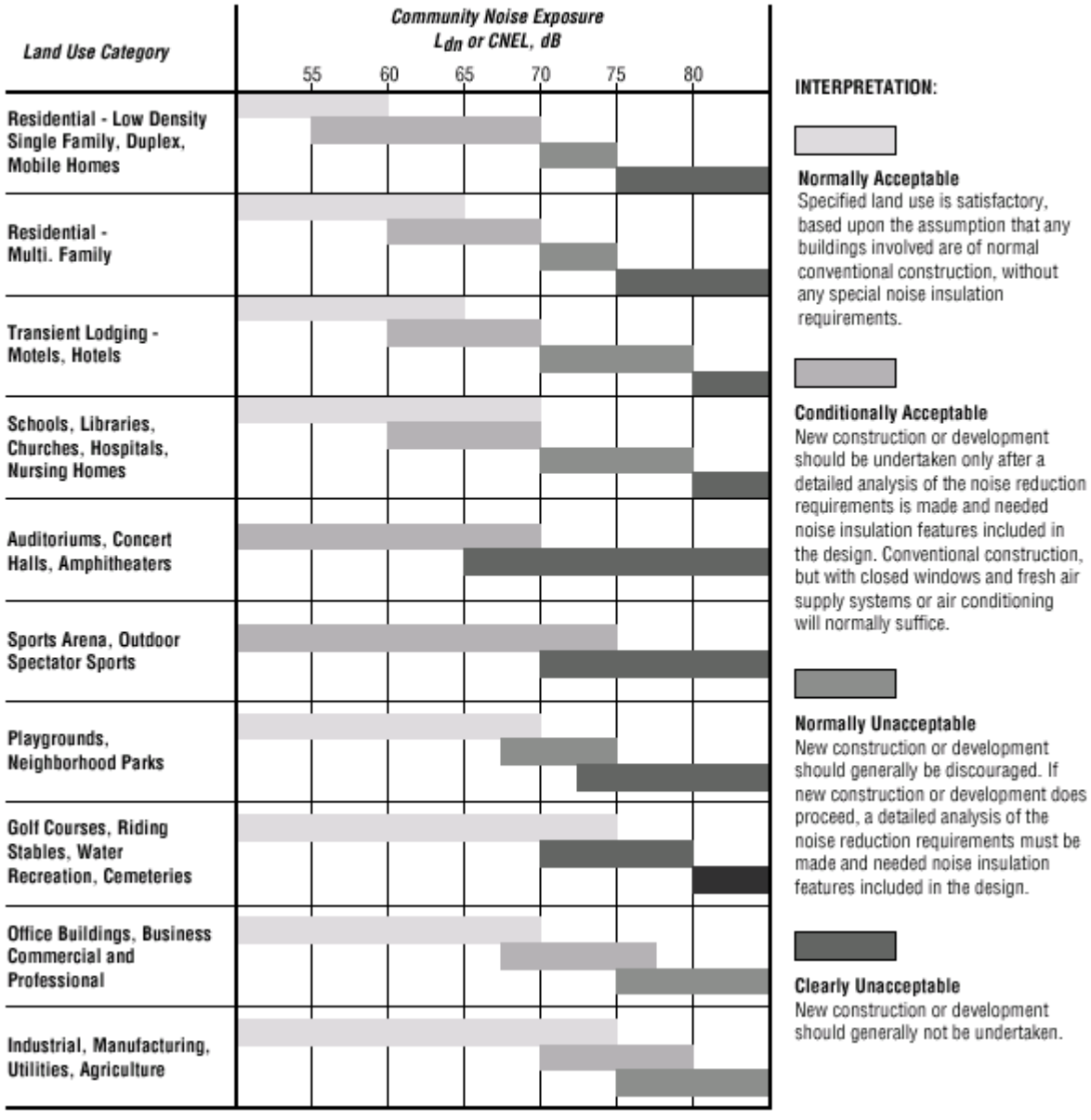


Table 1

Type of Correction	*Description*	*Amount of Correction to be Added to Measured CNEL in dB*
Seasonal Correction	Summer (or year-round operation)	**0**
	Winter only (or windows always closed)	**- 5**
Correction for Outdoor Residual Noise Level	Quiet suburban or rural community (remote from large cities and from industrial activity and trucking).	**+ 10**
	Quiet suburban or rural community (not located near industrial activity).	**+ 5**
	Urban residential community (not immediately adjacent to heavily traveled roads and industrial areas).	**0**
	Noisy urban residential community (near relatively busy roads or industrial areas.	**- 5**
	Very noisy urban residential community.	**- 10**
Correction for Previous Exposure and Community Attitudes	No prior experience with the intruding noise.	**+ 5**
	Community has had some previous exposure to intruding but little effort is being made to control the noise. This correction may also be applied in a situation where the community has not been exposed to the noise previously, but the people are aware that bona fide efforts are being made to control the noise.	**0**
	Community has had considerable previous exposure to the intruding noise and the noise maker's relations with the community are good.	**- 5**
	Community aware that operation causing noise is very necessary and it will not continue indefinitely. This correction can be applied for an operation of limited duration and under emergency circumstances.	**- 10**
Pure Tone or Impulse	No pure tone or impulsive character.	**0**
	Pure Tone or impulsive character present.	**+ 5**

ensure that compatible standards are utilized throughout the community and that the noise element develops as part of a coherent master plan, of which the ALUP forms an integral component.

Step 18:

"The adopted noise element shall serve as a guideline for compliance with the State's noise insulation standards." (§65302(f))

Recognizing the need to provide acceptable habitation environments, state law requires noise insulation of new multifamily dwellings constructed within the 60 dB (CNEL or Ldn) noise exposure contours. It is a function of the noise element to provide noise contour information around all major sources in support of the sound transmission control standards (Appendix, Chapter 2-35, Part 2, Title 24, California Code of Regulations).

RELATIONSHIP OF THE NOISE ELEMENT TO OTHER GENERAL PLAN ELEMENTS

The noise element is related to the land use, housing, circulation, and open-space elements. Recognition of the interrelationship of noise and these four other mandated elements is necessary in order to prepare an integrated general plan. The relationship between noise and these four elements is briefly discussed below.

- **Land Use**—A key objective of the noise element is to provide noise exposure information for use in the land use element. When integrated with the noise element, the land use element will show acceptable land uses in relation to existing and projected noise contours. Section 65302(f) states that: "The noise contours shall be used as a guide for establishing a pattern of land uses in the land use element that minimizes the exposure of community residents to excessive noise."
- **Housing**—The housing element considers the provision of adequate sites for new housing and standards for housing stock. Since residential land use is among the most noise sensitive, the noise exposure information provided in the noise element must be considered when planning the location of new housing. Also, state law requires special noise insulation of new multifamily dwellings constructed within the 60 dB (CNEL or Ldn) noise exposure contour. This requirement may influence the location and cost of this housing type. In some cases, the noise environment may be a constraint on housing opportunities.
- **Circulation**—The circulation system must be correlated with the land use element and is one of the major sources of noise. Noise exposure will thus be a decisive factor in the location and design of new transportation facilities and the possible mitigation of noise from existing facilities in relation to existing and planned land uses. The local planning agency may wish to review the circulation and land use elements simultaneously to assess their compatibility with the noise element.
- **Open Space**—Excessive noise can adversely affect the enjoyment of recreational pursuits in designated open space. Thus, noise exposure levels should be considered when planning for this kind of open-space use. Conversely, open space can be used to buffer sensitive land uses from noise sources through the use of setbacks and landscaping. Open-space designation can also effectively exclude other land uses from excessively noisy areas.

SELECTION OF THE NOISE METRIC

The community noise metrics to be used in noise elements are either CNEL or Ldn (as specified in §65302(f)). A significant factor in the selection of these scales was compatibility with existing quantifications of noise exposure currently in use in California. CNEL is the noise metric currently specified in the State Aeronautics Code for evaluation of noise impacts at specific airports that have been declared to have a noise problem. Local compliance with state airport noise standards necessitates that community noise be specified in CNEL. The Ldn represents a logical simplification of CNEL. It divides the day into two weighted time periods (Day—7 a.m. to 10 p.m. and Night—10 p.m. to 7 a.m.) rather than the three used in the CNEL measure (Day—7 a.m. to 7 p.m., Evening—7 p.m. to 10 p.m., and Night—10 p.m. to 7 a.m.) with no significant loss in accuracy.

CRITERIA FOR NOISE-COMPATIBLE LAND USE

Figure 2 summarizes the suggested use of the CNEL/Ldn metrics for evaluating land use noise compatibility. Such criteria require a rather broad interpretation, as illustrated by the ranges of acceptability for a given land use within a defined range of noise exposures.

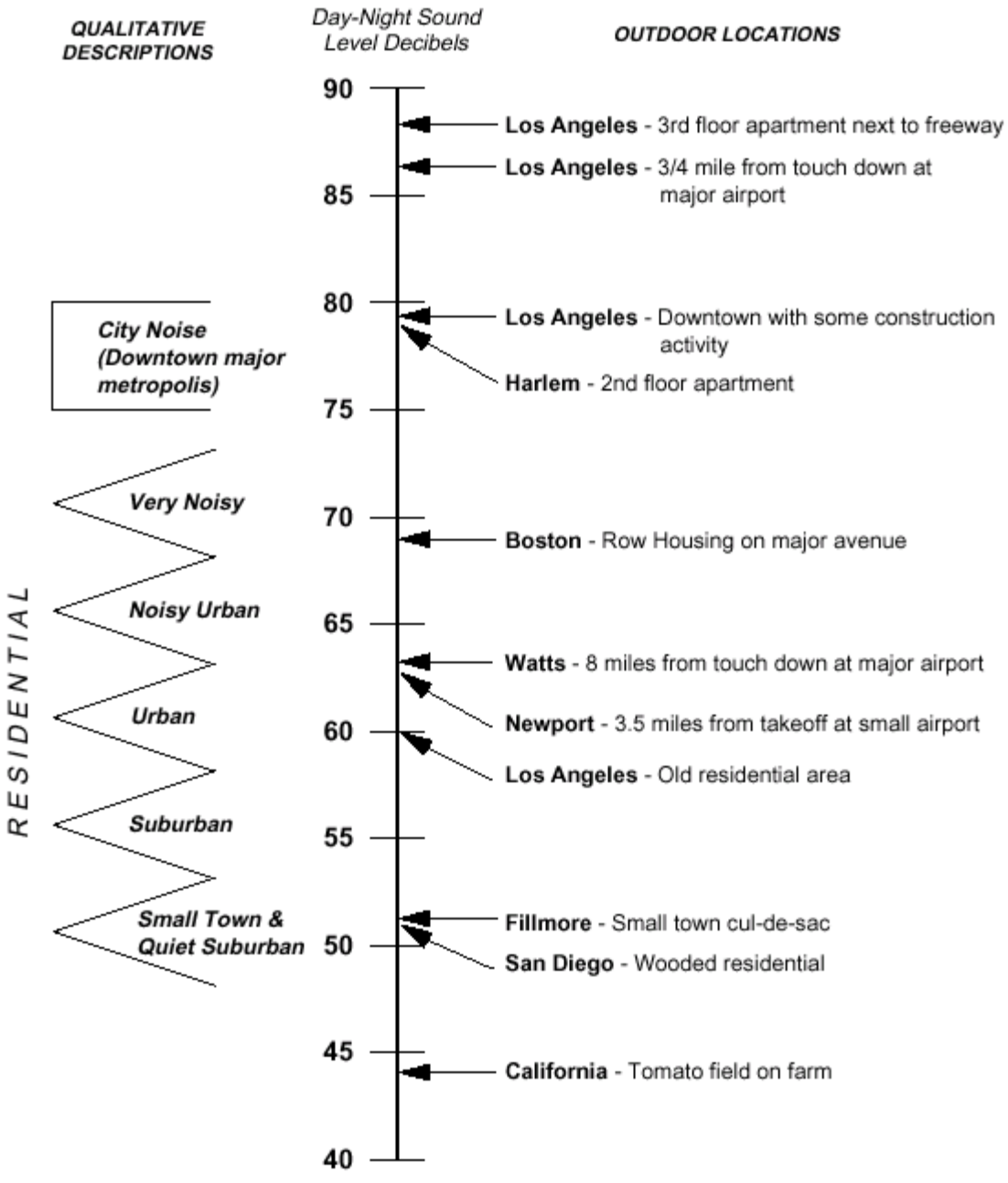
Denotation of a land use as "normally acceptable" on Figure 2 implies that the highest noise level in that band is the maximum desirable for existing or conventional construction that does not incorporate any special acoustic treatment. In general, evaluation of land use that falls into the "normally acceptable" or "normally unacceptable" noise environments should include consideration of the type of noise source, the sensitivity of the noise receptor, the noise reduction likely to be provided by structures, and the degree to which the noise source may interfere with speech, sleep, or other activities characteristic of the land use.

Figure 2 also provides an interpretation as to the suitability of various types of construction with respect to the range of outdoor noise exposure.

The objective of the noise compatibility guidelines in Figure 2 is to provide the community with a means of judging the noise environment it deems to be generally acceptable. Many efforts have been made to account for the variability in perceptions of environmental noise that exist between communities and within a given community.

Beyond the basic CNEL or Ldn quantification of noise exposure, one can apply correction factors to the measured or calculated values of these metrics in order to account for some of the factors that may cause

Figure 3



the noise to be more or less acceptable than the mean response. Significant among these factors are seasonal variations in noise source levels, existing outdoor ambient levels (i.e., relative intrusiveness of the source), general societal attitudes towards the noise source, prior history of the source, and tonal characteristics of the source. When it is possible to evaluate some or all of these factors, the measured or computed noise exposure values may be adjusted by means of the correction factors listed in Table 1 in order to more accurately assess local sentiments towards acceptable noise exposure.

In developing these acceptability recommendations, efforts were made to maintain consistency with the goals defined in the federal EPA's "Levels Document" and the State Sound Transmission Control Standards

for multifamily housing. In both of these documents, an interior noise exposure of 45 dB CNEL (or Ldn) is recommended to permit normal residential activity. If one considers the typical range of noise reduction provided by residential dwellings (12 to 18 dB with windows partially open), the 60 dB outdoor value identified as "clearly acceptable" for residential land use would provide the recommended interior environment.

Figure 3 has been included in order to better explain the qualitative nature of community noise environments expressed in terms of Ldn. It is apparent that noise environments cover a broad range and that, in general, it may be observed that the quality of the environment improves as one moves further away from major transportation noise sources.

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APPENDIX 3.3

City of Moreno Valley Noise Ordinance

9.10.140 Noise and sound.

Unless otherwise specified in Chapter 9.08, General Development Standards, or Chapter 9.09, Specific Use Development Standards, all commercial and industrial uses shall be operated so that noise created by any loudspeaker, bells, gongs, buzzers, or other noise attention or attracting devices shall not exceed fifty-five (55) dBA at any one time beyond the boundaries of the property. (Ord. 359 (part), 1992)

Chapter 11.80 NOISE REGULATION

11.80.010 Legislative findings.

It is found and declared that:

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

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

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

11.80.020 Definitions.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

"Noise disturbance" means any sound which:

1. Disturbs a reasonable person of normal sensitivities;

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

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

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

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

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

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

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

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

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

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

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

11.80.030 Prohibited acts.

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

B. Sound causing permanent hearing loss.

1. Sound level limits. Based on statistics from the Center for Disease Control and Prevention and the National Institute for Occupational Safety and Health, Table 1 and Table 1-A specify sound level limits which, if exceeded, will have a high probability of producing permanent hearing loss in anyone in the area where the

sound levels are being exceeded. No sound shall be permitted within the city which exceeds the parameters set forth in Tables 11.80.030-1 and 11.80.030-1-A of this chapter:

Table 11.80.030-1

MAXIMUM CONTINUOUS SOUND LEVELS*

Duration per Day Continuous Hours	Sound level [db(A)]
8	90
6	92
4	95
3	97
2	100
1.5	102
1	105
0.5	110
0.25	115

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

Table 11.80.030-1A

MAXIMUM IMPULSIVE SOUND LEVELS

Number of Repetitions per 24-Hour Period	Sound level [dB (A)]
1	145
10	135
100	125

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

a. Trespass;

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

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

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

Table 11.80.030-2

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

Residential		Commercial	
Daytime	Nighttime	Daytime	Nighttime
60	55	65	60

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

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

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

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

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

5. Loudspeakers and Public Address Systems.

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

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

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

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

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

a. Create a noise disturbance;

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

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

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

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

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

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

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

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

10. Pumps, Air Conditioners, Air-Handling Equipment and Other Continuously Operating Equipment. Notwithstanding the general prohibitions of subsection a of this section, no person shall operate or permit the operation of any pump, air conditioning, air-handling or other continuously operating motorized equipment in a state of disrepair or in a manner which otherwise creates a noise disturbance distinguishable from normal operating sounds.

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

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

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

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

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

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

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

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

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

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

11.80.040 Special provisions for temporary use and special event permits.

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

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

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

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

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

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

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

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

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

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

place.

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

11.80.050 Measurement or assessment of sound.

A. Measurement With Sound Meter.

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

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

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

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

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

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

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

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

3. The official need not be required to identify song titles, artists, or lyrics in order to establish a violation. (Ord. 740 § 1.2, 2007)

11.80.060 Violation.

A. Violation of Sound Level Limits. Any person violating any of the provisions of this chapter shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punishable by a fine not to exceed one

thousand dollars ($1,000.00) and/or six months in the county jail, or both. Notwithstanding the forgoing, any violation of the provisions of this chapter may, in the discretion of the citing officer or the city attorney, be cited and/or prosecuted as an infraction. Any person found guilty of an infraction hereunder shall be punished by a fine of not less than fifty dollars ($50.00) nor more than one hundred dollars ($100.00) for the first offense; a fine of not less than one hundred dollars ($100.00), nor more than two hundred dollars ($200.00) for the second offense. Any third or subsequent offense shall constitute a misdemeanor. Violations of this chapter may also be subject to civil citation pursuant to Chapter 1.10.

B. Joint and Several Responsibility. In addition to the person causing the offending sound, the owner, tenant or lessee of property, or a manager, overseer or agent, or any other person lawfully entitled to possess the property from which the offending sound is emitted at the time the offending sound is emitted, shall be responsible for compliance with this chapter if the additionally responsible party knows or should have known of the offending noise disturbance. It shall not be a lawful defense to assert that some other person caused the sound. The lawful possessor or operator of the premises shall be responsible for operating or maintaining the premises in compliance with this chapter and may be cited regardless of whether or not the person actually causing the sound is also cited.

C. Violation May Be Declared a Public Nuisance. The operation or maintenance of any device, equipment, instrument, vehicle or machinery in violation of any provisions of this chapter which endangers the public health, safety and quality of life of residents in the area is declared to be a public nuisance, and may be subject to abatement summarily or by a restraining order or injunction issued by a court of competent jurisdiction. (Ord. 740 § 1.2, 2007)

APPENDIX 4.1

Study Area Photos

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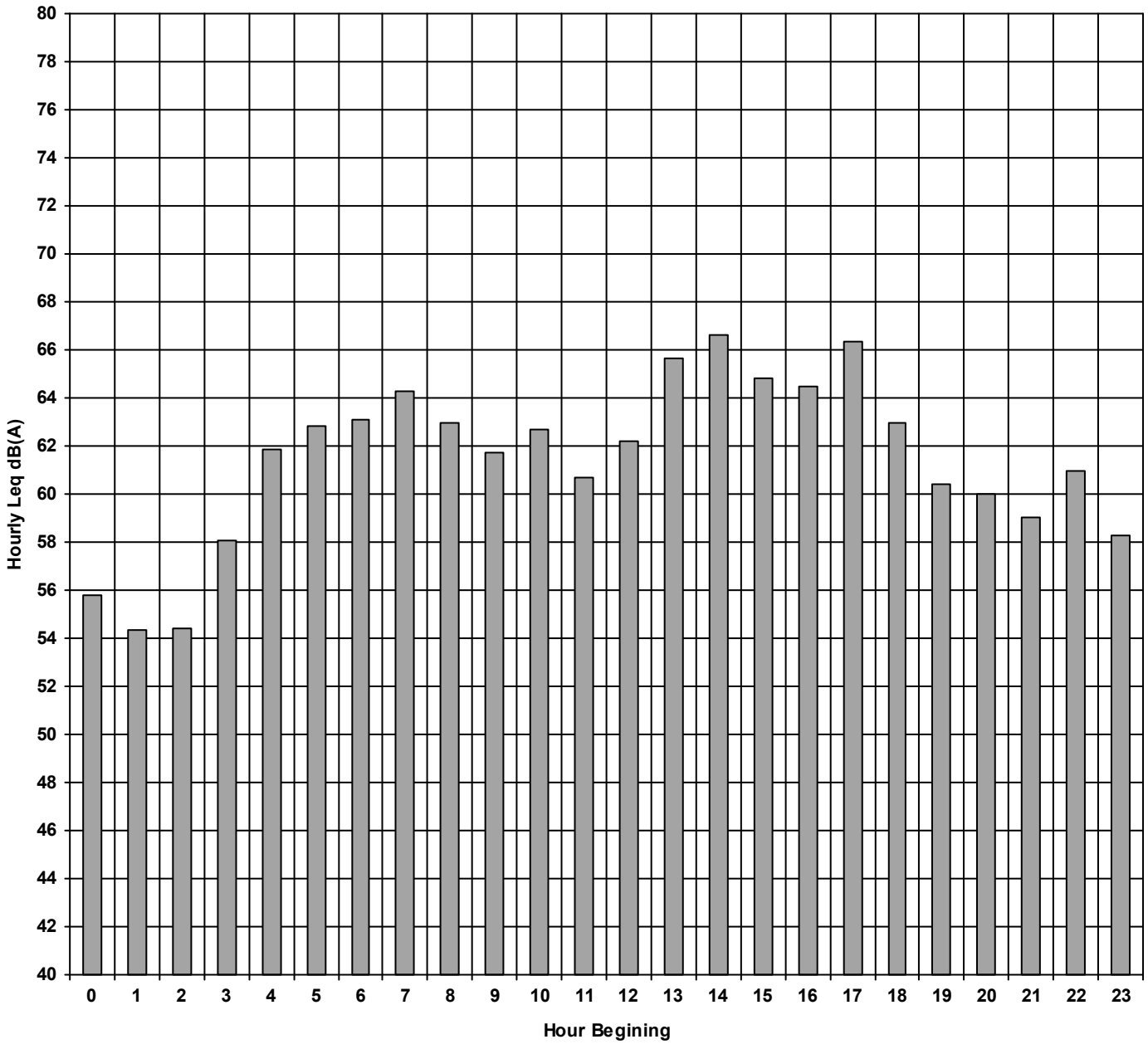
APPENDIX 4.2

24-Hour Noise Level Measurement Summary

24-Hour Noise Level Measurement Summary - 10/29/2012

Project Name: First Inland Logistics II
Job Number: 08181
Location #: L1
Analyst: B. Lawson
Description: West of Perris Blvd. south of the channel
Start Date: Thursday, October 25, 2012

Hourly Leq dB(A) Readings (unadjusted)



Measured Peak Noise Hour: 14

Measured Peak Hour dBA Leq: 66.6

Monday, October 29, 2012

24-Hour Noise Level Measurement Summary - 10/29/2012

Project Name: First Inland Logistics II
Job Number: 08181
Location #: L1
Analyst: B. Lawson
Description: West of Perris Blvd. south of the channel
Start Date: Thursday, October 25, 2012

Leq To CNEL Noise Calculations

Noise Hour	*Hourly Leq*	*CNEL Penalty*	*Adjusted Hourly Leq*
0	55.8	10	65.8
1	54.3	10	64.3
2	54.4	10	64.4
3	58.1	10	68.1
4	61.9	10	71.9
5	62.8	10	72.8
6	63.1	10	73.1
7	64.3	0	64.3
8	63.0	0	63.0
9	61.7	0	61.7
10	62.7	0	62.7
11	60.7	0	60.7
12	62.2	0	62.2
13	65.6	0	65.6
14	66.6	0	66.6
15	64.8	0	64.8
16	64.5	0	64.5
17	66.4	0	66.4
18	63.0	0	63.0
19	60.4	5	65.4
20	60.0	5	65.0
21	59.1	5	64.1
22	61.0	10	71.0
23	58.2	10	68.2

Calculated CNEL: 67.3

Evening Hours

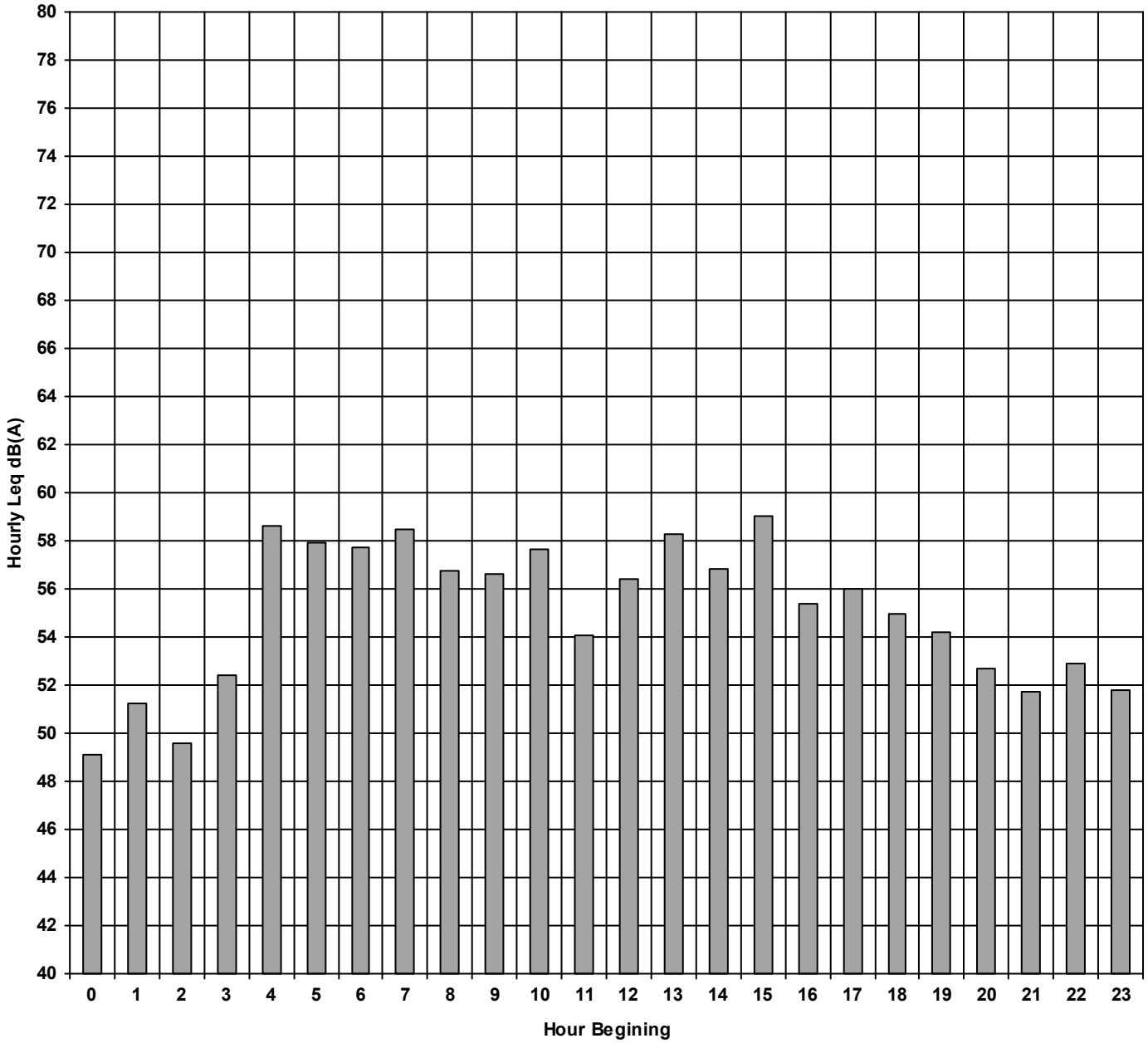
Nighttime Hours

Monday, October 29, 2012

24-Hour Noise Level Measurement Summary - 10/29/2012

Project Name: First Inland Logistics II
Job Number: 08181
Location #: L2
Analyst: B. Lawson
Description: Approximately 150 feet north of San Michelle Rd.
Start Date: Thursday, October 25, 2012

Hourly Leq dB(A) Readings (unadjusted)



Measured Peak Noise Hour: 15

Measured Peak Hour dBA Leq: 59.0

24-Hour Noise Level Measurement Summary - 10/29/2012

Project Name: First Inland Logistics II
Job Number: 08181
Location #: L2
Analyst: B. Lawson
Description: Approximately 150 feet north of San Michelle Rd.
Start Date: Thursday, October 25, 2012

Leq To CNEL Noise Calculations

Noise Hour	*Hourly Leq*	*CNEL Penalty*	*Adjusted Hourly Leq*
0	49.1	10	59.1
1	51.3	10	61.3
2	49.6	10	59.6
3	52.4	10	62.4
4	58.7	10	68.7
5	57.9	10	67.9
6	57.7	10	67.7
7	58.5	0	58.5
8	56.8	0	56.8
9	56.6	0	56.6
10	57.6	0	57.6
11	54.1	0	54.1
12	56.4	0	56.4
13	58.3	0	58.3
14	56.8	0	56.8
15	59.0	0	59.0
16	55.4	0	55.4
17	56.0	0	56.0
18	55.0	0	55.0
19	54.2	5	59.2
20	52.7	5	57.7
21	51.7	5	56.7
22	52.9	10	62.9
23	51.8	10	61.8

Calculated CNEL: 61.7

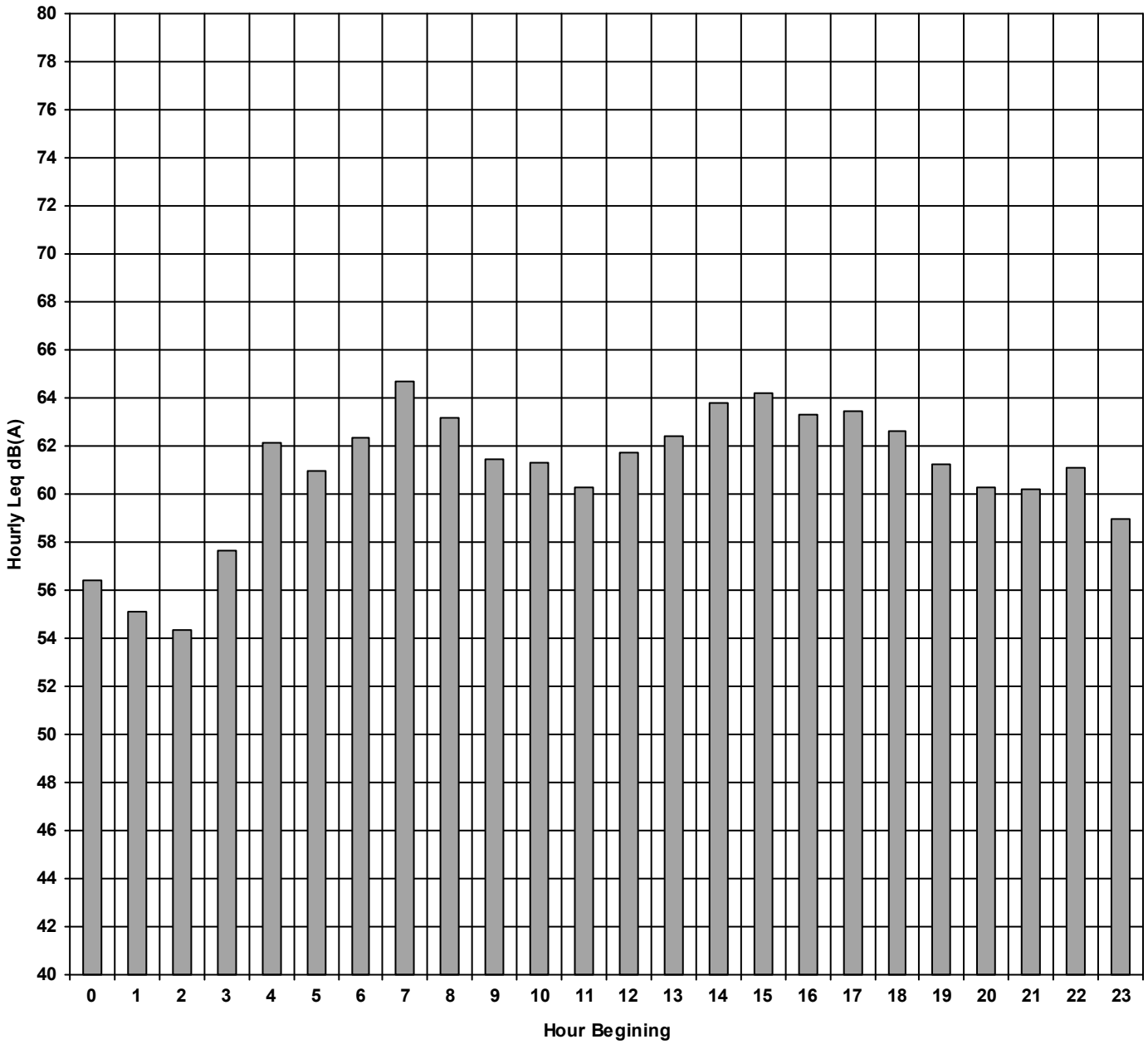
Evening Hours

Nighttime Hours

24-Hour Noise Level Measurement Summary - 10/29/2012

Project Name: First Inland Logistics II
Job Number: 08181
Location #: L3
Analyst: B. Lawson
Description: Southeast corner of Perris Blvd. and Modular Wa
Start Date: Thursday, October 25, 2012

Hourly Leq dB(A) Readings (unadjusted)



Measured Peak Noise Hour: 7

Measured Peak Hour dBA Leq: 64.7

24-Hour Noise Level Measurement Summary - 10/29/2012

Project Name: First Inland Logistics II
Job Number: 08181
Location #: L3
Analyst: B. Lawson
Description: Southeast corner of Perris Blvd. and Modular Wa
Start Date: Thursday, October 25, 2012

Leq To CNEL Noise Calculations

Noise Hour	*Hourly Leq*	*CNEL Penalty*	*Adjusted Hourly Leq*
0	56.4	10	66.4
1	55.1	10	65.1
2	54.3	10	64.3
3	57.6	10	67.6
4	62.1	10	72.1
5	61.0	10	71.0
6	62.3	10	72.3
7	64.7	0	64.7
8	63.2	0	63.2
9	61.4	0	61.4
10	61.3	0	61.3
11	60.3	0	60.3
12	61.7	0	61.7
13	62.4	0	62.4
14	63.8	0	63.8
15	64.2	0	64.2
16	63.3	0	63.3
17	63.4	0	63.4
18	62.6	0	62.6
19	61.2	5	66.2
20	60.3	5	65.3
21	60.2	5	65.2
22	61.1	10	71.1
23	59.0	10	69.0

Calculated CNEL: 66.9

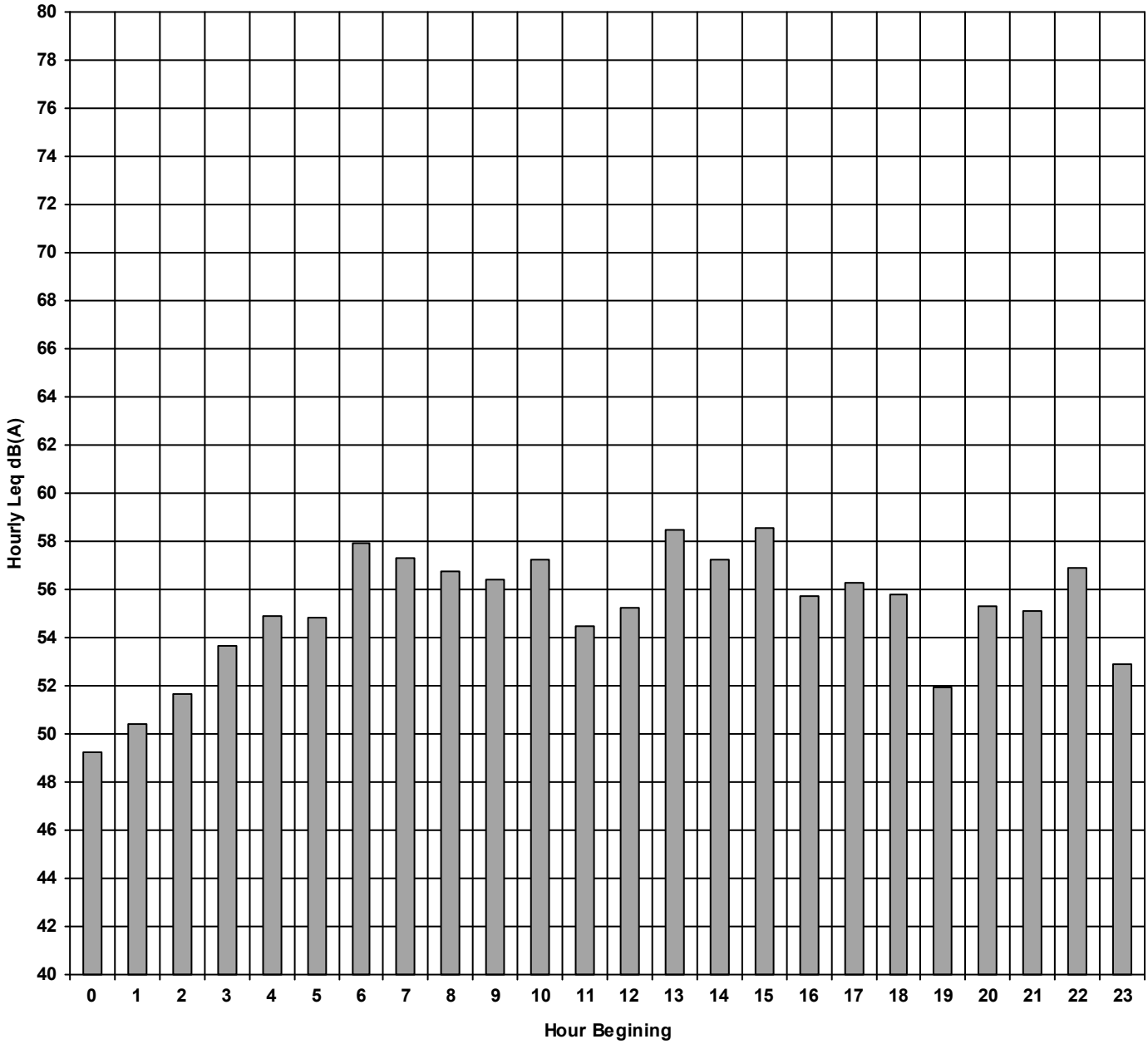
Evening Hours

Nighttime Hours

24-Hour Noise Level Measurement Summary - 10/29/2012

Project Name: First Inland Logistics II
Job Number: 08181
Location #: L4
Analyst: B. Lawson
Description: South Nandina Ave. near the Driveway 2
Start Date: Thursday, October 25, 2012

Hourly Leq dB(A) Readings (unadjusted)



Measured Peak Noise Hour: 15

Measured Peak Hour dBA Leq: 58.5

24-Hour Noise Level Measurement Summary - 10/29/2012

Project Name: First Inland Logistics II
Job Number: 08181
Location #: L4
Analyst: B. Lawson
Description: South Nandina Ave. near the Driveway 2
Start Date: Thursday, October 25, 2012

Leq To CNEL Noise Calculations

Noise Hour	*Hourly Leq*	*CNEL Penalty*	*Adjusted Hourly Leq*
0	49.2	10	59.2
1	50.4	10	60.4
2	51.7	10	61.7
3	53.7	10	63.7
4	54.9	10	64.9
5	54.8	10	64.8
6	57.9	10	67.9
7	57.3	0	57.3
8	56.8	0	56.8
9	56.4	0	56.4
10	57.2	0	57.2
11	54.5	0	54.5
12	55.2	0	55.2
13	58.5	0	58.5
14	57.3	0	57.3
15	58.5	0	58.5
16	55.7	0	55.7
17	56.3	0	56.3
18	55.8	0	55.8
19	51.9	5	56.9
20	55.3	5	60.3
21	55.1	5	60.1
22	56.9	10	66.9
23	52.9	10	62.9

Calculated CNEL: 61.4

Evening Hours

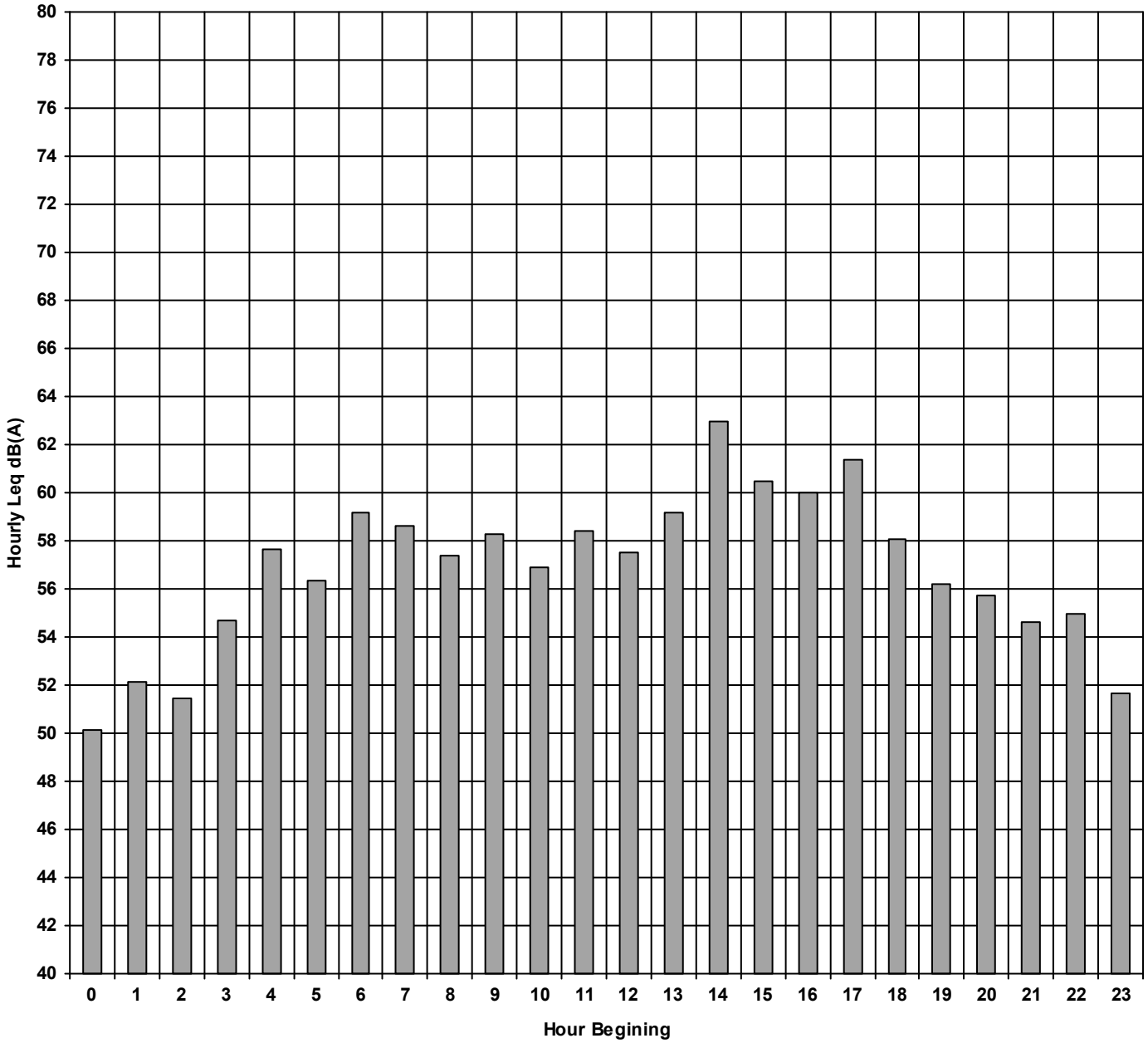
Nighttime Hours

Monday, October 29, 2012

24-Hour Noise Level Measurement Summary - 10/29/2012

Project Name: First Inland Logistics II
Job Number: 08181
Location #: L5
Analyst: B. Lawson
Description: Approximately 250 feet west of Perris Blvd.
Start Date: Thursday, October 25, 2012

Hourly Leq dB(A) Readings (unadjusted)



Measured Peak Noise Hour: 14

Measured Peak Hour dBA Leq: 63.0

24-Hour Noise Level Measurement Summary - 10/29/2012

Project Name: First Inland Logistics II
Job Number: 08181
Location #: L5
Analyst: B. Lawson
Description: Approximately 250 feet west of Perris Blvd.
Start Date: Thursday, October 25, 2012

Leq To CNEL Noise Calculations

Noise Hour	*Hourly Leq*	*CNEL Penalty*	*Adjusted Hourly Leq*
0	50.1	10	60.1
1	52.1	10	62.1
2	51.4	10	61.4
3	54.7	10	64.7
4	57.7	10	67.7
5	56.3	10	66.3
6	59.1	10	69.1
7	58.6	0	58.6
8	57.4	0	57.4
9	58.2	0	58.2
10	56.9	0	56.9
11	58.4	0	58.4
12	57.5	0	57.5
13	59.1	0	59.1
14	63.0	0	63.0
15	60.5	0	60.5
16	60.0	0	60.0
17	61.4	0	61.4
18	58.1	0	58.1
19	56.2	5	61.2
20	55.7	5	60.7
21	54.6	5	59.6
22	55.0	10	65.0
23	51.7	10	61.7

Calculated CNEL: 62.6

Evening Hours

Nighttime Hours

APPENDIX 6.1

Off-Site Traffic Noise Contour Worksheets

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Harley Knox Boulevard
Road Segment: West of I-215 Freeway

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,884 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	788 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-3.86	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-21.09	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-25.05	-4.55	-1.20	*-5.50*	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:	55.6	54.1	47.7	46.2	54.6	54.8
Heavy Trucks:	55.6	54.2	45.1	46.4	54.7	54.9
Vehicle Noise:	63.8	62.0	59.1	54.2	62.7	63.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	33	71	152	328
CNEL:	35	76	164	353

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Harley Knox Boulevard
Road Segment: I-215 SB Ramps to I-215 NB Ramps

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,824 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,082 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-2.48	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-19.72	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-23.67	-4.55	-1.20	*-5.50*	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:	56.9	55.4	49.1	47.5	56.0	56.2
Heavy Trucks:	57.0	55.6	46.5	47.8	56.1	56.3
Vehicle Noise:	65.2	63.4	60.4	55.6	64.1	64.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	41	87	188	405
CNEL:	44	94	202	436

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Harley Knox Boulevard
Road Segment: I-215 NB Ramps to Western Way

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,844 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,484 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-0.24	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-17.47	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-21.43	-4.55	-1.20	*-5.50*	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:	62.5	60.6	58.8	52.8	61.4	62.0
Medium Trucks:	56.2	54.7	48.4	46.8	55.3	55.5
Heavy Trucks:	57.1	55.7	46.6	47.9	56.2	56.4
Vehicle Noise:	64.3	62.6	59.4	54.8	63.3	63.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	36	77	166	358
CNEL:	38	83	178	384

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Harley Knox Boulevard
Road Segment: East of Western Way

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,052 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,405 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-0.47	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-17.71	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-21.67	-4.55	-1.20	*-5.50*	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:	62.3	60.4	58.6	52.6	61.2	61.8
Medium Trucks:	56.0	54.5	48.1	46.6	55.0	55.3
Heavy Trucks:	56.8	55.4	46.4	47.6	56.0	56.1
Vehicle Noise:	64.1	62.4	59.2	54.5	63.1	63.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	35	74	160	345
CNEL:	37	80	172	370

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Harley Knox Boulevard
Road Segment: West of Patterson Avenue

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,992 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,399 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-0.49	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-17.73	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-21.69	-4.55	-1.20	*-5.50*	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:	62.3	60.4	58.6	52.5	61.2	61.8
Medium Trucks:	56.0	54.5	48.1	46.6	55.0	55.3
Heavy Trucks:	56.8	55.4	46.4	47.6	56.0	56.1
Vehicle Noise:	64.1	62.3	59.2	54.5	63.0	63.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	34	74	160	344
CNEL:	37	80	171	369

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Harley Knox Boulevard
Road Segment: East of Patterson Avenue

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,152 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,315 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-0.76	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-18.00	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-21.96	-4.60	-1.20	*-5.50*	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:	61.9	60.0	58.3	52.2	60.8	61.4
Medium Trucks:	55.6	54.1	47.8	46.2	54.7	54.9
Heavy Trucks:	56.5	55.1	46.0	47.3	55.6	55.8
Vehicle Noise:	63.7	62.0	58.9	54.2	62.7	63.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	33	70	152	327
CNEL:	35	76	163	351

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Harley Knox Boulevard
Road Segment: West of Indian Street

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,592 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,159 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-2.18	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-19.42	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-23.38	-4.55	-1.20	*-5.50*	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:	63.9	62.0	60.2	54.2	62.8	63.4
Medium Trucks:	57.2	55.7	49.4	47.8	56.3	56.5
Heavy Trucks:	57.3	55.9	46.8	48.1	56.4	56.5
Vehicle Noise:	65.5	63.7	60.7	55.9	64.4	64.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	42	91	197	424
CNEL:	46	98	212	457

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Harley Knox Boulevard
Road Segment: East of Indian Street

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,856 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	586 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-5.15	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-22.38	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-26.34	-4.55	-1.20	*-5.50*	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:	54.3	52.8	46.4	44.9	53.3	53.6
Heavy Trucks:	54.3	52.9	43.9	45.1	53.5	53.6
Vehicle Noise:	62.5	60.7	57.8	52.9	61.5	61.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	27	58	125	269
CNEL:	29	62	134	290

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Western Way
Road Segment: North of Harley Knox Boulevard

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	120 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.865
Medium Trucks:	100.319
Heavy Trucks:	100.319

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-10.65	-4.61	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-27.89	-4.64	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	82.99	-31.84	-4.64	-1.20	*-5.50*	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:	50.1	48.2	46.4	40.3	49.0	49.6
Medium Trucks:	44.0	42.5	36.1	34.6	43.0	43.3
Heavy Trucks:	45.3	43.9	34.9	36.1	44.5	44.6
Vehicle Noise:	52.0	50.3	47.0	42.5	51.0	51.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	5	12	25	54
CNEL:	6	13	27	58

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Patterson Avenue
Road Segment: North of Harley Knox Boulevard
Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	132 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	13 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.865
Medium Trucks:	100.319
Heavy Trucks:	100.319

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-20.23	-4.61	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-37.47	-4.64	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	82.99	-41.43	-4.64	-1.20	*-5.50*	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:	40.5	38.6	36.8	30.7	39.4	40.0
Medium Trucks:	34.4	32.9	26.5	25.0	33.5	33.7
Heavy Trucks:	35.7	34.3	25.3	26.5	34.9	35.0
Vehicle Noise:	42.5	40.7	37.5	32.9	41.4	41.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	1	3	6	12
CNEL:	1	3	6	13

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Patterson Avenue
Road Segment: South of Harley Knox Boulevard

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,236 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	124 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.865
Medium Trucks:	100.319
Heavy Trucks:	100.319

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-10.52	-4.61	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-27.76	-4.64	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	82.99	-31.71	-4.64	-1.20	*-5.50*	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:	50.2	48.3	46.5	40.5	49.1	49.7
Medium Trucks:	44.1	42.6	36.2	34.7	43.2	43.4
Heavy Trucks:	45.4	44.0	35.0	36.2	44.6	44.7
Vehicle Noise:	52.2	50.4	47.2	42.6	51.2	51.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	6	12	26	55
CNEL:	6	13	28	59

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Indian Street
Road Segment: North of Nandina Avenue

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,672 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	367 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-6.30	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-23.54	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-27.50	-4.60	-1.20	*-5.50*	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:	56.4	54.5	52.7	46.7	55.3	55.9
Medium Trucks:	50.1	48.6	42.2	40.7	49.2	49.4
Heavy Trucks:	51.0	49.5	40.5	41.7	50.1	50.2
Vehicle Noise:	58.2	56.5	53.3	48.6	57.2	57.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	14	30	65	140
CNEL:	15	32	70	150

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Indian Street
Road Segment: South of Nandina Avenue

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,168 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	617 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-4.92	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-22.16	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-26.12	-4.55	-1.20	*-5.50*	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	57.5	51.4	60.0	60.7
Medium Trucks:	54.5	53.0	46.6	45.1	53.5	53.8
Heavy Trucks:	54.5	53.1	44.1	45.3	53.7	53.8
Vehicle Noise:	62.7	61.0	58.0	53.1	61.7	62.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	28	60	129	279
CNEL:	30	65	139	300

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Indian Street
Road Segment: North of Harley Knox Boulevard
Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,572 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	757 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-4.03	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-21.27	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-25.22	-4.55	-1.20	*-5.50*	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:	62.0	60.1	58.4	52.3	60.9	61.5
Medium Trucks:	55.4	53.9	47.5	46.0	54.4	54.7
Heavy Trucks:	55.4	54.0	45.0	46.2	54.6	54.7
Vehicle Noise:	63.6	61.8	58.9	54.0	62.6	63.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	32	69	148	319
CNEL:	34	74	160	344

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Indian Street
Road Segment: South of Harley Knox Boulevard

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,428 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	143 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-11.28	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-28.51	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-32.47	-4.55	-1.20	*-5.50*	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:	54.8	52.9	51.1	45.1	53.7	54.3
Medium Trucks:	48.1	46.6	40.3	38.7	47.2	47.4
Heavy Trucks:	48.2	46.8	37.7	39.0	47.3	47.5
Vehicle Noise:	56.4	54.6	51.6	46.8	55.3	55.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	11	23	49	105
CNEL:	11	24	52	113

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Knox Street
Road Segment: North of Nandina Avenue

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	324 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	32 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-16.85	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-34.08	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-38.04	-4.60	-1.20	*-5.50*	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:	45.8	43.9	42.2	36.1	44.7	45.3
Medium Trucks:	39.6	38.1	31.7	30.1	38.6	38.8
Heavy Trucks:	40.4	39.0	30.0	31.2	39.6	39.7
Vehicle Noise:	47.7	45.9	42.8	38.1	46.6	47.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	3	6	13	28
CNEL:	3	6	14	30

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Perris Boulevard
Road Segment: South of San Michele Road

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,932 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,693 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-0.54	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-17.77	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-21.73	-4.55	-1.20	*-5.50*	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:	65.5	63.6	61.9	55.8	64.4	65.0
Medium Trucks:	58.9	57.4	51.0	49.5	57.9	58.2
Heavy Trucks:	58.9	57.5	48.5	49.7	58.1	58.2
Vehicle Noise:	67.1	65.3	62.4	57.5	66.1	66.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	55	118	254	546
CNEL:	59	127	273	588

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Perris Boulevard
Road Segment: North of Nandina Avenue

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	19,962 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,996 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.18	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-17.06	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-21.01	-4.55	-1.20	*-5.50*	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	62.6	56.5	65.1	65.8
Medium Trucks:	59.6	58.1	51.7	50.2	58.6	58.9
Heavy Trucks:	59.6	58.2	49.2	50.4	58.8	58.9
Vehicle Noise:	67.8	66.1	63.1	58.2	66.8	67.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	61	131	283	610
CNEL:	66	141	304	656

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Perris Boulevard
Road Segment: South of Nandina Avenue

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	19,956 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,996 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.18	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-17.06	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-21.02	-4.55	-1.20	*-5.50*	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	62.6	56.5	65.1	65.8
Medium Trucks:	59.6	58.1	51.7	50.2	58.6	58.9
Heavy Trucks:	59.6	58.2	49.2	50.4	58.8	58.9
Vehicle Noise:	67.8	66.1	63.1	58.2	66.8	67.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	61	131	283	610
CNEL:	66	141	304	656

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: San Michele Road
Road Segment: West of Driveway 1

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,444 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	344 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-6.58	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-23.82	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-27.77	-4.60	-1.20	*-5.50*	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:	56.1	54.2	52.4	46.4	55.0	55.6
Medium Trucks:	49.8	48.3	42.0	40.4	48.9	49.1
Heavy Trucks:	50.7	49.3	40.2	41.5	49.8	49.9
Vehicle Noise:	57.9	56.2	53.0	48.4	56.9	57.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	13	29	62	134
CNEL:	14	31	67	144

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: San Michele Road
Road Segment: Driveway 1 to Driveway 3

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,444 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	344 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-6.58	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-23.82	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-27.77	-4.60	-1.20	*-5.50*	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:	56.1	54.2	52.4	46.4	55.0	55.6
Medium Trucks:	49.8	48.3	42.0	40.4	48.9	49.1
Heavy Trucks:	50.7	49.3	40.2	41.5	49.8	49.9
Vehicle Noise:	57.9	56.2	53.0	48.4	56.9	57.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	13	29	62	134
CNEL:	14	31	67	144

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: San Michele Road
Road Segment: Driveway 3 to Perris Boulevard

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,444 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	344 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-6.58	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-23.82	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-27.77	-4.60	-1.20	*-5.50*	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:	56.1	54.2	52.4	46.4	55.0	55.6
Medium Trucks:	49.8	48.3	42.0	40.4	48.9	49.1
Heavy Trucks:	50.7	49.3	40.2	41.5	49.8	49.9
Vehicle Noise:	57.9	56.2	53.0	48.4	56.9	57.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	13	29	62	134
CNEL:	14	31	67	144

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Nandina Avenue
Road Segment: West of Indian Street
Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,236 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	124 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.865
Medium Trucks:	100.319
Heavy Trucks:	100.319

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-10.52	-4.61	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-27.76	-4.64	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	82.99	-31.71	-4.64	-1.20	*-5.50*	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:	50.2	48.3	46.5	40.5	49.1	49.7
Medium Trucks:	44.1	42.6	36.2	34.7	43.2	43.4
Heavy Trucks:	45.4	44.0	35.0	36.2	44.6	44.7
Vehicle Noise:	52.2	50.4	47.2	42.6	51.2	51.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	6	12	26	55
CNEL:	6	13	28	59

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Nandina Avenue
Road Segment: Indian Street to Knox Street

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,340 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	234 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-8.26	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-25.50	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-29.45	-4.60	-1.20	*-5.50*	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:	54.4	52.5	50.8	44.7	53.3	53.9
Medium Trucks:	48.1	46.6	40.3	38.7	47.2	47.4
Heavy Trucks:	49.0	47.6	38.5	39.8	48.1	48.3
Vehicle Noise:	56.3	54.5	51.4	46.7	55.2	55.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	10	22	48	103
CNEL:	11	24	52	111

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Nandina Avenue
Road Segment: Knox Street to Driveway 2

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,608 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	161 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-9.89	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-27.13	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-31.08	-4.60	-1.20	*-5.50*	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:	52.8	50.9	49.1	43.1	51.7	52.3
Medium Trucks:	46.5	45.0	38.6	37.1	45.6	45.8
Heavy Trucks:	47.4	45.9	36.9	38.2	46.5	46.6
Vehicle Noise:	54.6	52.9	49.7	45.1	53.6	54.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	8	17	37	81
CNEL:	9	19	40	86

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Nandina Avenue
Road Segment: Driveway 2 to Driveway 4

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,068 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	107 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.865
Medium Trucks:	100.319
Heavy Trucks:	100.319

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-11.15	-4.61	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-28.39	-4.64	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	82.99	-32.35	-4.64	-1.20	*-5.50*	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:	49.5	47.6	45.9	39.8	48.5	49.1
Medium Trucks:	43.5	42.0	35.6	34.1	42.5	42.8
Heavy Trucks:	44.8	43.4	34.3	35.6	44.0	44.1
Vehicle Noise:	51.5	49.8	46.5	42.0	50.5	51.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	5	11	23	50
CNEL:	5	12	25	54

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Nandina Avenue
Road Segment: Driveway 4 to Perris Boulevard
Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,068 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	107 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.865
Medium Trucks:	100.319
Heavy Trucks:	100.319

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-11.15	-4.61	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-28.39	-4.64	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	82.99	-32.35	-4.64	-1.20	*-5.50*	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:	49.5	47.6	45.9	39.8	48.5	49.1
Medium Trucks:	43.5	42.0	35.6	34.1	42.5	42.8
Heavy Trucks:	44.8	43.4	34.3	35.6	44.0	44.1
Vehicle Noise:	51.5	49.8	46.5	42.0	50.5	51.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	5	11	23	50
CNEL:	5	12	25	54

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Plus Project
Road Name: Harley Knox Boulevard
Road Segment: West of I-215 Freeway

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,884 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	788 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-3.86	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-21.09	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-25.05	-4.55	-1.20	*-5.50*	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:	55.6	54.1	47.7	46.2	54.6	54.8
Heavy Trucks:	55.6	54.2	45.1	46.4	54.7	54.9
Vehicle Noise:	63.8	62.0	59.1	54.2	62.7	63.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	33	71	152	328
CNEL:	35	76	164	353

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Plus Project
Road Name: Harley Knox Boulevard
Road Segment: I-215 SB Ramps to I-215 NB Ramps

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,358 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,136 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-2.27	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-19.51	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-23.46	-4.55	-1.20	*-5.50*	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	60.1	54.1	62.7	63.3
Medium Trucks:	57.2	55.6	49.3	47.7	56.2	56.4
Heavy Trucks:	57.2	55.8	46.7	48.0	56.3	56.5
Vehicle Noise:	65.4	63.6	60.7	55.8	64.3	64.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	42	90	194	419
CNEL:	45	97	209	450

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Plus Project
Road Name: Harley Knox Boulevard
Road Segment: I-215 NB Ramps to Western Way

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,751 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,575 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	0.02	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-17.22	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-21.17	-4.55	-1.20	*-5.50*	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:	62.8	60.9	59.1	53.0	61.7	62.3
Medium Trucks:	56.5	55.0	48.6	47.1	55.5	55.8
Heavy Trucks:	57.3	55.9	46.9	48.1	56.5	56.6
Vehicle Noise:	64.6	62.8	59.7	55.0	63.6	64.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	37	80	173	372
CNEL:	40	86	185	399

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Plus Project
Road Name: Harley Knox Boulevard
Road Segment: East of Western Way

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,959 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,496 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-0.20	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-17.44	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-21.40	-4.55	-1.20	*-5.50*	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:	62.5	60.6	58.9	52.8	61.4	62.1
Medium Trucks:	56.3	54.8	48.4	46.8	55.3	55.5
Heavy Trucks:	57.1	55.7	46.7	47.9	56.3	56.4
Vehicle Noise:	64.4	62.6	59.5	54.8	63.3	63.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	36	77	167	360
CNEL:	39	83	179	386

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Plus Project
Road Name: Harley Knox Boulevard
Road Segment: West of Patterson Avenue

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,899 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,490 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-0.22	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-17.46	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-21.41	-4.55	-1.20	*-5.50*	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:	62.5	60.6	58.9	52.8	61.4	62.0
Medium Trucks:	56.2	54.7	48.4	46.8	55.3	55.5
Heavy Trucks:	57.1	55.7	46.6	47.9	56.2	56.4
Vehicle Noise:	64.4	62.6	59.5	54.8	63.3	63.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	36	77	167	359
CNEL:	38	83	179	385

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Plus Project
Road Name: Harley Knox Boulevard
Road Segment: East of Patterson Avenue

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,073 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,407 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-0.47	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-17.71	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-21.66	-4.60	-1.20	*-5.50*	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	58.6	52.5	61.1	61.7
Medium Trucks:	55.9	54.4	48.1	46.5	55.0	55.2
Heavy Trucks:	56.8	55.4	46.3	47.6	55.9	56.1
Vehicle Noise:	64.0	62.3	59.2	54.5	63.0	63.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	34	74	159	342
CNEL:	37	79	170	367

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Plus Project
Road Name: Harley Knox Boulevard
Road Segment: West of Indian Street

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,512 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,251 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-1.85	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-19.09	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-23.04	-4.55	-1.20	*-5.50*	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:	64.2	62.3	60.6	54.5	63.1	63.7
Medium Trucks:	57.6	56.1	49.7	48.2	56.6	56.9
Heavy Trucks:	57.6	56.2	47.2	48.4	56.8	56.9
Vehicle Noise:	65.8	64.0	61.1	56.2	64.7	65.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	45	96	207	447
CNEL:	48	104	223	480

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Plus Project
Road Name: Harley Knox Boulevard
Road Segment: East of Indian Street

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,856 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	586 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-5.15	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-22.38	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-26.34	-4.55	-1.20	*-5.50*	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:	54.3	52.8	46.4	44.9	53.3	53.6
Heavy Trucks:	54.3	52.9	43.9	45.1	53.5	53.6
Vehicle Noise:	62.5	60.7	57.8	52.9	61.5	61.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	27	58	125	269
CNEL:	29	62	134	290

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Plus Project
Road Name: Western Way
Road Segment: North of Harley Knox Boulevard

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	120 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.865
Medium Trucks:	100.319
Heavy Trucks:	100.319

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-10.65	-4.61	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-27.89	-4.64	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	82.99	-31.84	-4.64	-1.20	*-5.50*	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:	50.1	48.2	46.4	40.3	49.0	49.6
Medium Trucks:	44.0	42.5	36.1	34.6	43.0	43.3
Heavy Trucks:	45.3	43.9	34.9	36.1	44.5	44.6
Vehicle Noise:	52.0	50.3	47.0	42.5	51.0	51.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	5	12	25	54
CNEL:	6	13	27	58

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Plus Project
Road Name: Patterson Avenue
Road Segment: North of Harley Knox Boulevard

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	132 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	13 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.865
Medium Trucks:	100.319
Heavy Trucks:	100.319

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-20.23	-4.61	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-37.47	-4.64	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	82.99	-41.43	-4.64	-1.20	*-5.50*	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:	40.5	38.6	36.8	30.7	39.4	40.0
Medium Trucks:	34.4	32.9	26.5	25.0	33.5	33.7
Heavy Trucks:	35.7	34.3	25.3	26.5	34.9	35.0
Vehicle Noise:	42.5	40.7	37.5	32.9	41.4	41.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	1	3	6	12
CNEL:	1	3	6	13

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Plus Project
Road Name: Patterson Avenue
Road Segment: South of Harley Knox Boulevard

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,250 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	125 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.865
Medium Trucks:	100.319
Heavy Trucks:	100.319

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-10.47	-4.61	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-27.71	-4.64	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	82.99	-31.66	-4.64	-1.20	*-5.50*	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:	50.2	48.3	46.6	40.5	49.1	49.7
Medium Trucks:	44.2	42.7	36.3	34.8	43.2	43.4
Heavy Trucks:	45.5	44.1	35.0	36.3	44.6	44.8
Vehicle Noise:	52.2	50.5	47.2	42.7	51.2	51.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	6	12	26	56
CNEL:	6	13	28	60

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Plus Project
Road Name: Indian Street
Road Segment: North of Nandina Avenue

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,950 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	395 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-5.99	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-23.22	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-27.18	-4.60	-1.20	*-5.50*	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:	56.7	54.8	53.0	47.0	55.6	56.2
Medium Trucks:	50.4	48.9	42.6	41.0	49.5	49.7
Heavy Trucks:	51.3	49.8	40.8	42.1	50.4	50.5
Vehicle Noise:	58.5	56.8	53.6	49.0	57.5	58.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	15	32	68	147
CNEL:	16	34	73	157

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Plus Project
Road Name: Indian Street
Road Segment: South of Nandina Avenue

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,141 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	714 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-4.28	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-21.52	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-25.48	-4.55	-1.20	*-5.50*	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	52.1	60.7	61.3
Medium Trucks:	55.1	53.6	47.3	45.7	54.2	54.4
Heavy Trucks:	55.2	53.8	44.7	46.0	54.3	54.4
Vehicle Noise:	63.3	61.6	58.6	53.8	62.3	62.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	31	66	143	307
CNEL:	33	71	153	331

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Plus Project
Road Name: Indian Street
Road Segment: North of Harley Knox Boulevard
Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,545 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	855 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-3.51	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-20.74	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-24.70	-4.55	-1.20	*-5.50*	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:	62.6	60.7	58.9	52.8	61.5	62.1
Medium Trucks:	55.9	54.4	48.0	46.5	55.0	55.2
Heavy Trucks:	56.0	54.5	45.5	46.7	55.1	55.2
Vehicle Noise:	64.1	62.4	59.4	54.5	63.1	63.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	35	75	161	346
CNEL:	37	80	173	373

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Plus Project
Road Name: Indian Street
Road Segment: South of Harley Knox Boulevard

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,481 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	148 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-11.12	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-28.36	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-32.31	-4.55	-1.20	*-5.50*	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:	54.9	53.1	51.3	45.2	53.9	54.5
Medium Trucks:	48.3	46.8	40.4	38.9	47.4	47.6
Heavy Trucks:	48.3	46.9	37.9	39.1	47.5	47.6
Vehicle Noise:	56.5	54.8	51.8	46.9	55.5	56.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	11	23	50	108
CNEL:	12	25	54	116

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Plus Project
Road Name: Knox Street
Road Segment: North of Nandina Avenue

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	324 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	32 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-16.85	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-34.08	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-38.04	-4.60	-1.20	*-5.50*	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:	45.8	43.9	42.2	36.1	44.7	45.3
Medium Trucks:	39.6	38.1	31.7	30.1	38.6	38.8
Heavy Trucks:	40.4	39.0	30.0	31.2	39.6	39.7
Vehicle Noise:	47.7	45.9	42.8	38.1	46.6	47.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	3	6	13	28
CNEL:	3	6	14	30

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Plus Project
Road Name: Perris Boulevard
Road Segment: South of San Michele Road

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,998 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,700 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-0.52	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-17.76	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-21.71	-4.55	-1.20	*-5.50*	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:	65.5	63.6	61.9	55.8	64.5	65.1
Medium Trucks:	58.9	57.4	51.0	49.5	57.9	58.2
Heavy Trucks:	58.9	57.5	48.5	49.7	58.1	58.2
Vehicle Noise:	67.1	65.4	62.4	57.5	66.1	66.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	55	118	254	548
CNEL:	59	127	274	589

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Plus Project
Road Name: Perris Boulevard
Road Segment: North of Nandina Avenue

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	19,759 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,976 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.14	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-17.10	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-21.06	-4.55	-1.20	*-5.50*	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:	59.6	58.0	51.7	50.1	58.6	58.8
Heavy Trucks:	59.6	58.2	49.1	50.4	58.7	58.9
Vehicle Noise:	67.8	66.0	63.1	58.2	66.7	67.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	61	130	281	606
CNEL:	65	140	302	651

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Plus Project
Road Name: Perris Boulevard
Road Segment: South of Nandina Avenue

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	19,984 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,998 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.18	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-17.05	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-21.01	-4.55	-1.20	*-5.50*	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:	59.6	58.1	51.7	50.2	58.7	58.9
Heavy Trucks:	59.6	58.2	49.2	50.4	58.8	58.9
Vehicle Noise:	67.8	66.1	63.1	58.2	66.8	67.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	61	131	283	610
CNEL:	66	141	305	656

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Plus Project
Road Name: San Michele Road
Road Segment: West of Driveway 1

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,902 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	390 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-6.04	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-23.28	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-27.23	-4.60	-1.20	*-5.50*	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:	56.6	54.7	53.0	46.9	55.6	56.2
Medium Trucks:	50.4	48.9	42.5	41.0	49.4	49.6
Heavy Trucks:	51.2	49.8	40.8	42.0	50.4	50.5
Vehicle Noise:	58.5	56.7	53.6	48.9	57.4	57.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	15	31	68	146
CNEL:	16	34	72	156

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Plus Project
Road Name: San Michele Road
Road Segment: Driveway 1 to Driveway 3

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,396 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	340 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-6.64	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-23.88	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-27.84	-4.60	-1.20	*-5.50*	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:	56.0	54.1	52.4	46.3	54.9	55.6
Medium Trucks:	49.8	48.3	41.9	40.4	48.8	49.0
Heavy Trucks:	50.6	49.2	40.2	41.4	49.8	49.9
Vehicle Noise:	57.9	56.1	53.0	48.3	56.8	57.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	13	29	62	133
CNEL:	14	31	66	142

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Plus Project
Road Name: San Michele Road
Road Segment: Driveway 3 to Perris Boulevard

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,496 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	350 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-6.52	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-23.75	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-27.71	-4.60	-1.20	*-5.50*	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:	56.2	54.3	52.5	46.5	55.1	55.7
Medium Trucks:	49.9	48.4	42.0	40.5	48.9	49.2
Heavy Trucks:	50.7	49.3	40.3	41.5	49.9	50.0
Vehicle Noise:	58.0	56.3	53.1	48.4	57.0	57.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	14	29	63	135
CNEL:	15	31	67	145

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Plus Project
Road Name: Nandina Avenue
Road Segment: West of Indian Street

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,236 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	124 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.865
Medium Trucks:	100.319
Heavy Trucks:	100.319

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-10.52	-4.61	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-27.76	-4.64	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	82.99	-31.71	-4.64	-1.20	*-5.50*	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:	50.2	48.3	46.5	40.5	49.1	49.7
Medium Trucks:	44.1	42.6	36.2	34.7	43.2	43.4
Heavy Trucks:	45.4	44.0	35.0	36.2	44.6	44.7
Vehicle Noise:	52.2	50.4	47.2	42.6	51.2	51.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	6	12	26	55
CNEL:	6	13	28	59

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Plus Project
Road Name: Nandina Avenue
Road Segment: Indian Street to Knox Street

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,035 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	304 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-7.13	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-24.37	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-28.32	-4.60	-1.20	*-5.50*	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:	55.6	53.7	51.9	45.8	54.5	55.1
Medium Trucks:	49.3	47.8	41.4	39.9	48.3	48.6
Heavy Trucks:	50.1	48.7	39.7	40.9	49.3	49.4
Vehicle Noise:	57.4	55.6	52.5	47.8	56.4	56.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	12	27	57	123
CNEL:	13	28	61	132

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Plus Project
Road Name: Nandina Avenue
Road Segment: Knox Street to Driveway 2

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,303 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	230 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-8.33	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-25.57	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-29.52	-4.60	-1.20	*-5.50*	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:	54.4	52.5	50.7	44.6	53.3	53.9
Medium Trucks:	48.1	46.6	40.2	38.7	47.1	47.4
Heavy Trucks:	48.9	47.5	38.5	39.7	48.1	48.2
Vehicle Noise:	56.2	54.4	51.3	46.6	55.2	55.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	10	22	48	102
CNEL:	11	24	51	110

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Plus Project
Road Name: Nandina Avenue
Road Segment: Driveway 2 to Driveway 4

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,072 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	107 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.865
Medium Trucks:	100.319
Heavy Trucks:	100.319

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-11.14	-4.61	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-28.38	-4.64	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	82.99	-32.33	-4.64	-1.20	*-5.50*	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:	49.6	47.7	45.9	39.8	48.5	49.1
Medium Trucks:	43.5	42.0	35.6	34.1	42.5	42.8
Heavy Trucks:	44.8	43.4	34.4	35.6	44.0	44.1
Vehicle Noise:	51.6	49.8	46.6	42.0	50.5	51.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	5	11	23	50
CNEL:	5	12	25	54

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Plus Project
Road Name: Nandina Avenue
Road Segment: Driveway 4 to Perris Boulevard

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,135 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	114 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.865
Medium Trucks:	100.319
Heavy Trucks:	100.319

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-10.89	-4.61	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-28.13	-4.64	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	82.99	-32.08	-4.64	-1.20	*-5.50*	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:	49.8	47.9	46.1	40.1	48.7	49.3
Medium Trucks:	43.7	42.2	35.9	34.3	42.8	43.0
Heavy Trucks:	45.1	43.6	34.6	35.9	44.2	44.3
Vehicle Noise:	51.8	50.1	46.8	42.2	50.8	51.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	5	11	24	52
CNEL:	6	12	26	56

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 Without Project
Road Name: Harley Knox Boulevard
Road Segment: West of I-215 Freeway

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,255 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,326 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-1.60	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-18.84	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-22.79	-4.55	-1.20	*-5.50*	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:	57.8	56.3	50.0	48.4	56.9	57.1
Heavy Trucks:	57.9	56.4	47.4	48.7	57.0	57.1
Vehicle Noise:	66.0	64.3	61.3	56.4	65.0	65.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	46	100	215	464
CNEL:	50	108	232	499

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 Without Project
Road Name: Harley Knox Boulevard
Road Segment: I-215 SB Ramps to I-215 NB Ramps

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,732 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,473 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.11	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-16.13	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-20.08	-4.55	-1.20	*-5.50*	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	63.5	57.5	66.1	66.7
Medium Trucks:	60.5	59.0	52.7	51.1	59.6	59.8
Heavy Trucks:	60.6	59.1	50.1	51.4	59.7	59.8
Vehicle Noise:	68.7	67.0	64.0	59.2	67.7	68.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	70	152	326	703
CNEL:	76	163	351	757

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 Without Project
Road Name: Harley Knox Boulevard
Road Segment: I-215 NB Ramps to Western Way

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	36,174 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,617 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.63	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.61	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-17.56	-4.55	-1.20	*-5.50*	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:	60.1	58.6	52.2	50.7	59.1	59.4
Heavy Trucks:	60.9	59.5	50.5	51.7	60.1	60.2
Vehicle Noise:	68.2	66.5	63.3	58.6	67.2	67.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	65	140	301	648
CNEL:	70	150	323	695

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 Without Project
Road Name: Harley Knox Boulevard
Road Segment: East of Western Way
Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	35,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,530 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.53	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.71	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-17.67	-4.55	-1.20	*-5.50*	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	56.6	65.2	65.8
Medium Trucks:	60.0	58.5	52.1	50.6	59.0	59.3
Heavy Trucks:	60.8	59.4	50.4	51.6	60.0	60.1
Vehicle Noise:	68.1	66.4	63.2	58.5	67.1	67.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	64	137	296	638
CNEL:	68	147	317	684

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 Without Project
Road Name: Harley Knox Boulevard
Road Segment: West of Patterson Avenue

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	35,233 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,523 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.52	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.72	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-17.68	-4.55	-1.20	*-5.50*	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:	60.0	58.5	52.1	50.6	59.0	59.3
Heavy Trucks:	60.8	59.4	50.4	51.6	60.0	60.1
Vehicle Noise:	68.1	66.3	63.2	58.5	67.1	67.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	64	137	296	637
CNEL:	68	147	317	683

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 Without Project
Road Name: Harley Knox Boulevard
Road Segment: East of Patterson Avenue

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	34,418 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,442 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.42	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.82	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-17.78	-4.60	-1.20	*-5.50*	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	56.4	65.0	65.6
Medium Trucks:	59.8	58.3	52.0	50.4	58.9	59.1
Heavy Trucks:	60.7	59.2	50.2	51.5	59.8	59.9
Vehicle Noise:	67.9	66.2	63.0	58.4	66.9	67.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	62	134	288	621
CNEL:	67	144	309	666

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 Without Project
Road Name: Harley Knox Boulevard
Road Segment: West of Indian Street
Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,697 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,270 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	2.32	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-14.92	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-18.87	-4.55	-1.20	*-5.50*	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:	61.7	60.2	53.9	52.3	60.8	61.0
Heavy Trucks:	61.8	60.4	51.3	52.6	60.9	61.1
Vehicle Noise:	70.0	68.2	65.2	60.4	68.9	69.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	85	183	393	847
CNEL:	91	196	423	911

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 Without Project
Road Name: Harley Knox Boulevard
Road Segment: East of Indian Street

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,811 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,081 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-2.48	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-19.72	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-23.68	-4.55	-1.20	*-5.50*	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:	56.9	55.4	49.1	47.5	56.0	56.2
Heavy Trucks:	57.0	55.6	46.5	47.8	56.1	56.2
Vehicle Noise:	65.2	63.4	60.4	55.6	64.1	64.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	41	87	188	405
CNEL:	44	94	202	436

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 Without Project
Road Name: Western Way
Road Segment: North of Harley Knox Boulevard
Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,325 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	133 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.865
Medium Trucks:	100.319
Heavy Trucks:	100.319

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-10.22	-4.61	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-27.46	-4.64	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	82.99	-31.41	-4.64	-1.20	*-5.50*	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:	50.5	48.6	46.8	40.8	49.4	50.0
Medium Trucks:	44.4	42.9	36.6	35.0	43.5	43.7
Heavy Trucks:	45.7	44.3	35.3	36.5	44.9	45.0
Vehicle Noise:	52.5	50.7	47.5	42.9	51.5	51.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	6	13	27	58
CNEL:	6	13	29	62

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 Without Project
Road Name: Patterson Avenue
Road Segment: North of Harley Knox Boulevard
Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	154 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	15 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.865
Medium Trucks:	100.319
Heavy Trucks:	100.319

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-19.57	-4.61	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-36.81	-4.64	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	82.99	-40.77	-4.64	-1.20	*-5.50*	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:	41.1	39.2	37.5	31.4	40.0	40.6
Medium Trucks:	35.1	33.6	27.2	25.7	34.1	34.3
Heavy Trucks:	36.4	35.0	25.9	27.2	35.5	35.7
Vehicle Noise:	43.1	41.4	38.1	33.6	42.1	42.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	1	3	6	14
CNEL:	1	3	7	15

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 Without Project
Road Name: Patterson Avenue
Road Segment: South of Harley Knox Boulevard

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,485 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	149 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.865
Medium Trucks:	100.319
Heavy Trucks:	100.319

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-9.72	-4.61	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-26.96	-4.64	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	82.99	-30.92	-4.64	-1.20	*-5.50*	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:	51.0	49.1	47.3	41.3	49.9	50.5
Medium Trucks:	44.9	43.4	37.0	35.5	44.0	44.2
Heavy Trucks:	46.2	44.8	35.8	37.0	45.4	45.5
Vehicle Noise:	53.0	51.2	48.0	43.4	52.0	52.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	6	13	29	63
CNEL:	7	14	31	67

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 Without Project
Road Name: Indian Street
Road Segment: North of Nandina Avenue
Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,862 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,486 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-0.23	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-17.47	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-21.42	-4.60	-1.20	*-5.50*	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:	62.5	60.6	58.8	52.7	61.4	62.0
Medium Trucks:	56.2	54.7	48.3	46.8	55.2	55.5
Heavy Trucks:	57.0	55.6	46.6	47.8	56.2	56.3
Vehicle Noise:	64.3	62.5	59.4	54.7	63.3	63.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	35	76	165	355
CNEL:	38	82	177	381

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 Without Project
Road Name: Indian Street
Road Segment: South of Nandina Avenue
Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,893 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,089 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.38	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-16.86	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-20.82	-4.55	-1.20	*-5.50*	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	62.8	56.7	65.3	66.0
Medium Trucks:	59.8	58.3	51.9	50.4	58.8	59.1
Heavy Trucks:	59.8	58.4	49.4	50.6	59.0	59.1
Vehicle Noise:	68.0	66.2	63.3	58.4	67.0	67.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	63	135	292	628
CNEL:	68	146	314	676

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 Without Project
Road Name: Indian Street
Road Segment: North of Harley Knox Boulevard
Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	22,312 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,231 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.66	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-16.58	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-20.53	-4.55	-1.20	*-5.50*	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:	66.7	64.8	63.1	57.0	65.6	66.2
Medium Trucks:	60.1	58.6	52.2	50.7	59.1	59.4
Heavy Trucks:	60.1	58.7	49.7	50.9	59.3	59.4
Vehicle Noise:	68.3	66.5	63.6	58.7	67.3	67.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	66	141	305	657
CNEL:	71	152	328	706

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 Without Project
Road Name: Indian Street
Road Segment: South of Harley Knox Boulevard
Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,278 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	528 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-5.60	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-22.84	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-26.79	-4.55	-1.20	*-5.50*	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	56.8	50.7	59.4	60.0
Medium Trucks:	53.8	52.3	46.0	44.4	52.9	53.1
Heavy Trucks:	53.9	52.4	43.4	44.7	53.0	53.1
Vehicle Noise:	62.0	60.3	57.3	52.4	61.0	61.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	25	54	117	251
CNEL:	27	58	125	270

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 Without Project
Road Name: Knox Street
Road Segment: North of Nandina Avenue
Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	834 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	83 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-12.74	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-29.98	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-33.93	-4.60	-1.20	*-5.50*	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:	49.9	48.0	46.3	40.2	48.8	49.5
Medium Trucks:	43.7	42.2	35.8	34.3	42.7	42.9
Heavy Trucks:	44.5	43.1	34.1	35.3	43.7	43.8
Vehicle Noise:	51.8	50.0	46.9	42.2	50.7	51.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	5	11	24	52
CNEL:	6	12	26	56

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 Without Project
Road Name: Perris Boulevard
Road Segment: South of San Michele Road
Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,870 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,687 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.47	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-15.77	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-19.72	-4.55	-1.20	*-5.50*	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:	67.5	65.6	63.9	57.8	66.4	67.0
Medium Trucks:	60.9	59.4	53.0	51.5	59.9	60.2
Heavy Trucks:	60.9	59.5	50.5	51.7	60.1	60.2
Vehicle Noise:	69.1	67.3	64.4	59.5	68.1	68.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	74	160	345	743
CNEL:	80	172	371	800

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 Without Project
Road Name: Perris Boulevard
Road Segment: North of Nandina Avenue

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,920 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,992 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.94	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-15.30	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-19.26	-4.55	-1.20	*-5.50*	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	64.3	58.3	66.9	67.5
Medium Trucks:	61.4	59.8	53.5	51.9	60.4	60.6
Heavy Trucks:	61.4	60.0	50.9	52.2	60.5	60.7
Vehicle Noise:	69.6	67.8	64.9	60.0	68.5	69.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	80	172	371	798
CNEL:	86	185	399	859

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 Without Project
Road Name: Perris Boulevard
Road Segment: South of Nandina Avenue

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,209 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,921 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.83	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-15.41	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-19.36	-4.55	-1.20	*-5.50*	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:	67.9	66.0	64.2	58.2	66.8	67.4
Medium Trucks:	61.3	59.7	53.4	51.8	60.3	60.5
Heavy Trucks:	61.3	59.9	50.8	52.1	60.4	60.6
Vehicle Noise:	69.5	67.7	64.8	59.9	68.4	68.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	79	169	365	786
CNEL:	85	182	392	845

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 Without Project
Road Name: San Michele Road
Road Segment: West of Driveway 1

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,729 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	573 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-4.37	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-21.61	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-25.56	-4.60	-1.20	*-5.50*	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:	58.3	56.4	54.7	48.6	57.2	57.8
Medium Trucks:	52.0	50.5	44.2	42.6	51.1	51.3
Heavy Trucks:	52.9	51.5	42.4	43.7	52.0	52.2
Vehicle Noise:	60.1	58.4	55.3	50.6	59.1	59.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	19	40	87	188
CNEL:	20	43	94	202

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 Without Project
Road Name: San Michele Road
Road Segment: Driveway 1 to Driveway 3

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,477 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	548 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-4.57	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-21.80	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-25.76	-4.60	-1.20	*-5.50*	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:	58.1	56.2	54.5	48.4	57.0	57.6
Medium Trucks:	51.8	50.3	44.0	42.4	50.9	51.1
Heavy Trucks:	52.7	51.3	42.2	43.5	51.8	52.0
Vehicle Noise:	59.9	58.2	55.1	50.4	58.9	59.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	18	39	85	182
CNEL:	20	42	91	196

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 Without Project
Road Name: San Michele Road
Road Segment: Driveway 3 to Perris Boulevard

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,530 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	553 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-4.52	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-21.76	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-25.72	-4.60	-1.20	*-5.50*	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:	58.2	56.3	54.5	48.4	57.1	57.7
Medium Trucks:	51.9	50.4	44.0	42.5	50.9	51.2
Heavy Trucks:	52.7	51.3	42.3	43.5	51.9	52.0
Vehicle Noise:	60.0	58.2	55.1	50.4	59.0	59.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	18	40	85	184
CNEL:	20	42	91	197

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 Without Project
Road Name: Nandina Avenue
Road Segment: West of Indian Street
Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,224 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	622 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.865
Medium Trucks:	100.319
Heavy Trucks:	100.319

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-3.50	-4.61	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-20.74	-4.64	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	82.99	-24.69	-4.64	-1.20	*-5.50*	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:	57.2	55.3	53.5	47.5	56.1	56.7
Medium Trucks:	51.1	49.6	43.3	41.7	50.2	50.4
Heavy Trucks:	52.5	51.0	42.0	43.3	51.6	51.7
Vehicle Noise:	59.2	57.5	54.2	49.6	58.2	58.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	16	35	76	163
CNEL:	17	38	81	174

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 Without Project
Road Name: Nandina Avenue
Road Segment: Indian Street to Knox Street

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	560 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-4.47	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-21.71	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-25.66	-4.60	-1.20	*-5.50*	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:	58.2	56.3	54.6	48.5	57.1	57.7
Medium Trucks:	51.9	50.4	44.1	42.5	51.0	51.2
Heavy Trucks:	52.8	51.4	42.3	43.6	51.9	52.1
Vehicle Noise:	60.0	58.3	55.2	50.5	59.0	59.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	19	40	86	185
CNEL:	20	43	92	199

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 Without Project
Road Name: Nandina Avenue
Road Segment: Knox Street to Driveway 2

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,343 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	434 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-5.57	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-22.81	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-26.77	-4.60	-1.20	*-5.50*	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:	57.1	55.2	53.4	47.4	56.0	56.6
Medium Trucks:	50.8	49.3	43.0	41.4	49.9	50.1
Heavy Trucks:	51.7	50.3	41.2	42.5	50.8	51.0
Vehicle Noise:	58.9	57.2	54.1	49.4	57.9	58.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	16	34	73	156
CNEL:	17	36	78	168

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 Without Project
Road Name: Nandina Avenue
Road Segment: Driveway 2 to Driveway 4

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,463 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	346 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.865
Medium Trucks:	100.319
Heavy Trucks:	100.319

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-6.04	-4.61	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-23.28	-4.64	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	82.99	-27.24	-4.64	-1.20	*-5.50*	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:	54.7	52.8	51.0	44.9	53.6	54.2
Medium Trucks:	48.6	47.1	40.7	39.2	47.6	47.9
Heavy Trucks:	49.9	48.5	39.5	40.7	49.1	49.2
Vehicle Noise:	56.7	54.9	51.7	47.1	55.6	56.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	11	24	51	110
CNEL:	12	25	55	118

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 Without Project
Road Name: Nandina Avenue
Road Segment: Driveway 4 to Perris Boulevard

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,489 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	349 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.865
Medium Trucks:	100.319
Heavy Trucks:	100.319

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-6.01	-4.61	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-23.25	-4.64	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	82.99	-27.21	-4.64	-1.20	*-5.50*	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:	54.7	52.8	51.0	45.0	53.6	54.2
Medium Trucks:	48.6	47.1	40.8	39.2	47.7	47.9
Heavy Trucks:	49.9	48.5	39.5	40.7	49.1	49.2
Vehicle Noise:	56.7	55.0	51.7	47.1	55.7	56.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	11	24	51	111
CNEL:	12	26	55	119

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: Harley Knox Boulevard
Road Segment: West of I-215 Freeway

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,255 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,326 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-1.60	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-18.84	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-22.79	-4.55	-1.20	*-5.50*	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:	57.8	56.3	50.0	48.4	56.9	57.1
Heavy Trucks:	57.9	56.4	47.4	48.7	57.0	57.1
Vehicle Noise:	66.0	64.3	61.3	56.4	65.0	65.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	46	100	215	464
CNEL:	50	108	232	499

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: Harley Knox Boulevard
Road Segment: I-215 SB Ramps to I-215 NB Ramps

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,266 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,527 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.20	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-16.04	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-19.99	-4.55	-1.20	*-5.50*	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	57.5	66.2	66.8
Medium Trucks:	60.6	59.1	52.8	51.2	59.7	59.9
Heavy Trucks:	60.7	59.2	50.2	51.5	59.8	59.9
Vehicle Noise:	68.8	67.1	64.1	59.2	67.8	68.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	71	154	331	713
CNEL:	77	165	356	768

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: Harley Knox Boulevard
Road Segment: I-215 NB Ramps to Western Way

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	37,081 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,708 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.74	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.50	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-17.45	-4.55	-1.20	*-5.50*	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:	66.5	64.6	62.8	56.8	65.4	66.0
Medium Trucks:	60.2	58.7	52.3	50.8	59.3	59.5
Heavy Trucks:	61.1	59.6	50.6	51.8	60.2	60.3
Vehicle Noise:	68.3	66.6	63.4	58.7	67.3	67.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	66	142	306	659
CNEL:	71	152	328	707

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: Harley Knox Boulevard
Road Segment: East of Western Way

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	36,207 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,621 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.64	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.60	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-17.56	-4.55	-1.20	*-5.50*	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:	60.1	58.6	52.2	50.7	59.1	59.4
Heavy Trucks:	61.0	59.5	50.5	51.7	60.1	60.2
Vehicle Noise:	68.2	66.5	63.3	58.6	67.2	67.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	65	140	301	648
CNEL:	70	150	323	696

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: Harley Knox Boulevard
Road Segment: West of Patterson Avenue

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	36,140 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,614 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.63	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.61	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-17.57	-4.55	-1.20	*-5.50*	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:	60.1	58.6	52.2	50.7	59.1	59.4
Heavy Trucks:	60.9	59.5	50.5	51.7	60.1	60.2
Vehicle Noise:	68.2	66.5	63.3	58.6	67.2	67.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	65	140	301	648
CNEL:	69	150	323	695

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: Harley Knox Boulevard
Road Segment: East of Patterson Avenue

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	35,339 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,534 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.53	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-13.71	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-17.66	-4.60	-1.20	*-5.50*	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	62.6	56.5	65.1	65.7
Medium Trucks:	59.9	58.4	52.1	50.5	59.0	59.2
Heavy Trucks:	60.8	59.4	50.3	51.6	59.9	60.1
Vehicle Noise:	68.0	66.3	63.2	58.5	67.0	67.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	63	136	293	632
CNEL:	68	146	315	678

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: Harley Knox Boulevard
Road Segment: West of Indian Street

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	33,617 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,362 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	2.44	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-14.80	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-18.75	-4.55	-1.20	*-5.50*	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:	61.9	60.4	54.0	52.4	60.9	61.1
Heavy Trucks:	61.9	60.5	51.4	52.7	61.0	61.2
Vehicle Noise:	70.1	68.3	65.4	60.5	69.0	69.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	86	186	401	863
CNEL:	93	200	431	928

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: Harley Knox Boulevard
Road Segment: East of Indian Street

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,811 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,081 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-2.48	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-19.72	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-23.68	-4.55	-1.20	*-5.50*	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:	56.9	55.4	49.1	47.5	56.0	56.2
Heavy Trucks:	57.0	55.6	46.5	47.8	56.1	56.2
Vehicle Noise:	65.2	63.4	60.4	55.6	64.1	64.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	41	87	188	405
CNEL:	44	94	202	436

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: Western Way
Road Segment: North of Harley Knox Boulevard
Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,325 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	133 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.865
Medium Trucks:	100.319
Heavy Trucks:	100.319

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-10.22	-4.61	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-27.46	-4.64	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	82.99	-31.41	-4.64	-1.20	*-5.50*	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:	50.5	48.6	46.8	40.8	49.4	50.0
Medium Trucks:	44.4	42.9	36.6	35.0	43.5	43.7
Heavy Trucks:	45.7	44.3	35.3	36.5	44.9	45.0
Vehicle Noise:	52.5	50.7	47.5	42.9	51.5	51.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	6	13	27	58
CNEL:	6	13	29	62

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: Patterson Avenue
Road Segment: North of Harley Knox Boulevard

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	154 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	15 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.865
Medium Trucks:	100.319
Heavy Trucks:	100.319

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-19.57	-4.61	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-36.81	-4.64	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	82.99	-40.77	-4.64	-1.20	*-5.50*	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:	41.1	39.2	37.5	31.4	40.0	40.6
Medium Trucks:	35.1	33.6	27.2	25.7	34.1	34.3
Heavy Trucks:	36.4	35.0	25.9	27.2	35.5	35.7
Vehicle Noise:	43.1	41.4	38.1	33.6	42.1	42.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	1	3	6	14
CNEL:	1	3	7	15

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: Patterson Avenue
Road Segment: South of Harley Knox Boulevard

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,499 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	150 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.865
Medium Trucks:	100.319
Heavy Trucks:	100.319

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-9.68	-4.61	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-26.92	-4.64	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	82.99	-30.88	-4.64	-1.20	*-5.50*	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:	51.0	49.1	47.4	41.3	49.9	50.5
Medium Trucks:	45.0	43.4	37.1	35.5	44.0	44.2
Heavy Trucks:	46.3	44.9	35.8	37.1	45.4	45.6
Vehicle Noise:	53.0	51.3	48.0	43.5	52.0	52.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	6	14	29	63
CNEL:	7	15	31	67

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: Indian Street
Road Segment: North of Nandina Avenue

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,140 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,514 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-0.15	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-17.39	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-21.34	-4.60	-1.20	*-5.50*	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:	62.5	60.6	58.9	52.8	61.4	62.0
Medium Trucks:	56.3	54.7	48.4	46.8	55.3	55.5
Heavy Trucks:	57.1	55.7	46.6	47.9	56.3	56.4
Vehicle Noise:	64.4	62.6	59.5	54.8	63.3	63.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	36	77	167	359
CNEL:	39	83	179	385

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: Indian Street
Road Segment: South of Nandina Avenue

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,867 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,187 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.58	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-16.66	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-20.62	-4.55	-1.20	*-5.50*	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:	66.6	64.7	63.0	56.9	65.5	66.1
Medium Trucks:	60.0	58.5	52.1	50.6	59.0	59.3
Heavy Trucks:	60.0	58.6	49.6	50.8	59.2	59.3
Vehicle Noise:	68.2	66.4	63.5	58.6	67.2	67.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	65	140	301	648
CNEL:	70	150	324	697

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: Indian Street
Road Segment: North of Harley Knox Boulevard
Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,286 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,329 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.85	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-16.39	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-20.35	-4.55	-1.20	*-5.50*	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:	60.3	58.8	52.4	50.9	59.3	59.5
Heavy Trucks:	60.3	58.9	49.8	51.1	59.5	59.6
Vehicle Noise:	68.5	66.7	63.8	58.9	67.4	67.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	68	146	314	676
CNEL:	73	157	337	727

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: Indian Street
Road Segment: South of Harley Knox Boulevard

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,332 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	533 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	-5.55	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-22.79	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-26.75	-4.55	-1.20	*-5.50*	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	56.8	50.8	59.4	60.0
Medium Trucks:	53.9	52.4	46.0	44.5	52.9	53.1
Heavy Trucks:	53.9	52.5	43.4	44.7	53.1	53.2
Vehicle Noise:	62.1	60.3	57.4	52.5	61.0	61.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	25	54	117	253
CNEL:	27	59	126	272

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: Knox Street
Road Segment: North of Nandina Avenue

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	834 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	83 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-12.74	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-29.98	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-33.93	-4.60	-1.20	*-5.50*	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:	49.9	48.0	46.3	40.2	48.8	49.5
Medium Trucks:	43.7	42.2	35.8	34.3	42.7	42.9
Heavy Trucks:	44.5	43.1	34.1	35.3	43.7	43.8
Vehicle Noise:	51.8	50.0	46.9	42.2	50.7	51.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	5	11	24	52
CNEL:	6	12	26	56

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: Perris Boulevard
Road Segment: South of San Michele Road
Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,938 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,694 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.48	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-15.76	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-19.71	-4.55	-1.20	*-5.50*	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:	67.5	65.6	63.9	57.8	66.5	67.1
Medium Trucks:	60.9	59.4	53.0	51.5	59.9	60.2
Heavy Trucks:	60.9	59.5	50.5	51.7	60.1	60.2
Vehicle Noise:	69.1	67.4	64.4	59.5	68.1	68.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	74	160	346	744
CNEL:	80	173	372	801

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: Perris Boulevard
Road Segment: North of Nandina Avenue

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,986 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,999 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.95	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-15.29	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-19.25	-4.55	-1.20	*-5.50*	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	64.3	58.3	66.9	67.5
Medium Trucks:	61.4	59.9	53.5	52.0	60.4	60.6
Heavy Trucks:	61.4	60.0	50.9	52.2	60.6	60.7
Vehicle Noise:	69.6	67.8	64.9	60.0	68.5	69.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	80	172	371	800
CNEL:	86	185	399	860

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: Perris Boulevard
Road Segment: South of Nandina Avenue

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,233 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,923 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.412
Medium Trucks:	98.874
Heavy Trucks:	98.874

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.84	-4.51	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	82.40	-15.40	-4.55	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	86.40	-19.36	-4.55	-1.20	*-5.50*	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:	67.9	66.0	64.2	58.2	66.8	67.4
Medium Trucks:	61.3	59.7	53.4	51.8	60.3	60.5
Heavy Trucks:	61.3	59.9	50.8	52.1	60.4	60.6
Vehicle Noise:	69.5	67.7	64.8	59.9	68.4	68.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	79	169	365	786
CNEL:	85	182	393	846

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: San Michele Road
Road Segment: West of Driveway 1

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,007 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	601 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-4.16	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-21.40	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-25.36	-4.60	-1.20	*-5.50*	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:	58.5	56.6	54.9	48.8	57.4	58.0
Medium Trucks:	52.2	50.7	44.4	42.8	51.3	51.5
Heavy Trucks:	53.1	51.7	42.6	43.9	52.2	52.4
Vehicle Noise:	60.3	58.6	55.5	50.8	59.3	59.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	19	42	90	194
CNEL:	21	45	97	208

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: San Michele Road
Road Segment: Driveway 1 to Driveway 3

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,477 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	548 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-4.57	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-21.80	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-25.76	-4.60	-1.20	*-5.50*	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:	58.1	56.2	54.5	48.4	57.0	57.6
Medium Trucks:	51.8	50.3	44.0	42.4	50.9	51.1
Heavy Trucks:	52.7	51.3	42.2	43.5	51.8	52.0
Vehicle Noise:	59.9	58.2	55.1	50.4	58.9	59.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	18	39	85	182
CNEL:	20	42	91	196

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: San Michele Road
Road Segment: Driveway 3 to Perris Boulevard

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,584 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	558 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-4.48	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-21.72	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-25.68	-4.60	-1.20	*-5.50*	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:	58.2	56.3	54.5	48.5	57.1	57.7
Medium Trucks:	51.9	50.4	44.1	42.5	51.0	51.2
Heavy Trucks:	52.8	51.4	42.3	43.6	51.9	52.0
Vehicle Noise:	60.0	58.3	55.1	50.5	59.0	59.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	18	40	86	185
CNEL:	20	43	92	198

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: Nandina Avenue
Road Segment: West of Indian Street

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,224 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	622 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.865
Medium Trucks:	100.319
Heavy Trucks:	100.319

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-3.50	-4.61	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-20.74	-4.64	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	82.99	-24.69	-4.64	-1.20	*-5.50*	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:	57.2	55.3	53.5	47.5	56.1	56.7
Medium Trucks:	51.1	49.6	43.3	41.7	50.2	50.4
Heavy Trucks:	52.5	51.0	42.0	43.3	51.6	51.7
Vehicle Noise:	59.2	57.5	54.2	49.6	58.2	58.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	16	35	76	163
CNEL:	17	38	81	174

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: Nandina Avenue
Road Segment: Indian Street to Knox Street

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,296 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	630 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-3.96	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-21.20	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-25.15	-4.60	-1.20	*-5.50*	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:	58.7	56.8	55.1	49.0	57.6	58.2
Medium Trucks:	52.4	50.9	44.6	43.0	51.5	51.7
Heavy Trucks:	53.3	51.9	42.8	44.1	52.4	52.6
Vehicle Noise:	60.5	58.8	55.7	51.0	59.5	60.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	20	43	93	200
CNEL:	21	46	100	215

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: Nandina Avenue
Road Segment: Knox Street to Driveway 2

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,038 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	504 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.323
Medium Trucks:	99.780
Heavy Trucks:	99.780

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-4.93	-4.57	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	79.45	-22.17	-4.60	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	84.25	-26.12	-4.60	-1.20	*-5.50*	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:	57.8	55.9	54.1	48.0	56.7	57.3
Medium Trucks:	51.5	50.0	43.6	42.1	50.5	50.8
Heavy Trucks:	52.3	50.9	41.9	43.1	51.5	51.6
Vehicle Noise:	59.6	57.8	54.7	50.0	58.6	59.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	17	37	80	173
CNEL:	19	40	86	185

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: Nandina Avenue
Road Segment: Driveway 2 to Driveway 4

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,491 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	349 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.865
Medium Trucks:	100.319
Heavy Trucks:	100.319

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-6.01	-4.61	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-23.25	-4.64	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	82.99	-27.20	-4.64	-1.20	*-5.50*	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:	54.7	52.8	51.0	45.0	53.6	54.2
Medium Trucks:	48.6	47.1	40.8	39.2	47.7	47.9
Heavy Trucks:	50.0	48.5	39.5	40.7	49.1	49.2
Vehicle Noise:	56.7	55.0	51.7	47.1	55.7	56.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	11	24	51	111
CNEL:	12	26	55	119

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Year 2017 With Project
Road Name: Nandina Avenue
Road Segment: Driveway 4 to Perris Boulevard

Project Name: First Inland Logistics II
Job Number: 8181

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,555 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	356 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	12 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	2.000		
Medium Trucks:	15.000		
Heavy Trucks:	15.000	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	99.865
Medium Trucks:	100.319
Heavy Trucks:	100.319

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-5.93	-4.61	-1.20	*-4.87*	0.000	0.000
Medium Trucks:	77.72	-23.17	-4.64	-1.20	*-5.50*	0.000	0.000
Heavy Trucks:	82.99	-27.13	-4.64	-1.20	*-5.50*	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:	54.8	52.9	51.1	45.1	53.7	54.3
Medium Trucks:	48.7	47.2	40.8	39.3	47.8	48.0
Heavy Trucks:	50.0	48.6	39.6	40.8	49.2	49.3
Vehicle Noise:	56.8	55.0	51.8	47.2	55.7	56.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	11	24	52	112
CNEL:	12	26	56	120

APPENDIX 8.1

RCNM (Roadway Construction Noise Model) Database

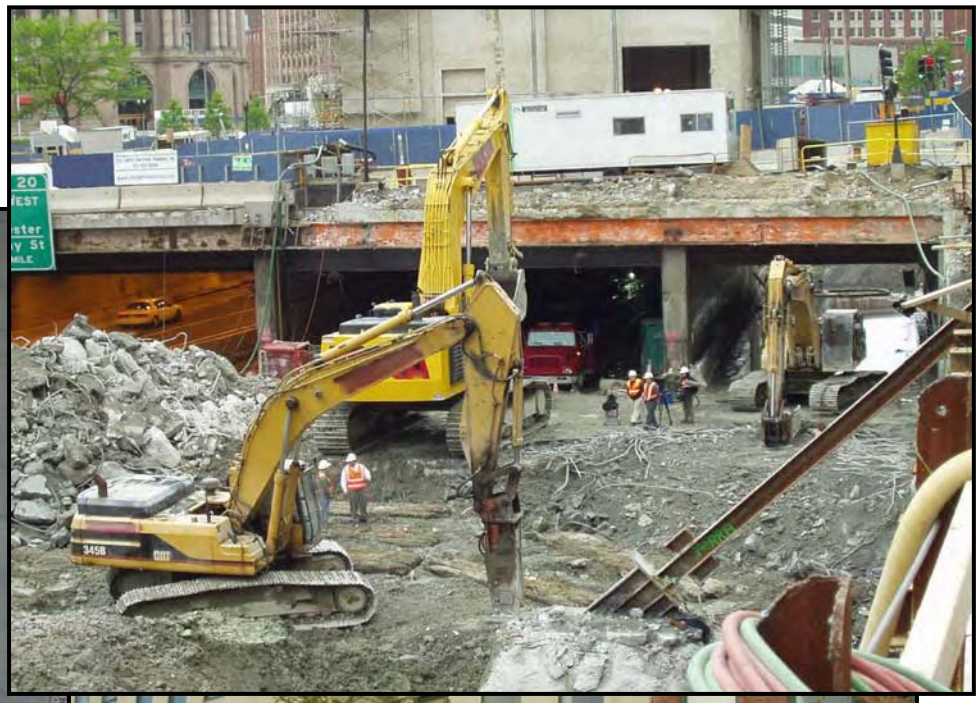
U.S. Department
of Transportation

Federal Highway Administration

FHWA
Roadway Construction Noise Model
User's Guide

FHWA-HEP-05-054
DOT-VNTSC-FHWA-05-01

Final Report
January 2006



Prepared for
U.S. Department of Transportation
Federal Highway Administration
Office of Natural and Human Environment
Washington, DC 20590

Prepared by
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Table 1. CA/T equipment noise emissions and acoustical usage factors database.

CA/T Noise Emission Reference Levels and Usage Factors					
filename: EQUIPLST.xls					
revised: 7/26/05		Acoustical	Spec 721.560	Actual Measured	No. of Actual
	Impact	Use Factor	Lmax @ 50ft	Lmax @ 50ft	Data Samples
Equipment Description	Device ?	(%)	(dBA, slow)	(dBA, slow)	(Count)
				(samples averaged)	
All Other Equipment > 5 HP	No	50	85	-- N/A --	0
Auger Drill Rig	No	20	85	84	36
Backhoe	No	40	80	78	372
Bar Bender	No	20	80	-- N/A --	0
Blasting	Yes	-- N/A --	94	-- N/A --	0
Boring Jack Power Unit	No	50	80	83	1
Chain Saw	No	20	85	84	46
Clam Shovel (dropping)	Yes	20	93	87	4
Compactor (ground)	No	20	80	83	57
Compressor (air)	No	40	80	78	18
Concrete Batch Plant	No	15	83	-- N/A --	0
Concrete Mixer Truck	No	40	85	79	40
Concrete Pump Truck	No	20	82	81	30
Concrete Saw	No	20	90	90	55
Crane	No	16	85	81	405
Dozer	No	40	85	82	55
Drill Rig Truck	No	20	84	79	22
Drum Mixer	No	50	80	80	1
Dump Truck	No	40	84	76	31
Excavator	No	40	85	81	170
Flat Bed Truck	No	40	84	74	4
Front End Loader	No	40	80	79	96
Generator	No	50	82	81	19
Generator (<25KVA, VMS signs)	No	50	70	73	74
Gradall	No	40	85	83	70
Grader	No	40	85	-- N/A --	0
Grapple (on backhoe)	No	40	85	87	1
Horizontal Boring Hydr. Jack	No	25	80	82	6
Hydra Break Ram	Yes	10	90	-- N/A --	0
Impact Pile Driver	Yes	20	95	101	11
Jackhammer	Yes	20	85	89	133
Man Lift	No	20	85	75	23
Mounted Impact Hammer (hoe ram)	Yes	20	90	90	212
Pavement Scarafier	No	20	85	90	2
Paver	No	50	85	77	9
Pickup Truck	No	40	55	75	1
Pneumatic Tools	No	50	85	85	90
Pumps	No	50	77	81	17
Refrigerator Unit	No	100	82	73	3
Rivit Buster/chipping gun	Yes	20	85	79	19
Rock Drill	No	20	85	81	3
Roller	No	20	85	80	16
Sand Blasting (Single Nozzle)	No	20	85	96	9
Scraper	No	40	85	84	12
Shears (on backhoe)	No	40	85	96	5
Slurry Plant	No	100	78	78	1
Slurry Trenching Machine	No	50	82	80	75
Soil Mix Drill Rig	No	50	80	-- N/A --	0
Tractor	No	40	84	-- N/A --	0
Vacuum Excavator (Vac-truck)	No	40	85	85	149
Vacuum Street Sweeper	No	10	80	82	19
Ventilation Fan	No	100	85	79	13
Vibrating Hopper	No	50	85	87	1
Vibratory Concrete Mixer	No	20	80	80	1
Vibratory Pile Driver	No	20	95	101	44
Warning Horn	No	5	85	83	12
Welder / Torch	No	40	73	74	5