

Appendix I Noise Modeling Data

Appendices

This page intentionally left blank.

Contents

- City of Duarte General Plan Noise Element
- City of Duarte Municipal Code (pertinent sections re noise)
- City of Irwindale General Plan Public Safety Element
- City of Irwindale Municipal Code (pertinent sections re noise)
- Ambient Noise Field Measurement Details
- Traffic Segment Volumes (for traffic-generated noise inputs)
- Traffic Noise Calculations
 - o Project Contributions
 - o Existing Conditions
 - o Existing + Project Conditions
 - o Future Conditions
 - o Future + Project Conditions
 - o Intersection Information
- Construction Noise Calculations
- Construction Vibration Calculations

- City of Duarte General Plan Noise Element

CHAPTER 4 NOISE

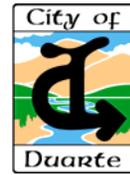
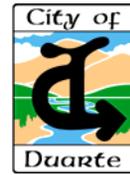


Table of Contents

INTRODUCTION	1
Noise Element Statutory Requirements	2
Relationship to other General Plan Elements and Program EIR	2
GOALS, OBJECTIVES and POLICIES	2
Reduce noise impacts from transportation sources	2
Measures to control non-transportation noise impacts	3
Establish land uses which are compatible with community noise levels	4
NOISE SCALES AND DEFINITIONS	4
Community Noise Equivalent Level (CNEL)	7
Equivalent Noise Level (L_{EQ})	7
Day Night Average (Ldn)	7
Other Noise Matrices	8
RELATED AGENCIES, LAWS AND PLANS	
Federal Noise Standards	8
U.S. Environmental Protection Agency	9
State of California	9
City Noise Standards	10
NOISE ANALYSIS	
Existing Conditions	12
Projected Noise Conditions	26
DESCRIPTION OF NOISE PLAN	
Typical Noise Attenuation Rates	29
Noise and Land Use Planning Integration	31
Transportation Noise Control	31
Non-Transportation Noise Control	31
IMPLEMENTATION MEASURES	31
List of Tables	
N -1 Land Use Compatibility Noise Guidelines — California	10
N -2 City of Duarte Noise Ordinance Standards	11

CHAPTER 4

NOISE



N -3 Corrections to Noise Limits	11
N -4 Sensitive Receptors	14
N -5 Existing Traffic Noise Levels	18
N -6 Field Noise Measurements	22
N -7 Projected 2020 Traffic Noise Levels	28
N -8 Noise Implementation Measures	32

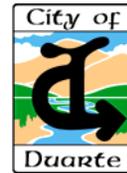
List of Exhibits

N -1 Common Environmental Noise Levels	6
N -2 Sensitive Uses	16
N -3a Field Noise Measurement Sites	23
N -3b Field Noise Measurement Sites	24
N -3c Field Noise Measurement Sites	25

List of Diagrams

N – 1 1989 Noise Contours	17
N – 2 2020 Noise Contours	27

CHAPTER 4 NOISE ELEMENT



INTRODUCTION

The Noise Element of the General Plan provides a framework to limit noise exposure within the City. Existing and future noise environments and the compatibility of land uses are considered in the Element, as well as sensitive receptors and generators of stationary noise. Projected noise levels are included to help guide future land use policy and prevent high noise levels in sensitive areas at buildout. In addition, noise contours in the form of community noise equivalent level (CNEL) or day-night average level (Ldn) are provided for all referenced sources.

Various measures are described in order to mitigate potential noise conflicts. These measures are designed to lessen impacts from unavoidable noise conflicts within the City of Duarte. The Noise Element also serves as a guideline for compliance with the State's Noise Insulation Standards.

The State of California requires every jurisdiction to include a Noise element in their General Plan. The Noise element for this General Plan presents several different aspects of noise evaluation. The City's goals, objectives, and policies for meeting noise standards are first identified, and then the method in which the noise levels are measured are described. The most general ways to quantify noise levels are by CNEL, Leq, and Ldn, which are measured in decibels using the A-weighted sound pressure level (dBA). Community Noise Exposure Level (CNEL) is a long-term noise measurement that is an average of noise levels gathered over 24 hours. Equivalent sound level (Leq) is more short-term noise measurement taken over a given period of time, which can vary from one hour to 24 hours. The 24-hour measurement period is how the CNEL is derived. The average day/night noise level (Ldn) is another way to analyze community noise exposure. The Ldn noise level is measured by taking noise measurements over a 24-hour period, similar to CNEL, meaning the two are generally equivalent.

Also presented in the Noise element are Federal, State, and Local noise standards, and related laws, standards, ordinances, and regulations, such as the U.S. Noise Control Act and California Office of Planning and Research Guidelines. The noise analysis follows and includes an evaluation of existing noise conditions, including sensitive receptors, noise generated by traffic and stationary sources, and ambient noise levels. Existing traffic noise levels are evaluated, as well as projected traffic noise levels for 2020. A description of the noise plan, including attenuation rates and other noise controls, and implementation measures suggesting how to go about meeting established goals concludes the Noise element of the General Plan.

CHAPTER 4 NOISE ELEMENT



Noise Element Statutory Requirements

The State of California Government Code Section 65302(f) requires that a General Plan include:

“... a noise element which 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...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, 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.”

Relationship to Other General Plan Elements and Program EIR

California law requires that all elements of the General Plan be consistent. While each of the General Plan elements could be characterized as independent documents, they are also interrelated in the common goal of providing a long-range integrated plan for the ongoing development of the city. The Noise Element is most directly related to the Land Use, Circulation, and Air Quality section of the Open Space and Conservation Elements.

A Program Environmental Impact Report (EIR) will be prepared in conjunction with the Duarte General Plan. Policies and mitigation measures presented in the Noise Element will also be presented as mitigation measures in the Program EIR.

GOALS, OBJECTIVES AND POLICIES

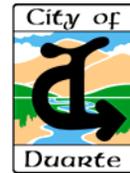
This section presents the goals, objectives, and policies for the Noise Element of the Duarte General Plan.

Noise Goal 1: To reduce noise impacts from transportation sources.

Objective 1.1: Maintain and reduce where feasible background noise levels emanating from citywide transportation sources.

CHAPTER 4

NOISE ELEMENT



Policies:

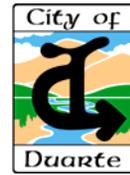
- Noise 1.1.1 Ensure noise mitigation measures are included in the design of new developments.
- Noise 1.1.2 Encourage the State Department of Transportation (Caltrans) to continue Programs that lead to the reduction of the noise levels on I-210 and I-605.
- Noise 1.1.3 Continue the City's beautification program along arterials to help reduce noise levels.
- Noise 1.1.4 Encourage acoustical materials in all new residential and commercial developments where noise levels exceed the compatibility standards outlined in the Noise Element.
- Noise 1.1.5 Limit construction, delivery, and through truck traffic to designated routes.
- Noise 1.1.6 Ensure Community Noise Equivalent Levels (CNEL) for noise sensitive land uses meet or exceed normally acceptable levels, as defined by State of California standards.
- Noise 1.1.7 The City should encourage, support, and enforce all State and Federal legislation designed to abate and control noise pollution.
- Noise 1.1.8 The City should encourage the use of rubberized asphalt city streets.

Noise Goal 2: Develop measures to control non-transportation noise impacts.

Objective 1.2: Commercial and industrial uses, construction activity and other non-transportation related sources of noise can contribute negatively to the noise environment. Identifying and mitigating these potential noise sources will reduce negative impacts.

CHAPTER 4

NOISE ELEMENT



Policies:

- Noise 2.2.1 Continuously review the Noise Ordinance to ensure noise-generating uses are adequately addressed.
- Noise 2.1.2 Strive to resolve existing and potential conflicts between noise generating uses and human activities.
- Noise 2.1.3 Reduce noise from rock quarrying operations.
- Noise 2.1.4 Prohibit significant noise generating activities from locating adjacent to residential neighborhoods and near schools.
- Noise 2.1.5 Evaluate the noise impacts from projects and existing uses in adjacent cities and work cooperatively with these cities to develop mitigation measures that will improve ambient noise conditions in Duarte.

Noise Goal 3: To establish land uses which are compatible with noise levels within the community.

Objective 1.3: Land use planning decisions directly relate to potential noise impacts. Therefore, careful consideration of noise impacts should be a part of all land use decisions.

Policies:

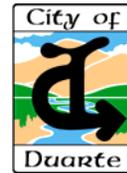
- Noise 3.1.1 Establish a system of locating land uses according to the maximum noise levels they generate.
- Noise 3.1.2 Enforce limits set by the State to control noise levels, particularly those governing motor vehicles.
- Noise 3.1.3 Ensure that construction noise does not cause an adverse impact to the residents of the City.
- Noise 3.1.4 Minimize noise and light spillage onto other residential properties.

NOISE SCALES AND DEFINITIONS

Sound pressure level is a measure of the sound pressure of a given noise source relative to a standard reference value. The reference pressure is typical of the quietest sound that a young person with good hearing is able to detect. Sound

CHAPTER 4

NOISE ELEMENT



pressure levels are measured in decibels (dB). Decibels are logarithmic quantities, relating the sound pressure level of a noise source to the reference pressure level.

An important characteristic of sound is frequency. This is the rate of repetition of sound pressure oscillations (waves) as they reach our ears; frequency is expressed in hertz (Hz). When analyzing the total noise of any source, the frequency components are sometimes analyzed to determine the relative amounts of low-frequency, middle-frequency, and high-frequency noise. This breakdown is important for two reasons:

- Our ear is better equipped to hear mid- and high-range frequencies than lower frequencies. Thus, we find mid- and high-frequency noise to be more annoying. High-frequency noise is also more capable of producing hearing loss.
- Engineering solutions to a noise problem are different for different frequency ranges. Low-frequency noise is generally harder to control.

The normal frequency range of hearing for most people extends from a low frequency of about 20 Hz to a high frequency of about 10,000 to 15,000 Hz. People respond to sound most readily when the predominant frequency is in the range of normal conversation, typically around 1,000 to 2,000 Hz. Several filters have been developed that match the sensitivity of our ear and thus help us to judge the relative loudness of various sounds made up of many different frequencies. The so-called “A” filter is the best measure for most environmental noise sources. Sound pressure levels measured through this filter are referred to as A-weighted levels, and are measured in A-weighted decibels or (dBA). Exhibit N -1 (Common Environmental Noise Levels) provides examples of common environmental noise levels.

The A-weighted filter significantly de-emphasizes those parts of the total noise that occur at lower frequencies (those below about 500 Hz) and also those at very high frequencies (above 10,000 Hz) the frequencies that we do not hear as well. The filter has very little effect, or is nearly “flat,” in the middle range of frequencies (between 500 and 10,000 Hz), where our ears are most sensitive. Because this filter generally matches our ears’ sensitivity, sounds having a higher A-weighted sound level are usually judged to be louder than those with lower A-weighted sound levels, a relationship that otherwise might not be true.



Jet Engine

140

Harmfully Loud

Shotgun Firing

130

Pain Threshold

Thunderclap

120

Rock Music Band

110

Regular exposure over 1 minute risks permanent hearing loss

Garbage Truck

100

No more than 15 minute exposure recommended

Lawnmower

90

Annoying

Average City Traffic Noise

80

Annoying - interferes with conversation

Vacuum Cleaner

70

Telephone use Difficult

Normal Conversation

60

Comfortable

Quiet Office

50

Quiet

Refrigerator Humming

40

Very Quiet

Whisper

30

Rustling Leaves

20

Just Audible

Normal Breathing

10

Threshold of Hearing

0

Noise Source

dB(A) Noise Level

Response



General Plan
Building a new vision.
20/20

Common Environmental Noise Levels
Exhibit N - 1

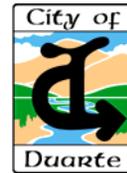
LEGEND

Melville C. Branch and R. Dale Beland, *Outdoor Noise in the Metropolitan Environment*, 1970.

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

CHAPTER 4

NOISE ELEMENT



Community Noise Equivalent Level (CNEL)

Cumulative noise metrics were developed to assess community response to noise. They are useful because they attempt to take into account the loudness and duration of the noise, the total number of noise events, and the time of day these events occur in one single-number rating scale. They are designed to account for the known health effects of noise on people. The community noise equivalent level (CNEL) is a 24-hour, time-weighted energy-average noise level based on dBA that measures the overall noise during an entire day. Noise that occurs during certain sensitive time periods is penalized for occurring at these times (by adding decibels to its L_{eq} measurement). On the CNEL scale, noise between 7:00 a.m. and 10:00 p.m. is penalized by approximately five dB, to account for the greater potential for noise to interfere during these hours, as well as the typically lower ambient (background) noise levels during these hours. Noise during the night (from 10:00 p.m. to 7:00 a.m.) is penalized by 10 dB to attempt to account for our higher sensitivity to noise in the nighttime and the expected further decrease in ambient noise levels that typically occur in the night.

Equivalent Noise Level (L_{eq})

The equivalent sound level, abbreviated L_{eq} , is a measure of the exposure resulting from the accumulation of A-weighted sound levels over a particular time period (e.g., 1 hour, 8 hour, a school day, nighttime, or a full 24-hour day). However, because the length of the period can be different depending on the time frame of interest, the applicable period should always be identified or clearly understood when discussing the metric. Such durations are often identified through a subscript, for example, " $L_{eq}(24)$ ".

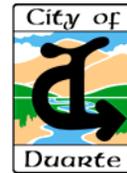
Conceptually, L_{eq} may be thought of as a constant sound level over the period of interest that contains as much sound energy as the actual time-varying sound level with its normal peaks and valleys. It is important to realize, however, that the two signals (the constant one and the time-varying one) would sound very different from each other if compared in real life. Variations in the "average" sound level suggested by L_{eq} is not an arithmetic value, but a logarithmic ("energy-averaged") sound level. Thus, loud events clearly dominate any noise environment described by the metric.

Day Night Average (L_{dn})

Another commonly used noise metric is the day/night average noise level (L_{dn}). The L_{dn} is a measure of the 24-hour average noise level at a given location. It was adopted by the EPA for developing criteria to evaluate community noise exposure. L_{dn} is based on a measure of the average noise level over a given

CHAPTER 4

NOISE ELEMENT



time period. The L_{dn} is calculated by averaging the L_{eq} for each hour of the day at a given location after penalizing the sleeping hours (from 10:00 p.m. to 7:00 a.m.) by 10 dBA to take into account the increased sensitivity of people to noises that occur at night. The sound level exceeded over a specified time frame can be expressed as L_n (i.e., L_{90} , L_{50} , L_{10} , etc.). L_{50} equals the level exceeded 50 percent of the time; L_{10} , 10 percent of the time; etc.

Other Noise Matrices

As previously mentioned, people tend to respond to changes in sound pressure in a logarithmic manner. In general, a 1 dBA change in the sound pressure levels of a given sound is detectable only under laboratory conditions. A 3 dBA change in sound pressure level is considered a detectable difference in most situations. A 5 dBA change is readily noticeable and a 10 dBA change is considered a doubling (or halving) of the subjective loudness. It should be noted that a 3 dBA increase or decrease in the average traffic noise level is realized by a doubling or halving of the traffic volume; or by about a 7 mile per hour (mph) increase or decrease in speed.

For each doubling of distance from a point noise source, the sound level will decrease by 6 dBA. In other words, if a person is 100 feet from a machine, and moves to 200 feet from that source, sound levels will drop approximately 6 dBA. For each doubling of distance from a line source, like a roadway, noise levels are reduced by 3 to 5 decibels, depending on the ground cover between the source and the receiver.

Noise barriers can provide approximately a 5 dBA CNEL noise reduction (additional reduction may be provided with a barrier of appropriate height, material, location and length). A row of buildings provides up to 5 dBA CNEL noise reduction with a 1.5 dBA CNEL reduction for each additional row up to a maximum reduction of approximately 10 dBA. The exact degree of noise attenuation depends on the nature and orientation of the structure and intervening barriers.

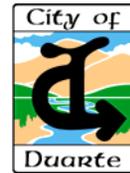
RELATED LAWS, ORDINANCES, REGULATIONS, AND STANDARDS

Federal Noise Standards

The United States Noise Control Act of 1972 (NCA) recognized the role of the Federal government in dealing with major commercial noise sources in order to

CHAPTER 4

NOISE ELEMENT



provide for uniform treatment of such sources. As Congress has the authority to regulate interstate and foreign commerce, regulation of noise generated by such commerce also falls under congressional authority. The Federal government specifically preempts local control of noise emissions from aircraft, railroad and interstate highways.

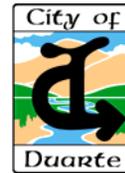
U.S. Environmental Protection Agency

The EPA offers guidelines for community noise exposure in the publication *Noise Effects Handbook – A Desk Reference to Health and Welfare Effects of Noise*. These guidelines consider occupational noise exposure as well as noise exposure in homes. The EPA recognizes an exterior noise level of 55 dB Ldn as a general goal to protect the public from hearing loss, activity interference, sleep disturbance, and annoyance. The EPA and other Federal agencies have adopted suggested land use compatibility guidelines that indicate that residential noise exposures of 55 to 65 dB Ldn are acceptable. The EPA notes, however, that these levels are not regulatory goals, but are levels defined by a negotiated scientific consensus, without concern for economic and technological feasibility or the needs and desires of any particular community.

State of California

The State Office of Planning and Research (OPR) *Noise Element Guidelines* include recommended exterior and interior noise level standards for local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. The OPR Guidelines contain a land use compatibility table that describes the compatibility of various land uses with a range of environmental noise levels in terms of CNEL. A noise environment of 50 to 60 CNEL is considered to be “normally acceptable” for residential uses. The OPR recommendations also note that, under certain conditions, more restrictive standards than the maximum levels cited may be appropriate. As an example, the standards for quiet suburban and rural communities may be reduced by 5 to 10 dB to reflect their lower existing outdoor noise levels in comparison with urban environments. Table N -1 (Land Use Compatibility Noise Guidelines – California) illustrates the State guidelines established by the State Department of Health Services for acceptable noise levels for each county and city.

CHAPTER 4 NOISE ELEMENT



**Table N -1
Land Use Compatibility Noise Guidelines — California**

Land Use Category	Community Noise Exposure (L_{dn} or CNEL, dBA)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential - Low Density, Single-Family, Duplex, Mobile Homes	50 - 60	55 - 70	70-75	75-85
Residential - Multiple Family	50 - 65	60 - 70	70 - 75	70 - 85
Transient Lodging - Motels, and Hotels	50 - 65	60 - 70	70 - 80	80 - 85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 - 70	60 - 70	70 - 80	80 - 85
Auditoriums, Concert Halls, Amphitheaters	NA	50 - 70	NA	65 - 85
Sports Arenas, Outdoor Spectator Sports	NA	50 - 75	NA	70 - 85
Playgrounds, Neighborhood Parks	50 - 70	NA	67.5 - 75	72.5 - 85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 - 70	NA	70 - 80	80 - 85
Office Buildings, Business Commercial and Professional	50 - 70	67.5 - 77.5	75 - 85	NA
Industrial, Manufacturing, Utilities, Agriculture	50 - 75	70 - 80	75 - 85	NA
NA: Not Applicable				
Source: General Plan Guidelines, Office of Planning and Research, California, October 2003.				
Normally Acceptable – Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.				
Conditionally Acceptable – New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.				
Normally Unacceptable – New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.				
Clearly Unacceptable – New construction or development should generally not be undertaken.				

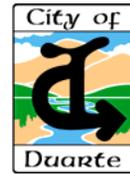
City Noise Standards

The City of Duarte maintains a comprehensive Noise Ordinance within the Municipal Code that sets standards for noise levels citywide and provides the means to enforce the reduction of obnoxious or offensive noises. Chapter 9.68 of the Duarte Municipal Code establishes noise standards and enforcement procedures.

City Noise Ordinance

The City of Duarte has adopted a number of policies that are directed at controlling or mitigating environmental noise effects. A Noise Ordinance establishes acceptable noise levels generated on private property in residential neighborhoods. It is designed to control unnecessary, excessive and annoying sounds generated from a stationary source impacting an adjacent property. It differentiates between environmental and nuisance noise. Environmental noise is measured under a time average period while nuisance noise cannot exceed the established Noise Ordinance levels at any time. Chapter 9.68 of the City of

CHAPTER 4 NOISE ELEMENT



Duarte Municipal Code controls unnecessary, excessive and annoying noise. The City’s noise regulations have established in the Ambient Base Noise Levels that “It is unlawful for any person within the city of Duarte to make, cause or allow to be produced noise which is received on property occupied by another person with the designated zone, in excess of the following levels, except as expressly provided otherwise”. Table N -2 (City of Duarte Noise Ordinance Standards) provides the City of Duarte’s noise regulations.

**TABLE N - 2
CITY OF DUARTE NOISE ORDINANCE STANDARDS**

Zone	Noise Level (dBA)	
	Day: 7AM – 9PM	Night: 9PM – 7AM
R-1 and R-2	55	45
R-3 and R-4	55	50
Commercial	60	55
Industrial and Light Manufacturing	70	70

Source: City of Duarte Municipal Code, Chapter 9.68.050 (Ambient base noise levels)

At the boundary line between a residential property and a commercial and manufacturing property, the noise level of the quieter zone shall be used. Table N -3 (Corrections to Noise Limits) illustrates how the numerical limits given in Table N -2 (City of Duarte Noise Ordinance Standards) shall be adjusted by the following corrections when appropriate.

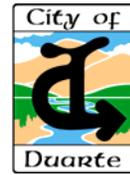
**TABLE N - 3
CORRECTION TO NOISE LIMITS**

Noise Condition	Correction (in dB)
Repetitive impulsive noise, pure tones and sound with cyclically varying amplitude	- 5
Steady whine, screech or hum	- 5
Noise occurring more than 5 but less than 15 minutes per hour*	+ 5
Noise occurring more than 1 but less than 5 minutes per hour*	+ 10
Noise occurring less than 1 minute per hour*	+ 15

* The Following corrections apply to day only
Source: City of Duarte Municipal Code, Chapter 9.68.050 (Ambient base noise levels)

The major sources of noise in the City of Duarte are transportation related. These sources include I-210, local surface streets, railroads, and rapid transit. The major traffic noise sources include vehicles operating on the major arterials that serve the city, such as, Huntington Drive, Buena Vista Street, Highland

CHAPTER 4 NOISE ELEMENT



Avenue, and Duarte Road. Also, I-210 generates significant noise levels because the freeway is elevated at its closest point within the city. The noise generated by the traffic noise represent a constant noise; while railroads, on the average, generate a higher level of noise but only for a short duration of time. In the areas throughout the city where industrial operations are located in close proximity to homes, there is a potential for noise impacts from machinery, work activities, and truck traffic during certain periods of the day. Over the recent years, noise levels throughout the community have escalated as development and traffic have increased.

Residents are protected from excessive noise through established local and state laws and standards. The Duarte Noise Ordinance will also serve as a primary implementation measure or reducing excessive noise in the city. The California Department of Transportation (Caltrans) has established, according to Section 215.5 of the State Streets and Highway Code, a priority system for erecting sound walls along freeway routes. The state has also established noise insulation standards pursuant to Title 25, Section 1092 of the California Administrative Code. This code protects multiple-family residential dwelling units from excessive and unnecessary noise.

NOISE ANALYSIS

The following sections describe the existing noise conditions in the City of Duarte and present the projected noise for the future buildout year of 2020.

Existing Conditions

Human response to noise varies widely depending on the type of noise, time of day, and sensitivity of the receptor. The effects of noise on humans can range from temporary or permanent hearing loss to mild stress and annoyance due to such things as speech interference and sleep deprivation. Prolonged stress, regardless of the cause, is known to contribute to a variety of health disorders. Noise, or the lack of it, is a factor in the aesthetic perception of some settings, particularly those with religious or cultural significance.

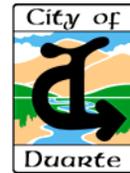
Table N - 4 (Sensitive Receptors) and Exhibit N - 2 (Sensitive Uses) illustrate some of the sensitive receptors that are located within the City of Duarte and can be affected by excess noise levels.

Computer Modeling

Roadway noise levels throughout the City were projected using the Federal Highway Administration's Highway Noise Prediction Model (FHWA RD-77-108)

CHAPTER 4

NOISE ELEMENT



together with several roadway and site parameters. These parameters determine the projected impact of vehicular traffic noise and include the roadway cross-section (i.e., number of lanes), the roadway width, the average daily traffic (ADT), and the vehicle travel speed. The percentages of auto and truck traffic, the roadway grade, the angle-of-view, the site conditions (“hard” or “soft”), and the percent of total ADT that flows each hour throughout a 24-hour period. The model does not account for ambient noise levels (i.e., noise from adjacent land uses) or topographical differences between the roadways and adjacent land uses. Various vehicle speeds were assumed throughout the City based on empirical observations and posted maximum speeds. Noise projections are based on vehicular traffic as derived from the *Duarte General Plan Circulation Element*.

Traffic Noise

Traffic noise levels can be reliably predicted using formulas that take into account traffic volume, speed and percentage of trucks. Existing noise contours were calculated for all the City’s primary and major arterials, as well as I-210 that traverse the City. In addition, a number of secondary and commuter streets were modeled as well. Noise generation for each roadway segment was calculated and the distance to the 60, 65, and 70 dBA CNEL contours was determined. A noise contour is a line behind which the noise level does not exceed a certain value. For instance, the 60 dBA CNEL contour indicates that the CNEL between the street and the contour line is equal to, or greater than 60 dBA; the CNEL beyond the contour line - away from the street - is less than 60 dBA). Refer to Exhibit N - 3 (Existing Noise Contours), for the approximate location of existing noise contours based on average daily traffic (ADT).

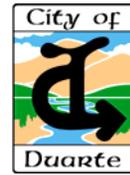
CHAPTER 4 NOISE ELEMENT



**TABLE N - 4
SENSITIVE RECEPTORS**

Receptor:	Location:
Institutional:	
Berean Bible Church	2302 Mountain Avenue, Duarte, CA 91010
Church of Christ	1330 Highland Avenue, Duarte, CA 91010
Church of the Nazarene Duarte	2047 Mountain Avenue, Duarte, CA 91010
Covenant Life Ministries	1430 East Huntington Dr, Duarte, CA 91010
Duarte Christian Church	2632 Royal Oaks Drive, Duarte, CA 91010
Duarte Fellowship Church	1551 Huntington Drive, Duarte, CA 91010
First Baptist Church of Duarte	2200 East Huntington Dr, Duarte, CA 91010
God's Grace Christian Fellowship Church	2160 East Huntington Drive, Duarte, CA 91010
Joy Christian Center	822 Bradbourne Avenue, Duarte, CA 91010
New Life Assembly of God	822 Bradbourne Avenue, Duarte, CA 91010
The Church of Jesus Christ of Latter-Day Saints	1452 Royal Oaks Drive, Duarte, CA 91010
City of Hope - National Medical Center	1500 E. Duarte Road, Duarte, CA 91010
The Manor at Santa Teresita Hospital	819 Buena Vista Street, Duarte, CA 91010
Country Villa Monte Vista (Rehabilitation Center)	802 Buena Vista Street, Duarte, CA 91010
Monrovia Convalescent Hospital	1220 Huntington Drive, Duarte, CA 91010
Duarte Montessori School	1640 3rd Street, Duarte, CA 91010
Head Start-State Preschool	1433 Crestfield Drive, Duarte, CA 91010
Kidz Excel	1014 Highland Av, Duarte, CA 91010
YMCA of San Gabriel Valley	1014 Highland Avenue, Duarte, CA 91010
Andres Duarte Elementary School	1433 Crestfield Drive, Duarte, CA 91010
Beardslee Elementary School	1212 E. Kellwil Way, Duarte, CA 91010
Royal Oaks Elementary School	2499 Royal Oaks Drive, Duarte, CA 91010
Valley View Elementary School	237 Melcanyon Road, Duarte, CA 91010
Mount Olive Alternative Education (7-12)	1400 Mount Olive Drive, Duarte, CA 91010
Northview Intermediate School (7-8)	1401 Highland, Duarte, CA 91010
Duarte High School (9-12)	1565 East Central Avenue, Duarte, CA 91010
Duarte Public Library	1301 Buena Vista Street, Duarte, CA 91010
Westminster Gardens - Residential Facility	1420 Santo Domingo Avenue, Duarte, CA 91010
Community Care Center	2335 Mountain Avenue, Duarte, CA 91010
Huntington Oaks Village	1657 Huntington Drive, Duarte, CA 91010
Andres Duarte Terrace	1730 East Huntington Drive, Duarte, CA 91010
Parks:	
Beardslee Park (4.91 acres)	2000 Buena Vista Street, Duarte, CA 91010
Duarte Park (2.96 acres)	1344 Bloomdale Street, Duarte, CA 91010
Encanto Park (11.5 acres)	751 Encanto Parkway, Duarte, CA 91010
Hacienda Park (1.64 acres)	2695 Hacienda Drive, Duarte, CA 91010
Lena Valenzuela Park (0.78 acres)	2120 Mountain Avenue, Duarte, CA 91010
Moore Park (1.13 acres)	1100 Duarte Road, Duarte, CA 91010
Northview Park (2.02 acres)	1433 Highland Avenue, Duarte, CA 91010
Royal Oaks Park (7.40 acres)	2627 Royal Oaks Drive, Duarte, CA 91010
Royal Oaks Park Extension	2701 Royal Oaks Drive, Duarte, CA 91010

CHAPTER 4 NOISE ELEMENT



**TABLE N - 4 [CONTINUED]
SENSITIVE RECEPTORS**

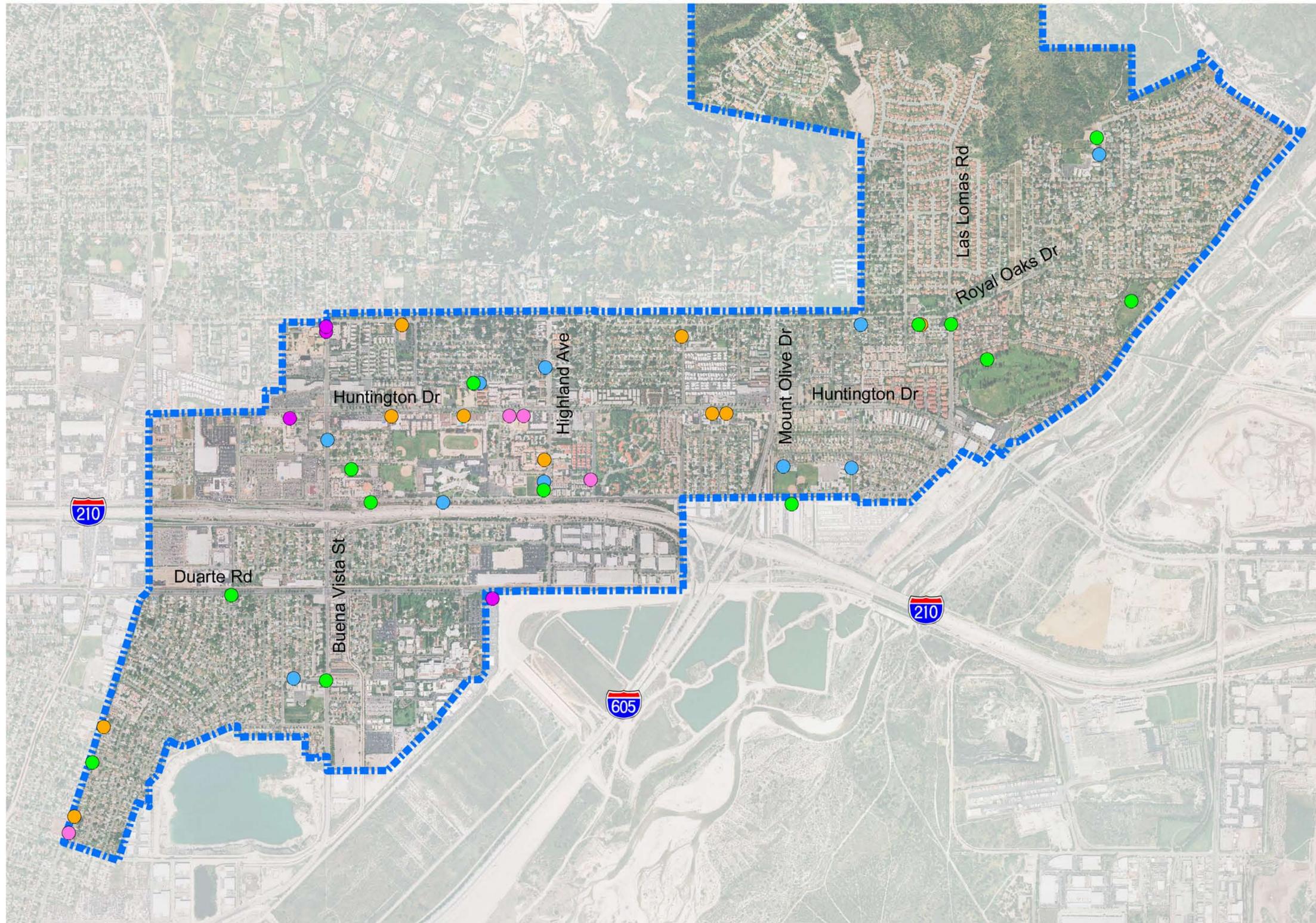
Receptor:	Location:
Parks [continued]:	
Sports Park (12.25 acres)	1401 Central Avenue, Duarte, CA 91010
Third Street Park (0.36 acres)	1626 Third Street, Duarte, CA 91010
Glenn Miller Park (1.38 acres)	205 Melcanyon Drive, Duarte, CA 91010
Residential:	
	North of I-210/I-605 Intersection
	South of I-210 (Eastbound direction)
	Southwest "corner" of the city – stretching to the City boundaries
	East of I-605 and continuing north to the San Gabriel Mountains
	Northern area of Duarte
Source: Google Earth, 2005. Image 2006, NASA; 2006 TerraMetrics.	

In an effort to reduce the effects of roadway noise generated from I-210 on the local population, the City of Duarte has constructed soundwalls adjacent to the I-210 freeway as well as provided landscaping along the soundwalls. Phase One of the 210 Freeway soundwall project was completed in December 2002 by Caltrans. Phase two timing has not been determined.

Existing Noise Contours

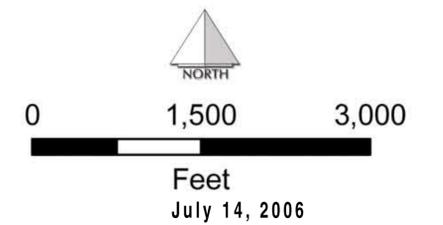
As indicated in Table N - 5 (Existing Traffic Noise Levels), none of the roadways measured generate noise levels at a distance of 100 feet from centerline that exceed 75 CNEL. Of the 35 roadway links modeled within the City planning area, eight roadway links generate noise levels at 65 CNEL or greater at 100 feet from centerline. Eleven of the roadway links modeled generate noise levels between 60 CNEL and 65 CNEL. These links include Huntington Drive East of Las Lomas, Duarte Road, segments along Buena Vista, Buena Vista Street between I-210 Freeway to the south of Duarte Road, segments along Royal Oaks Road and Mount Olive Drive. Twelve of the thirty-five roadway segments modeled generate noise levels between 55 CNEL and 60 CNEL. These segments are along Buena Vista Street, Highland Avenue, Royal Oaks Road, Bradbourne Avenue, and Las Lomas. Four modeled roadway links with noise levels below 55 CNEL at 100 feet from centerline are Mountain Avenue south of Duarte Road, Royal Oaks Road west of Encanto Parkway, and Los Lomas Road north of Royal Oaks Road. Exhibit N-3 displays the projected 60, 65, and 70 CNEL noise contours calculated from the roadway centerline.

Sensitive Uses
Exhibit N - 2

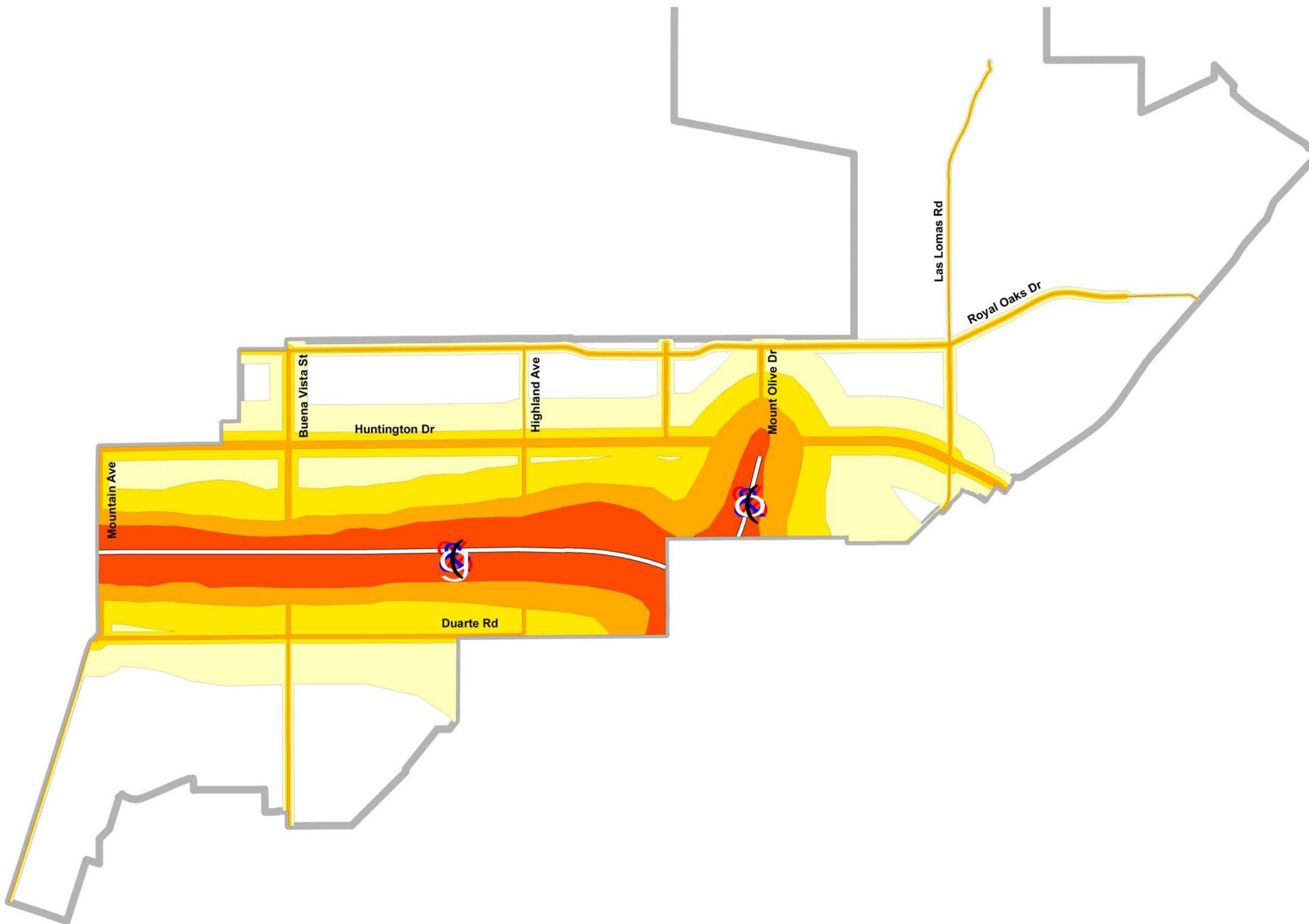


- LEGEND**
- Sensitive Noise Receptors
- Churches
 - Hospitals
 - Parks
 - Schools
 - Senior Centers
- Interstate Highways
-  210
 -  605
-  City Limits

Note: The sensitive receptors correspond to Table N-4 (Sensitive Receptors).



Existing Noise Contours
Diagram N - 1



LEGEND

Noise Levels - Existing

- 75 CNEL
- 70 CNEL
- 65 CNEL
- 60 CNEL

Interstates

-  210
-  605

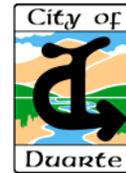
 City Limits


 NORTH

0 1,500 3,000

 Feet
 July 14, 2006

CHAPTER 4 NOISE ELEMENT



**Table N - 5
Existing Traffic Noise Levels**

Roadway Segment	ADT	dBA @ 100 Feet from Roadway Centerline	Noise Contour (distance from centerline)		
			60 CNEL	65 CNEL	70 CNEL
Arterial Roadways:					
Huntington Drive:					
Between Mountain Ave. and Buena Vista St.	26,530	67.1	621	196	62
Between Buena Vista St. and Highland Ave.	23,810	66.6	557	176	56
Between Highland Ave. and Bradbourne Ave.	26,460	67.1	620	196	62
Between Bradbourne Ave. and Mount Olive Dr.	28,640	67.4	672	212	67
Between Mount Olive Dr. and Las Lomas Rd.	26,750	67.1	627	198	63
Huntington Dr. East of Las Lomas Rd.	26,170	64.0	221	103	48
Duarte Road:					
Between Mountain Ave. and Buena Vista St.	11,950	63.8	280	89	28
Buena Vista St. to Highland Ave.	12,740	64.0	299	94	30
Mountain Avenue:					
Between Huntington Drive and I-210 Freeway	24,500	65.6	423	134	42
Between I-210 Freeway and Duarte Road	31,040	66.7	535	169	54
Mountain Avenue South of Duarte Road	3,550	54.6	48	22	10
Buena Vista Street:					
Between Royal Oaks Dr. and Huntington Dr.	11,310	63.5	265	84	26
Between Huntington Drive and I-210 Freeway	18,860	65.7	442	140	44
Between I-210 Freeway and Duarte Road	15,170	61.8	154	71	33
Buena Vista Street South of Duarte Road	7,860	58.0	81	38	17
Highland Avenue:					
Between Royal Oaks Dr. and Huntington Drive	3,750	57.7	65	20	6
Between Huntington Drive and I-210 Freeway	11,480	63.8	269	85	27
Between I-210 Freeway and Duarte Road	9,650	60.1	114	53	25
Collector Streets:					
Royal Oaks Drive:					
Royal Oaks Dr. West of Buena Vista Street	10,650	62.2	184	58	18
Between Buena Vista St. to Highland Avenue	8,550	58.3	86	40	18
Between Highland Ave. and Bradbourne Ave.	7,610	57.9	79	37	17
Between Bradbourne Ave. and Mount Olive Dr.	7,870	58.0	81	38	17
Between Mount Olive Dr. and Las Lomas Road	10,380	59.2	97	45	21
Royal Oaks Dr. East of Las Lomas Road	8,000	58.1	82	38	18
Royal Oaks Dr. West of Encanto Parkway	1,400	50.5	26	12	6

CHAPTER 4 NOISE ELEMENT



**Table N – 5 (Continued)
Existing Traffic Noise Levels**

Roadway Segment	ADT	dBA @ 100 Feet from Roadway Centerline	Noise Contour (distance from centerline)		
			60 CNEL	65 CNEL	70 CNEL
Central Avenue:					
Central Avenue West of Buena Vista Street	3,880	56.5	48	15	5
Central Avenue East of Buena Vista Street	12,200	61.5	150	48	15
Central Avenue West of Highland Avenue	3,550	56.2	44	14	4
Between Highland Ave. and Bradbourne Ave.	7,100	59.2	88	28	9
Bradbourne Avenue:					
Between Royal Oaks Dr. and Huntington Drive	1,260	51.0	118	55	25
Mount Olive Drive:					
Between Royal Oaks Dr. to Huntington Drive	10,230	60.4	118	55	25
Mount Olive Drive South of Huntington Drive	23,870	63.6	208	97	45
Las Lomas Road:					
Las Lomas Road North of Royal Oaks Drive	3,200	52.6	36	17	8
Between Royal Oaks Dr. and Huntington Drive	9,440	58.4	91	42	20
Las Lomas Road South of Huntington Drive	4,080	55.1	52	24	11
Source: Chapter 4, Circulation Element, prepared by RBF Consulting, April 2006.					

Stationary Noise Sources

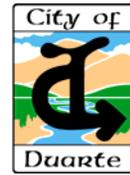
Commercial and industrial land uses located near residential areas currently generate occasional noise impacts. The primary noise sources associated with these facilities are caused by delivery trucks, air compressors, generators, outdoor loudspeakers and gas venting. Other significant stationary noise sources in the City include noise from construction activity, street sweepers and gas-powered leaf blowers. Residential land uses and areas identified as noise-sensitive must be protected from excessive noise from stationary sources including commercial and industrial centers. These impacts are best controlled through effective land use planning and application of the City Noise Ordinance.

Irwindale Rock Quarry

Irwindale is in close proximity, southwest of Duarte and is home to seventeen rock quarries; however, currently, eight of the seventeen quarries are dormant. According to police records, no noise complaints have been made regarding these facilities, however, residents, at public meeting indicate they can hear the quarry operations.

CHAPTER 4

NOISE ELEMENT



Azusa Rock Company

The Azusa Rock Company, which is now a part of Vulcan Materials Company, is a 350-acre Rock Pit on the border of Duarte and its easterly neighboring community, Azusa. Despite the large mining activities, truck traffic is typically not a major noise source since the material coming out of the Azusa Rock pit is placed on a conveyor belt, transported to the Reliance Plant and crushed into sand and gravel. However, residents at public meeting have indicated that when in full operation, the Azusa Rock Quarry is loud.

San Gabriel Valley Gun Club

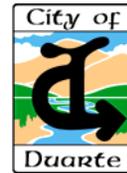
The San Gabriel Valley Gun Club, which was closed in late 2006, was located in the City of Azusa, at the northeast corner of the City of Duarte. The Gun Club provided civilians, security agencies, police, government agencies, and the military a safe and secure location to practice marksmanship. The Gun Club was open for entry at 6:30 a.m. Tuesday through Sunday. The outdoor rifle and pistol ranges were open from 8:00 a.m. to 4:00 p.m. Tuesday through Friday and 8:00 a.m. to 4:45 p.m. Saturday and Sunday and offers eighty-six (86) covered shooting positions. The air rifle and air pistol range was open the same hours of operation as the rifle and pistol range and has 20 positions available. In addition to the rifle and pistol ranges, the Club also offered four shotgun fields that operated from the hours of 10:00 a.m. to 3:30 p.m. Tuesday, Wednesday and Friday and from 8:30 a.m. to 4:15 p.m. on Saturday and Sunday. The San Gabriel Valley Gun Club was a non-conforming use in the City of Azusa. It was reported that residents in both Azusa and Duarte complained about noise generated by the facility. The gun club is no longer a noise generator.

Duarte Gold Line Metro Station

The Duarte Gold Line Metro Station is proposed along Duarte Road, approximately 500 feet west of Highland Avenue. The proposed station will be a center platform station with entrances on both ends. The surrounding uses include commercial and industrial buildings to the northeast and the San Gabriel Flood Control area to the south. In a baseline study, RBF Consulting conducted an overnight noise measurement on March 22, 2006. The overnight measurement read 67 L_{eq} ; refer to Table N - 6 (Field Noise Measurements). In addition to the proposed Gold Line Metro Station, the City is anticipating that ten out of the twenty acres east of the residential areas and west of Highland Avenue will become mixed use. The development of the Gold Line Station will slightly increase noise within the vicinity of the station; however, noises would be a result

CHAPTER 4

NOISE ELEMENT



of the increase in passengers waiting for the train in the morning as well as departing the train in the evening. The station is located in an industrial area and thus, the slight increase in noise will not create a disturbance or become a nuisance to the surrounding uses.

Irwindale Speedway

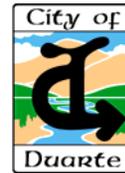
The Irwindale Speedway is a new, state-of-the-art motorsports and entertainment event facility that features 6,000 seats, 12 exclusive Corporate “Sky Box” Suites, twin paved oval race tracks that are banked at 1/2 and 1/3 mile, sound and lighting systems, and paved parking for over 3,000 cars. The Irwindale Speedway is located adjacent to the 605 Freeway and to the southeast of Duarte. The Speedway accommodates stock cars, sprint cars, midgets, supermodifieds, legends, and trucks. The venue is home to National Association for Stock Car Auto Racing (NASCAR) competition on selected Friday and Saturday evenings with gates opening to the public at 4:00 p.m. and the race starting at 10:00 p.m and ending at 10:00 p.m. During the week, NASCAR drivers can be found training around the oval tracks. Drag Racing is held at the venue every Sunday from 8:00 a.m. to 5:00 p.m. and Thursday from 4:00 p.m. to 10 p.m. According to Duarte Sheriff records, there are no noise complaints filed in regards to the Speedway, however, at General Plan public meetings, residents stated they can clearly hear the speedway.

Ambient Noise

In atmospheric sound transmission or noise pollution the ambient noise level is the sound pressure level at a given location, normally specified as a reference level to study a new intrusive sound source. Ambient sound levels are often measured in order to map sound conditions over a specific area to understand their variation with locale. In this case the product of the investigation is a sound level contour diagram. Alternatively ambient noise levels may be measured to provide a reference point for analyzing an intrusive sound to a given environment. For example, aircraft noise is studied by measuring ambient sound without the presence of any overflights, and then studying the noise addition by measurement or computer simulation of overflight events.

Ambient noise level is measured with a sound level meter. It is usually measured in dB above a reference pressure level of 0.00002 Pascals (Pa), in the International System of Units (SI). Most frequently ambient noise levels are measured using a frequency-weighting filter, the most common being the A-weighting scale, such that resulting measurements are denoted dBA, or decibels on the A-weighting scale.

CHAPTER 4 NOISE ELEMENT



The thirteen ambient noise measurement points were selected based on their proximity to sensitive receptors within the City. They were taken in areas that had several sensitive uses within one area. The four roadway measurements were chosen based on the traffic volume on the roadways. Three roadway measurements were taken along Huntington Drive, the main traffic artery within the City and the other was along Duarte Road, a local street that runs parallel to the eastbound lane of Interstate 210. To quantify the ambient noise levels in the City of Duarte, RBF Consulting conducted noise measurements on March 22 through 23, 2006; refer to Table N - 6 (Field Noise Measurements). The noise measurement sites were representative of typical existing noise exposure within and immediately adjacent to sensitive uses within the City; refer to Exhibits N-4a through N-4c (Noise Measurement Sites). Fifteen-minute measurements were taken at each site, between 10:00 a.m. and 4:30 p.m. Meteorological conditions were typical, with light wind speeds, low humidity, and clear skies.

**Table N - 6
Field Noise Measurements**

Site	Location	Leq	Time ¹
1	Duarte High School	63.9	10:40 a.m.
2	Huntington Drive and Buena Vista Street	68.7	11:17 a.m.
3	Second Street between Cotter and Oak Avenues	52.7	11:42 a.m.
4	Broadland Avenue between Maynard Drive and Bloomdale Street	56.8	12:07 p.m.
5	Aloysia Moore Park	53.1	1:20 p.m.
6	Duarte Road and Earlington Avenue	65.6	1:45 p.m.
7	City of Hope Hospital – National Medical Center	59.6	3:00 p.m.
8	Sandefur Street and Eastford Avenue	50.0	3:30 p.m.
9 ²	East Duarte Road between Hope Drive and Highland Avenue	67.1	4:10 p.m.
10	Crestfield Drive and Bashor Street	48.5	11:25 a.m.
11	Fairwood Street between Bernwood and Conata Streets	48.4	11:45 a.m.
12	Huntington Drive near Calle Linares	70.6	12:10 p.m.
13	Huntington Drive and Windsor Circle	71.1	12:43 p.m.
14	Westminster Gardens – A Retirement Oasis	58.2	2:00 p.m.
15	Maynard Street between Crestfield and Femley Drives	57.4	2:29 p.m.
16	Bettyhill Avenue between Conata and Elda Streets	48.8	2:54 p.m.
17	Eastern side of Hacienda Park on Hacienda Drive	54.2	3:23 p.m.
1 Unless otherwise noted, noise measurements were recorded over a period of 15 minutes.			
2 Overnight measurement for the duration of 18 hours, 21 minutes, 9.8 seconds.			
Leq = equivalent sound level; dBA = A-weighted decibel.			
Source: Noise Monitoring Survey conducted by RBF Consulting, March 22 and 23, 2006.			

Field Noise Measurement Sites
Exhibit N - 3a



Field Noise Measurement Sites
Exhibit N - 3b



Field Noise Measurement Sites
Exhibit N - 3c



CHAPTER 4

NOISE ELEMENT



Measured noise levels ranged from 48.4 to 71.1 dBA Leq. Noise monitoring equipment used for the ambient noise survey consisted of a Larson Davis Laboratories Model LDL 820 sound level analyzer equipped with a Larson Davis Type 2561 microphone. The instrumentation was calibrated prior to use with a Larson Davis CA250 acoustical calibrator to ensure the accuracy of the measurements, and complies with applicable requirements of the American National Standards Institute (ANSI) for Type I (precision) sound level meters. The accuracy of the calibrator is maintained through a program established by the manufacturer, and is traceable to the National Bureau of Standards. All instrumentation meets the requirements of ANSI S1.4-1971.

Projected Noise Conditions

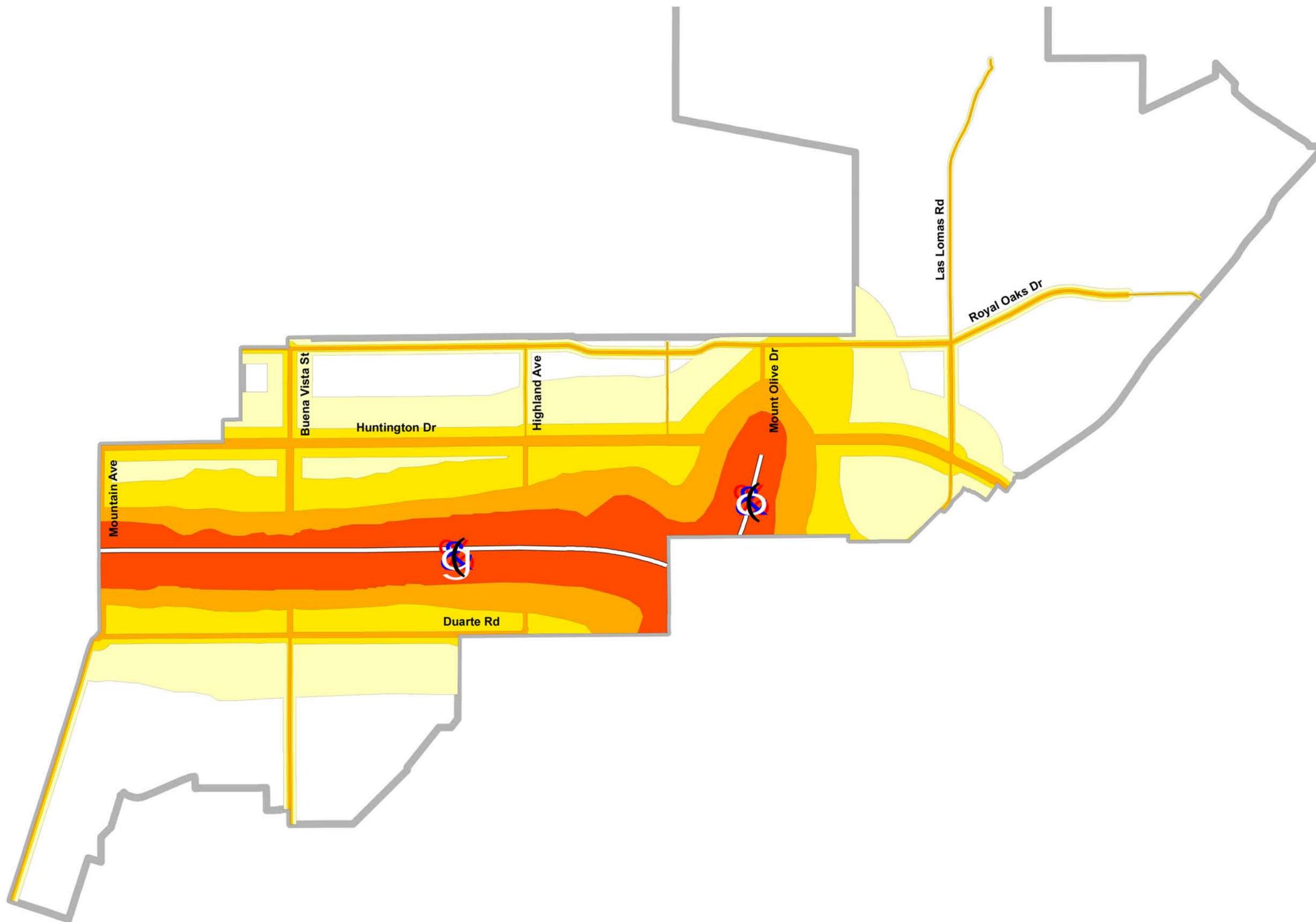
Exhibit N - 5 (2020 Noise Contours) displays the projected 60, 65, and 70 CNEL noise contours calculated from the roadway centerline.

Table N - 7 “Projected 2020 Traffic Noise Levels” depicts the average daily traffic (ADT) for projected ADTs and the volume noise levels at 100 feet from the roadway centerline and the distance from the roadway centerline to the 70, 65 and 60 dBA CNEL contours. Tables in the Circulation Element indicate traffic volumes on designated street segments. Surface traffic noise has the greatest impact on the noise environment of residential and sensitive-receptor properties. Contours between 55 and 60 dBA CNEL are common along City collector streets, while 65 dBA CNEL or greater contours are common along major streets.

Of the 35 roadway links modeled within the City planning area, nine roadway links generate noise levels at 65 CNEL or greater at 100 feet from centerline. Ten of the roadway links modeled generate noise levels between 60 CNEL and 65 CNEL at 100 feet from centerline. These links include Huntington Drive east of Las Lomas, Duarte Road, segments along Buena Vista, Buena Vista Street between I-210 Freeway to the south of Duarte Road, segments along Royal Oaks, Central Ave. east of Buena Vista Street, and Mount Olive Drive. Thirteen of the thirty-five roadway segments modeled generate noise levels between 55 CNEL and 60 CNEL. These segments are along Mountain Avenue south of Duarte Road, Buena Vista Street, Highland Avenue, Royal Oaks Drive, Central Avenue, and Las Lomas. Three modeled roadway links with noise levels below 55 CNEL at 100 feet from centerline are Royal Oaks Drive west of Encanto Parkway, Bradbourne Avenue, and Los Lomas Road north of Royal Oaks Drive.

In the City of Duarte, soundwalls are adjacent to the I-210 Freeway. These soundwalls serve as a noise barrier and as noise attenuation. All other noise impacts are located within commercial or industrial areas in the City, which are not identified as sensitive receptors.

2020 Noise Contours
Diagram N - 2



LEGEND

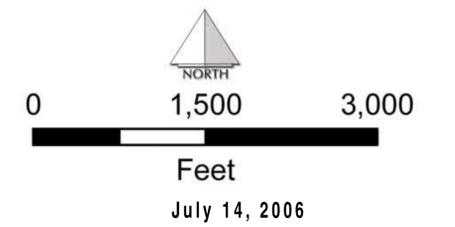
Noise Levels - 2020 Projected

- 75 CNEL
- 70 CNEL
- 65 CNEL
- 60 CNEL

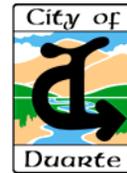
Interstates

-  210
-  605

 City Limits



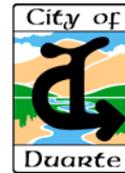
CHAPTER 4 NOISE ELEMENT



**Table N - 7
Projected 2020 Traffic Noise Levels**

Roadway Segment	ADT	dBA @ 100 Feet from Roadway Centerline	Noise Contour (distance from centerline)		
			60 CNEL	65 CNEL	70 CNEL
Arterial Roadways:					
Huntington Drive:					
Between Mountain Ave. and Buena Vista St.	30,700	67.8	720	228	72
Between Buena Vista St. and Highland Ave.	27,400	67.3	642	203	64
Between Highland Ave. and Bradbourne Ave.	31,800	67.9	745	236	75
Between Bradbourne Ave. and Mount Olive Dr	34,000	68.2	796	525	80
Between Mount Olive Dr. and Las Lomas Rd.	31,400	67.8	736	233	74
Huntington Drive east of Las Lomas Road	30,000	64.6	243	113	52
Duarte Road:					
Between Mountain Ave. and Buena Vista St.	14,000	64.5	328	104	33
Buena Vista Street to Highland Avenue	17,000	65.3	398	126	40
Mountain Avenue:					
Between Huntington Drive and I-210 Freeway	28,200	66.3	486	154	49
Between I-210 Freeway and Duarte Road	36,300	67.3	626	198	63
Mountain Avenue South of Duarte Road	11,900	59.8	107	50	23
Buena Vista Street:					
Between Royal Oaks Dr. and Huntington Dr.	13,600	64.3	318	101	32
Between Huntington Drive and I-210 Freeway	23,400	66.7	548	173	55
Between I-210 Freeway and Duarte Road	19,000	62.7	179	83	39
Buena Vista Street South of Duarte Road	9,100	58.6	89	41	19
Highland Avenue:					
Between Royal Oaks Dr. and Huntington Dr.	4,800	58.7	83	26	8
Between Huntington Drive and I-210 Freeway	13,500	64.5	316	100	32
Between I-210 Freeway and Duarte Road	12,800	61.3	137	64	30
Collector Streets:					
Royal Oaks Drive:					
Royal Oaks Drive west of Buena Vista Street	12,100	62.8	209	66	21
Between Buena Vista St. to Highland Avenue	10,200	59.1	96	45	21
Between Highland Ave. and Bradbourne Ave.	9,100	58.7	89	41	19
Between Bradbourne Ave. and Mount Olive Dr	9,300	58.8	91	42	20
Between Mount Olive Dr. and Las Lomas Rd.	12,000	59.8	107	50	23
Royal Oaks Drive east of Las Lomas Road	9,100	58.7	89	41	19
Royal Oaks Drive west of Encanto Parkway	1,700	51.4	29	14	6

CHAPTER 4 NOISE ELEMENT



**Table N - 7 [continued]
Projected 2020 Traffic Noise Levels**

Roadway Segment	ADT	dBA @ 100 Feet from Roadway Centerline	Noise Contour (distance from centerline)		
			60 CNEL	65 CNEL	70 CNEL
Central Avenue:					
Central Avenue west of Buena Vista Street	4,800	57.5	59	19	6
Central Avenue east of Buena Vista Street	14,000	62.1	173	55	17
Central Avenue west of Highland Avenue	4,300	57.0	53	17	5
Between Highland Ave. and Bradbourne Ave.	8,200	59.8	101	32	10
Bradbourne Avenue:					
Between Royal Oaks Dr. and Huntington Drive	1,600	52.1	34	16	7
Mount Olive Drive:					
Between Royal Oaks Dr. to Huntington Drive	11,600	60.9	129	60	28
Mount Olive Drive south of Huntington Drive	27,900	64.2	231	107	50
Las Lomas Road:					
Las Lomas Road north of Royal Oaks Drive	3,900	53.5	41	19	9
Between Royal Oaks Dr. and Huntington Drive	10,900	59.0	101	47	22
Las Lomas Road south of Huntington Drive	4,700	55.7	57	27	12

Source: Chapter 4, Circulation Element, prepared by RBF Consulting, April 2006.

DESCRIPTION OF NOISE PLAN

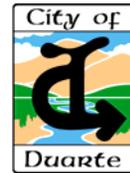
Transportation noise is the most serious noise problem in Duarte. However, local government has little direct control of transportation noise at the source. State and federal agencies have the responsibility to control vehicle noise emission levels. The most effective method the City has to mitigate transportation noise is by reducing noise impact on the community. Mitigation through site planning and the design and construction of a noise barrier (generally a wall or berm) are the most common ways of alleviating traffic noise impacts in existing urban environments.

Typical Noise Attenuation Rates

Noise impacts can be mitigated in three basic ways: by reducing the sound level of the noise generator, by increasing the distance between the source and receiver, and by insulating the receiver.

CHAPTER 4

NOISE ELEMENT



Noise reduction can be accomplished by placement of walls, landscaped berms, or a combination of the two, between the noise source and the receiver. Generally, effective noise shielding requires a solid barrier with a mass of at least four pounds per square-foot of surface area which is large enough to block the line of sight between source and receiver. Variations may be appropriate in individual cases based on distance, nature and orientation of buildings behind the barrier, and a number of other factors. Garages or other buildings may be used to shield dwelling units and outdoor living areas from traffic noise.

In addition to site design techniques, noise insulation can be accomplished through proper design of buildings. Nearby noise generators should be recognized in determining the location of doors, windows and vent openings. Sound-rated windows (extra thick or multi-paned) and wall insulation are also effective. None of these measures, however, can realize their full potential unless care is taken in actual construction: doors and windows fitted properly, openings sealed, joints caulked, plumbing adequately insulated from structural members.

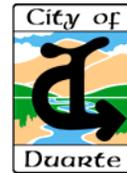
Of course, sound-rated doors and windows will have little effect if left open. This may require installation of air conditioning for adequate ventilation. The chain of design, construction and operation is only as effective as its weakest link.

Noise impacts can be reduced by insulating noise sensitive uses, such as residences, schools, libraries, hospitals, nursing and carehomes and some types of commercial activities. But perhaps a more efficient approach involves limiting the level of noise generation at the source. State and Federal statutes have largely preempted local control over vehicular noise emissions but commercial and industrial operations and certain residential activities provide opportunities for local government to assist in noise abatement. Local ordinances may establish maximum levels for noise generated on-site. This usually takes the form of limiting the level of noise permitted to leave the property where it may impact other uses.

Although vehicular noise emissions standards are established at the State and Federal levels, local agencies can play a significant part in reducing traffic noise by controlling traffic volume and congestion. Traffic noise is greatest at intersections due to acceleration, deceleration and gear shifting. Measures such as signal synchronization can help to minimize this problem. Likewise, reduction of congestion aids in reduction of noise. This can be accomplished through the application of traffic engineering techniques such as channelization of turning movements, parking restrictions, separation of modes (bus, auto, bicycle, pedestrian) and restrictions on truck traffic.

CHAPTER 4

NOISE ELEMENT



Noise reduction through reduction of traffic volumes can also be accomplished with incentive programs for use of public transit facilities and high-occupancy vehicles, staggering of work hours and land use controls. Vehicle trips can be turned into pedestrian trips with integration of housing and employment into the same project or area, construction of high-density, affordable housing in proximity to employment, shopping and public transit facilities and other techniques.

Noise and Land Use Planning Integration

Information relative to the existing and future noise environments within Duarte should be integrated into future land use planning decisions. This Element presents the existing and future noise environments so that the City will include noise impact considerations in development programs. Noise and land use compatibility guidelines are presented, as well as noise standards for new developments. Community noise considerations are to be incorporated into land use planning to the maximum extent feasible.

Transportation Noise Control

The most efficient and effective means of controlling noise from transportation systems is to reduce noise at the source. However, since the City has little direct control over source noise levels because of State and federal preemption (for example, State motor vehicle noise standards and federal air regulations), the City should focus on reducing the impact of the noise on the community.

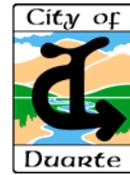
Non-Transportation Noise Control

People must be protected from excessive noise from non-transportation sources, including commercial and industrial centers. These impacts are most effectively controlled through the application of the City's Noise Ordinance.

IMPLEMENTATION MEASURES

Government Code 65400 requires the legislative body to consider and adopt reasonable and practical means for implementing the general plan. This is necessary so that the plan will serve as an effective guide for orderly growth and development, and the efficient expenditure of public funds relating to the subjects addressed in the general plan. The State also requires an annual report to the legislative body, State Department of Housing and Community Development

CHAPTER 4 NOISE ELEMENT



(HCD) and State Office of Planning and Research on the status of the plan and progress in implementing the plan.

This section provides an implementation matrix for policies found in the Noise chapter. The matrix identifies the policy to be implemented, the implementation measure to be used for that policy, the responsible agency or department that will be implementing the measure, the funding source and the estimated timeframe to complete the implementation.

Responsible Agency:

All = All Departments
 CD = Community Development
 CM = City Manager
 AS = Administrative Services
 PS = Public Safety
 P&R = Parks and Recreation

Funding Source:

GF = General Fund
 RA = Redevelopment Agency
 G = Grants
 DF = Development Fees
 SF = State funds
 FF = Federal Funds
 OF = Other Funds

Implementation Timeframe (or as resources provide):

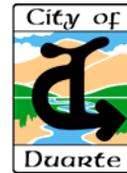
ST = Short-term by 2009
 MT = Mid-term by 2015
 LT = Long Term by 2020
 On = Ongoing

**Table N - 8
Noise Implementation Measures**

Policy #	Implementation Measure	Responsible Agency	Funding Source	Time frame
N 1.1.1	Require new developments to pay their fair share of mitigating measures.	CD	DF, OF, GF	On
N 1.1.2	In coordination with Caltrans, the City will continue to participate in the phased program for the construction of sound walls along I-210 and I-605.	CD	FF, SF, GF	On
N 1.1.3	Require earthen berms, setbacks and other noise reduction techniques as conditions of development where applicable.	CD	OF	On
N 1.1.4	Require noise mitigation methods as a condition of approval during the development review process. Encourage the use of Sound Transmission Glass (STC) or Outdoor Indoor Transmission Glass (OITC) rated windows for residential uses adjacent to the freeways and along major arterials.	CD	OF	On
N 1.1.5	Limit construction, delivery, and through truck traffic to designated routes.	PS	GF	On

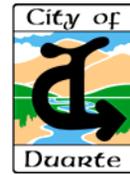
CHAPTER 4

NOISE ELEMENT



N 1.1.6	Incorporate noise reduction measures into all development proposals, as necessary. Monitor existing noise levels along major arterials and enforce the City's noise ordinance where necessary.	CD	GF	On
N 1.1.7	Support noise abatement legislation through increased lobbying activities.	CM, CD	GF	On
N 1.1.8	Support the use of rubberized asphalt on city streets for projects that require substantial paving activity, or roadways with high levels of traffic.	CD	GF, OF, SF	On
N 2.1.1	Strictly enforce the Noise Ordinance to ensure that noise generating uses are promptly abated.	PS, CD	GF	On
N 2.1.2	Require noise studies to be prepared in accordance with the City's environmental review procedure for all projects that are not "clearly compatible" with the future noise levels at the site. Consider developing maximum noise standards for ventilation systems (i.e., air conditioning units) in residential areas. Consider developing regulations to prohibit the use of public address systems and encourage the use of alternative (noise sensitive) communication devices (i.e., walkie-talkies, hand-held phones, or other similar methods).	CD	OF, GF	On
N 2.1.3	Continue to monitor activities from the Irwindale and Azusa Rock Quarries and prepare periodic reports, which will analyze noise reduction attempts.	CM, CD	GF	On
N 2.1.4	Require noise studies during the development review process if a project has the potential to generate significant noise.	CD, CM	OF	On
N 2.1.5	Evaluate the noise impacts from proposed development projects and existing uses (i.e., Irwindale Raceway and San Gabriel Valley Gun Club) in adjacent cities as part of the environmental (CEQA) and project review process and implement measures to mitigate any significant impacts.	CD	GF	On
N 3.1.1	Prepare noise and land use compatibility guidelines that can effectively reduce noise exposure to acceptable levels.	CD	GF	MT
N 3.1.2	Review the City's noise reduction ordinance to ensure compliance with State requirements.	CD	GF	MT
N 3.1.3	Condition projects adjacent to developed/occupied uses to require the developer to submit a construction related noise mitigation plan to the Director of Community Development for review and	CD	GF	On

CHAPTER 4 NOISE ELEMENT



	approval prior to issuance of grading permits.			
N 3.1.4	Refine the Noise Ordinance to reduce spillage of noise to adjacent properties and adopt a light spillage ordinance	CD	GF	MT

- City of Duarte Municipal Code (pertinent sections re noise)

City of Duarte Municipal Code

Chapter 9.68 - NOISE REGULATIONS

Sections:

I. - GENERAL PROVISIONS

9.68.010 - Policy declaration.

It is declared to be the policy of the city to prohibit unnecessary, excessive and annoying noises from all sources subject to its police power. At certain levels, noises are detrimental to the health and welfare of the citizenry and, in the public interest, such noise levels shall be systematically proscribed.

(Ord. 380 Art. 1 § 1, 1975)

9.68.020 - Definitions.

Unless the context otherwise clearly indicates, the words and phrases used in this chapter are defined as follows:

- (a) "Ambient noise" is the all-encompassing noise associated with a given environment, being usually a composite of sounds from many sources near and far. For the purpose of this chapter, "ambient noise level" is the level obtained when the noise level is averaged over a period of fifteen minutes without inclusion of noise from isolated identifiable sources, at the location and time of day near that at which a comparison is to be made.
- (b) "'A'-weighted sound pressure level" means the sound pressure level as measured with a sound meter using the "A"-weighting network. The standard notation is dBA.
- (c) "Commercial purpose" means and includes the use, operation or maintenance of any sound amplifying equipment for the purpose of advertising any business, or any goods, or any services, or for the purpose of attracting the attention of the public to, or advertising for, or soliciting patronage or customers to or for any performance, show, entertainment, exhibition or event, for the purpose of demonstrating any such sound equipment.
- (d) "Commercial zone" means an area designated as administrative professional (CP), neighborhood commercial (C-1), retail commercial (C-2), community commercial (C-3), service commercial (C-4), or commercial-recreation (C-R) on the city of Duarte zoning map.
- (e) "Cyclically varying noise" means steady or non-steady noise which varies in amplitude such that the same sound pressure level is obtained repetitively at reasonably uniform intervals of time. A beat is one class of noise.
- (f) "Day" means the time period from seven a.m. of one day to ten p.m. of the same day.
- (g) "Decibel" (dB) means a unit for expressing the ratio between two quantities of acoustical signal powers; the number of decibels corresponding to the ratio of two amounts of power is ten times the logarithm to the base ten of this ratio.
- (h) "Emergency work" means work made necessary to restore property to a safe condition following a public calamity, or work required to protect persons or property from an imminent exposure to danger, or work by private or public utilities when restoring utility service.
- (i) "Impulsive sound" means a short-duration sound (such as might be produced by the impact of a drophammer or a piledriver) with one second or less duration.

- (j) "Industrial" or "manufacturing" zone means an area designated as industrial park zone (I-P) or light manufacturing zone (M-1) on the city of Duarte zoning map.
- (k) "Motor vehicles" includes, but is not limited to, automobiles, trucks, motorcycles, minibikes and go-carts.
- (l) "Night" means the time period from ten p.m. of one day to seven a.m. of the following day.
- (m) "Noncommercial purpose" means the use, operation or maintenance of any sound equipment for other than a "commercial use." "Noncommercial purpose" means and includes, but is not limited to, philanthropic, political, patriotic and charitable purposes.
- (n) "Person" means a person, firm, association, copartnership, joint venture, corporation, or any entity, public or private in nature, excluding the city of Duarte.
- (o) "Property boundary line" means an imaginary line at the ground surface, which separates the real property owned by one person from that owned by another person and its vertical extension. This includes multiple-family dwelling units, with the property boundary being the wall separating the adjoining dwelling units.
- (p) "Pure tone" means a sound wave whose instantaneous sound pressure varies essentially as a simple sinusoidal function of time.
- (q) "Residential zone" means an area designated as single family residential zone (R-1, R-1-A, R-1-B, R-1-C, R-1-D, R-1-E, R-1-F), multiple residential zone (R-2, R-3, R-4), planned unit development zone (PUD), mobile home residential zone (R-MH), or residential recreation zone (R-R) on the city of Duarte zoning map.
- (r) "Sound" is the sensation perceived by the sense of hearing. For the purpose of this chapter, the terms "sound" and "noise" shall be used synonymously.
- (s) "Sound amplifying equipment" is any machine or device for the amplification of the human voice, music or any other sound, but shall not include:
 - (1) Warning devices or emergency vehicles;
 - (2) Horns, burglar and fire alarms, or other warning devices expressly authorized by law.
- (t) "Sound level" (noise level) expressed in decibels (dB) is the sound measured with the "A"-weight scale and with slow response by a sound level meter.
- (u) "Sound level meter" means an instrument including a microphone, an amplifier, an output meter, and "A" frequency weighting networks for the measurement of sound levels, which satisfies the pertinent requirements in American Standard Specifications for Sound Level Meters SI.4-1971 or the most recent revision thereof.
- (v) "Sound pressure level" is twenty times the logarithm to the base ten of the ratio of the root-mean-square sound pressure to the reference pressure, which is twenty micronewtons per square meter.
- (w) "Sound truck" means any motor vehicle or any other vehicle, regardless of motive power, whether in motion or stationary, which carries, is equipped with or which has mounted thereon, or attached thereto, any sound amplifying equipment for commercial, political or charitable purposes.
- (x) "Steady noise" means noise for which the sound pressure level remains essentially constant during the period of observation. It does not vary more than six dBA when measured with the "slow" meter characteristic of a sound level meter.

(Ord. 380 Art. 1 § 2, 1975)

9.68.030 - Sound level measurement.

Any sound level measurement made pursuant to the provisions of this chapter shall be measured with a sound level meter using the "A"- weighting and response as indicated in Section 9.68.020(u).

(Ord. 380 Art. 1 § 3, 1975)

9.68.040 - Noise measurement procedures.

The following procedures shall be utilized for measuring and evaluating exterior noise in the city unless otherwise specified in this chapter:

- (a) Noise measurements shall be conducted any time during the day or night when the suspect noise source is in operation.
- (b) The location selected for noise measurement shall be on the noise receptor's property line at a point approximately ten feet from any building, wall or obstruction (trees, bushes, etc.)
- (c) No individual other than the operator shall be within ten feet of the sound level meter during the measurement period.
- (d) The sound level meter shall be calibrated in accordance with the manufacturer's instructions.
- (e) With the noise source in operation, the operator shall record the instantaneous response at fifteen-second intervals or less, for a period of fifteen minutes or greater. Or, for a noise source in operation for less than fifteen minutes, the operator shall record the instantaneous response at fifteen-second intervals or less for the time the noise source is in operation.
- (f) The suspect noise source shall only be measured for a violation of this ordinance when it is five dBA or greater than another noise source within the measurement vicinity.
- (g) The corrective factors set forth in Section 9.68.050(b) shall be applied to the noise standard established for the specific noise zone.
- (h) The suspect noise level shall be compared with the standards in Section 9.68.050(a). If the noise level generated from the suspect noise source exceeds the standard, the suspect noise source shall be considered to be in violation of this chapter.

(Ord. 380 Art. 1 § 4, 1975)

9.68.050 - Ambient base noise levels.

- (a) It is unlawful for any person within the city of Duarte to make, cause or allow to be produced noise which is received on property occupied by another person within the designated zone, in excess of the following levels, except as expressly provided otherwise herein:

STANDARDS

	Day	Night
Zone	7:00 A.M.- 9:00 P.M.	9:00 P.M.- 7:00 A.M.
R-1 and R-2	55 dBA	45
R-3 and R-4	55 dBA	50

Commercial	60 dBA	55
Industrial and Light Manufacturing	70 dBA	70

At the boundary line between a residential property and a commercial and manufacturing property, the noise level of the quieter zone shall be used.

(b) CORRECTIONS TO NOISE LIMITS. The numerical limits given in subsection (a) of this section shall be adjusted by the following corrections, where appropriate:

	Noise Condition	Correction (in dB)
1.	Repetitive impulsive noise, pure tones and sound with cyclically varying amplitude	-5
2.	Steady whine, screech or hum	-5
The following corrections apply to day only:		
3.	Noise occurring more than 5 but less than 15 minutes per hour	+5
4.	Noise occurring more than 1 but less than 5 minutes per hour	+10
5.	Noise occurring less than 1 minute per hour	+15

(Ord. 682 § 1, 1991; Ord. 380 Art. 1 § 5, 1975)

9.68.060 - Loud, unnecessary and unusual noise.

Notwithstanding any other provision of this chapter, and in addition thereto, it is unlawful for any person to wilfully make or continue, or cause to be made and continued, any loud, unnecessary or unusual noise which disturbs the peace and quiet of any neighborhood, or which causes discomfort or annoyance to residents of the area. The standards which shall be considered in determining whether a violation of the provisions of this section exists may include, but not be limited to, the following:

- (a) The level of the noise;
- (b) Whether the nature of the noise is usual or unusual;
- (c) The nature and zoning of the area within which the noise emanates;
- (d) The density of the inhabitation of the area within which the noise emanates;
- (e) The time of day or night the noise occurs;

- (f) The duration of the noise;
- (g) Whether the noise is recurrent, intermittent, or constant; and
- (h) Whether the origin of the noise is natural or unnatural.

(Ord. 380 Art. 5 § 1, 1975)

9.68.070 - Violations—Additional remedies—Injunctions.

As an additional remedy, the operation or maintenance of any device, instrument, vehicle, or machinery in violation of any provision of this chapter, which operation or maintenance causes discomfort or annoyance to reasonable persons of normal sensitiveness or which endangers the comfort, repose, health, or peace of residents in the area, shall be deemed and is declared to be a public nuisance and may be subject to abatement summarily by a restraining order or injunction issued by a court of competent jurisdiction.

(Ord. 380 Art. 1 § 6, 1975)

II. - SPECIAL NOISE SOURCES

9.68.080 - Horns and signaling devices.

It is unlawful for any person to sound any horn or signaling device on an automobile, motorcycle or other vehicle on any street or public place of the city, except as a danger warning; to create by means of any such signaling device any unreasonably loud or harsh sound; to sound any such device for an unnecessary and unreasonable period of time; to use any signaling device except one operated by hand or electricity; to sound any horn, whistle or other device operated by engine exhaust; and to use any such signaling device when traffic is for any reason held up.

(Ord. 380 Art. 2 § 1, 1975)

9.68.090 - Radios, television sets, and similar devices.

It is unlawful for any person within any residential zone of the city to use or operate any radio receiving set, musical instrument, phonograph, television set, or other machine or device for the producing or reproducing of sound (between the hours of ten p.m. of one day and seven a.m. of the following day) in such a manner as to disturb the peace, quiet and comfort of neighboring residents or any reasonable person of normal sensitiveness residing in the area.

(Ord. 380 Art. 2 § 2, 1975)

9.68.100 - Animals and fowl.

No person shall keep or maintain, or permit the keeping of, upon any premises owned, occupied, or controlled by such person any animal or fowl otherwise permitted to be kept which, by any sound, cry or behavior, shall cause annoyance or discomfort to a reasonable person of normal sensitiveness in any residential neighborhood.

(Ord. 380 Art. 2 § 3, 1975)

9.68.110 - Exhausts.

It is unlawful for any person to cause emission into the open air of the exhaust from any motorboat or motor vehicle except through a muffler or other device which will effectively prevent loud or explosive noises therefrom.

(Ord. 380 Art. 2 § 4, 1975)

9.68.120 - Construction of buildings and projects.

It is unlawful for any person within a residential zone, or within a radius of five hundred feet therefrom, to operate equipment or perform any outside construction or repair work on buildings, structures, or projects or to operate any pile-driver, power shovel, pneumatic hammer, derrick, power hoist, or any other construction type device (between the hours of ten p.m. of one day and seven a.m. of the next day) in such a manner that a reasonable person of normal sensitiveness residing in the area is caused discomfort or annoyance unless beforehand a permit therefor has been duly obtained from the planning and zoning division, department of public services. No permit shall be required to perform emergency work as defined in Section 9.68.020(h).

(Ord. 380 Art. 2 § 5, 1975)

9.68.130 - Hawkers and peddlers.

It is unlawful for any person within the city to sell anything by outcry within any area of the city zoned for residential uses. The provisions of this section shall not be construed to prohibit the selling by outcry of merchandise, food, and beverages at licensed sporting events, parades, fairs, circuses, and other similar licensed public entertainment events.

(Ord. 380 Art. 2 § 6, 1975)

9.68.140 - Drums.

It is unlawful for any person to use any drum or other instrument or device of any kind for the purpose of attracting attention by the creation of noise within the city. This section shall not apply to any person who is a participant in a school band or duly licensed parade or who has been otherwise duly authorized to engage in such conduct.

(Ord. 380 Art. 2 § 7, 1975)

9.68.150 - Schools, churches, libraries, hospitals and convalescent homes.

It is unlawful for any person to create any noise on any city street, sidewalk, or public place adjacent to any school, institution of learning, church or library while the same is in use or adjacent to any hospital or convalescent home, which noise unreasonably interferes with the workings of such institution or which disturbs or unduly annoys patients in such medical facilities, provided conspicuous signs are placed in such streets, sidewalks or public place indicating the presence of these facilities.

(Ord. 380 Art. 2 § 8, 1975)

9.68.160 - Machinery, equipment, fans and air conditioning.

It is unlawful for any person to operate any machinery, equipment, pump, fan, air conditioning apparatus, or similar mechanical device (between the hours of ten p.m. of one day and seven a.m. of the following day), use of which is attended by loud or unusual noises.

(Ord. 380 Art. 2 § 9, 1975)

9.68.170 - Train horns and whistles.

It is unlawful and a public nuisance for any person in this city to blow, or otherwise activate, or permit to be blown or activated, any train whistle, horn or other device designed and intended primarily to make noise at a noise level in excess of seventy-five decibels, or to operate or activate such whistle, horn or other device at any sound level, at any grade crossing protected by automatic safety gates.

(Ord. 409 § 1, 1977; Ord. 380 Art. 2 § 10, 1975)

9.68.180 - Exemptions.

There are exempted from this chapter the following:

- (a) Lawfully conducted parades;
- (b) Emergency work as defined in Section 9.68.020(h);
- (c) Aircraft flight operations;
- (d) Bells, chimes or carillons while being used in conjunction with religious services;
- (e) Commercial motor vehicle operations;
- (f) Emergency energy release devices;
- (g) Speed or endurance events authorized by the city of Duarte, involving motor or other vehicles;
- (h) Surface carriers engaged in commerce by railroad, except for horns and whistles operated within city limits;
- (i) Systems used to warn community of attack or imminent public danger such as flooding or explosion;
- (j) Any noise or situation within the scope of Sections 23130 or 23109 of the Vehicle Code of the state.

(Ord. 380 Art. 2 § 11, 1975)

III. - VEHICLES

9.68.190 - Vehicle repairs.

It is unlawful for any person within any residential area of the city to repair, rebuild, or test any motor vehicle (between the hours of ten p.m. of one day and seven a.m. of the next day) in such a manner that a reasonable person of normal sensitiveness residing in the area is caused discomfort or annoyance.

(Ord. 380 Art. 3 § 1, 1975)

9.68.200 - Motor-driven vehicles.

It is unlawful for any person to operate any motor-driven vehicle within the city in such a manner that a reasonable person of normal sensitiveness residing in the area is caused discomfort or annoyance; provided, however, any such vehicle which is operated upon any public highway, street, or right-of-way shall be excluded from the provisions of this section.

(Ord. 380 Art. 3 § 2, 1975)

IV. - SOUND AMPLIFYING EQUIPMENT

9.68.210 - Purpose of provisions.

The council enacts this legislation for the sole purpose of securing and promoting the public health, comfort, safety, and welfare of its citizenry. While recognizing that the use of sound amplifying equipment is protected by the constitutional rights of freedom of speech and assembly, the council nevertheless feels obligated to reasonably regulate the use of sound amplifying equipment in order to protect the correlative constitutional rights of the citizens of this community to privacy and freedom from public nuisance of loud and unnecessary noise.

(Ord. 380 Art. 4 § 1, 1975)

9.68.220 - Registration statement—Required.

It is unlawful for any person, other than personnel of law enforcement or governmental agencies, to install, use, or operate within the city a loudspeaker or sound amplifying equipment in a fixed or movable position or mounted upon any sound truck for the purposes of giving instructions, directions, talks, addresses, lectures, or transmitting music to any persons or assemblages of persons in or upon any street, alley, sidewalk, park, place, or public property without first filing a registration statement and obtaining approval thereof as set forth in Sections 9.68.230 through 9.68.280.

(Ord. 380 Art. 4 § 2, 1975)

9.68.230 - Registration statement—Filing and contents.

Every user of sound amplifying equipment shall file a registration statement with the planning and zoning division, department of public services, ten days prior to the date on which the sound amplifying equipment is intended to be used, which statement shall contain the following information:

- (1) The name, address and telephone number of both the owner and user of the sound amplifying equipment;
- (2) The maximum sound producing power of the sound amplifying equipment which shall include the wattage to be used, the volume in decibels of sound which will be produced, and the approximate distance for which sound will be audible from the sound amplifying equipment;
- (3) The license and motor number if a sound truck is to be used;
- (4) A general description of the sound amplifying equipment which is to be used; and
- (5) Whether the sound amplifying equipment will be used for commercial or noncommercial purposes.

(Ord. 380 Art. 4 § 3(a), 1975)

9.68.240 - Registration statement—Approval—Disapproval when.

The planning and zoning division shall return to the applicant an approved certified copy of the registration statement unless it is found that:

- (a) The conditions of the motor vehicle movement are such that, in the opinion of the planning and zoning division, use of the equipment would constitute a detriment to traffic safety; or
- (b) The conditions of pedestrian movement are such that use of the equipment would constitute a detriment to traffic safety; or
- (c) The registration statement required reveals that the applicant would violate the provisions set forth in Section 9.68.280 or any other provisions of this code.

(Ord. 380 Art. 4 § 3(b), 1975)

9.68.260 - Registration statement—Disapproval—Appeal.

Any person aggrieved by disapproval of a registration statement may appeal by complying with the provisions of this code relating to appeals.

(Ord. 380 Art. 4 § 4, 1975)

9.68.270 - Fees.

Prior to the issuance of the registration statement, a fee in an amount established by resolution of the city council shall be paid to the city.

(Ord. 781 § 1 (part), 2006)

9.68.280 - Regulations.

The commercial and noncommercial use of sound amplifying equipment shall be subject to the following regulations:

- (a) The only sounds permitted shall be either music or human speech, or both.
- (b) The operation of sound amplifying equipment shall only occur between the hours of seven a.m. and ten p.m. of each day except on Sundays and legal holidays. No operation of sound amplifying equipment for commercial purposes shall be permitted on Sundays or legal holidays. The operation of sound amplifying equipment for noncommercial purposes on Sundays and legal holidays shall only occur between the hours of ten a.m. and six p.m.
- (c) Sound level emanating from sound amplifying equipment shall not exceed fifteen decibels above the ambient base noise level.
- (d) Notwithstanding the provisions of subsection (c) of this section, sound amplifying equipment shall not be operated within two hundred feet of churches, schools, hospitals, convalescent homes, or city or county buildings.
- (e) In any event, the volume of sound shall be so controlled that it will not be unreasonably loud, raucous, jarring, disturbing, or a nuisance to reasonable persons of normal sensitiveness within the area of audibility.

(Ord. 380 Art. 4 § 6, 1975)

V. - NOISE DISTURBANCES

9.68.300 - Fees for the use of police personnel at loud or unruly assemblages.

When any loud or unruly assemblage occurs or is held, and the city's law enforcement agency is required to respond to the scene in response to citizen complaints and the senior peace officer at the scene determines that there is a threat to the public peace, health safety or general welfare, then that senior peace officer shall notify the owner of the property and/or the person in charge of the property where the assemblage exists, and/or the person responsible for the said assemblage, that such person or persons, or in the case of a minor, the parents and/or guardians of such minor, will be held personally liable for the cost of providing additional law enforcement personnel on special security assignment over and above the normal services provided by the law enforcement agency in response to such assemblage. Such person or persons shall be given a first warning, in the form of notification by the said senior peace officer as above described, that the first police response as above described, shall be deemed to be the normal police services provided. The police personnel necessarily utilized after such first warning to control the threat to the public peace, health, safety or general welfare shall be deemed to be on special security assignment over and above the normal services provided and the owner of the property and/or the person in charge of the property where such assemblage occurs, and/or the person responsible for such assemblage, shall be personally responsible for the cost of such special security assignment in an amount determined upon a cost accounting basis by the city. The cost of such special security assignment, shall include damage to city property and/or injuries to city personnel. A fee charged will not be in excess of five hundred dollars for a single incident. The city reserves its legal options to elect any other legal remedies when said costs or damage exceed five hundred dollars.

(Ord. 631 § 1, 1987)

- City of Irwindale General Plan Public Safety Element



City of Irwindale GENERAL PLAN UPDATE

**City of Irwindale
5050 North Irwindale Avenue
Irwindale, California 91706**



June 2008



Section 6 Public Safety Element

**City of Irwindale
2020 General Plan**

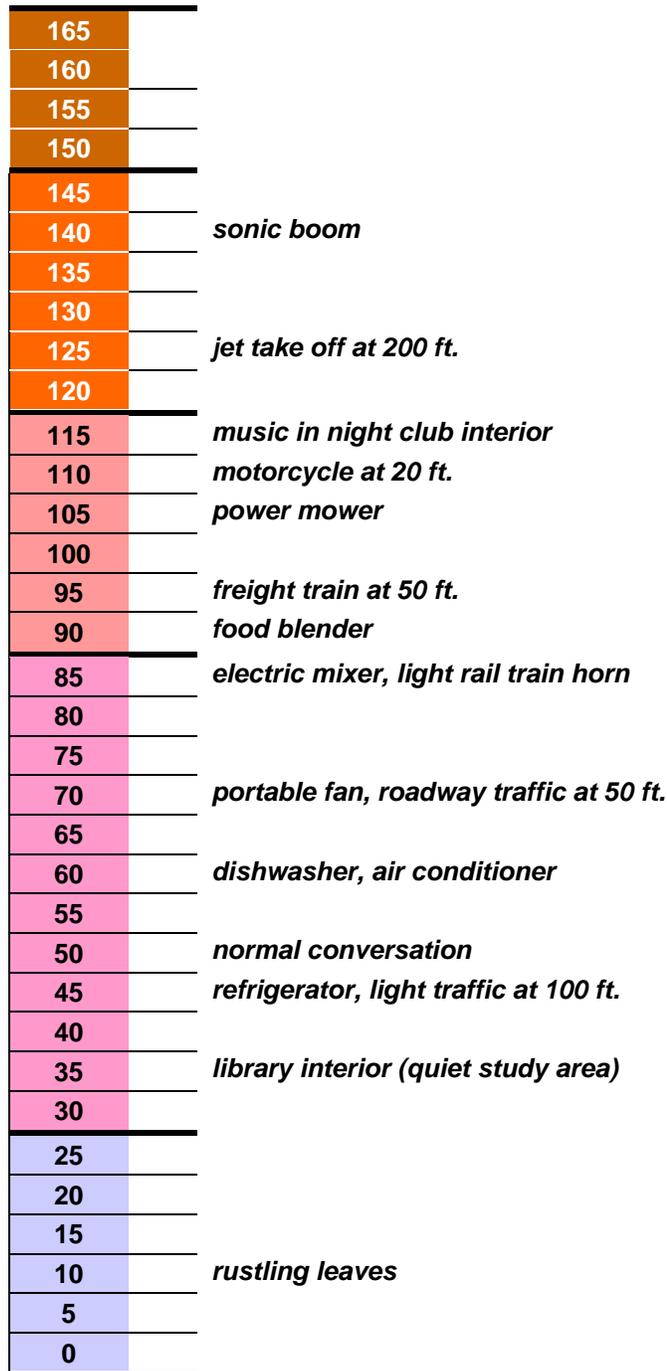


Exhibit 6-5
Typical Noise Levels
City of Irwindale General Plan



Noise and Land Use Compatibility

Guidelines governing land use and noise compatibility have been prepared by a number of Federal and State agencies including the Federal Highway Administration, the Environmental Protection Agency (EPA), the Department of Housing and Urban Development, the American National Standards Institute and the State of California. These guidelines, presented in the following paragraphs, are all based upon cumulative noise criteria such as Leg, LDN or CNEL.

- *Environmental Protection Agency.* In March 1974, the EPA published "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety" (EPA 550/9-74-004). This report indicates that 55 LDN is the requisite level with an adequate margin of safety for areas with outdoor uses, including residential and recreational areas. The EPA "levels document" does not constitute a standard, specification or regulation, but identifies safe levels of environmental noise exposure without consideration for economic cost for achieving these levels.
- *Federal Highway Administration (FHWA).* The FHWA has adopted and published noise abatement criteria for highway construction projects. The FHWA noise abatement criterion established an exterior noise goal for residential land uses of 67 Leq and an interior goal for residences of 52 Leq. The noise abatement criterion applies to private yard areas and assumes that typical wood frame homes with windows open provide a 10 dB noise reduction (outdoor to indoor) and 20 dB noise reduction with windows closed.
- *State of California.* The State requires every city and county to adopt noise elements as part of their general plans. Such noise elements must contain a noise/land use compatibility matrix. A recommended (but not mandatory) matrix is presented in the "Guidelines for the Preparation and Content of Noise Elements of the General Plan," (Office of Noise Control, California Department of Health, February 1976).

Ambient Noise Environment in Irwindale

The sources of noise in Irwindale fall into five basic categories. These include freeways, both the Foothill Freeway and the San Gabriel River Freeway; aircraft over flights; major and minor arterial roadways; railroad lines; and stationary sources. Each of these sources and their impacts on the noise environment

of Irwindale are summarized in the following paragraphs.

- *Freeways.* The San Gabriel River Freeway (I-605) traverses the westerly boundary of the city in a north/south direction. This freeway is generally below grade with respect to the adjacent areas. Most of the development along the freeway is commercial, along with quarry operations. The Foothill Freeway (I-210) is elevated at least twenty feet above the adjacent areas and no walls exist at the present time.
- *Traffic Noise.* Traffic noise on surface streets is a significant source of noise within the community. Noise levels along roadways are affected by a number of factors. Most important is the average daily traffic (ADT). Roadways in Irwindale have a very high percentage of truck traffic resulting from the mining operations and industrial development in the City.
- *Airports and Heliports.* There are no airports located in Irwindale, nor are there any specific flight corridors that overfly the City. The nearest general aviation airport is located in El Monte. During field surveys conducted in the City, helicopter operations were observed in the vicinity of the Santa Fe Dam.
- *Railroads.* The City of Irwindale has a number of main railroad and spur lines. Major lines located in the city include the BN&SF Railroad, the Los Angeles Junction Railroad Company, Southern Pacific Railroad Company and the Union Pacific Railroad Company. The majority of the railroad traffic consists of freight trains performing switcher operations. A Metrolink commuter line is located in the southern portion of the City.
- *Stationary Sources.* The City of Irwindale contains a large number of stationary noise sources. Commercial areas located near residential areas from adjacent cities result in occasional noise impacts. The primary noises associated with industrial and commercial operations include truck traffic, air compressors, generators, outdoor loudspeakers and gas venting.

The existing traffic noise levels from major roadways in the City were computed using the Highway Noise Model published by the Federal Highway Administration ("FHWA Highway Traffic Noise Prediction Model," FHWA-RD-77-108, December 1978). The FHWA model uses traffic volume, vehicle mix, vehicle speed, and roadway geometry to compute the Leq noise level. The results of this analysis are shown in Table 6-2.



**Table 6-2
Traffic Noise Levels Along Major Arterial Roadways Serving the City**

Roadway Segment	Distance to CNEL Contour (in feet)				CNEL (dBA) 50' from Centerline
	55 CNEL	60 CNEL	65 CNEL	70 CNEL	
Foothill Freeway (I-210)	2,157	1,930	993	110	72.3
San Gabriel River Freeway (I-605)	2,303	2,120	1,220	125	74.1
Arrow Highway (north of Live Oak)	1,100	750	510	15	63.1
Arrow Highway (between Live Oak & Irwindale)	1,215	727	493	27	61.7
Arrow Highway (east of Irwindale)	1,201	693	373	19	61.3
Foothill Boulevard	975	427	210	0	61.0
Irwindale Avenue (north of Arrow)	750	375	163	0	60.7
Irwindale Avenue (south of Arrow)	501	320	110	0	60.5
Live Oak Avenue	275	101	47	0	58.2

Source: FHWA Noise Prediction Model

The City of Irwindale has three types of noise-sensitive receptors within the city boundaries. Residential areas, the school, and the Santa Fe Dam Recreation Area are currently exposed to several fixed and transient sources of noise. In general, mining operations in the City of Irwindale are not considered significant stationary noise sources. Because noise travels in a line-of-sight manner and attenuates with distance, the depth of the quarries provide significant separation and the pit walls serve as a barrier around the operating equipment. Above-grade sand and gravel mining plant sites and their conveyor systems, however, have been a source of stationary noise for the community.

The Irwindale Speedway is an additional source of noise. Designers have been deliberate about mitigating any potential impact to the City or neighboring communities. The track has been designed so that the major noise contributors located within the pit and paddock areas are located further away from sensitive noise receptors. Noise attenuating bleachers are also used to dampen any noise created by activities and capture it within the

Speedway site rather than allowing it to release into neighboring areas. The City has implemented a noise monitoring program with the cooperation of the Speedway operator to ensure this potential noise source remains in compliance with the City codes.

The noise environment in Irwindale was determined through comprehensive noise measurement surveys with nine sites selected for the measurement of the ambient noise levels. The measurement locations were selected based on proximity to major noise sources and noise sensitivity of the land use. Each site was monitored for a minimum of 15 minutes. The quantities measured were the Equivalent Noise Level (Leg) and the Percent Noise Levels (L%). Percent Noise Levels are another method of characterizing ambient noise where, for example, L90 is the noise level exceeded 90% of the time, L50 represents the noise level exceeded 50% of the time, and L10 is the level exceeded 10% of the time. L90 represents the background or minimum noise level, L50 represents the average noise level, and L10 the peak or intrusive noise levels. The results of this measurement survey are summarized below in Table 6-3.



Table 6-3 Noise Measurement Survey Results				
Map Reference No. and Location	Measured Noise Levels (in dBA)			Major Source of Noise Affecting the Area
	L10	L50	L90	
1. Foothill/Irwindale	73.3	71.7	69.5	Freeway traffic
2. Irwindale/I 210 Freeway	74.1	73.0	70.1	Freeway traffic
3. Live Oak/I 605 Freeway	71.3	69.7	65.7	Freeway traffic
4. Arrow/Motor	69.1	67.2	64.3	Traffic
5. Arrow/Irwindale	68.5	66.6	63.4	Traffic/machinery
6. Irwindale/Gladstone	67.1	65.3	62.1	Trucks
7. Civic Center	62.3	60.1	58.7	Traffic
8. Vincent/Cypress	61.5	59.3	52.1	Traffic
9. Los Angeles Street	60.7	58.7	54.3	Traffic
Source: Blodgett/Baylosis Associates				

Air Quality

The City of Irwindale is located in the South Coast Air Basin, which includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and the San Bernardino Counties. In 1996, the federal standards for ozone and PM-10 were exceeded in this Basin, which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAQMD is responsible for monitoring and measuring air quality in the area and maintains a monitoring station in the City of Azusa.

The South Coast Air Basin has been declared a non-attainment area because it has levels of one or more pollutants exceeding national ambient air quality standards. Generally there are five main sources of air pollution emissions in the City of Irwindale: truck traffic; vehicular traffic (including employee work trips); on-site gas/diesel powered equipment operations; stationary emissions from asphalt and cement plants, and particulate matter associated with mining activities.

The area's climate is semi-arid and characterized by moist, mild winters and hot, dry summers accompanied by sea breezes. Wind patterns vary seasonally; westerly winds predominate in the summer months and northeasterly winds in the winter months. Local Southern California weather is affected by winter storms moving along the Pacific Coast,

warm tropical air masses, and hot, dry Santa Ana winds caused by high-pressure systems in the Great Basin.

The dominant daily wind pattern consists of a daytime sea breeze blowing inland from the ocean followed by a nighttime land breeze blowing from the inland areas toward the coast. The climate in Irwindale is consistent with the region's temperate weather patterns. The average daily temperatures range from between 40 F. and 90°F. with an average annual temperature of 64.4°F. Annual precipitation averages approximately 15 to 18 inches per year with most of this precipitation occurring during the winter months. During the summer, the air within the high-pressure center over the ocean sinks and warms. Near the ocean's surface, the air cools due to its contact with the cooler water. This forms a shallow, well-mixed layer of marine air approximately 1,000 feet deep capped by a massive layer of warm air. Pollutants emitted near the ground remain trapped within that shallow layer.

As each pollution source adds its contribution to that layer, the air arriving at the eastern portion of the Los Angeles metropolitan area may become highly polluted with visibility-degrading aerosols and with unhealthy, invisible gaseous pollutants. This condition will continue and become more concentrated until either the inversion breaks or surface winds increase to disperse the pollutants horizontally. The primary source of emissions in

- City of Irwindale Municipal Code (pertinent sections re noise)

City of Irwindale Municipal Code

Chapter 9.28 - NOISE REGULATION

Sections:

9.28.010 - Declaration of policy.

It is declared to be the policy of the city to prohibit unnecessary, excessive and annoying noises from all sources subject to its police power and contrary to the public interest. At certain levels noises are detrimental to the health and welfare of the citizenry and in the public interest shall be systematically proscribed.

(Ord. 297 § 1(part), 1976: prior code § 4800).

9.28.020 - Definitions.

As used in this chapter, unless the context otherwise clearly indicates, the words and phrases used in this chapter are defined as follows:

- A. "Ambient base noise level" means reasonable and representative ambient noise levels in various land use categories in the city and at various times as established by the planning commission.
- B. "Ambient noise level" means the all-encompassing noise associated with a given environment, usually being a composite of sounds with many sources excluding the alleged offensive noise at the location and approximate time at which a comparison with the alleged offensive noise is to be made.
- C. "Commercial purpose" means and includes the use, operation, or maintenance of any sound amplifying equipment for the purpose of advertising any business, or any good, or any services, or for the purpose of attracting the attention of the public to, or advertising for, or soliciting patronage or customers to or for any performance, show entertainment, exhibition, or event, or for the purpose of demonstrating any such sound equipment.
- D. "Decibel (dB)" means a unit of level which denotes the ratio between two quantities which are proportional to power; the number of decibels corresponding to the ratio of two amounts of power is ten times the logarithm to the base ten of this ratio.
- E. "Emergency work" means work made necessary to restore property to a safe condition following a public calamity, or work required to protect persons or property from an imminent exposure to danger, or work performed by public utilities or public agencies and utility companies.
- F. "Motor vehicles" includes, but is not limited to, off-road vehicles, minibikes and gocarts.
- G. "Noise level" means the "A" weighted sound pressure level in decibels obtained by using a sound level meter at slow response with a reference pressure of twenty micronewtons per square meter. The unit of measure is the dB(A).
- H. "Noncommercial purpose" means the use, operation, or maintenance of any sound amplifying equipment for other than a commercial purpose. "Noncommercial purpose" means and includes, but shall not be limited to, philanthropic, political, patriotic and charitable purposes.
- I. "Person" means a person, firm, association, copartnership, joint venture, corporation, or any entity, public or private in nature.

- J. "Sound amplifying equipment" means any machine or device for the amplification of the human voice, music, or any other sound. "Sound amplifying equipment" does not include standard automobile radios when used and heard only by the occupants of the vehicle in which the automobile radio is installed. "Sound amplifying equipment," as used in this chapter, does not include warning devices on authorized safety emergency vehicles or horns or other warning devices on any vehicle used only for traffic safety purposes.
- K. "Sound level meter" means an instrument meeting American National Standard Institute's Standard S1.4-1971 for Type 1 or Type 2 sound level meters or an instrument and the associated recording and analyzing equipment which will provide equivalent data.
- L. "Sound pressure level," in decibels, of a sound means twenty times the logarithm to the base ten of the ratio of the pressure of this sound to the reference pressure, which reference pressure shall be explicitly stated.
- M. "Sound truck" means any motor vehicle, or any other vehicle regardless of motive power, whether in motion or stationary, having mounted thereon, or attached thereto, any sound amplifying equipment.

(Ord. 297 § 1(part), 1976: prior code § 4801).

9.28.030 - Ambient base noise levels designated—Proof of violation.

A. Where the ambient noise level is less than designated in this section, the ambient base noise level in this section shall govern.

Zone	Ambient Base Noise Level	
	10 p.m. to 7 a.m.	7 a.m. to 10 p.m.
Residential	45	50
Commercial	50	55
Industrial	60	70

B. Any noise at a level which exceeds the ambient or the ambient base level as set forth in subsection A of this section, whichever is greater, by more than ten dB when measured at any boundary line of the property from which the noise emanates shall constitute sufficient proof of a violation.

(Ord. 297 § 1(part), 1976: prior code § 4803).

9.28.040 - Noise level violation designated.

It is unlawful for any person to wilfully make or continue, or cause to be made or continued any noise at a level which exceeds by more than five dB the ambient or the ambient base level as set

forth in Section 9.28.030, whichever is greater, when measured at any boundary line of the property from which the noise emanates.

(Ord. 297 § 1(part), 1976: prior code § 4804).

9.28.050 - Radios, television sets and similar devices.

It is unlawful for any person within any residential zone of the city to use or operate any radio receiving set, musical instrument, phonograph, television set or other machine or device for the producing or reproducing of sound in a manner which would constitute a violation of Section 9.28.040.

(Ord. 297 § 1(part), 1976: prior code § 4820).

9.28.060 - Hawkers and peddlers.

It is unlawful for any person within the city to sell anything by outcry within any area of the city zones for residential uses.

(Ord. 297 § 1 (part), 1976: prior code § 4821).

9.28.070 - Drums.

It is unlawful for any person to use any drum or other instrument or device of any kind for the purpose of attracting attention for commercial purposes by the creation of noise within the city. This section shall not apply to any person who is a participant in a duly authorized parade or who has been otherwise duly authorized to engage in such conduct.

(Ord. 297 § 1(part), 1976: prior code § 4822).

9.28.080 - Schools and churches.

It is unlawful for any person to create any noise on any street, sidewalk or public place adjacent to any school, institution of learning, or church while the same is in use, if such noise unreasonably interferes with the working of such institution or would constitute a violation of Section 9.28.040.

(Ord. 297 § 1(part), 1976: prior code § 4823).

9.28.090 - Animals and fowl.

No person shall keep or maintain, or permit the keeping of, upon any premises owned, occupied or controlled by such person, any animal or fowl otherwise permitted to be kept which, by any sound, cry, or behavior, shall cause noise in any residential neighborhood which would constitute a violation of Section 9.28.040, or otherwise constitute a nuisance.

(Ord. 297 § 1(part), 1976: prior code § 4824).

9.28.100 - Machinery, equipment, fans, and air conditioning.

It is unlawful for any person to operate any machinery, equipment, pump, fan, air-conditioning apparatus, or similar mechanical device in any manner so as to create any noise which would cause the noise level at any boundary line of any property from which such noise emanates to exceed the ambient noise level or the ambient base level as set forth in Section 9.28.030, whichever is greater, by more than ten decibels; provided, however, this section shall not prevent the reasonable operation of customary household gardening equipment or hobby shop equipment during the hours of eight a.m. to nine p.m., Monday through Saturday, and ten a.m. to eight p.m. on Sunday, provided the same may not exceed eighty decibels (as measured from the adjacent property line) for more than three hours from sunup to sundown.

(Ord. 297 § 1(part), 1976: prior code § 4825).

9.28.110 - Construction of building and projects—Times specified.

A. It is unlawful for any person within a residential zone, or within a radius of five hundred feet therefrom, to operate equipment or perform any outside construction or repair work on buildings, structures, or projects or to operate any pile driver, steam shovel, pneumatic hammer, derrick, steam or electric hoist or other construction type device on a development requiring a city permit, in such a manner that noise is produced which would constitute a violation of Section 9.28.040, unless beforehand authorization therefor has been duly obtained from the building inspector. Such activity is unlawful without a permit during all hours on Sunday. No permit shall be required to perform emergency work as defined in subsection E of 9.28.020.

B. Construction authorized by subsection A of this section shall be limited to seven a.m. to seven p.m.

(Ord. 297 § 1(part), 1976: prior code § 4830).

9.28.120 - Industry and racetracks.

The noise level from industrial plants, auto wreckers, junkyards, racetracks or other industrial user shall not exceed the levels set forth in Section 9.28.040, except as may be specifically authorized by permit from the city.

(Ord. 297 § 1(part), 1976: prior code § 4860).

9.28.130 - Vehicle repairs.

It is unlawful for any person within any residential area of the city to repair, rebuild or test any motor vehicle thereby producing noise which would constitute a violation of Section 9.28.040.

(Ord. 297 § 1 (part), 1976: prior code § 4840).

9.28.140 - Motor-driven vehicles.

It is unlawful for any person to operate any motor-driven vehicle within the city in such a manner producing noise which would constitute a violation of Section 9.28.040.

(Ord. 297 § 1(part), 1976: prior code § 4841).

9.28.150 - Amplified sound—Purpose of provisions.

The council enacts this legislation for the sole purpose of securing and promoting the public health, comfort, safety and welfare for its citizenry. While recognizing that the use of sound amplifying equipment for certain purposes is protected by the constitutional rights of freedom of speech and assembly, the council nevertheless feels obligated to reasonably regulate the use of sound amplifying equipment in order to protect the correlative constitutional rights of the citizens of this community to privacy and freedom from public nuisance of loud and unnecessary noise.

(Ord. 297 § 1(part), 1976: prior code § 4850).

9.28.160 - Amplified sound—Commercial use prohibited.

It is unlawful for any person to install, use, or operate within the city for commercial purposes, a loudspeaker or sound amplifying equipment in a fixed or movable position or mounted upon any sound truck.

(Ord. 297 § 1(part), 1976: prior code § 4851).

9.28.170 - Amplified sound—Registration statement—Required.

It is unlawful for any person, other than personnel of law enforcement or governmental agencies, to install, use or operate within the city for noncommercial purposes a loudspeaker or sound amplifying equipment in a fixed or movable position or mounted upon any sound truck for the purposes of giving instructions, directions, talks, addresses, lectures or transmitting music to any persons or assemblages of persons in or upon any street, alley, sidewalk, park, place or public property without first filing a registration statement and obtaining approval thereof, as set forth in Section 9.28.180.

(Ord. 297 § 1(part), 1976: prior code § 4852).

9.28.180 - Amplified sound—Registration statement—Filing—Approval—Disapproval—Revocation.

A. Filing. Every user of sound amplifying equipment for noncommercial purposes shall file a registration statement with the chief of police ten days prior to the date on which the sound amplifying equipment is intended to be used, which statement shall contain the following information:

1. The name, address and telephone number of both the owner and user of the sound amplifying equipment;
 2. The maximum sound producing power of the sound amplifying equipment which shall include the wattage to be used, the volume in decibels of sound which will be produced, and the approximate distance for which sound will be audible from the sound amplifying equipment;
 3. The license and motor number if a sound truck is to be used;
 4. A general description of the sound amplifying equipment which is to be used; and
 5. The nature of the use of the sound amplifying equipment proposed to be used for noncommercial purposes.
- B. Approval. The chief of police shall return to the applicant an approved certified copy of the registration statement unless he finds that:
1. The conditions of the motor vehicle movement are such that in the opinion of the chief of police, use of the equipment would constitute a detriment to traffic safety; or
 2. The conditions of pedestrian movement are such that use of the equipment would constitute a detriment to traffic safety; or
 3. The registration statement required reveals that the applicant would violate the provisions set forth in Section 9.28.150, or any other provisions of this code.
- C. Disapproval. In the event the registration statement is disapproved, the chief of police shall endorse upon the statement his reasons for disapproval and return it forthwith to the applicant.
- D. Revocation. Any such permit may be revoked for violation of Section 9.28.150.

(Ord. 297 § 1(part), 1976: prior code § 4853).

9.28.190 - Amplified sound—Appeals.

Any person aggrieved by disapproval of a registration statement may file an appeal to the city council within ten days of the date of disapproval. The city council shall decide the appeal at its next meeting.

(Ord. 297 § 1(part), 1976: prior code § 4854).

9.28.200 - Amplified sound—Regulations of noncommercial use.

The noncommercial use of sound amplifying equipment shall be subject to the following regulations:

- A. The only sound permitted shall be either music or human speech or both.
- B. The operation of sound amplifying equipment shall only occur between the hours of eight a.m. and six p.m. each day except on Sundays and legal holidays. The operation of sound amplifying equipment on Sundays and legal holidays shall only occur between the hours of ten a.m. and six p.m.
- C. No sound emanating from sound amplifying equipment shall exceed fifteen dB above the ambient as measured at any property line.

- D. Notwithstanding the provisions of subsection C of this section, sound amplifying equipment shall not be operated within two hundred feet of churches, schools, or city or county buildings, except by special permit.
- E. In any event, the volume of sound shall be so controlled that it will not be unreasonably loud, raucous, jarring, disturbing or a nuisance to reasonable persons of normal sensitiveness within the area of audibility.

(Ord. 297 § 1(part), 1976: prior code § 4855).

9.28.210 - Excessive noise prohibited.

Notwithstanding any other provision of this chapter, it is unlawful for any person to wilfully make or continue, or cause to be made or continued, any loud, unnecessary, or unusual noise which disturbs the peace or quiet of any neighborhood.

(Ord. 297 § 1(part), 1976: prior code § 4870).

9.28.220 - Standards for determining violation of Section 9.28.210.

The standards which may be considered in determining whether a violation of the provisions of Section 9.28.210 exists shall include, but not be limited to, the following:

- A. The loudness of the noise;
- B. The intensity of the noise;
- C. Whether the nature of the noise is usual or unusual;
- D. Whether the origin of the noise is natural or unnatural;
- E. The loudness and intensity of the background noise, if any;
- F. The proximity of the noise to residential sleeping facilities;
- G. The nature and zoning of the area within which the noise emanates;
- H. The density of the inhabitation of the area within which the noise emanates;
- I. The time of the day or night the noise occurs;
- J. The duration of the noise;
- K. Whether the noise is recurrent, intermittent, or continuous; and
- L. Whether the noise is produced by a commercial or residential activity.

(Ord. 297 § 1(part), 1976: prior code § 4871).

9.28.230 - Exclusions to chapter applicability.

The provisions of this chapter shall not apply to:

- A. Sound produced by motor vehicles as regulated by sound limitation provisions of the California Vehicle Code when such vehicle is located or operated on any public street, right-of-way or highway;

- B. Aircraft operated in conformity with federal law;
- C. Public and private schools, organized activities including sports, carnivals, assemblies and other regular activities;
- D. Construction, operation, maintenance and repairs of equipment, apparatus or facilities of park and recreation departments, public works projects or essential public services and facilities, including those of public utilities subject to the regulatory jurisdiction of the California Public Utilities Commission;
- E. Activities of the federal, state or local government;
- F. Any noise continuing for less than thirty seconds at intervals greater than once in three hours.

(Ord. 297 § 1(part), 1976: prior code § 4880).

9.28.240 - Effect of chapter.

Nothing in this chapter shall authorize any use otherwise prohibited or regulated by this code.

(Ord. 297 § 1(part), 1976: prior code § 4808).

9.28.250 - Noise level enforcement criteria.

Enforcement of the provisions of this chapter shall be based on a noise level measurement to establish the noise level. The measurement shall be taken in accordance with the city's administrative instruction concerning noise level measurement procedure.

(Ord. 297 § 1(part), 1976: prior code § 4802).

9.28.251 - Residential parties—Publicized commercialism regulated.

A. Definitions. For the purpose of this section:

1. "Major party" means a group of more than fifty persons meeting together for social, recreational or amusement purposes, but excluding meetings for political, charitable or religious purposes.
 2. "Residence" means:
 - a. any property used for residential use; and
 - b. any property situated in any of the residential zones as defined and zoned in the zoning code of this city.
 3. "Publicized" means an open invitation circulated by flyer or advertised by publication, posting or distribution in or about public places suggesting unlimited or unreserved attendance.
 4. "Commercial" means the suggestion or request of a monetary charge for admission.
 5. "Permit" means a permit issued by either the city council, city manager or police chief. Such permit shall be issued upon application unless the issuer finds that such party will (or is likely to) cause problems relating to traffic, overcrowding, noise, hours after eleven p.m. or other matters affecting residential quality of life. Such permits may also contain appropriate conditions.
- B. It is unlawful to have or permit a publicized commercial major party in a residence in this city without a permit or other than in compliance with such permit.

C. violation of this section is punishable by a fine not to exceed five hundred dollars or by imprisonment for not to exceed six months, or by both such fine and imprisonment.

(Ord. 408 § 1, 1986: Ord. 366 § 1, 1983).

9.28.260 - Violations—Penalties.

Any person violating any of the provisions of this chapter shall be deemed guilty of a misdemeanor and, upon conviction thereof, shall be fined in an amount not exceeding five hundred dollars or be imprisoned in the county jail for a period not exceeding six months, or by both such fine and imprisonment. Each day such violation is committed or permitted to continue shall constitute a separate offense and shall be punishable as such.

(Ord. 297 § 1(part), 1976: prior code § 4805).

9.28.270 - Violations—Additional remedies—Injunctions.

As an additional remedy, the operation or maintenance of any device, instrument, vehicle, or machinery in violation of any provision of this chapter shall be deemed, and is declared to be, a public nuisance and may be subject to abatement summarily by a restraining order or injunction issued by a court of competent jurisdiction.

(Ord. 297 § 1(part), 1976: prior code § 4806).

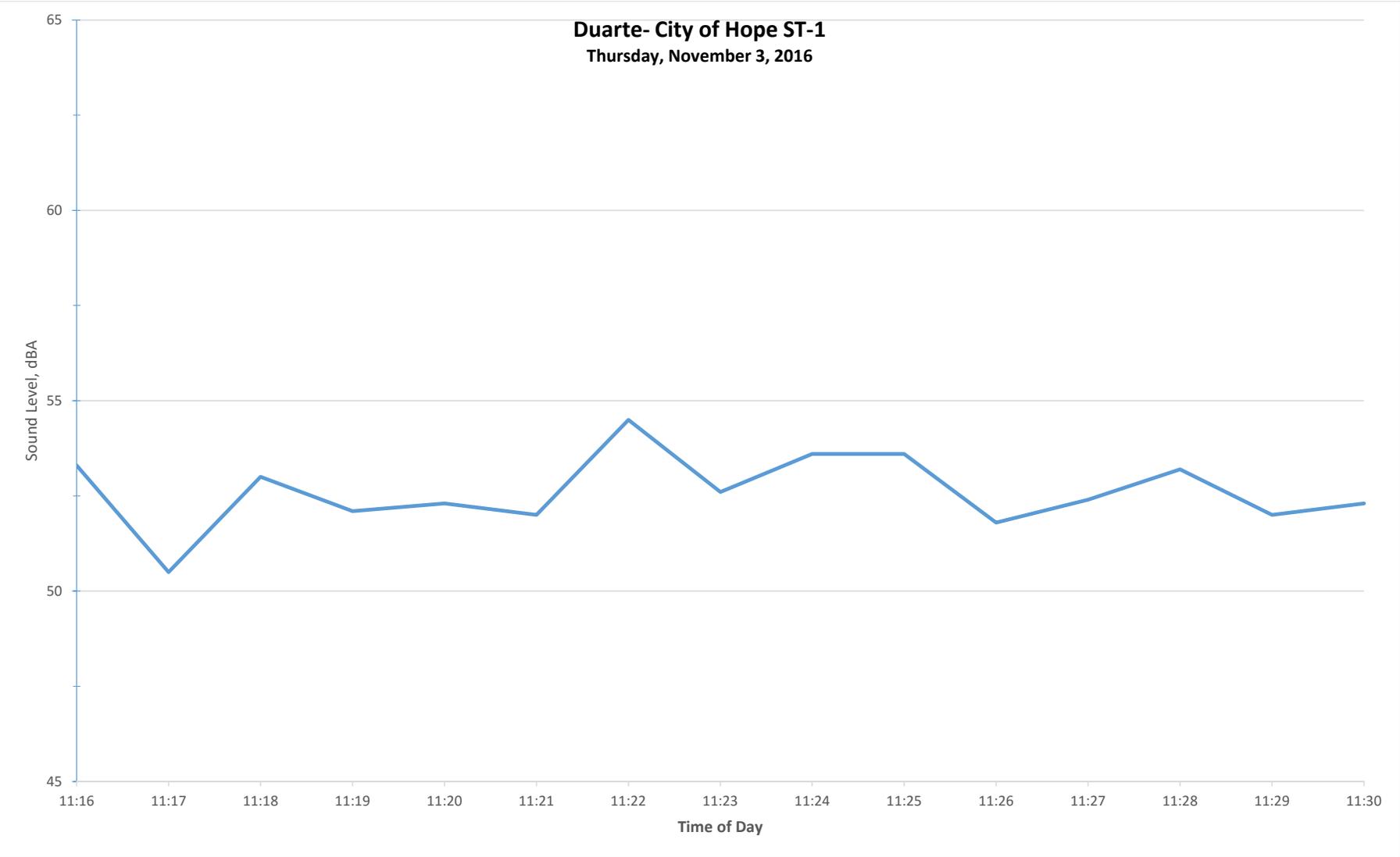
- Ambient Noise Field Measurement Details

ST-1 Time History

Date	Time	Level	SEL
3-Nov-16	11:16:45	53.3	71
3-Nov-16	11:17:45	50.5	68.3
3-Nov-16	11:18:45	53	70.8
3-Nov-16	11:19:45	52.1	69.9
3-Nov-16	11:20:45	52.3	70.1
3-Nov-16	11:21:45	52	69.8
3-Nov-16	11:22:45	54.5	72.2
3-Nov-16	11:23:45	52.6	70.3
3-Nov-16	11:24:45	53.6	71.4
3-Nov-16	11:25:45	53.6	71.4
3-Nov-16	11:26:45	51.8	69.6
3-Nov-16	11:27:45	52.4	70.2
3-Nov-16	11:28:45	53.2	70.9
3-Nov-16	11:29:45	52	69.8
3-Nov-16	11:30:45	52.3	70

15-min Leq 52.7

Date	Time	Duration	Leq	ST-1 Intervals			Peak	UW Peak	L(2)	L(8)	L(10)	L(25)	L(50)	L(90)
				SEL	Lmax	Lmin								
3-Nov-16	11:16:45	900	52.7	82.3	61.2	49.1	85.3	93.2	56.5	54.6	54.3	53.2	52.2	50.9

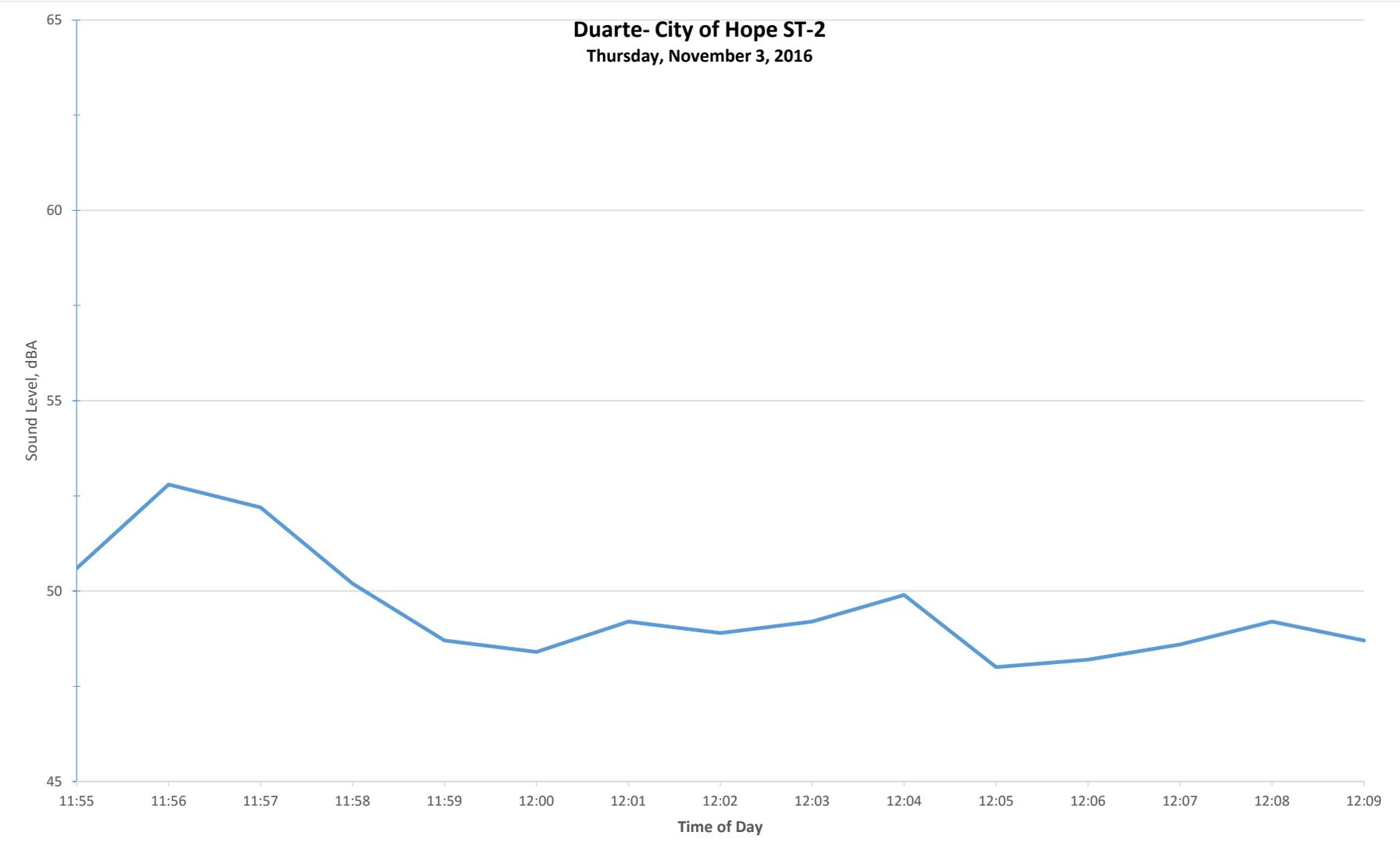


ST-2 Time History

Date	Time	Level	SEL
3-Nov-16	11:55:58	50.6	68.4
3-Nov-16	11:56:58	52.8	70.6
3-Nov-16	11:57:58	52.2	70
3-Nov-16	11:58:58	50.2	67.9
3-Nov-16	11:59:58	48.7	66.5
3-Nov-16	12:00:58	48.4	66.2
3-Nov-16	12:01:58	49.2	67
3-Nov-16	12:02:58	48.9	66.7
3-Nov-16	12:03:58	49.2	67
3-Nov-16	12:04:58	49.9	67.7
3-Nov-16	12:05:58	48	65.8
3-Nov-16	12:06:58	48.2	66
3-Nov-16	12:07:58	48.6	66.4
3-Nov-16	12:08:58	49.2	67
3-Nov-16	12:09:58	48.7	66.5

15-min Leq

Date	Time	Duration	Leq	ST-2 Intervals			Peak	UW Peak	L(2)	L(8)	L(10)	L(25)	L(50)	L(90)
				SEL	Lmax	Lmin								
3-Nov-16	11:55:58	900	49.8	79.3	58.4	46.3	79.9	97.4	54.9	52.1	51.7	49.9	48.9	47.4

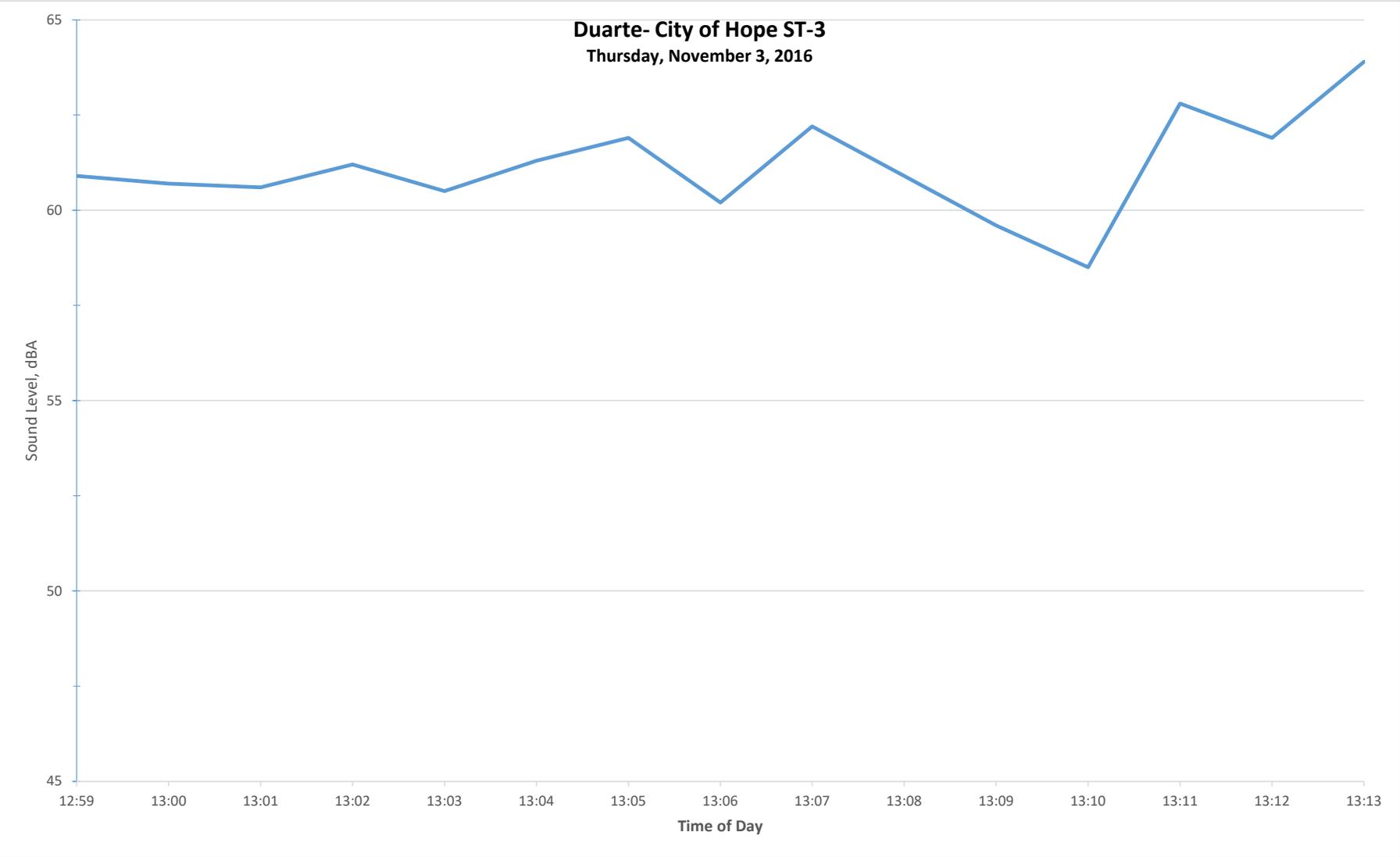


ST-3 Time History

Date	Time	Level	SEL
3-Nov-16	12:59:49	60.9	78.7
3-Nov-16	13:00:49	60.7	78.5
3-Nov-16	13:01:49	60.6	78.4
3-Nov-16	13:02:49	61.2	79
3-Nov-16	13:03:49	60.5	78.3
3-Nov-16	13:04:49	61.3	79.1
3-Nov-16	13:05:49	61.9	79.7
3-Nov-16	13:06:49	60.2	77.9
3-Nov-16	13:07:49	62.2	79.9
3-Nov-16	13:08:49	60.9	78.7
3-Nov-16	13:09:49	59.6	77.4
3-Nov-16	13:10:49	58.5	76.2
3-Nov-16	13:11:49	62.8	80.6
3-Nov-16	13:12:49	61.9	79.7
3-Nov-16	13:13:49	63.9	81.7
3-Nov-16	13:14:49	61	78.8

15-min Leq 61.3

Date	Time	Duration	Leq	ST-3 Intervals			Peak	UW Peak	L(2)	L(8)	L(10)	L(25)	L(50)	L(90)
				SEL	Lmax	Lmin								
3-Nov-16	12:59:49	900	61.3	90.9	72.8	56.9	85.4	94.3	66.5	64.3	63.9	61.8	59.9	58.1

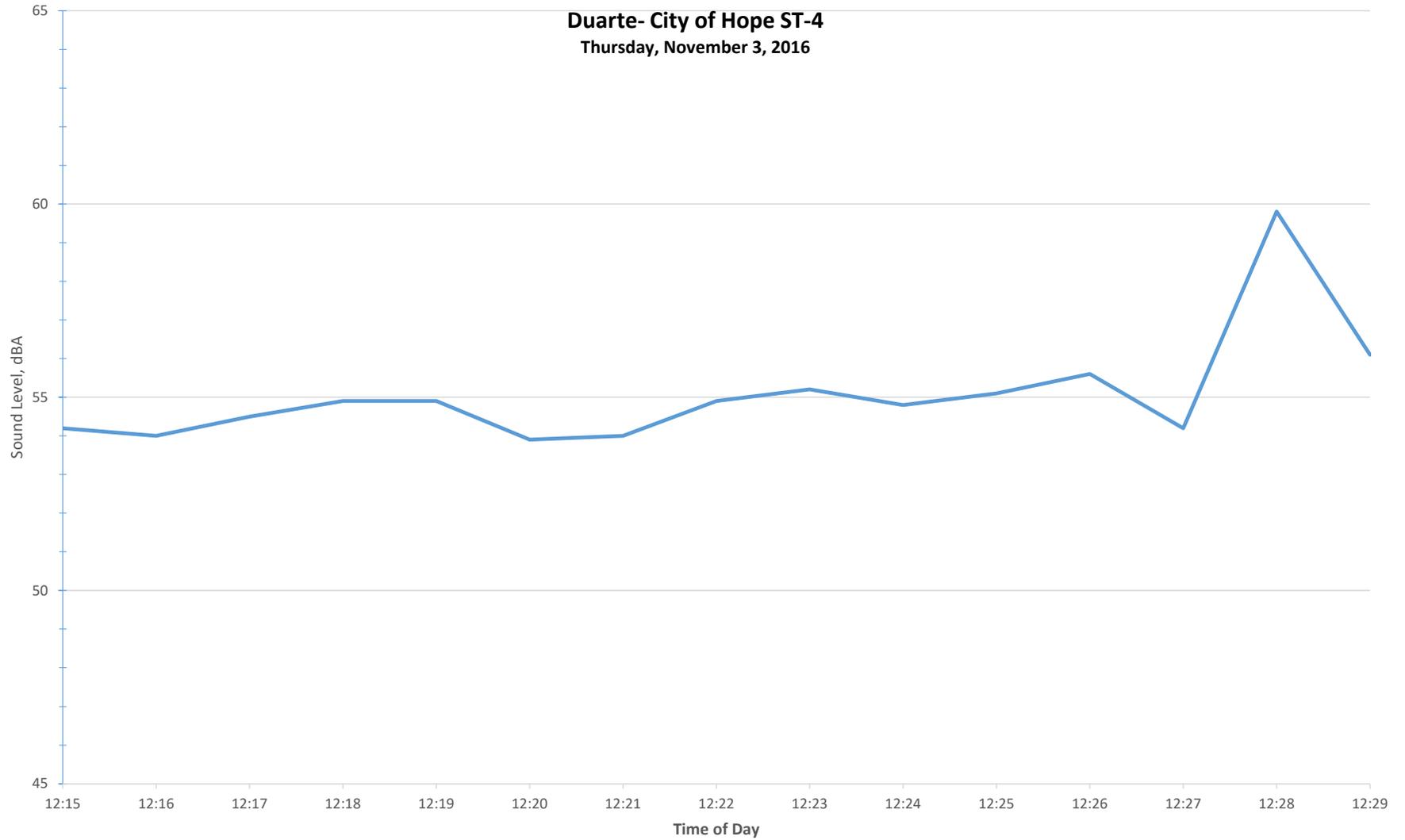


ST-4 Time History

Date	Time	Level	SEL
3-Nov-16	12:15:45	54.2	72
3-Nov-16	12:16:45	54	71.8
3-Nov-16	12:17:45	54.5	72.3
3-Nov-16	12:18:45	54.9	72.7
3-Nov-16	12:19:45	54.9	72.7
3-Nov-16	12:20:45	53.9	71.6
3-Nov-16	12:21:45	54	71.8
3-Nov-16	12:22:45	54.9	72.7
3-Nov-16	12:23:45	55.2	73
3-Nov-16	12:24:45	54.8	72.6
3-Nov-16	12:25:45	55.1	72.9
3-Nov-16	12:26:45	55.6	73.4
3-Nov-16	12:27:45	54.2	72
3-Nov-16	12:28:45	59.8	77.6
3-Nov-16	12:29:45	56.1	73.9
3-Nov-16	12:30:45	54.1	71.9
15-min Leq		55.4	

Date	Time	Duration	Leq	ST-4 Intervals			Peak	UW Peak	L(2)	L(8)	L(10)	L(25)	L(50)	L(90)
				SEL	Lmax	Lmin								
3-Nov-16	12:15:00	900	55.4	84.9	71.9	51.4	85.5	100	57.8	56.3	56	55.4	54.6	53.1

Duarte- City of Hope ST-4
Thursday, November 3, 2016



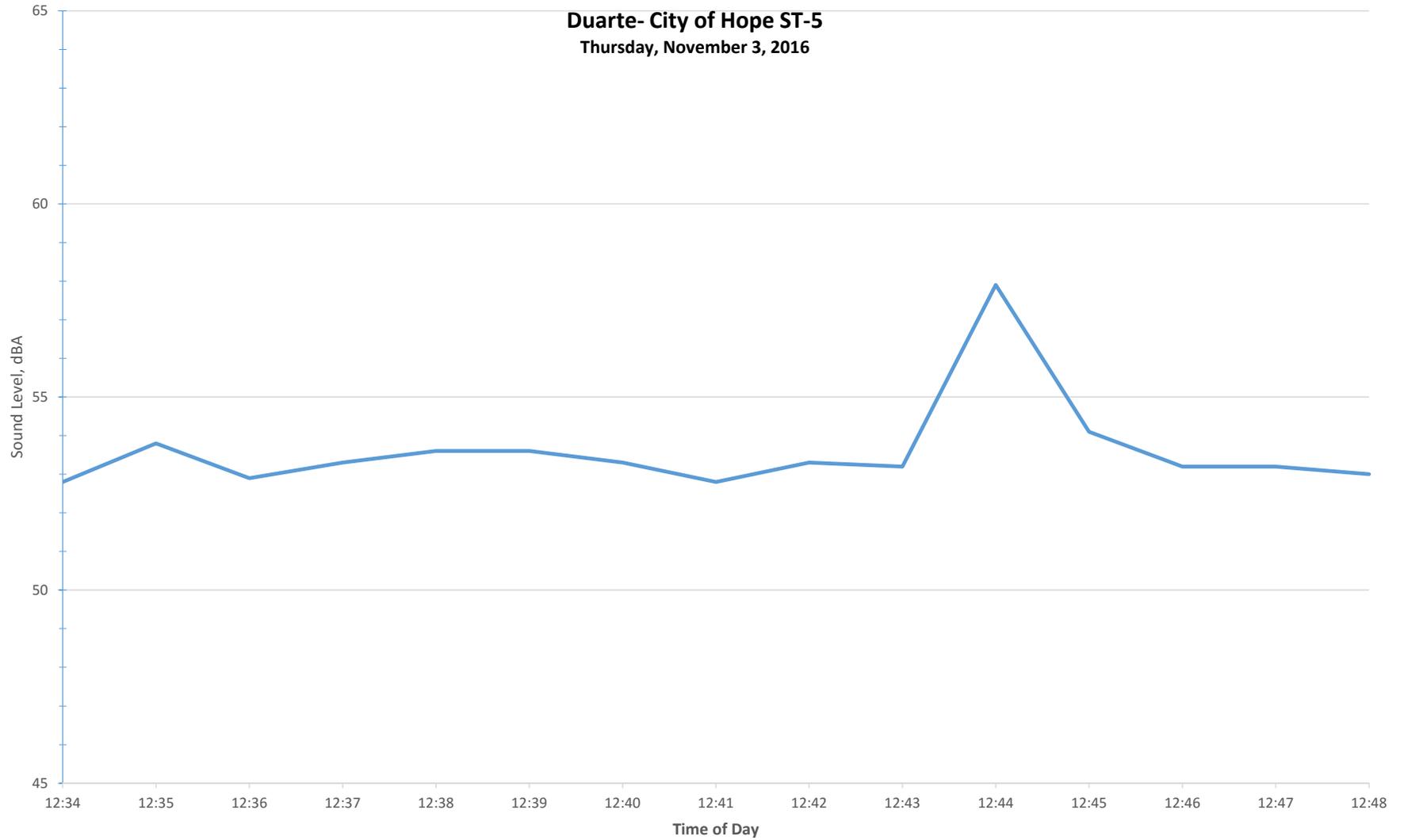
ST-5 Time History

Date	Time	Level	SEL
3-Nov-16	12:34:24	52.8	70.6
3-Nov-16	12:35:24	53.8	71.6
3-Nov-16	12:36:24	52.9	70.7
3-Nov-16	12:37:24	53.3	71.1
3-Nov-16	12:38:24	53.6	71.4
3-Nov-16	12:39:24	53.6	71.4
3-Nov-16	12:40:24	53.3	71.1
3-Nov-16	12:41:24	52.8	70.5
3-Nov-16	12:42:24	53.3	71.1
3-Nov-16	12:43:24	53.2	71
3-Nov-16	12:44:24	57.9	75.7
3-Nov-16	12:45:24	54.1	71.9
3-Nov-16	12:46:24	53.2	71
3-Nov-16	12:47:24	53.2	71
3-Nov-16	12:48:24	53	70.8
3-Nov-16	12:49:24	52.5	70.2

15-min Leq 53.8

Date	Time	Duration	Leq	ST-5 Intervals			Peak	UW Peak	L(2)	L(8)	L(10)	L(25)	L(50)	L(90)
				SEL	Lmax	Lmin								
3-Nov-16	12:34:24	900	53.8	83.4	63.2	50.2	89.7	89.2	59.6	54.8	54.6	53.8	53.2	52.1

Duarte- City of Hope ST-5
Thursday, November 3, 2016



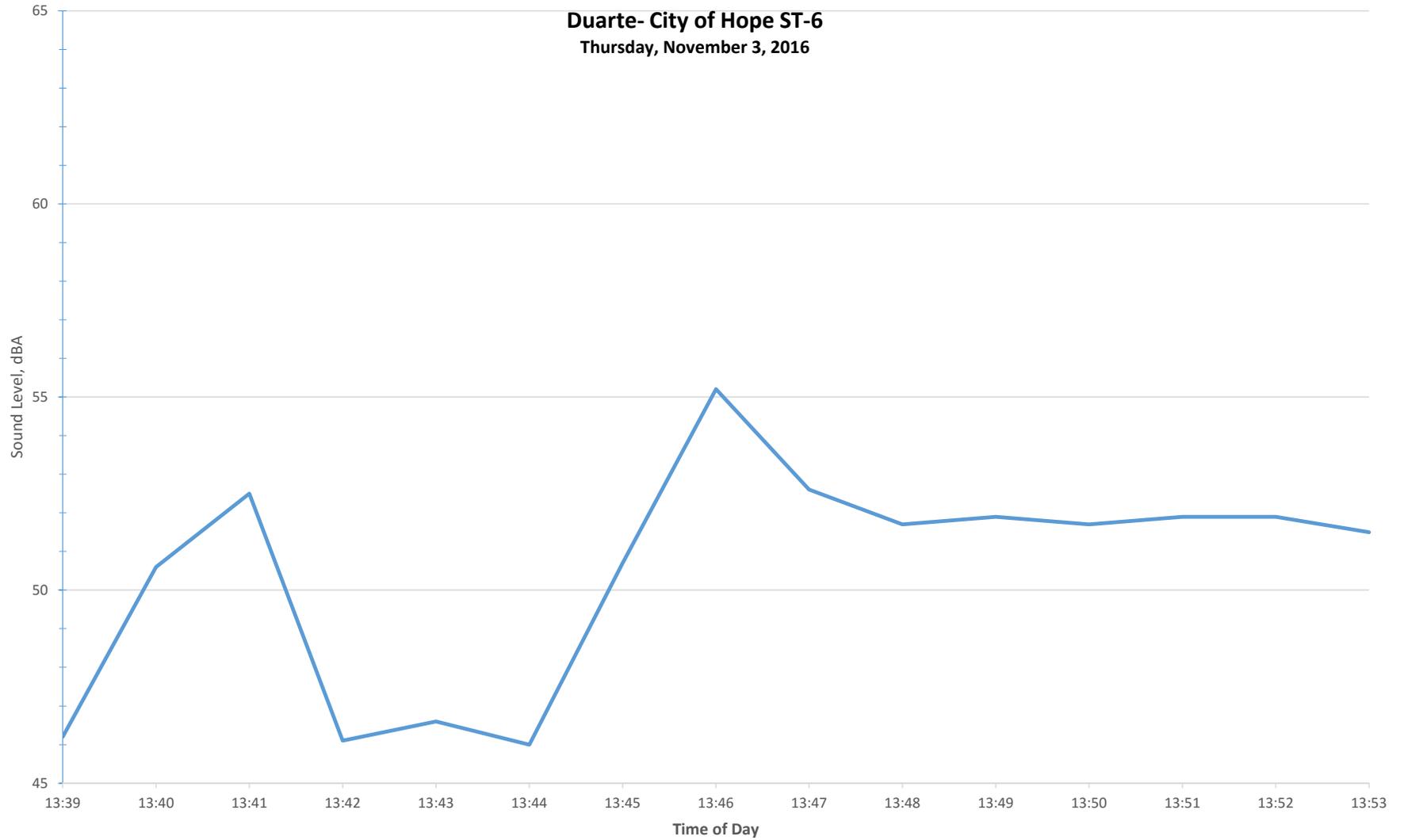
ST-6 Time History

Date	Time	Level	SEL
3-Nov-16	13:39:23	46.2	63.9
3-Nov-16	13:40:23	50.6	68.4
3-Nov-16	13:41:23	52.5	70.3
3-Nov-16	13:42:23	46.1	63.9
3-Nov-16	13:43:23	46.6	64.4
3-Nov-16	13:44:23	46	63.8
3-Nov-16	13:45:23	50.7	68.5
3-Nov-16	13:46:23	55.2	73
3-Nov-16	13:47:23	52.6	70.4
3-Nov-16	13:48:23	51.7	69.5
3-Nov-16	13:49:23	51.9	69.7
3-Nov-16	13:50:23	51.7	69.5
3-Nov-16	13:51:23	51.9	69.7
3-Nov-16	13:52:23	51.9	69.7
3-Nov-16	13:53:23	51.5	69.3
3-Nov-16	13:54:23	47	64.7

15-min Leq 51.2

Date	Time	Duration	Leq	ST-6 Intervals			Peak	UW Peak	L(2)	L(8)	L(10)	L(25)	L(50)	L(90)
				SEL	Lmax	Lmin								
3-Nov-16	13:39:23	900	51.2	80.8	59.1	43.4	81.4	94.3	56.9	53.7	53.1	52	51.3	45.1

Duarte- City of Hope ST-6
Thursday, November 3, 2016

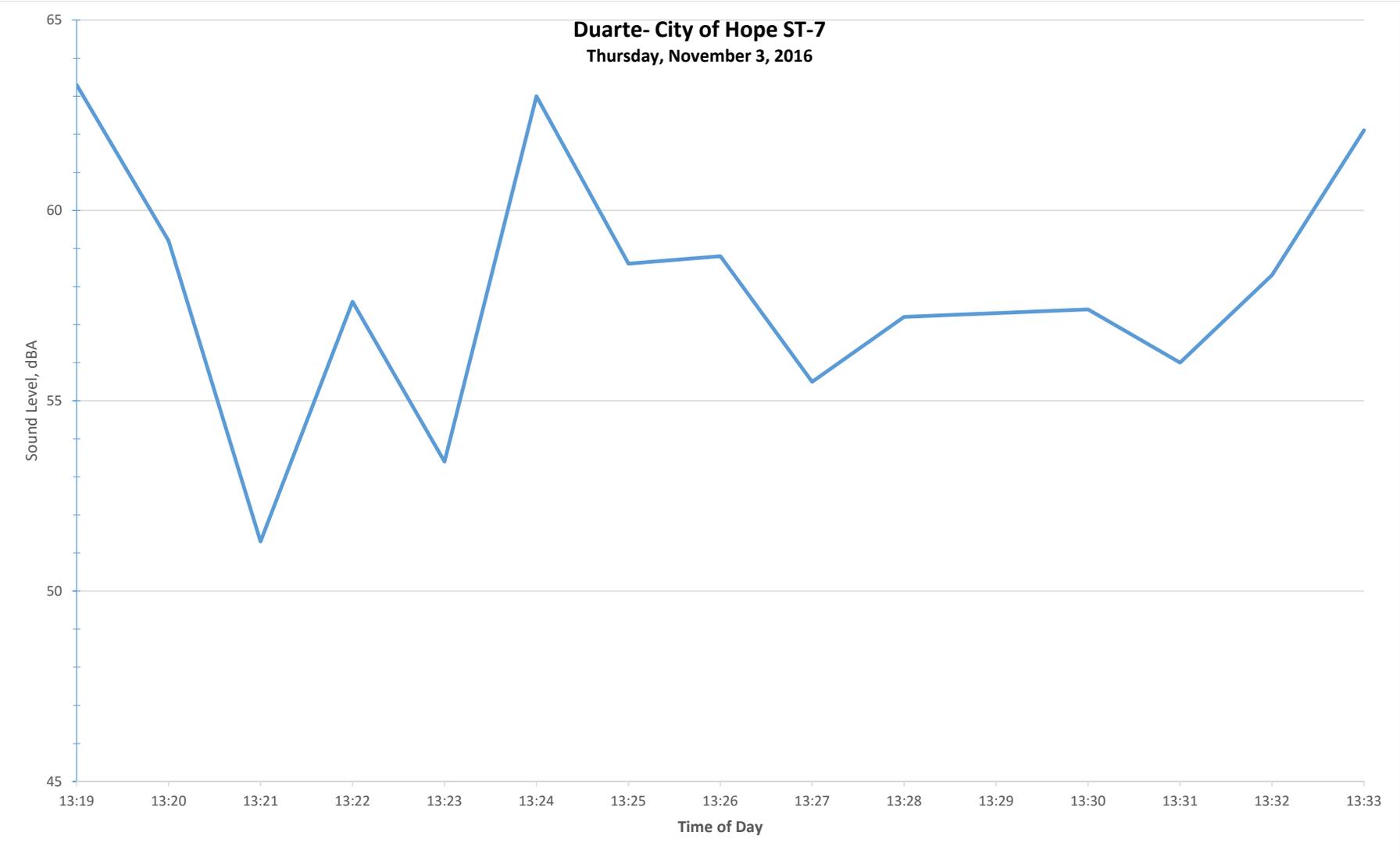


ST-7 Time History

Date	Time	Level	SEL
3-Nov-16	13:19:25	63.3	81.1
3-Nov-16	13:20:25	59.2	77
3-Nov-16	13:21:25	51.3	69.1
3-Nov-16	13:22:25	57.6	75.4
3-Nov-16	13:23:25	53.4	71.2
3-Nov-16	13:24:25	63	80.8
3-Nov-16	13:25:25	58.6	76.4
3-Nov-16	13:26:25	58.8	76.5
3-Nov-16	13:27:25	55.5	73.3
3-Nov-16	13:28:25	57.2	75
3-Nov-16	13:29:25	57.3	75.1
3-Nov-16	13:30:25	57.4	75.1
3-Nov-16	13:31:25	56	73.8
3-Nov-16	13:32:25	58.3	76.1
3-Nov-16	13:33:25	62.1	79.9
3-Nov-16	13:34:25	50.4	68.1

15-min Leq 59.0

Date	Time	Duration	Leq	ST-7 Intervals			Peak	UW Peak	L(2)	L(8)	L(10)	L(25)	L(50)	L(90)
				SEL	Lmax	Lmin								
3-Nov-16	13:19:25	900	59	88.6	71.7	47.4	85.6	93.2	67.2	62.7	62.1	59.1	56.3	50



- Traffic Segment Volumes (for traffic-generated noise inputs)

CITY OF HOPE DAILY PROJECT STREET SEGMENT VOLUMES

ID	Street	From	To	Daily Existing Volume	Daily Total Project Volume	Daily E+P Volume	Daily RP Volume	Daily Future Volume	Daily F+P Volume
19	Huntington Dr	Mountain Ave	Buena Vista St	21040	238	21278	2542	25787	26025
21	Huntington Dr	Buena Vista St	Highland Ave	20240	93	20333	5531	27892	27985
23	Huntington Dr	Highland Ave	Mt. Olive Dr	26680	559	27239	5411	34887	35446
25	Huntington Dr	Mt. Olive Dr	Crestfield Dr	22380	190	22570	2050	26775	26965
31	Central Ave	I-210 WB On-Ramp	Mountain Ave	9880	0	9880	0	10915	10915
45	Central Ave	Mountain Ave	Buena Vista St	12580	594	13174	1835	15733	16327
37	Central Ave	Buena Vista St	I-210 WB Off-Ramp	11370	392	11762	1245	13807	14199
39	Central Ave	I-210 WB Off-Ramp	Highland Ave	9100	83	9183	1100	11154	11237
43	Central Ave	Highland Ave	Santo Domingo Ave	9820	48	9868	121	10970	11018
59	Evergreen St	I-210 EB Off-Ramp	Mountain Ave	7050	0	7050	458	8247	8247
60	Evergreen St	Mountain Ave	Buena Vista St	7200	0	7200	500	8455	8455
68	Evergreen St	Duncannon Ave	Highland Ave	1980	0	1980	425	2613	2613
72	Evergreen St	Highland Ave	Santo Domingo Ave	1130	0	1130	8	1256	1256
75	Three Ranch Rd	Bradbury Ave	Buena Vista St	410	0	410	66	519	519
76	Three Ranch Rd	Buena Vista St	Duncannon Ave	1120	0	1120	66	1303	1303
80	Business Center Dr	Fairdale Ave	Highland Ave	430	0	430	0	475	475
81	Business Center Dr	Highland Ave	Santo Domingo Ave	990	0	990	25	1119	1119
84	Duarte Rd	California Ave	Mountain Ave	9900	238	10138	925	11863	12101
85	Duarte Rd	Mountain Ave	Buena Vista St	10850	428	11278	1393	13380	13808
87	Duarte Rd	Buena Vista St	Cinco Roberts Dr	13450	2726	16176	3955	18815	21541
89	Duarte Rd	Cinco Roberts Dr	Village Rd	12380	2727	15107	3955	17632	20359
91	Duarte Rd	Village Rd	Hope Dr	10890	1589	12479	3905	15936	17525
93	Duarte Rd	Hope Dr	Circle Rd	9380	885	10265	3855	14218	15103
95	Duarte Rd	Circle Rd	Highland Ave	10670	630	11300	3855	15643	16273
110	Arrow Hwy	Longden Ave	Live Oak Ave	32250	96	32346	3770	39400	39496
111	Arrow Hwy	Live Oak Ave	Avenida Barbosa	23830	880	24710	7187	33514	34394
113	Arrow Hwy	Avenida Barbosa	I-605 SB Off-Ramp	28460	332	28792	8208	39651	39983
114	Arrow Hwy	I-605 SB Off-Ramp	I-650 NB On-Ramp	26140	332	26472	7453	36332	36664
118	Live Oak Ave	Arrow Hwy	I-605 SB On-Ramp	19670	784	20454	4601	26332	27116
119	Live Oak Ave	I-605 SB On-Ramp	I-605 NB Off-Ramp	21080	392	21472	3686	26975	27367
120	Live Oak Ave	I-605 NB Off-Ramp	Rivergrade Rd	21860	0	21860	3212	27363	27363
18	Mountain Ave	Huntington Dr	Central Ave	14240	190	14430	242	15974	16164
34	Mountain Ave	Central Ave	Evergreen St	13360	190	13550	242	15002	15192
61	Mountain Ave	Evergreen St	Duarte Rd	10790	190	10980	225	12146	12336
86	Mountain Ave	Duarte Rd	Hustview St	7040	0	7040	200	7978	7978
8	Buena Vista St	Royal Oaks Dr	Huntington Dr	7340	62	7402	2293	10402	10464
22	Buena Vista St	Huntington Dr	Central Ave	10210	393	10603	4274	15554	15947
38	Buena Vista St	Central Ave	I-210 WB On-Ramp	14230	784	15014	3770	19491	20275
47	Buena Vista St	I-210 WB On-Ramp	Evergreen St	12630	1378	14008	3669	17623	19001
65	Buena Vista St	Evergreen St	Three Ranch Rd	12300	2483	14783	3724	17313	19796
77	Buena Vista St	Three Ranch Rd	Duarte Rd	12510	2483	14993	3590	17411	19894
88	Buena Vista St	Duarte Rd	Village Rd	8710	1810	10520	912	10535	12345
100	Buena Vista St	Village Rd	Avenida Barbosa	8420	1212	9632	611	9913	11125
104	Avenida Barbosa	Buena Vista St	Arrow Hwy	12390	1212	13602	2113	15801	17013
42	Duncannon Ave	Central Ave	Evergreen St	1340	0	1340	425	1905	1905
69	Duncannon Ave	Evergreen St	Three Ranch Rd	1380	0	1380	0	1525	1525
10	Highland Ave	Royal Oaks Dr	Huntington Dr	4610	34	4644	330	5423	5457
24	Highland Ave	Huntington Dr	Central Ave	9650	500	10150	2211	12872	13372
44	Highland Ave	Central Ave	Evergreen St	12300	630	12930	2316	15905	16535
73	Highland Ave	Evergreen St	Business Center Dr	11050	630	11680	2717	14925	15555
82	Highland Ave	Business Center Dr	Duarte Rd	10610	630	11240	2938	14660	15290

- Traffic Noise Calculations
 - o Project Contributions
 - o Existing Conditions
 - o Existing + Project Conditions
 - o Future Conditions
 - o Future + Project Conditions
 - o Intersection Information

Noise Contours for Existing No Project Conditions

Roadway	Segment	Daily Traffic Volumes	Noise level at 50 feet (dBA CNEL)	Distance to noise contour (feet)		
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
Huntington Dr	Mountain Ave to Buena Vista St	21,040	70.9	57	123	264
Huntington Dr	Buena Vista St to Highland Ave	20,240	70.7	56	120	258
Huntington Dr	Highland Ave to Mt Olive Dr	26,680	71.9	67	144	310
Huntington Dr	Mt. Olive Dr to Crestfield Dr	22,380	71.1	59	128	276
Central Ave	I-210 WB On-Ramp to Mountain Ave	9,880	65.4	25	53	114
Central Ave	Mountain Ave to Buena Vista St	12,580	66.4	29	62	134
Central Ave	Buena Vista St to I-210 WB Off-Ramp	11,370	66.0	27	58	125
Central Ave	I-210 WB Off-Ramp to Highland Ave	9,100	65.0	23	50	108
Central Ave	Highland Ave to Santo Domingo Ave	9,820	65.3	24	53	113
Evergreen St	I-210 EB Off-Ramp to Mountain Ave	7,050	63.9	20	42	91
Evergreen St	Mountain Ave to Buena Vista St	7,200	64.0	20	43	92
Evergreen St	Duncannon Ave to Highland Ave	1,980	58.4	8	18	39
Evergreen St	Highland Ave to Santo Domingo Ave	1,130	55.9	6	12	27
Three Ranch Rd	Bradbury Ave to Buena Vista St	410	48.2	2	4	8
Three Ranch Rd	Buena Vista St to Duncannon Ave	1,120	52.6	3	7	16
Business Center Dr	Fairdale Ave to Highland Ave	430	48.4	2	4	8
Business Center Dr	Highland Ave to Santo Domingo Ave	990	52.0	3	7	15
Duarte Rd	California Ave to Mountain Ave	9,900	67.6	34	74	160
Duarte Rd	Mountain Ave to Buena Vista St	10,850	68.0	37	79	170
Duarte Rd	Buena Vista St to Cinco Roberts Dr	13,450	68.9	42	91	196
Duarte Rd	Cinco Roberts Dr to Village Rd	12,380	68.5	40	86	186
Duarte Rd	Village Rd to Hope Dr	10,890	68.0	37	79	170
Duarte Rd	Hope Dr to Circle Rd	9,380	67.3	33	72	154
Duarte Rd	Circle Rd to Highland Ave	10,670	67.9	36	78	168
Arrow Hwy	Longden Ave to Live Oak Ave	32,250	74.0	92	199	428
Arrow Hwy	Live Oak Ave to Avenida Barbosa	23,830	72.7	75	162	350
Arrow Hwy	Avenida Barbosa to I-605 SB Off-Ramp	28,460	73.4	85	183	393
Arrow Hwy	I-605 SB Off-Ramp to I-605 NB On-Ramp	26,140	73.1	80	173	372
Live Oak Ave	Arrow Hwy to I-605 SB On-ramp	19,670	75.0	107	231	497
Live Oak Ave	I-605 SB On-Ramp to I-605 NB Off-Ramp	21,080	75.3	112	242	521
Live Oak Ave	I-605 NB Off-Ramp to Rivergrade Rd	21,860	75.4	115	248	534
Mountain Ave	Huntington Dr to Central Ave	14,240	69.2	44	95	204
Mountain Ave	Central Ave to Evergreen St	13,360	68.9	42	91	195
Mountain Ave	Evergreen St to Duarte Rd	10,790	68.0	37	79	169
Mountain Ave	Duarte Rd to Hurstview	7,040	66.1	27	59	127
Buena Vista St	Royal Oaks Dr to Huntington Dr	7,340	64.5	21	46	99
Buena Vista St	Huntington Dr to Central Ave	10,210	65.9	27	57	124
Buena Vista St	Central Ave to I-210 WB On-Ramp	14,230	67.3	33	72	154
Buena Vista St	I-210 WB On-Ramp to Evergreen St	12,630	66.8	31	66	143
Buena Vista St	Evergreen St to Three Ranch Rd	12,300	66.7	30	65	140
Buena Vista St	Three Ranch Rd to Duarte Rd	12,510	66.8	31	66	142
Buena Vista St	Duarte Rd to Village Rd	8,710	65.2	24	52	111
Buena Vista St	Village Rd to Avenida Barbosa	8,420	65.1	23	51	109
Avenida Barbosa	Buena Vista St to Arrow Hwy	12,390	69.8	49	105	226
Duncannon Ave	Central Ave to Evergreen St	1,340	53.4	4	8	18
Duncannon Ave	Evergreen St to Three Ranch Rd	1,380	53.5	4	9	18
Highland Ave	Royal Oaks Dr to Huntington Dr	4,610	62.4	16	34	73
Highland Ave	Huntington Dr to Central Ave	9,650	65.7	26	55	119
Highland Ave	Central Ave to Evergreen St	12,300	66.7	30	65	140
Highland Ave	Evergreen St to Business Center Dr	11,050	66.2	28	61	130
Highland Ave	Business Center Dr to Duarte Rd	10,610	66.1	27	59	127

Noise Contours for Existing Plus Project Conditions

Roadway	Segment	Daily Traffic Volumes	Noise level at 50 feet (dBA CNEL)	Distance to noise contour (feet)		
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
Huntington Dr	Mountain Ave to Buena Vista St	21,278	70.9	57	124	266
Huntington Dr	Buena Vista St to Highland Ave	20,333	70.7	56	120	259
Huntington Dr	Highland Ave to Mt Olive Dr	27,239	72.0	68	146	314
Huntington Dr	Mt. Olive Dr to Crestfield Dr	22,570	71.2	60	129	277
Central Ave	I-210 WB On-Ramp to Mountain Ave	9,880	65.4	25	53	114
Central Ave	Mountain Ave to Buena Vista St	13,174	66.6	30	64	138
Central Ave	Buena Vista St to I-210 WB Off-Ramp	11,762	66.1	28	59	128
Central Ave	I-210 WB Off-Ramp to Highland Ave	9,183	65.0	23	50	108
Central Ave	Highland Ave to Santo Domingo Ave	9,868	65.3	24	53	114
Evergreen St	I-210 EB Off-Ramp to Mountain Ave	7,050	63.9	20	42	91
Evergreen St	Mountain Ave to Buena Vista St	7,200	64.0	20	43	92
Evergreen St	Duncannon Ave to Highland Ave	1,980	58.4	8	18	39
Evergreen St	Highland Ave to Santo Domingo Ave	1,130	55.9	6	12	27
Three Ranch Rd	Bradbury Ave to Buena Vista St	410	48.2	2	4	8
Three Ranch Rd	Buena Vista St to Duncannon Ave	1,120	52.6	3	7	16
Business Center Dr	Fairdale Ave to Highland Ave	430	48.4	2	4	8
Business Center Dr	Highland Ave to Santo Domingo Ave	990	52.0	3	7	15
Duarte Rd	California Ave to Mountain Ave	10,138	67.7	35	75	163
Duarte Rd	Mountain Ave to Buena Vista St	11,278	68.1	38	81	175
Duarte Rd	Buena Vista St to Cinco Roberts Dr	16,176	69.7	48	103	222
Duarte Rd	Cinco Roberts Dr to Village Rd	15,107	69.4	46	98	212
Duarte Rd	Village Rd to Hope Dr	12,479	68.6	40	87	187
Duarte Rd	Hope Dr to Circle Rd	10,265	67.7	35	76	164
Duarte Rd	Circle Rd to Highland Ave	11,300	68.2	38	81	175
Arrow Hwy	Longden Ave to Live Oak Ave	32,346	74.0	92	199	429
Arrow Hwy	Live Oak Ave to Avenida Barbosa	24,710	72.8	77	166	358
Arrow Hwy	Avenida Barbosa to I-605 SB Off-Ramp	28,792	73.5	85	184	397
Arrow Hwy	I-605 SB Off-Ramp to I-605 NB On-Ramp	26,472	73.1	81	174	375
Live Oak Ave	Arrow Hwy to I-605 SB On-ramp	20,454	75.1	110	237	510
Live Oak Ave	I-605 SB On-Ramp to I-605 NB Off-Ramp	21,472	75.3	114	245	527
Live Oak Ave	I-605 NB Off-Ramp to Rivergrade Rd	21,860	75.4	115	248	534
Mountain Ave	Huntington Dr to Central Ave	14,430	69.2	44	95	206
Mountain Ave	Central Ave to Evergreen St	13,550	68.9	42	92	197
Mountain Ave	Evergreen St to Duarte Rd	10,980	68.0	37	80	171
Mountain Ave	Duarte Rd to Hurstview	7,040	66.1	27	59	127
Buena Vista St	Royal Oaks Dr to Huntington Dr	7,402	64.5	22	46	100
Buena Vista St	Huntington Dr to Central Ave	10,603	66.1	27	59	127
Buena Vista St	Central Ave to I-210 WB On-Ramp	15,014	67.6	34	74	160
Buena Vista St	I-210 WB On-Ramp to Evergreen St	14,008	67.3	33	71	153
Buena Vista St	Evergreen St to Three Ranch Rd	14,783	67.5	34	74	158
Buena Vista St	Three Ranch Rd to Duarte Rd	14,993	67.6	34	74	160
Buena Vista St	Duarte Rd to Village Rd	10,520	66.0	27	59	126
Buena Vista St	Village Rd to Avenida Barbosa	9,632	65.6	26	55	119
Avenida Barbosa	Buena Vista St to Arrow Hwy	13,602	70.2	52	112	241
Duncannon Ave	Central Ave to Evergreen St	1,340	53.4	4	8	18
Duncannon Ave	Evergreen St to Three Ranch Rd	1,380	53.5	4	9	18
Highland Ave	Royal Oaks Dr to Huntington Dr	4,644	62.5	16	34	73
Highland Ave	Huntington Dr to Central Ave	10,150	65.9	27	57	123
Highland Ave	Central Ave to Evergreen St	12,930	66.9	31	67	145
Highland Ave	Evergreen St to Business Center Dr	11,680	66.5	29	63	135
Highland Ave	Business Center Dr to Duarte Rd	11,240	66.3	28	61	132

Project Contributions - Existing Conditions

Roadway	Segment	CNEL at 50 feet (dBA)			
		No Project	With Project	Project Contribution	Potential Impact?
Huntington Dr	Mountain Ave to Buena Vista St	70.9	70.9	0.0	no
Huntington Dr	Buena Vista St to Highland Ave	70.7	70.7	0.0	no
Huntington Dr	Highland Ave to Mt Olive Dr	71.9	72.0	0.1	no
Huntington Dr	Mt. Olive Dr to Crestfield Dr	71.1	71.2	0.1	no
Central Ave	I-210 WB On-Ramp to Mountain Ave	65.4	65.4	0.0	no
Central Ave	Mountain Ave to Buena Vista St	66.4	66.6	0.2	no
Central Ave	Buena Vista St to I-210 WB Off-Ramp	66.0	66.1	0.1	no
Central Ave	I-210 WB Off-Ramp to Highland Ave	65.0	65.0	0.0	no
Central Ave	Highland Ave to Santo Domingo Ave	65.3	65.3	0.0	no
Evergreen St	I-210 EB Off-Ramp to Mountain Ave	63.9	63.9	0.0	no
Evergreen St	Mountain Ave to Buena Vista St	64.0	64.0	0.0	no
Evergreen St	Duncannon Ave to Highland Ave	58.4	58.4	0.0	no
Evergreen St	Highland Ave to Santo Domingo Ave	55.9	55.9	0.0	no
Three Ranch Rd	Bradbury Ave to Buena Vista St	48.2	48.2	0.0	no
Three Ranch Rd	Buena Vista St to Duncannon Ave	52.6	52.6	0.0	no
Business Center Dr	Fairdale Ave to Highland Ave	48.4	48.4	0.0	no
Business Center Dr	Highland Ave to Santo Domingo Ave	52.0	52.0	0.0	no
Duarte Rd	California Ave to Mountain Ave	67.6	67.7	0.1	no
Duarte Rd	Mountain Ave to Buena Vista St	68.0	68.1	0.1	no
Duarte Rd	Buena Vista St to Cinco Roberts Dr	68.9	69.7	0.8	no
Duarte Rd	Cinco Roberts Dr to Village Rd	68.5	69.4	0.9	no
Duarte Rd	Village Rd to Hope Dr	68.0	68.6	0.6	no
Duarte Rd	Hope Dr to Circle Rd	67.3	67.7	0.4	no
Duarte Rd	Circle Rd to Highland Ave	67.9	68.2	0.3	no
Arrow Hwy	Longden Ave to Live Oak Ave	74.0	74.0	0.0	no
Arrow Hwy	Live Oak Ave to Avenida Barbosa	72.7	72.8	0.1	no
Arrow Hwy	Avenida Barbosa to I-605 SB Off-Ramp	73.4	73.5	0.1	no
Arrow Hwy	I-605 SB Off-Ramp to I-605 NB On-Ramp	73.1	73.1	0.0	no
Live Oak Ave	Arrow Hwy to I-605 SB On-ramp	75.0	75.1	0.1	no
Live Oak Ave	I-605 SB On-Ramp to I-605 NB Off-Ramp	75.3	75.3	0.0	no
Live Oak Ave	I-605 NB Off-Ramp to Rivergrade Rd	75.4	75.4	0.0	no
Mountain Ave	Huntington Dr to Central Ave	69.2	69.2	0.0	no
Mountain Ave	Central Ave to Evergreen St	68.9	68.9	0.0	no
Mountain Ave	Evergreen St to Duarte Rd	68.0	68.0	0.0	no
Mountain Ave	Duarte Rd to Hurstview	66.1	66.1	0.0	no
Buena Vista St	Royal Oaks Dr to Huntington Dr	64.5	64.5	0.0	no
Buena Vista St	Huntington Dr to Central Ave	65.9	66.1	0.2	no
Buena Vista St	Central Ave to I-210 WB On-Ramp	67.3	67.6	0.3	no
Buena Vista St	I-210 WB On-Ramp to Evergreen St	66.8	67.3	0.5	no
Buena Vista St	Evergreen St to Three Ranch Rd	66.7	67.5	0.8	no
Buena Vista St	Three Ranch Rd to Duarte Rd	66.8	67.6	0.8	no
Buena Vista St	Duarte Rd to Village Rd	65.2	66.0	0.8	no
Buena Vista St	Village Rd to Avenida Barbosa	65.1	65.6	0.5	no
Avenida Barbosa	Buena Vista St to Arrow Hwy	69.8	70.2	0.4	no
Duncannon Ave	Central Ave to Evergreen St	53.4	53.4	0.0	no
Duncannon Ave	Evergreen St to Three Ranch Rd	53.5	53.5	0.0	no
Highland Ave	Royal Oaks Dr to Huntington Dr	62.4	62.5	0.1	no
Highland Ave	Huntington Dr to Central Ave	65.7	65.9	0.2	no
Highland Ave	Central Ave to Evergreen St	66.7	66.9	0.2	no
Highland Ave	Evergreen St to Business Center Dr	66.2	66.5	0.3	no
Highland Ave	Business Center Dr to Duarte Rd	66.1	66.3	0.2	no

Noise Contours for Future No Project Conditions

Roadway	Segment	Daily Traffic Volumes	Noise level at 50 feet (dBA CNEL)	Distance to noise contour (feet)		
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
Huntington Dr	Mountain Ave to Buena Vista St	25,787	71.7	65	141	303
Huntington Dr	Buena Vista St to Highland Ave	27,892	72.1	69	148	319
Huntington Dr	Highland Ave to Mt Olive Dr	34,887	73.0	80	172	370
Huntington Dr	Mt. Olive Dr to Crestfield Dr	26,775	71.9	67	144	311
Central Ave	I-210 WB On-Ramp to Mountain Ave	10,915	65.8	26	56	122
Central Ave	Mountain Ave to Buena Vista St	15,733	67.4	33	72	155
Central Ave	Buena Vista St to I-210 WB Off-Ramp	13,807	66.8	31	66	142
Central Ave	I-210 WB Off-Ramp to Highland Ave	11,154	65.9	27	57	123
Central Ave	Highland Ave to Santo Domingo Ave	10,970	65.8	26	57	122
Evergreen St	I-210 EB Off-Ramp to Mountain Ave	8,247	64.6	22	47	101
Evergreen St	Mountain Ave to Buena Vista St	8,455	64.7	22	48	103
Evergreen St	Duncannon Ave to Highland Ave	2,613	59.6	10	22	47
Evergreen St	Highland Ave to Santo Domingo Ave	1,256	56.4	6	13	29
Three Ranch Rd	Bradbury Ave to Buena Vista St	519	49.2	2	4	10
Three Ranch Rd	Buena Vista St to Duncannon Ave	1,303	53.2	4	8	18
Business Center Dr	Fairdale Ave to Highland Ave	475	48.9	2	4	9
Business Center Dr	Highland Ave to Santo Domingo Ave	1,119	52.6	3	7	16
Duarte Rd	California Ave to Mountain Ave	11,863	68.4	39	84	180
Duarte Rd	Mountain Ave to Buena Vista St	13,380	68.9	42	91	196
Duarte Rd	Buena Vista St to Cinco Roberts Dr	18,815	70.4	53	114	245
Duarte Rd	Cinco Roberts Dr to Village Rd	17,632	70.1	51	109	235
Duarte Rd	Village Rd to Hope Dr	15,936	69.6	47	102	220
Duarte Rd	Hope Dr to Circle Rd	14,218	69.1	44	95	204
Duarte Rd	Circle Rd to Highland Ave	15,643	69.6	47	101	217
Arrow Hwy	Longden Ave to Live Oak Ave	39,400	74.9	105	227	489
Arrow Hwy	Live Oak Ave to Avenida Barbosa	33,514	74.1	95	204	439
Arrow Hwy	Avenida Barbosa to I-605 SB Off-Ramp	39,651	74.9	106	228	491
Arrow Hwy	I-605 SB Off-Ramp to I-605 NB On-Ramp	36,332	74.5	100	215	463
Live Oak Ave	Arrow Hwy to I-605 SB On-ramp	26,332	76.2	130	280	604
Live Oak Ave	I-605 SB On-Ramp to I-605 NB Off-Ramp	26,975	76.3	132	285	614
Live Oak Ave	I-605 NB Off-Ramp to Rivergrade Rd	27,363	76.4	134	288	620
Mountain Ave	Huntington Dr to Central Ave	15,974	69.7	47	102	220
Mountain Ave	Central Ave to Evergreen St	15,002	69.4	45	98	211
Mountain Ave	Evergreen St to Duarte Rd	12,146	68.5	40	85	183
Mountain Ave	Duarte Rd to Hurstview	7,978	66.6	30	64	139
Buena Vista St	Royal Oaks Dr to Huntington Dr	10,402	66.0	27	58	125
Buena Vista St	Huntington Dr to Central Ave	15,554	67.7	35	76	164
Buena Vista St	Central Ave to I-210 WB On-Ramp	19,491	68.7	41	88	190
Buena Vista St	I-210 WB On-Ramp to Evergreen St	17,623	68.3	38	83	178
Buena Vista St	Evergreen St to Three Ranch Rd	17,313	68.2	38	82	176
Buena Vista St	Three Ranch Rd to Duarte Rd	17,411	68.2	38	82	177
Buena Vista St	Duarte Rd to Village Rd	10,535	66.0	27	59	126
Buena Vista St	Village Rd to Avenida Barbosa	9,913	65.8	26	56	121
Avenida Barbosa	Buena Vista St to Arrow Hwy	15,801	70.9	57	123	266
Duncannon Ave	Central Ave to Evergreen St	1,905	54.9	5	11	23
Duncannon Ave	Evergreen St to Three Ranch Rd	1,525	53.9	4	9	20
Highland Ave	Royal Oaks Dr to Huntington Dr	5,423	63.2	17	38	81
Highland Ave	Huntington Dr to Central Ave	12,872	66.9	31	67	144
Highland Ave	Central Ave to Evergreen St	15,905	67.8	36	77	166
Highland Ave	Evergreen St to Business Center Dr	14,925	67.6	34	74	159
Highland Ave	Business Center Dr to Duarte Rd	14,660	67.5	34	73	157

Noise Contours for Future Plus Project Conditions

Roadway	Segment	Daily Traffic Volumes	Noise level at 50 feet (dBA CNEL)	Distance to noise contour (feet)		
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
Huntington Dr	Mountain Ave to Buena Vista St	26,025	71.8	66	141	305
Huntington Dr	Buena Vista St to Highland Ave	27,985	72.1	69	148	320
Huntington Dr	Highland Ave to Mt Olive Dr	35,446	73.1	81	174	374
Huntington Dr	Mt. Olive Dr to Crestfield Dr	26,965	71.9	67	145	312
Central Ave	I-210 WB On-Ramp to Mountain Ave	10,915	65.8	26	56	122
Central Ave	Mountain Ave to Buena Vista St	16,327	67.5	34	74	159
Central Ave	Buena Vista St to I-210 WB Off-Ramp	14,199	66.9	31	67	145
Central Ave	I-210 WB Off-Ramp to Highland Ave	11,237	65.9	27	58	124
Central Ave	Highland Ave to Santo Domingo Ave	11,018	65.8	26	57	122
Evergreen St	I-210 EB Off-Ramp to Mountain Ave	8,247	64.6	22	47	101
Evergreen St	Mountain Ave to Buena Vista St	8,455	64.7	22	48	103
Evergreen St	Duncannon Ave to Highland Ave	2,613	59.6	10	22	47
Evergreen St	Highland Ave to Santo Domingo Ave	1,256	56.4	6	13	29
Three Ranch Rd	Bradbury Ave to Buena Vista St	519	49.2	2	4	10
Three Ranch Rd	Buena Vista St to Duncannon Ave	1,303	53.2	4	8	18
Business Center Dr	Fairdale Ave to Highland Ave	475	48.9	2	4	9
Business Center Dr	Highland Ave to Santo Domingo Ave	1,119	52.6	3	7	16
Duarte Rd	California Ave to Mountain Ave	12,101	68.4	39	85	183
Duarte Rd	Mountain Ave to Buena Vista St	13,808	69.0	43	93	200
Duarte Rd	Buena Vista St to Cinco Roberts Dr	21,541	71.0	58	125	269
Duarte Rd	Cinco Roberts Dr to Village Rd	20,359	70.7	56	120	259
Duarte Rd	Village Rd to Hope Dr	17,525	70.1	50	109	234
Duarte Rd	Hope Dr to Circle Rd	15,103	69.4	46	98	212
Duarte Rd	Circle Rd to Highland Ave	16,273	69.7	48	103	223
Arrow Hwy	Longden Ave to Live Oak Ave	39,496	74.9	105	227	490
Arrow Hwy	Live Oak Ave to Avenida Barbosa	34,394	74.3	96	207	446
Arrow Hwy	Avenida Barbosa to I-605 SB Off-Ramp	39,983	74.9	106	229	494
Arrow Hwy	I-605 SB Off-Ramp to I-605 NB On-Ramp	36,664	74.5	100	216	466
Live Oak Ave	Arrow Hwy to I-605 SB On-ramp	27,116	76.4	133	286	616
Live Oak Ave	I-605 SB On-Ramp to I-605 NB Off-Ramp	27,367	76.4	134	288	620
Live Oak Ave	I-605 NB Off-Ramp to Rivergrade Rd	27,363	76.4	134	288	620
Mountain Ave	Huntington Dr to Central Ave	16,164	69.7	48	103	222
Mountain Ave	Central Ave to Evergreen St	15,192	69.4	46	99	213
Mountain Ave	Evergreen St to Duarte Rd	12,336	68.5	40	86	185
Mountain Ave	Duarte Rd to Hurstview	7,978	66.6	30	64	139
Buena Vista St	Royal Oaks Dr to Huntington Dr	10,464	66.0	27	58	126
Buena Vista St	Huntington Dr to Central Ave	15,947	67.8	36	77	167
Buena Vista St	Central Ave to I-210 WB On-Ramp	20,275	68.9	42	91	195
Buena Vista St	I-210 WB On-Ramp to Evergreen St	19,001	68.6	40	87	187
Buena Vista St	Evergreen St to Three Ranch Rd	19,796	68.8	41	89	192
Buena Vista St	Three Ranch Rd to Duarte Rd	19,894	68.8	42	90	193
Buena Vista St	Duarte Rd to Village Rd	12,345	66.7	30	65	140
Buena Vista St	Village Rd to Avenida Barbosa	11,125	66.3	28	61	131
Avenida Barbosa	Buena Vista St to Arrow Hwy	17,013	71.2	60	130	279
Duncannon Ave	Central Ave to Evergreen St	1,905	54.9	5	11	23
Duncannon Ave	Evergreen St to Three Ranch Rd	1,525	53.9	4	9	20
Highland Ave	Royal Oaks Dr to Huntington Dr	5,457	63.2	18	38	81
Highland Ave	Huntington Dr to Central Ave	13,372	67.1	32	69	148
Highland Ave	Central Ave to Evergreen St	16,535	68.0	37	79	171
Highland Ave	Evergreen St to Business Center Dr	15,555	67.7	35	76	164
Highland Ave	Business Center Dr to Duarte Rd	15,290	67.7	35	75	162

Project Contributions - Future Conditions

Roadway	Segment	CNEL at 50 feet (dBA)			
		No Project	With Project	Project Contribution	Potential Impact?
Huntington Dr	Mountain Ave to Buena Vista St	71.7	71.8	0.1	no
Huntington Dr	Buena Vista St to Highland Ave	72.1	72.1	0.0	no
Huntington Dr	Highland Ave to Mt Olive Dr	73.0	73.1	0.1	no
Huntington Dr	Mt. Olive Dr to Crestfield Dr	71.9	71.9	0.0	no
Central Ave	I-210 WB On-Ramp to Mountain Ave	65.8	65.8	0.0	no
Central Ave	Mountain Ave to Buena Vista St	67.4	67.5	0.1	no
Central Ave	Buena Vista St to I-210 WB Off-Ramp	66.8	66.9	0.1	no
Central Ave	I-210 WB Off-Ramp to Highland Ave	65.9	65.9	0.0	no
Central Ave	Highland Ave to Santo Domingo Ave	65.8	65.8	0.0	no
Evergreen St	I-210 EB Off-Ramp to Mountain Ave	64.6	64.6	0.0	no
Evergreen St	Mountain Ave to Buena Vista St	64.7	64.7	0.0	no
Evergreen St	Duncannon Ave to Highland Ave	59.6	59.6	0.0	no
Evergreen St	Highland Ave to Santo Domingo Ave	56.4	56.4	0.0	no
Three Ranch Rd	Bradbury Ave to Buena Vista St	49.2	49.2	0.0	no
Three Ranch Rd	Buena Vista St to Duncannon Ave	53.2	53.2	0.0	no
Business Center Dr	Fairdale Ave to Highland Ave	48.9	48.9	0.0	no
Business Center Dr	Highland Ave to Santo Domingo Ave	52.6	52.6	0.0	no
Duarte Rd	California Ave to Mountain Ave	68.4	68.4	0.0	no
Duarte Rd	Mountain Ave to Buena Vista St	68.9	69.0	0.1	no
Duarte Rd	Buena Vista St to Cinco Roberts Dr	70.4	71.0	0.6	no
Duarte Rd	Cinco Roberts Dr to Village Rd	70.1	70.7	0.6	no
Duarte Rd	Village Rd to Hope Dr	69.6	70.1	0.5	no
Duarte Rd	Hope Dr to Circle Rd	69.1	69.4	0.3	no
Duarte Rd	Circle Rd to Highland Ave	69.6	69.7	0.1	no
Arrow Hwy	Longden Ave to Live Oak Ave	74.9	74.9	0.0	no
Arrow Hwy	Live Oak Ave to Avenida Barbosa	74.1	74.3	0.2	no
Arrow Hwy	Avenida Barbosa to I-605 SB Off-Ramp	74.9	74.9	0.0	no
Arrow Hwy	I-605 SB Off-Ramp to I-605 NB On-Ramp	74.5	74.5	0.0	no
Live Oak Ave	Arrow Hwy to I-605 SB On-ramp	76.2	76.4	0.2	no
Live Oak Ave	I-605 SB On-Ramp to I-605 NB Off-Ramp	76.3	76.4	0.1	no
Live Oak Ave	I-605 NB Off-Ramp to Rivergrade Rd	76.4	76.4	0.0	no
Mountain Ave	Huntington Dr to Central Ave	69.7	69.7	0.0	no
Mountain Ave	Central Ave to Evergreen St	69.4	69.4	0.0	no
Mountain Ave	Evergreen St to Duarte Rd	68.5	68.5	0.0	no
Mountain Ave	Duarte Rd to Hurstview	66.6	66.6	0.0	no
Buena Vista St	Royal Oaks Dr to Huntington Dr	66.0	66.0	0.0	no
Buena Vista St	Huntington Dr to Central Ave	67.7	67.8	0.1	no
Buena Vista St	Central Ave to I-210 WB On-Ramp	68.7	68.9	0.2	no
Buena Vista St	I-210 WB On-Ramp to Evergreen St	68.3	68.6	0.3	no
Buena Vista St	Evergreen St to Three Ranch Rd	68.2	68.8	0.6	no
Buena Vista St	Three Ranch Rd to Duarte Rd	68.2	68.8	0.6	no
Buena Vista St	Duarte Rd to Village Rd	66.0	66.7	0.7	no
Buena Vista St	Village Rd to Avenida Barbosa	65.8	66.3	0.5	no
Avenida Barbosa	Buena Vista St to Arrow Hwy	70.9	71.2	0.3	no
Duncannon Ave	Central Ave to Evergreen St	54.9	54.9	0.0	no
Duncannon Ave	Evergreen St to Three Ranch Rd	53.9	53.9	0.0	no
Highland Ave	Royal Oaks Dr to Huntington Dr	63.2	63.2	0.0	no
Highland Ave	Huntington Dr to Central Ave	66.9	67.1	0.2	no
Highland Ave	Central Ave to Evergreen St	67.8	68.0	0.2	no
Highland Ave	Evergreen St to Business Center Dr	67.6	67.7	0.1	no
Highland Ave	Business Center Dr to Duarte Rd	67.5	67.7	0.2	no

Overall Project Contributions

Roadway	Segment	CNEL at 50 feet (dBA)				
		Existing	Future With Project	Overall Increase	Project Contribution	Potential Impact?
Huntington Dr	Mountain Ave to Buena Vista St	70.9	71.8	0.9	0.0	no
Huntington Dr	Buena Vista St to Highland Ave	70.7	72.1	1.4	0.0	no
Huntington Dr	Highland Ave to Mt Olive Dr	71.9	73.1	1.2	0.1	no
Huntington Dr	Mt. Olive Dr to Crestfield Dr	71.1	71.9	0.8	0.1	no
Central Ave	I-210 WB On-Ramp to Mountain Ave	65.4	65.8	0.4	0.0	no
Central Ave	Mountain Ave to Buena Vista St	66.4	67.5	1.1	0.2	no
Central Ave	Buena Vista St to I-210 WB Off-Ramp	66.0	66.9	1.0	0.1	no
Central Ave	I-210 WB Off-Ramp to Highland Ave	65.0	65.9	0.9	0.0	no
Central Ave	Highland Ave to Santo Domingo Ave	65.3	65.8	0.5	0.0	no
Evergreen St	I-210 EB Off-Ramp to Mountain Ave	63.9	64.6	0.7	0.0	no
Evergreen St	Mountain Ave to Buena Vista St	64.0	64.7	0.7	0.0	no
Evergreen St	Duncannon Ave to Highland Ave	58.4	59.6	1.2	0.0	no
Evergreen St	Highland Ave to Santo Domingo Ave	55.9	56.4	0.5	0.0	no
Three Ranch Rd	Bradbury Ave to Buena Vista St	48.2	49.2	1.0	0.0	no
Three Ranch Rd	Buena Vista St to Duncannon Ave	52.6	53.2	0.7	0.0	no
Business Center Dr	Fairdale Ave to Highland Ave	48.4	48.9	0.4	0.0	no
Business Center Dr	Highland Ave to Santo Domingo Ave	52.0	52.6	0.5	0.0	no
Duarte Rd	California Ave to Mountain Ave	67.6	68.4	0.9	0.1	no
Duarte Rd	Mountain Ave to Buena Vista St	68.0	69.0	1.0	0.1	no
Duarte Rd	Buena Vista St to Cinco Roberts Dr	68.9	71.0	2.0	0.8	no
Duarte Rd	Cinco Roberts Dr to Village Rd	68.5	70.7	2.2	0.9	no
Duarte Rd	Village Rd to Hope Dr	68.0	70.1	2.1	0.6	no
Duarte Rd	Hope Dr to Circle Rd	67.3	69.4	2.1	0.4	no
Duarte Rd	Circle Rd to Highland Ave	67.9	69.7	1.8	0.3	no
Arrow Hwy	Longden Ave to Live Oak Ave	74.0	74.9	0.9	0.0	no
Arrow Hwy	Live Oak Ave to Avenida Barbosa	72.7	74.3	1.6	0.1	no
Arrow Hwy	Avenida Barbosa to I-605 SB Off-Ramp	73.4	74.9	1.5	0.1	no
Arrow Hwy	I-605 SB Off-Ramp to I-605 NB On-Ramp	73.1	74.5	1.5	0.0	no
Live Oak Ave	Arrow Hwy to I-605 SB On-ramp	75.0	76.4	1.4	0.1	no
Live Oak Ave	I-605 SB On-Ramp to I-605 NB Off-Ramp	75.3	76.4	1.1	0.0	no
Live Oak Ave	I-605 NB Off-Ramp to Rivergrade Rd	75.4	76.4	1.0	0.0	no
Mountain Ave	Huntington Dr to Central Ave	69.2	69.7	0.6	0.0	no
Mountain Ave	Central Ave to Evergreen St	68.9	69.4	0.6	0.0	no
Mountain Ave	Evergreen St to Duarte Rd	68.0	68.5	0.6	0.0	no
Mountain Ave	Duarte Rd to Hurstview	66.1	66.6	0.5	0.0	no
Buena Vista St	Royal Oaks Dr to Huntington Dr	64.5	66.0	1.5	0.0	no
Buena Vista St	Huntington Dr to Central Ave	65.9	67.8	1.9	0.2	no
Buena Vista St	Central Ave to I-210 WB On-Ramp	67.3	68.9	1.5	0.3	no
Buena Vista St	I-210 WB On-Ramp to Evergreen St	66.8	68.6	1.8	0.5	no
Buena Vista St	Evergreen St to Three Ranch Rd	66.7	68.8	2.1	0.8	no
Buena Vista St	Three Ranch Rd to Duarte Rd	66.8	68.8	2.0	0.8	no
Buena Vista St	Duarte Rd to Village Rd	65.2	66.7	1.5	0.8	no
Buena Vista St	Village Rd to Avenida Barbosa	65.1	66.3	1.2	0.5	no
Avenida Barbosa	Buena Vista St to Arrow Hwy	69.8	71.2	1.4	0.4	no
Duncannon Ave	Central Ave to Evergreen St	53.4	54.9	1.5	0.0	no
Duncannon Ave	Evergreen St to Three Ranch Rd	53.5	53.9	0.4	0.0	no
Highland Ave	Royal Oaks Dr to Huntington Dr	62.4	63.2	0.7	0.1	no
Highland Ave	Huntington Dr to Central Ave	65.7	67.1	1.4	0.2	no
Highland Ave	Central Ave to Evergreen St	66.7	68.0	1.3	0.2	no
Highland Ave	Evergreen St to Business Center Dr	66.2	67.7	1.5	0.3	no
Highland Ave	Business Center Dr to Duarte Rd	66.1	67.7	1.6	0.2	no

- Traffic Noise Calculations

- Project Contributions
- Existing Conditions
- Existing + Project Conditions
- Future Conditions
- Future + Project Conditions
- Intersection Information

City of Hope SP

EXISTING p1

#	ROADWAY	SEGMENT	ADT	POSTED SPEED LIMIT	LANE DISTANCE	SITE CONDITION	LANES	GRADE (%)
1	Huntington Dr	Mountain Ave to Buena Vista St	21,040	40	48	Soft	4D	0%
2	Huntington Dr	Buena Vista St to Highland Ave	20,240	40	48	Soft	4D	0%
3	Huntington Dr	Highland Ave to Mt Olive Dr	26,680	40	48	Soft	4D	0%
4	Huntington Dr	Mt. Olive Dr to Crestfield Dr	22,380	40	48	Soft	4D	0%
5	Central Ave	I-210 WB On-Ramp to Mountain Ave	9,880	35	12	Soft	2U	0%
6	Central Ave	Mountain Ave to Buena Vista St	12,580	35	12	Soft	2U	0%
7	Central Ave	Buena Vista St to I-210 WB Off-Ramp	11,370	35	12	Soft	2U	0%
8	Central Ave	I-210 WB Off-Ramp to Highland Ave	9,100	35	12	Soft	2U	0%
9	Central Ave	Highland Ave to Santo Domingo Ave	9,820	35	12	Soft	2U	0%
10	Evergreen St	I-210 EB Off-Ramp to Mountain Ave	7,050	35	12	Soft	2U	0%
11	Evergreen St	Mountain Ave to Buena Vista St	7,200	35	12	Soft	2U	0%
12	Evergreen St	Duncannon Ave to Highland Ave	1,980	35	12	Soft	2U	0%
13	Evergreen St	Highland Ave to Santo Domingo Ave	1,130	35	12	Soft	2U	0%
14	Three Ranch Rd	Bradbury Ave to Buena Vista St	410	25	12	Soft	2U	0%
15	Three Ranch Rd	Buena Vista St to Duncannon Ave	1,120	25	12	Soft	2U	0%
16	Business Center Dr	Fairdale Ave to Highland Ave	430	25	12	Soft	2U	0%
17	Business Center Dr	Highland Ave to Santo Domingo Ave	990	25	12	Soft	2U	0%
18	Duarte Rd	California Ave to Mountain Ave	9,900	40	48	Soft	4D	0%
19	Duarte Rd	Mountain Ave to Buena Vista St	10,850	40	48	Soft	4D	0%
20	Duarte Rd	Buena Vista St to Cinco Roberts Dr	13,450	40	48	Soft	4D	0%
21	Duarte Rd	Cinco Roberts Dr to Village Rd	12,380	40	48	Soft	4D	0%
22	Duarte Rd	Village Rd to Hope Dr	10,890	40	48	Soft	4D	0%
23	Duarte Rd	Hope Dr to Circle Rd	9,380	40	48	Soft	4D	0%
24	Duarte Rd	Circle Rd to Highland Ave	10,670	40	48	Soft	4D	0%
25	Arrow Hwy	Longden Ave to Live Oak Ave	32,250	45	48	Soft	4D	0%
26	Arrow Hwy	Live Oak Ave to Avenida Barbosa	23,830	45	48	Soft	4D	0%
27	Arrow Hwy	Avenida Barbosa to I-605 SB Off-Ramp	28,460	45	48	Soft	4D	0%
28	Arrow Hwy	I-605 SB Off-Ramp to I-605 NB On-Ramp	26,140	45	48	Soft	4D	0%
29	Live Oak Ave	Arrow Hwy to I-605 SB On-ramp	19,670	45	84	Soft	6D	0%
30	Live Oak Ave	I-605 SB On-Ramp to I-605 NB Off-Ramp	21,080	45	84	Soft	6D	0%
31	Live Oak Ave	I-605 NB Off-Ramp to Rivergrade Rd	21,860	45	84	Soft	6D	0%
32	Mountain Ave	Huntington Dr to Central Ave	14,240	40	48	Soft	4D	0%
33	Mountain Ave	Central Ave to Evergreen St	13,360	40	48	Soft	4D	0%
34	Mountain Ave	Evergreen St to Duarte Rd	10,790	40	48	Soft	4D	0%
35	Mountain Ave	Duarte Rd to Hurstview	7,040	40	48	Soft	4D	0%
36	Buena Vista St	Royal Oaks Dr to Huntington Dr	7,340	35	36	Soft	4U	0%
37	Buena Vista St	Huntington Dr to Central Ave	10,210	35	36	Soft	4U	0%
38	Buena Vista St	Central Ave to I-210 WB On-Ramp	14,230	35	36	Soft	4U	0%
39	Buena Vista St	I-210 WB On-Ramp to Evergreen St	12,630	35	36	Soft	4U	0%
40	Buena Vista St	Evergreen St to Three Ranch Rd	12,300	35	36	Soft	4U	0%
41	Buena Vista St	Three Ranch Rd to Duarte Rd	12,510	35	36	Soft	4U	0%
42	Buena Vista St	Duarte Rd to Village Rd	8,710	35	36	Soft	4U	0%
43	Buena Vista St	Village Rd to Avenida Barbosa	8,420	35	36	Soft	4U	0%
44	Avenida Barbosa	Buena Vista St to Arrow Hwy	12,390	45	48	Soft	4D	0%
45	Duncannon Ave	Central Ave to Evergreen St	1,340	25	12	Soft	2U	0%

ANALYST
NJF

ROAD CLASSIFICATION	SPEED	LANE DISTANCE
2U	40	12
4U	40	36
4D	45	48
6D	45	84
2D	40	24

73.6 75.55%
 13.6 13.96%
 10.22 10.49%

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.42%	DAY	75.5%
% MT	1.84%	EVENING	14.0%
% HT	0.74%	NIGHT	10.5%

Source: Riverside, County of, Department of Public Health, Office of Industrial Hygiene. 2009, November. For Determining and Mitigating Tr
 Riverside County Fleet Mix: Secondary, Collectors, or Smaller

Vehicle	Overall %	Day (7 AM to Evening (7 Night (10 PM to 7 AM)		
Auto	97%	73.60	13.60	10.22
Medium Truck	2%	0.90	0.04	0.90
Heavy Truck	1%	0.35	0.04	0.35
		74.85	13.68	11.47

City of Hope SP
EXISTING p1 CONDITIONS NOISE CONTOURS RESULT SUMMARY TABLE

#	ROADWAY	SEGMENT	DAILY TRAFFIC VOLUMES	NOISE LEVEL AT 50 FT. (dBA CNEL)	DISTANCE TO NOISE CONTOUR (FT.)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Huntington Dr	Mountain Ave to Buena Vista St	21,040	70.9	57	123	264
2	Huntington Dr	Buena Vista St to Highland Ave	20,240	70.7	56	120	258
3	Huntington Dr	Highland Ave to Mt Olive Dr	26,680	71.9	67	144	310
4	Huntington Dr	Mt. Olive Dr to Crestfield Dr	22,380	71.1	59	128	276
5	Central Ave	I-210 WB On-Ramp to Mountain Ave	9,880	65.4	25	53	114
6	Central Ave	Mountain Ave to Buena Vista St	12,580	66.4	29	62	134
7	Central Ave	Buena Vista St to I-210 WB Off-Ramp	11,370	66.0	27	58	125
8	Central Ave	I-210 WB Off-Ramp to Highland Ave	9,100	65.0	23	50	108
9	Central Ave	Highland Ave to Santo Domingo Ave	9,820	65.3	24	53	113
10	Evergreen St	I-210 EB Off-Ramp to Mountain Ave	7,050	63.9	20	42	91
11	Evergreen St	Mountain Ave to Buena Vista St	7,200	64.0	20	43	92
12	Evergreen St	Duncannon Ave to Highland Ave	1,980	58.4	8	18	39
13	Evergreen St	Highland Ave to Santo Domingo Ave	1,130	55.9	6	12	27
14	Three Ranch Rd	Bradbury Ave to Buena Vista St	410	48.2	2	4	8
15	Three Ranch Rd	Buena Vista St to Duncannon Ave	1,120	52.6	3	7	16
16	Business Center Dr	Fairdale Ave to Highland Ave	430	48.4	2	4	8
17	Business Center Dr	Highland Ave to Santo Domingo Ave	990	52.0	3	7	15
18	Duarte Rd	California Ave to Mountain Ave	9,900	67.6	34	74	160
19	Duarte Rd	Mountain Ave to Buena Vista St	10,850	68.0	37	79	170
20	Duarte Rd	Buena Vista St to Cinco Roberts Dr	13,450	68.9	42	91	196
21	Duarte Rd	Cinco Roberts Dr to Village Rd	12,380	68.5	40	86	186
22	Duarte Rd	Village Rd to Hope Dr	10,890	68.0	37	79	170
23	Duarte Rd	Hope Dr to Circle Rd	9,380	67.3	33	72	154
24	Duarte Rd	Circle Rd to Highland Ave	10,670	67.9	36	78	168
25	Arrow Hwy	Longden Ave to Live Oak Ave	32,250	74.0	92	199	428
26	Arrow Hwy	Live Oak Ave to Avenida Barbosa	23,830	72.7	75	162	350
27	Arrow Hwy	Avenida Barbosa to I-605 SB Off-Ramp	28,460	73.4	85	183	393
28	Arrow Hwy	I-605 SB Off-Ramp to I-605 NB On-Ramp	26,140	73.1	80	173	372
29	Live Oak Ave	Arrow Hwy to I-605 SB On-ramp	19,670	75.0	107	231	497
30	Live Oak Ave	I-605 SB On-Ramp to I-605 NB Off-Ramp	21,080	75.3	112	242	521
31	Live Oak Ave	I-605 NB Off-Ramp to Rivergrade Rd	21,860	75.4	115	248	534
32	Mountain Ave	Huntington Dr to Central Ave	14,240	69.2	44	95	204
33	Mountain Ave	Central Ave to Evergreen St	13,360	68.9	42	91	195
34	Mountain Ave	Evergreen St to Duarte Rd	10,790	68.0	37	79	169
35	Mountain Ave	Duarte Rd to Hurstview	7,040	66.1	27	59	127
36	Buena Vista St	Royal Oaks Dr to Huntington Dr	7,340	64.5	21	46	99
37	Buena Vista St	Huntington Dr to Central Ave	10,210	65.9	27	57	124
38	Buena Vista St	Central Ave to I-210 WB On-Ramp	14,230	67.3	33	72	154
39	Buena Vista St	I-210 WB On-Ramp to Evergreen St	12,630	66.8	31	66	143
40	Buena Vista St	Evergreen St to Three Ranch Rd	12,300	66.7	30	65	140
41	Buena Vista St	Three Ranch Rd to Duarte Rd	12,510	66.8	31	66	142
42	Buena Vista St	Duarte Rd to Village Rd	8,710	65.2	24	52	111
43	Buena Vista St	Village Rd to Avenida Barbosa	8,420	65.1	23	51	109
44	Avenida Barbosa	Buena Vista St to Arrow Hwy	12,390	69.8	49	105	226
45	Duncannon Ave	Central Ave to Evergreen St	1,340	53.4	4	8	18

Scenario: EXISTING p1
 Roadway: Huntington Dr
 Segment: Mountain Ave to Buena Vista St

Project: City of Hope SP
 Analyst: NJF
 Date: 14-Nov-16

ROADWAY INPUTS	
ADT	21,040
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1290	24	10	954	18	7	239	5	2
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-0.2	-17.5	-21.4	-1.5	-18.8	-22.7	-7.5	-24.8	-28.7
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	67.9	59.6	60.5	66.6	58.3	59.2	60.6	52.3	53.2
VEHICULAR NOISE	DAY=	69.1	Leq	EVENING=	67.8	Leq	NIGHT=	61.8	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 70.2 CNEL= 70.9
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	52 111 240
		CNEL:	57 123 264

Scenario: **EXISTING p1**
 Roadway: **Huntington Dr**
 Segment: **Buena Vista St to Highland Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	20,240
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1241	23	9	918	17	7	230	4	2
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-0.4	-17.6	-21.6	-1.7	-18.9	-22.9	-7.7	-25.0	-28.9
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	67.7	59.4	60.3	66.4	58.1	59.0	60.4	52.1	53.0
VEHICULAR NOISE	DAY=	69.0	Leq	EVENING=	67.6	Leq	NIGHT=	61.6	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 70.1 CNEL= 70.7
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	50 109 234
		CNEL:	56 120 258

Scenario: **EXISTING p1**
 Roadway: **Huntington Dr**
 Segment: **Highland Ave to Mt Olive Dr**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	26,680
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1636	31	12	1209	23	9	303	6	2
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	0.8	-16.4	-20.4	-0.5	-17.7	-21.7	-6.5	-23.8	-27.7
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	68.9	60.6	61.5	67.6	59.3	60.2	61.6	53.3	54.2
VEHICULAR NOISE	DAY=	70.2	Leq	EVENING=	68.8	Leq	NIGHT=	62.8	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 71.3 CNEL= 71.9
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	61 131 281
		CNEL:	67 144 310

Scenario: **EXISTING p1**
 Roadway: **Huntington Dr**
 Segment: **Mt. Olive Dr to Crestfield Dr**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	22,380
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1373	26	10	1015	19	8	254	5	2
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	0.0	-17.2	-21.1	-1.3	-18.5	-22.5	-7.3	-24.5	-28.5
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	68.2	59.9	60.8	66.8	58.6	59.4	60.8	52.5	53.4
VEHICULAR NOISE	DAY=	69.4	Leq	EVENING=	68.1	Leq	NIGHT=	62.1	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 70.5 CNEL= 71.1
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	54 116 250
		CNEL:	59 128 276

Scenario: EXISTING p1
 Roadway: Central Ave
 Segment: I-210 WB On-Ramp to Mountain Ave

Project: City of Hope SP
 Analyst: NJF
 Date: 14-Nov-16

ROADWAY INPUTS	
ADT	9,880
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	606	11	5	448	8	3	112	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-2.9	-20.2	-24.1	-4.2	-21.5	-25.4	-10.2	-27.5	-31.4
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	62.1	54.6	55.9	60.8	53.3	54.6	54.8	47.3	48.5
VEHICULAR NOISE	DAY=	63.6	Leq	EVENING=	62.3	Leq	NIGHT=	56.3	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 64.7 CNEL= 65.4
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	22 48 103
		CNEL:	25 53 114

Scenario: EXISTING p1
 Roadway: Central Ave
 Segment: Mountain Ave to Buena Vista St

Project: City of Hope SP
 Analyst: NJF
 Date: 14-Nov-16

ROADWAY INPUTS	
ADT	12,580
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	772	15	6	570	11	4	143	3	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-1.9	-19.1	-23.1	-3.2	-20.4	-24.4	-9.2	-26.4	-30.4
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	63.2	55.7	56.9	61.9	54.3	55.6	55.9	48.3	49.6
VEHICULAR NOISE	DAY=	64.7	Leq	EVENING=	63.4	Leq	NIGHT=	57.4	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 65.8 CNEL= 66.4
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	26 56 121
		CNEL:	29 62 134

Scenario: EXISTING p1
 Roadway: Central Ave
 Segment: Buena Vista St to I-210 WB Off-Ramp

Project: City of Hope SP
 Analyst: NJF
 Date: 14-Nov-16

ROADWAY INPUTS	
ADT	11,370
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	697	13	5	515	10	4	129	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-2.3	-19.6	-23.5	-3.6	-20.9	-24.8	-9.6	-26.9	-30.8
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	62.7	55.2	56.5	61.4	53.9	55.2	55.4	47.9	49.2
VEHICULAR NOISE	DAY=	64.2	Leq	EVENING=	62.9	Leq	NIGHT=	56.9	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 65.3 CNEL= 66.0
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	24 53 113
		CNEL:	27 58 125

Scenario: EXISTING p1
 Roadway: Central Ave
 Segment: I-210 WB Off-Ramp to Highland Ave

Project: City of Hope SP
 Analyst: NJF
 Date: 14-Nov-16

ROADWAY INPUTS	
ADT	9,100
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	558	11	4	413	8	3	103	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-3.3	-20.5	-24.5	-4.6	-21.8	-25.8	-10.6	-27.8	-31.8
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	61.8	54.3	55.5	60.5	52.9	54.2	54.4	46.9	48.2
VEHICULAR NOISE	DAY=	63.3	Leq	EVENING=	62.0	Leq	NIGHT=	56.0	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 64.4 CNEL= 65.0
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	21 45 98
		CNEL:	23 50 108

Scenario: EXISTING p1
 Roadway: Central Ave
 Segment: Highland Ave to Santo Domingo Ave

Project: City of Hope SP
 Analyst: NJF
 Date: 14-Nov-16

ROADWAY INPUTS	
ADT	9,820
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	602	11	5	445	8	3	112	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-2.9	-20.2	-24.1	-4.3	-21.5	-25.5	-10.3	-27.5	-31.5
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	62.1	54.6	55.8	60.8	53.3	54.5	54.8	47.3	48.5
VEHICULAR NOISE	DAY=	63.6	Leq	EVENING=	62.3	Leq	NIGHT=	56.3	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 64.7 CNEL= 65.3
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	22 48 103
		CNEL:	24 53 113

Scenario: **EXISTING p1**
 Roadway: **Evergreen St**
 Segment: **I-210 EB Off-Ramp to Mountain Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	7,050
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	432	8	3	320	6	2	80	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-4.4	-21.6	-25.6	-5.7	-22.9	-26.9	-11.7	-29.0	-32.9
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	60.7	53.1	54.4	59.4	51.8	53.1	53.3	45.8	47.1
VEHICULAR NOISE	DAY=	62.2	Leq	EVENING=	60.9	Leq	NIGHT=	54.8	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 63.3 CNEL= 63.9
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	18 38 83
		CNEL:	20 42 91

Scenario: **EXISTING p1**
 Roadway: **Evergreen St**
 Segment: **Mountain Ave to Buena Vista St**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	7,200
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	442	8	3	326	6	2	82	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-4.3	-21.5	-25.5	-5.6	-22.8	-26.8	-11.6	-28.9	-32.8
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	60.8	53.2	54.5	59.4	51.9	53.2	53.4	45.9	47.2
VEHICULAR NOISE	DAY=	62.3	Leq	EVENING=	60.9	Leq	NIGHT=	54.9	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	63.4
		CNEL=	64.0
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	18 39 84
		CNEL:	20 43 92

Scenario: **EXISTING p1**
 Roadway: **Evergreen St**
 Segment: **Duncannon Ave to Highland Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	1,980
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	121	2	1	90	2	1	22	0	0
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-9.9	-27.1	-31.1	-11.2	-28.5	-32.4	-17.2	-34.5	-38.4
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	55.1	47.6	48.9	53.8	46.3	47.6	47.8	40.3	41.6
VEHICULAR NOISE	DAY=	56.7	Leq	EVENING=	55.3	Leq	NIGHT=	49.3	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	57.7
		CNEL=	58.4
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	8 16 35
		CNEL:	8 18 39

Scenario: **EXISTING p1** Project: **City of Hope SP**
 Roadway: **Evergreen St** Analyst: **NJF**
 Segment: **Highland Ave to Santo Domingo Av** Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	1,130
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	69	1	1	51	1	0	13	0	0
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-12.3	-29.6	-33.5	-13.7	-30.9	-34.8	-19.7	-36.9	-40.9
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	52.7	45.2	46.5	51.4	43.9	45.1	45.4	37.9	39.1
VEHICULAR NOISE	DAY=	54.2	Leq	EVENING=	52.9	Leq	NIGHT=	46.9	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	55.3
		CNEL=	55.9
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	5 11 24
		CNEL:	6 12 27

Scenario: **EXISTING p1**
 Roadway: **Three Ranch Rd**
 Segment: **Bradbury Ave to Buena Vista St**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	410
SPEED (mph)	25
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	25	0	0	19	0	0	5	0	0
Speed in MPH	25	25	25	25	25	25	25	25	25
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	59.4	71.1	77.2	59.4	71.1	77.2	59.4	71.1	77.2
ADJUSTMENTS									
Flow	-15.3	-32.5	-36.5	-16.6	-33.8	-37.8	-22.6	-39.8	-43.8
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	44.1	38.5	40.7	42.8	37.2	39.4	36.8	31.2	33.4
VEHICULAR NOISE	DAY=	46.5	Leq	EVENING=	45.2	Leq	NIGHT=	39.2	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	47.6
		CNEL=	48.2
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	2 3 7
		CNEL:	2 4 8

Scenario: **EXISTING p1** Project: **City of Hope SP**
 Roadway: **Three Ranch Rd** Analyst: **NJF**
 Segment: **Buena Vista St to Duncannon Ave** Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	1,120
SPEED (mph)	25
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	69	1	1	51	1	0	13	0	0
Speed in MPH	25	25	25	25	25	25	25	25	25
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	59.4	71.1	77.2	59.4	71.1	77.2	59.4	71.1	77.2
ADJUSTMENTS									
Flow	-10.9	-28.2	-32.1	-12.2	-29.5	-33.4	-18.2	-35.5	-39.4
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	48.5	42.9	45.1	47.2	41.6	43.8	41.1	35.6	37.7
VEHICULAR NOISE	DAY=	50.9	Leq	EVENING=	49.5	Leq	NIGHT=	43.5	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	52.0
		CNEL=	52.6
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	3 7 15
		CNEL:	3 7 16

Scenario: **EXISTING p1**
 Roadway: **Business Center Dr**
 Segment: **Fairdale Ave to Highland Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	430
SPEED (mph)	25
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	26	0	0	19	0	0	5	0	0
Speed in MPH	25	25	25	25	25	25	25	25	25
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	59.4	71.1	77.2	59.4	71.1	77.2	59.4	71.1	77.2
ADJUSTMENTS									
Flow	-15.1	-32.3	-36.3	-16.4	-33.6	-37.6	-22.4	-39.6	-43.6
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	44.3	38.7	40.9	43.0	37.4	39.6	37.0	31.4	33.6
VEHICULAR NOISE	DAY=	46.7	Leq	EVENING=	45.4	Leq	NIGHT=	39.4	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	47.8
		CNEL=	48.4
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	2 4 8
		CNEL:	2 4 8

Scenario: **EXISTING p1** Project: **City of Hope SP**
 Roadway: **Business Center Dr** Analyst: **NJF**
 Segment: **Highland Ave to Santo Domingo Av** Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	990
SPEED (mph)	25
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	61	1	0	45	1	0	11	0	0
Speed in MPH	25	25	25	25	25	25	25	25	25
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	59.4	71.1	77.2	59.4	71.1	77.2	59.4	71.1	77.2
ADJUSTMENTS									
Flow	-11.5	-28.7	-32.6	-12.8	-30.0	-34.0	-18.8	-36.0	-40.0
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	47.9	42.3	44.5	46.6	41.0	43.2	40.6	35.0	37.2
VEHICULAR NOISE	DAY=	50.3	Leq	EVENING=	49.0	Leq	NIGHT=	43.0	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	51.4
		CNEL=	52.0
NOISE CONTOUR:		70 dBA	65 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):	Ldn:	3	6
	CNEL:	3	7
		13	15

Scenario: **EXISTING p1**
 Roadway: **Duarte Rd**
 Segment: **California Ave to Mountain Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	9,900
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	607	11	5	449	8	3	112	2	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-3.5	-20.7	-24.7	-4.8	-22.0	-26.0	-10.8	-28.1	-32.0
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	64.6	56.3	57.2	63.3	55.0	55.9	57.3	49.0	49.9
VEHICULAR NOISE	DAY=	65.9	Leq	EVENING=	64.5	Leq	NIGHT=	58.5	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	66.9
		CNEL=	67.6
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	31 67 145
		CNEL:	34 74 160

Scenario: **EXISTING p1**
 Roadway: **Duarte Rd**
 Segment: **Mountain Ave to Buena Vista St**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	10,850
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	665	13	5	492	9	4	123	2	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-3.1	-20.3	-24.3	-4.4	-21.6	-25.6	-10.4	-27.7	-31.6
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	65.0	56.7	57.6	63.7	55.4	56.3	57.7	49.4	50.3
VEHICULAR NOISE	DAY=	66.3	Leq	EVENING=	64.9	Leq	NIGHT=	58.9	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn= 67.3	
		CNEL= 68.0	
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn: 33	72 154
		CNEL: 37	79 170

Scenario: **EXISTING p1** Project: **City of Hope SP**
 Roadway: **Duarte Rd** Analyst: **NJF**
 Segment: **Buena Vista St to Cinco Roberts Dr** Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	13,450
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	825	16	6	610	12	5	153	3	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-2.2	-19.4	-23.4	-3.5	-20.7	-24.7	-9.5	-26.7	-30.7
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	65.9	57.7	58.6	64.6	56.3	57.2	58.6	50.3	51.2
VEHICULAR NOISE	DAY=	67.2	Leq	EVENING=	65.9	Leq	NIGHT=	59.9	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	68.3
		CNEL=	68.9
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	38 83 178
		CNEL:	42 91 196

Scenario: **EXISTING p1**
 Roadway: **Duarte Rd**
 Segment: **Cinco Roberts Dr to Village Rd**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	12,380
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	759	14	6	561	11	4	141	3	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-2.5	-19.8	-23.7	-3.8	-21.1	-25.0	-9.8	-27.1	-31.0
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	65.6	57.3	58.2	64.3	56.0	56.9	58.3	50.0	50.9
VEHICULAR NOISE	DAY=	66.8	Leq	EVENING=	65.5	Leq	NIGHT=	59.5	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	67.9
		CNEL=	68.5
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	36 78 169
		CNEL:	40 86 186

Scenario: **EXISTING p1**
 Roadway: **Duarte Rd**
 Segment: **Village Rd to Hope Dr**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	10,890
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	668	13	5	494	9	4	124	2	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-3.1	-20.3	-24.3	-4.4	-21.6	-25.6	-10.4	-27.6	-31.6
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	65.0	56.7	57.6	63.7	55.4	56.3	57.7	49.4	50.3
VEHICULAR NOISE	DAY=	66.3	Leq	EVENING=	65.0	Leq	NIGHT=	58.9	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	67.4
		CNEL=	68.0
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	33 72 155
		CNEL:	37 79 170

Scenario: **EXISTING p1**
 Roadway: **Duarte Rd**
 Segment: **Hope Dr to Circle Rd**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	9,380
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	575	11	4	425	8	3	107	2	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-3.7	-21.0	-24.9	-5.0	-22.3	-26.2	-11.1	-28.3	-32.2
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	64.4	56.1	57.0	63.1	54.8	55.7	57.1	48.8	49.7
VEHICULAR NOISE	DAY=	65.6	Leq	EVENING=	64.3	Leq	NIGHT=	58.3	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn= 66.7	
		CNEL= 67.3	
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn: 30	65 140
		CNEL: 33	72 154

Scenario: **EXISTING p1**
 Roadway: **Duarte Rd**
 Segment: **Circle Rd to Highland Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	10,670
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	654	12	5	484	9	4	121	2	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-3.2	-20.4	-24.4	-4.5	-21.7	-25.7	-10.5	-27.7	-31.7
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	64.9	56.7	57.5	63.6	55.3	56.2	57.6	49.3	50.2
VEHICULAR NOISE	DAY=	66.2	Leq	EVENING=	64.9	Leq	NIGHT=	58.9	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	67.3
		CNEL=	67.9
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	33 71 153
		CNEL:	36 78 168

Scenario: **EXISTING p1**
 Roadway: **Arrow Hwy**
 Segment: **Longden Ave to Live Oak Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	32,250
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1978	37	15	1462	28	11	366	7	3
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	1.1	-16.1	-20.1	-0.2	-17.4	-21.4	-6.2	-23.4	-27.4
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	71.2	62.3	62.8	69.9	60.9	61.5	63.9	54.9	55.5
VEHICULAR NOISE	DAY=	72.3	Leq	EVENING=	70.9	Leq	NIGHT=	64.9	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	73.4
		CNEL=	74.0
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	84 180 388
		CNEL:	92 199 428

Scenario: **EXISTING p1** Project: **City of Hope SP**
 Roadway: **Arrow Hwy** Analyst: **NJF**
 Segment: **Live Oak Ave to Avenida Barbosa** Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	23,830
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1462	28	11	1080	20	8	271	5	2
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	-0.2	-17.4	-21.4	-1.5	-18.7	-22.7	-7.5	-24.8	-28.7
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	69.9	60.9	61.5	68.6	59.6	60.2	62.6	53.6	54.2
VEHICULAR NOISE	DAY=	70.9	Leq	EVENING=	69.6	Leq	NIGHT=	63.6	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	72.0
		CNEL=	72.7
NOISE CONTOUR:		70 dBA	65 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	68
		CNEL:	75
			147
			317
			162
			350

Scenario: **EXISTING p1**
 Roadway: **Arrow Hwy**
 Segment: **Avenida Barbosa to I-605 SB Off-R**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	28,460
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1746	33	13	1290	24	10	323	6	2
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	0.6	-16.7	-20.6	-0.7	-18.0	-21.9	-6.7	-24.0	-27.9
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	70.7	61.7	62.3	69.4	60.4	61.0	63.3	54.4	55.0
VEHICULAR NOISE	DAY=	71.7	Leq	EVENING=	70.4	Leq	NIGHT=	64.4	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	72.8
		CNEL=	73.4
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	77 166 357
		CNEL:	85 183 393

Scenario: **EXISTING p1** Project: **City of Hope SP**
 Roadway: **Arrow Hwy** Analyst: **NJF**
 Segment: **I-605 SB Off-Ramp to I-605 NB On** Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	26,140
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1603	30	12	1185	22	9	297	6	2
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	0.2	-17.0	-21.0	-1.1	-18.3	-22.3	-7.1	-24.4	-28.3
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	70.3	61.3	61.9	69.0	60.0	60.6	63.0	54.0	54.6
VEHICULAR NOISE	DAY=	71.3	Leq	EVENING=	70.0	Leq	NIGHT=	64.0	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	72.4
		CNEL=	73.1
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):	Ldn:	73	157 338
	CNEL:	80	173 372

Scenario: **EXISTING p1**
 Roadway: **Live Oak Ave**
 Segment: **Arrow Hwy to I-605 SB On-ramp**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	19,670
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	84
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1206	23	9	892	17	7	223	4	2
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	-1.0	-18.3	-22.2	-2.3	-19.6	-23.5	-8.3	-25.6	-29.5
Distance	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	72.2	63.2	63.8	70.9	61.9	62.5	64.9	55.9	56.5
VEHICULAR NOISE	DAY=	73.2	Leq	EVENING=	71.9	Leq	NIGHT=	65.9	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	74.3
		CNEL=	75.0
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	97 210 452
		CNEL:	107 231 497

Scenario: **EXISTING p1** Project: **City of Hope SP**
 Roadway: **Live Oak Ave** Analyst: **NJF**
 Segment: **I-605 SB On-Ramp to I-605 NB Off** Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	21,080
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	84
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1293	24	10	956	18	7	239	5	2
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	-0.7	-18.0	-21.9	-2.0	-19.3	-23.2	-8.0	-25.3	-29.2
Distance	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	72.5	63.5	64.1	71.2	62.2	62.8	65.2	56.2	56.8
VEHICULAR NOISE	DAY=	73.5	Leq	EVENING=	72.2	Leq	NIGHT=	66.2	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	74.6
		CNEL=	75.3
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	102 220 473
		CNEL:	112 242 521

Scenario: **EXISTING p1** Project: **City of Hope SP**
 Roadway: **Live Oak Ave** Analyst: **NJF**
 Segment: **I-605 NB Off-Ramp to Rivergrade F** Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	21,860
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	84
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1341	25	10	991	19	8	248	5	2
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	-0.6	-17.8	-21.8	-1.9	-19.1	-23.1	-7.9	-25.1	-29.1
Distance	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	72.7	63.7	64.3	71.3	62.4	62.9	65.3	56.4	56.9
VEHICULAR NOISE	DAY=	73.7	Leq	EVENING=	72.4	Leq	NIGHT=	66.4	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	74.8
		CNEL=	75.4
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	104 225 485
		CNEL:	115 248 534

Scenario: **EXISTING p1**
 Roadway: **Mountain Ave**
 Segment: **Huntington Dr to Central Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	14,240
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	873	16	7	646	12	5	162	3	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-1.9	-19.2	-23.1	-3.2	-20.5	-24.4	-9.2	-26.5	-30.4
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	66.2	57.9	58.8	64.9	56.6	57.5	58.9	50.6	51.5
VEHICULAR NOISE	DAY=	67.4	Leq	EVENING=	66.1	Leq	NIGHT=	60.1	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	68.5
		CNEL=	69.2
NOISE CONTOUR:		70 dBA	65 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	40
		CNEL:	44
		65 dBA	86
		60 dBA	185
		65 dBA	95
		60 dBA	204

Scenario: **EXISTING p1**
 Roadway: **Mountain Ave**
 Segment: **Central Ave to Evergreen St**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	13,360
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	819	15	6	606	11	5	152	3	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-2.2	-19.4	-23.4	-3.5	-20.7	-24.7	-9.5	-26.8	-30.7
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	65.9	57.6	58.5	64.6	56.3	57.2	58.6	50.3	51.2
VEHICULAR NOISE	DAY=	67.2	Leq	EVENING=	65.8	Leq	NIGHT=	59.8	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	68.3
		CNEL=	68.9
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	38 82 177
		CNEL:	42 91 195

Scenario: **EXISTING p1**
 Roadway: **Mountain Ave**
 Segment: **Evergreen St to Duarte Rd**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	10,790
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	662	12	5	489	9	4	123	2	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-3.1	-20.4	-24.3	-4.4	-21.7	-25.6	-10.4	-27.7	-31.6
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	65.0	56.7	57.6	63.7	55.4	56.3	57.7	49.4	50.3
VEHICULAR NOISE	DAY=	66.2	Leq	EVENING=	64.9	Leq	NIGHT=	58.9	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):			Ldn= 67.3
			CNEL= 68.0
NOISE CONTOUR:			<i>70 dBA 65 dBA 60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	33 71 154
		CNEL:	37 79 169

Scenario: **EXISTING p1**
 Roadway: **Mountain Ave**
 Segment: **Duarte Rd to Hurstview**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	7,040
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	432	8	3	319	6	2	80	2	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-5.0	-22.2	-26.2	-6.3	-23.5	-27.5	-12.3	-29.5	-33.5
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	63.1	54.8	55.7	61.8	53.5	54.4	55.8	47.5	48.4
VEHICULAR NOISE	DAY=	64.4	Leq	EVENING=	63.1	Leq	NIGHT=	57.0	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	65.5
		CNEL=	66.1
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	25 54 116
		CNEL:	27 59 127

Scenario: **EXISTING p1**
 Roadway: **Buena Vista St**
 Segment: **Royal Oaks Dr to Huntington Dr**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	7,340
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	450	9	3	333	6	3	83	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-4.2	-21.5	-25.4	-5.5	-22.8	-26.7	-11.5	-28.8	-32.7
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	61.2	53.7	55.0	59.9	52.4	53.7	53.9	46.4	47.7
VEHICULAR NOISE	DAY=	62.7	Leq	EVENING=	61.4	Leq	NIGHT=	55.4	Leq

RESULTS					
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	63.8		
		CNEL=	64.5		
NOISE CONTOUR:		70 dBA	65 dBA	60 dBA	
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	19	42	90
		CNEL:	21	46	99

Scenario: **EXISTING p1**
 Roadway: **Buena Vista St**
 Segment: **Huntington Dr to Central Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	10,210
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	626	12	5	463	9	4	116	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-2.8	-20.0	-24.0	-4.1	-21.3	-25.3	-10.1	-27.3	-31.3
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	62.7	55.2	56.4	61.4	53.8	55.1	55.4	47.8	49.1
VEHICULAR NOISE	DAY=	64.2	Leq	EVENING=	62.9	Leq	NIGHT=	56.9	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):			Ldn= 65.3
			CNEL= 65.9
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	24 52 112
		CNEL:	27 57 124

Scenario: **EXISTING p1** Project: **City of Hope SP**
 Roadway: **Buena Vista St** Analyst: **NJF**
 Segment: **Central Ave to I-210 WB On-Ramp** Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	14,230
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	873	16	7	645	12	5	162	3	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-1.3	-18.6	-22.5	-2.7	-19.9	-23.8	-8.7	-25.9	-29.9
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	64.1	56.6	57.9	62.8	55.3	56.5	56.8	49.3	50.5
VEHICULAR NOISE	DAY=	65.6	Leq	EVENING=	64.3	Leq	NIGHT=	58.3	Leq

RESULTS					
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	66.7		
		CNEL=	67.3		
NOISE CONTOUR:		70 dBA	65 dBA	60 dBA	
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	30	65	140
		CNEL:	33	72	154

Scenario: **EXISTING p1** Project: **City of Hope SP**
 Roadway: **Buena Vista St** Analyst: **NJF**
 Segment: **I-210 WB On-Ramp to Evergreen** Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	12,630
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	775	15	6	573	11	4	143	3	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-1.9	-19.1	-23.0	-3.2	-20.4	-24.4	-9.2	-26.4	-30.4
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	63.6	56.1	57.3	62.3	54.8	56.0	56.3	48.8	50.0
VEHICULAR NOISE	DAY=	65.1	Leq	EVENING=	63.8	Leq	NIGHT=	57.8	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	66.2
		CNEL=	66.8
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	28 60 130
		CNEL:	31 66 143

Scenario: **EXISTING p1** Project: **City of Hope SP**
 Roadway: **Buena Vista St** Analyst: **NJF**
 Segment: **Evergreen St to Three Ranch Rd** Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	12,300
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	754	14	6	558	11	4	140	3	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-2.0	-19.2	-23.2	-3.3	-20.5	-24.5	-9.3	-26.5	-30.5
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	63.5	56.0	57.2	62.2	54.7	55.9	56.2	48.6	49.9
VEHICULAR NOISE	DAY=	65.0	Leq	EVENING=	63.7	Leq	NIGHT=	57.7	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	66.1
		CNEL=	66.7
NOISE CONTOUR:		70 dBA	65 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	27
		CNEL:	30
			59
			127
			140

Scenario: **EXISTING p1**
 Roadway: **Buena Vista St**
 Segment: **Three Ranch Rd to Duarte Rd**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	12,510
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	767	14	6	567	11	4	142	3	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-1.9	-19.1	-23.1	-3.2	-20.4	-24.4	-9.2	-26.5	-30.4
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	63.6	56.0	57.3	62.2	54.7	56.0	56.2	48.7	50.0
VEHICULAR NOISE	DAY=	65.1	Leq	EVENING=	63.8	Leq	NIGHT=	57.7	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	66.2
		CNEL=	66.8
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	28 60 129
		CNEL:	31 66 142

Scenario: **EXISTING p1**
 Roadway: **Buena Vista St**
 Segment: **Duarte Rd to Village Rd**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	8,710
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	534	10	4	395	7	3	99	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-3.5	-20.7	-24.7	-4.8	-22.0	-26.0	-10.8	-28.0	-32.0
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	62.0	54.5	55.7	60.7	53.2	54.4	54.7	47.1	48.4
VEHICULAR NOISE	DAY=	63.5	Leq	EVENING=	62.2	Leq	NIGHT=	56.2	Leq

RESULTS					
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	64.6		
		CNEL=	65.2		
NOISE CONTOUR:		70 dBA	65 dBA	60 dBA	
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	22	47	101
		CNEL:	24	52	111

Scenario: **EXISTING p1**
 Roadway: **Buena Vista St**
 Segment: **Village Rd to Avenida Barbosa**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	8,420
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	516	10	4	382	7	3	96	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-3.6	-20.9	-24.8	-4.9	-22.2	-26.1	-10.9	-28.2	-32.1
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	61.8	54.3	55.6	60.5	53.0	54.3	54.5	47.0	48.3
VEHICULAR NOISE	DAY=	63.3	Leq	EVENING=	62.0	Leq	NIGHT=	56.0	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	64.4
		CNEL=	65.1
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	21 46 99
		CNEL:	23 51 109

Scenario: **EXISTING p1**
 Roadway: **Avenida Barbosa**
 Segment: **Buena Vista St to Arrow Hwy**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	12,390
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	760	14	6	562	11	4	141	3	1
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	-3.0	-20.3	-24.2	-4.3	-21.6	-25.5	-10.4	-27.6	-31.5
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	67.1	58.1	58.7	65.7	56.8	57.4	59.7	50.8	51.3
VEHICULAR NOISE	DAY=	68.1	Leq	EVENING=	66.8	Leq	NIGHT=	60.8	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	69.2
		CNEL=	69.8
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	44 95 205
		CNEL:	49 105 226

Scenario: **EXISTING p1**
 Roadway: **Duncannon Ave**
 Segment: **Central Ave to Evergreen St**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **14-Nov-16**

ROADWAY INPUTS	
ADT	1,340
SPEED (mph)	25
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	82	2	1	61	1	0	15	0	0
Speed in MPH	25	25	25	25	25	25	25	25	25
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	59.4	71.1	77.2	59.4	71.1	77.2	59.4	71.1	77.2
ADJUSTMENTS									
Flow	-10.1	-27.4	-31.3	-11.5	-28.7	-32.6	-17.5	-34.7	-38.7
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	49.2	43.7	45.9	47.9	42.3	44.5	41.9	36.3	38.5
VEHICULAR NOISE	DAY=	51.6	Leq	EVENING=	50.3	Leq	NIGHT=	44.3	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	52.7
		CNEL=	53.4
NOISE CONTOUR:		70 dBA	65 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	4
		CNEL:	4
		60 dBA	16
			18

City of Hope SP

EXISTING p2

#	ROADWAY	SEGMENT	ADT	POSTED SPEED LIMIT	LANE DISTANCE	SITE CONDITION	LANES	GRADE (%)	
1	Duncannon Ave	Evergreen St to Three Ranch Rd	1,380	25	12	Soft	2U	0%	1
2	Highland Ave	Royal Oaks Dr to Huntington Dr	4,610	35	36	Soft	4U	0%	2
3	Highland Ave	Huntington Dr to Central Ave	9,650	35	36	Soft	4U	0%	3
4	Highland Ave	Central Ave to Evergreen St	12,300	35	36	Soft	4U	0%	4
5	Highland Ave	Evergreen St to Business Center Dr	11,050	35	36	Soft	4U	0%	5
6	Highland Ave	Business Center Dr to Duarte Rd	10,610	35	36	Soft	4U	0%	6
7									7
8									8
9									9
10									10
11									11
12									12
13									13
14									14
15									15
16									16
17									17
18									18
19									19
20									20
21									21
22									22
23									23
24									24
25									25
26									26
27									27
28									28
29									29
30									30

ANALYST
NJF

ROAD CLASSIFICATION	SPEED	LANE DISTANCE
2U	40	12
4U	40	36
4D	45	48
6D	45	84
2D	40	24

73.6 75.55%
 13.6 13.96%
 10.22 10.49%

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.42%	DAY	75.5%
% MT	1.84%	EVENING	14.0%
% HT	0.74%	NIGHT	10.5%

Source: Riverside, County of, Department of Public Health, Office of Industrial Hygiene. 2009, November. For Determining and Mitigating Tr
 Riverside County Fleet Mix: Secondary, Collectors, or Smaller

Vehicle	Overall %	Day (7 AM to Evening (7 Night (10 PM to 7 AM)		
Auto	97%	73.60	13.60	10.22
Medium Truck	2%	0.90	0.04	0.90
Heavy Truck	1%	0.35	0.04	0.35
		74.85	13.68	11.47

City of Hope SP
EXISTING p2 CONDITIONS NOISE CONTOURS RESULT SUMMARY TABLE

#	ROADWAY	SEGMENT	DAILY TRAFFIC VOLUMES	NOISE LEVEL AT 50 FT. (dBA CNEL)	DISTANCE TO NOISE CONTOUR (FT.)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Duncannon Ave	Evergreen St to Three Ranch Rd	1,380	53.5	4	9	18
2	Highland Ave	Royal Oaks Dr to Huntington Dr	4,610	62.4	16	34	73
3	Highland Ave	Huntington Dr to Central Ave	9,650	65.7	26	55	119
4	Highland Ave	Central Ave to Evergreen St	12,300	66.7	30	65	140
5	Highland Ave	Evergreen St to Business Center Dr	11,050	66.2	28	61	130
6	Highland Ave	Business Center Dr to Duarte Rd	10,610	66.1	27	59	127
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

Scenario: EXISTING p2
 Roadway: Duncannon Ave
 Segment: Evergreen St to Three Ranch Rd

Project: City of Hope SP
 Analyst: NJF
 Date: 15-Nov-16

ROADWAY INPUTS	
ADT	1,380
SPEED (mph)	25
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	85	2	1	63	1	0	16	0	0
Speed in MPH	25	25	25	25	25	25	25	25	25
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	59.4	71.1	77.2	59.4	71.1	77.2	59.4	71.1	77.2
ADJUSTMENTS									
Flow	-10.0	-27.2	-31.2	-11.3	-28.6	-32.5	-17.3	-34.6	-38.5
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	49.4	43.8	46.0	48.1	42.5	44.7	42.0	36.5	38.7
VEHICULAR NOISE	DAY=	51.8	Leq	EVENING=	50.4	Leq	NIGHT=	44.4	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 52.9 CNEL= 53.5
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	4 8 17
		CNEL:	4 9 18

Scenario: EXISTING p2
 Roadway: Highland Ave
 Segment: Royal Oaks Dr to Huntington Dr

Project: City of Hope SP
 Analyst: NJF
 Date: 15-Nov-16

ROADWAY INPUTS	
ADT	4,610
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	283	5	2	209	4	2	52	1	0
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-6.2	-23.5	-27.4	-7.5	-24.8	-28.7	-13.6	-30.8	-34.8
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	59.2	51.7	53.0	57.9	50.4	51.7	51.9	44.4	45.6
VEHICULAR NOISE	DAY=	60.7	Leq	EVENING=	59.4	Leq	NIGHT=	53.4	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 61.8 CNEL= 62.4
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	14 31 66
		CNEL:	16 34 73

Scenario: **EXISTING p2**
 Roadway: **Highland Ave**
 Segment: **Huntington Dr to Central Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **15-Nov-16**

ROADWAY INPUTS	
ADT	9,650
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	592	11	4	437	8	3	110	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-3.0	-20.3	-24.2	-4.3	-21.6	-25.5	-10.3	-27.6	-31.5
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	62.4	54.9	56.2	61.1	53.6	54.9	55.1	47.6	48.8
VEHICULAR NOISE	DAY=	63.9	Leq	EVENING=	62.6	Leq	NIGHT=	56.6	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 65.0 CNEL= 65.7
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	23 50 108
		CNEL:	26 55 119

Scenario: EXISTING p2
 Roadway: Highland Ave
 Segment: Central Ave to Evergreen St

Project: City of Hope SP
 Analyst: NJF
 Date: 15-Nov-16

ROADWAY INPUTS	
ADT	12,300
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	754	14	6	558	11	4	140	3	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-2.0	-19.2	-23.2	-3.3	-20.5	-24.5	-9.3	-26.5	-30.5
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	63.5	56.0	57.2	62.2	54.7	55.9	56.2	48.6	49.9
VEHICULAR NOISE	DAY=	65.0	Leq	EVENING=	63.7	Leq	NIGHT=	57.7	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 66.1 CNEL= 66.7
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	27 59 127
		CNEL:	30 65 140

Scenario: **EXISTING p2**
 Roadway: **Highland Ave**
 Segment: **Evergreen St to Business Center Dr**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **15-Nov-16**

ROADWAY INPUTS	
ADT	11,050
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	678	13	5	501	9	4	125	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-2.4	-19.7	-23.6	-3.7	-21.0	-24.9	-9.8	-27.0	-31.0
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	63.0	55.5	56.8	61.7	54.2	55.5	55.7	48.2	49.4
VEHICULAR NOISE	DAY=	64.5	Leq	EVENING=	63.2	Leq	NIGHT=	57.2	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 65.6 CNEL= 66.2
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	26 55 118
		CNEL:	28 61 130

Scenario: EXISTING p2
 Roadway: Highland Ave
 Segment: Business Center Dr to Duarte Rd

Project: City of Hope SP
 Analyst: NJF
 Date: 15-Nov-16

ROADWAY INPUTS	
ADT	10,610
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	651	12	5	481	9	4	120	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-2.6	-19.9	-23.8	-3.9	-21.2	-25.1	-9.9	-27.2	-31.1
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	62.8	55.3	56.6	61.5	54.0	55.3	55.5	48.0	49.3
VEHICULAR NOISE	DAY=	64.3	Leq	EVENING=	63.0	Leq	NIGHT=	57.0	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 65.4 CNEL= 66.1
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	25 54 115
		CNEL:	27 59 127

- Traffic Noise Calculations
 - o Project Contributions
 - o Existing Conditions
 - o Existing + Project Conditions
 - o Future Conditions
 - o Future + Project Conditions
 - o Intersection Information

**City of Hope SP
EXISTING + P p1**

#	ROADWAY	SEGMENT	ADT	POSTED SPEED LIMIT	LANE DISTANCE	SITE CONDITION	LANES	GRADE (%)	
1	Huntington Dr	Mountain Ave to Buena Vista St	21,278	40	48	Soft	4D	0%	1
2	Huntington Dr	Buena Vista St to Highland Ave	20,333	40	48	Soft	4D	0%	2
3	Huntington Dr	Highland Ave to Mt Olive Dr	27,239	40	48	Soft	4D	0%	3
4	Huntington Dr	Mt. Olive Dr to Crestfield Dr	22,570	40	48	Soft	4D	0%	4
5	Central Ave	I-210 WB On-Ramp to Mountain Ave	9,880	35	12	Soft	2U	0%	5
6	Central Ave	Mountain Ave to Buena Vista St	13,174	35	12	Soft	2U	0%	6
7	Central Ave	Buena Vista St to I-210 WB Off-Ramp	11,762	35	12	Soft	2U	0%	7
8	Central Ave	I-210 WB Off-Ramp to Highland Ave	9,183	35	12	Soft	2U	0%	8
9	Central Ave	Highland Ave to Santo Domingo Ave	9,868	35	12	Soft	2U	0%	9
10	Evergreen St	I-210 EB Off-Ramp to Mountain Ave	7,050	35	12	Soft	2U	0%	10
11	Evergreen St	Mountain Ave to Buena Vista St	7,200	35	12	Soft	2U	0%	11
12	Evergreen St	Duncannon Ave to Highland Ave	1,980	35	12	Soft	2U	0%	12
13	Evergreen St	Highland Ave to Santo Domingo Ave	1,130	35	12	Soft	2U	0%	13
14	Three Ranch Rd	Bradbury Ave to Buena Vista St	410	25	12	Soft	2U	0%	14
15	Three Ranch Rd	Buena Vista St to Duncannon Ave	1,120	25	12	Soft	2U	0%	15
16	Business Center Dr	Fairdale Ave to Highland Ave	430	25	12	Soft	2U	0%	16
17	Business Center Dr	Highland Ave to Santo Domingo Ave	990	25	12	Soft	2U	0%	17
18	Duarte Rd	California Ave to Mountain Ave	10,138	40	48	Soft	4D	0%	18
19	Duarte Rd	Mountain Ave to Buena Vista St	11,278	40	48	Soft	4D	0%	19
20	Duarte Rd	Buena Vista St to Cinco Roberts Dr	16,176	40	48	Soft	4D	0%	20
21	Duarte Rd	Cinco Roberts Dr to Village Rd	15,107	40	48	Soft	4D	0%	21
22	Duarte Rd	Village Rd to Hope Dr	12,479	40	48	Soft	4D	0%	22
23	Duarte Rd	Hope Dr to Circle Rd	10,265	40	48	Soft	4D	0%	23
24	Duarte Rd	Circle Rd to Highland Ave	11,300	40	48	Soft	4D	0%	24
25	Arrow Hwy	Longden Ave to Live Oak Ave	32,346	45	48	Soft	4D	0%	25
26	Arrow Hwy	Live Oak Ave to Avenida Barbosa	24,710	45	48	Soft	4D	0%	26
27	Arrow Hwy	Avenida Barbosa to I-605 SB Off-Ramp	28,792	45	48	Soft	4D	0%	27
28	Arrow Hwy	I-605 SB Off-Ramp to I-605 NB On-Ramp	26,472	45	48	Soft	4D	0%	28
29	Live Oak Ave	Arrow Hwy to I-605 SB On-ramp	20,454	45	84	Soft	6D	0%	29
30	Live Oak Ave	I-605 SB On-Ramp to I-605 NB Off-Ramp	21,472	45	84	Soft	6D	0%	30
31	Live Oak Ave	I-605 NB Off-Ramp to Rivergrade Rd	21,860	45	84	Soft	6D	0%	31
32	Mountain Ave	Huntington Dr to Central Ave	14,430	40	48	Soft	4D	0%	32
33	Mountain Ave	Central Ave to Evergreen St	13,550	40	48	Soft	4D	0%	33
34	Mountain Ave	Evergreen St to Duarte Rd	10,980	40	48	Soft	4D	0%	34
35	Mountain Ave	Duarte Rd to Hurstview	7,040	40	48	Soft	4D	0%	35
36	Buena Vista St	Royal Oaks Dr to Huntington Dr	7,402	35	36	Soft	4U	0%	36
37	Buena Vista St	Huntington Dr to Central Ave	10,603	35	36	Soft	4U	0%	37
38	Buena Vista St	Central Ave to I-210 WB On-Ramp	15,014	35	36	Soft	4U	0%	38
39	Buena Vista St	I-210 WB On-Ramp to Evergreen St	14,008	35	36	Soft	4U	0%	39
40	Buena Vista St	Evergreen St to Three Ranch Rd	14,783	35	36	Soft	4U	0%	40
41	Buena Vista St	Three Ranch Rd to Duarte Rd	14,993	35	36	Soft	4U	0%	41
42	Buena Vista St	Duarte Rd to Village Rd	10,520	35	36	Soft	4U	0%	42
43	Buena Vista St	Village Rd to Avenida Barbosa	9,632	35	36	Soft	4U	0%	43
44	Avenida Barbosa	Buena Vista St to Arrow Hwy	13,602	45	48	Soft	4D	0%	44
45	Duncannon Ave	Central Ave to Evergreen St	1,340	25	12	Soft	2U	0%	45

ANALYST
NJF

ROAD CLASSIFICATION	SPEED	LANE DISTANCE
2U	40	12
4U	40	36
4D	45	48
6D	45	84
2D	40	24

73.6 75.55%
 13.6 13.96%
 10.22 10.49%

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.42%	DAY	75.5%
% MT	1.84%	EVENING	14.0%
% HT	0.74%	NIGHT	10.5%

Source: Riverside, County of, Department of Public Health, Office of Industrial Hygiene. 2009, November. For Determining and Mitigating Tr
 Riverside County Fleet Mix: Secondary, Collectors, or Smaller

Vehicle	Overall %	Day (7 AM to Evening (7 Night (10 PM to 7 AM)		
Auto	97%	73.60	13.60	10.22
Medium Truck	2%	0.90	0.04	0.90
Heavy Truck	1%	0.35	0.04	0.35
		74.85	13.68	11.47

City of Hope SP
EXISTING + P p1 CONDITIONS NOISE CONTOURS RESULT SUMMARY TABLE

#	ROADWAY	SEGMENT	DAILY TRAFFIC VOLUMES	NOISE LEVEL AT 50 FT. (dBA CNEL)	DISTANCE TO NOISE CONTOUR (FT.)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Huntington Dr	Mountain Ave to Buena Vista St	21,278	70.9	57	124	266
2	Huntington Dr	Buena Vista St to Highland Ave	20,333	70.7	56	120	259
3	Huntington Dr	Highland Ave to Mt Olive Dr	27,239	72.0	68	146	314
4	Huntington Dr	Mt. Olive Dr to Crestfield Dr	22,570	71.2	60	129	277
5	Central Ave	I-210 WB On-Ramp to Mountain Ave	9,880	65.4	25	53	114
6	Central Ave	Mountain Ave to Buena Vista St	13,174	66.6	30	64	138
7	Central Ave	Buena Vista St to I-210 WB Off-Ramp	11,762	66.1	28	59	128
8	Central Ave	I-210 WB Off-Ramp to Highland Ave	9,183	65.0	23	50	108
9	Central Ave	Highland Ave to Santo Domingo Ave	9,868	65.3	24	53	114
10	Evergreen St	I-210 EB Off-Ramp to Mountain Ave	7,050	63.9	20	42	91
11	Evergreen St	Mountain Ave to Buena Vista St	7,200	64.0	20	43	92
12	Evergreen St	Duncannon Ave to Highland Ave	1,980	58.4	8	18	39
13	Evergreen St	Highland Ave to Santo Domingo Ave	1,130	55.9	6	12	27
14	Three Ranch Rd	Bradbury Ave to Buena Vista St	410	48.2	2	4	8
15	Three Ranch Rd	Buena Vista St to Duncannon Ave	1,120	52.6	3	7	16
16	Business Center Dr	Fairdale Ave to Highland Ave	430	48.4	2	4	8
17	Business Center Dr	Highland Ave to Santo Domingo Ave	990	52.0	3	7	15
18	Duarte Rd	California Ave to Mountain Ave	10,138	67.7	35	75	163
19	Duarte Rd	Mountain Ave to Buena Vista St	11,278	68.1	38	81	175
20	Duarte Rd	Buena Vista St to Cinco Roberts Dr	16,176	69.7	48	103	222
21	Duarte Rd	Cinco Roberts Dr to Village Rd	15,107	69.4	46	98	212
22	Duarte Rd	Village Rd to Hope Dr	12,479	68.6	40	87	187
23	Duarte Rd	Hope Dr to Circle Rd	10,265	67.7	35	76	164
24	Duarte Rd	Circle Rd to Highland Ave	11,300	68.2	38	81	175
25	Arrow Hwy	Longden Ave to Live Oak Ave	32,346	74.0	92	199	429
26	Arrow Hwy	Live Oak Ave to Avenida Barbosa	24,710	72.8	77	166	358
27	Arrow Hwy	Avenida Barbosa to I-605 SB Off-Ramp	28,792	73.5	85	184	397
28	Arrow Hwy	I-605 SB Off-Ramp to I-605 NB On-Ramp	26,472	73.1	81	174	375
29	Live Oak Ave	Arrow Hwy to I-605 SB On-ramp	20,454	75.1	110	237	510
30	Live Oak Ave	I-605 SB On-Ramp to I-605 NB Off-Ramp	21,472	75.3	114	245	527
31	Live Oak Ave	I-605 NB Off-Ramp to Rivergrade Rd	21,860	75.4	115	248	534
32	Mountain Ave	Huntington Dr to Central Ave	14,430	69.2	44	95	206
33	Mountain Ave	Central Ave to Evergreen St	13,550	68.9	42	92	197
34	Mountain Ave	Evergreen St to Duarte Rd	10,980	68.0	37	80	171
35	Mountain Ave	Duarte Rd to Hurstview	7,040	66.1	27	59	127
36	Buena Vista St	Royal Oaks Dr to Huntington Dr	7,402	64.5	22	46	100
37	Buena Vista St	Huntington Dr to Central Ave	10,603	66.1	27	59	127
38	Buena Vista St	Central Ave to I-210 WB On-Ramp	15,014	67.6	34	74	160
39	Buena Vista St	I-210 WB On-Ramp to Evergreen St	14,008	67.3	33	71	153
40	Buena Vista St	Evergreen St to Three Ranch Rd	14,783	67.5	34	74	158
41	Buena Vista St	Three Ranch Rd to Duarte Rd	14,993	67.6	34	74	160
42	Buena Vista St	Duarte Rd to Village Rd	10,520	66.0	27	59	126
43	Buena Vista St	Village Rd to Avenida Barbosa	9,632	65.6	26	55	119
44	Avenida Barbosa	Buena Vista St to Arrow Hwy	13,602	70.2	52	112	241
45	Duncannon Ave	Central Ave to Evergreen St	1,340	53.4	4	8	18

Scenario: EXISTING + P p1
 Roadway: Huntington Dr
 Segment: Mountain Ave to Buena Vista St

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	21,278
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1305	25	10	965	18	7	242	5	2
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-0.2	-17.4	-21.4	-1.5	-18.7	-22.7	-7.5	-24.7	-28.7
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	67.9	59.7	60.5	66.6	58.3	59.2	60.6	52.3	53.2
VEHICULAR NOISE	DAY=	69.2	Leq	EVENING=	67.9	Leq	NIGHT=	61.9	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 70.3 CNEL= 70.9
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	52 112 242
		CNEL:	57 124 266

Scenario: **EXISTING + P p1**
 Roadway: **Huntington Dr**
 Segment: **Buena Vista St to Highland Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	20,333
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1247	24	9	922	17	7	231	4	2
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-0.4	-17.6	-21.6	-1.7	-18.9	-22.9	-7.7	-24.9	-28.9
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	67.7	59.5	60.3	66.4	58.1	59.0	60.4	52.1	53.0
VEHICULAR NOISE	DAY=	69.0	Leq	EVENING=	67.7	Leq	NIGHT=	61.7	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 70.1 CNEL= 70.7
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	51 109 235
		CNEL:	56 120 259

Scenario: **EXISTING + P p1**
 Roadway: **Huntington Dr**
 Segment: **Highland Ave to Mt Olive Dr**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	27,239
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1671	32	13	1235	23	9	309	6	2
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	0.9	-16.3	-20.3	-0.4	-17.6	-21.6	-6.4	-23.7	-27.6
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	69.0	60.7	61.6	67.7	59.4	60.3	61.7	53.4	54.3
VEHICULAR NOISE	DAY=	70.3	Leq	EVENING=	68.9	Leq	NIGHT=	62.9	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 71.3 CNEL= 72.0
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	61 132 285
		CNEL:	68 146 314

Scenario: EXISTING + P p1
 Roadway: Huntington Dr
 Segment: Mt. Olive Dr to Crestfield Dr

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	22,570
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1384	26	11	1023	19	8	256	5	2
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	0.1	-17.2	-21.1	-1.2	-18.5	-22.4	-7.2	-24.5	-28.4
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	68.2	59.9	60.8	66.9	58.6	59.5	60.9	52.6	53.5
VEHICULAR NOISE	DAY=	69.4	Leq	EVENING=	68.1	Leq	NIGHT=	62.1	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 70.5 CNEL= 71.2
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	54 117 252
		CNEL:	60 129 277

Scenario: EXISTING + P p1
 Roadway: Central Ave
 Segment: I-210 WB On-Ramp to Mountain Ave

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	9,880
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	606	11	5	448	8	3	112	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-2.9	-20.2	-24.1	-4.2	-21.5	-25.4	-10.2	-27.5	-31.4
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	62.1	54.6	55.9	60.8	53.3	54.6	54.8	47.3	48.5
VEHICULAR NOISE	DAY=	63.6	Leq	EVENING=	62.3	Leq	NIGHT=	56.3	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 64.7 CNEL= 65.4
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	22 48 103
		CNEL:	25 53 114

Scenario: **EXISTING + P p1**
 Roadway: **Central Ave**
 Segment: **Mountain Ave to Buena Vista St**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	13,174
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	808	15	6	597	11	5	150	3	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-1.7	-18.9	-22.9	-3.0	-20.2	-24.2	-9.0	-26.2	-30.2
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	63.4	55.9	57.1	62.1	54.5	55.8	56.1	48.5	49.8
VEHICULAR NOISE	DAY=	64.9	Leq	EVENING=	63.6	Leq	NIGHT=	57.6	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 66.0 CNEL= 66.6
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	27 58 125
		CNEL:	30 64 138

Scenario: EXISTING + P p1
 Roadway: Central Ave
 Segment: Buena Vista St to I-210 WB Off-Ramp

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	11,762
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	721	14	5	533	10	4	134	3	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-2.2	-19.4	-23.4	-3.5	-20.7	-24.7	-9.5	-26.7	-30.7
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	62.9	55.4	56.6	61.6	54.1	55.3	55.6	48.0	49.3
VEHICULAR NOISE	DAY=	64.4	Leq	EVENING=	63.1	Leq	NIGHT=	57.1	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 65.5 CNEL= 66.1
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	25 54 116
		CNEL:	28 59 128

Scenario: EXISTING + P p1
 Roadway: Central Ave
 Segment: I-210 WB Off-Ramp to Highland Ave

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	9,183
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	563	11	4	416	8	3	104	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-3.2	-20.5	-24.4	-4.6	-21.8	-25.7	-10.6	-27.8	-31.8
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	61.8	54.3	55.6	60.5	53.0	54.2	54.5	47.0	48.2
VEHICULAR NOISE	DAY=	63.3	Leq	EVENING=	62.0	Leq	NIGHT=	56.0	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 64.4 CNEL= 65.0
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	21 46 98
		CNEL:	23 50 108

Scenario: **EXISTING + P p1**
 Roadway: **Central Ave**
 Segment: **Highland Ave to Santo Domingo Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	9,868
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	605	11	5	447	8	3	112	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-2.9	-20.2	-24.1	-4.2	-21.5	-25.4	-10.3	-27.5	-31.4
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	62.1	54.6	55.9	60.8	53.3	54.6	54.8	47.3	48.5
VEHICULAR NOISE	DAY=	63.6	Leq	EVENING=	62.3	Leq	NIGHT=	56.3	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 64.7 CNEL= 65.3
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	22 48 103
		CNEL:	24 53 114

Scenario: **EXISTING + P p1**
 Roadway: **Evergreen St**
 Segment: **I-210 EB Off-Ramp to Mountain Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	7,050
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	432	8	3	320	6	2	80	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-4.4	-21.6	-25.6	-5.7	-22.9	-26.9	-11.7	-29.0	-32.9
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	60.7	53.1	54.4	59.4	51.8	53.1	53.3	45.8	47.1
VEHICULAR NOISE	DAY=	62.2	Leq	EVENING=	60.9	Leq	NIGHT=	54.8	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 63.3 CNEL= 63.9
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	18 38 83
		CNEL:	20 42 91

Scenario: **EXISTING + P p1**
 Roadway: **Evergreen St**
 Segment: **Mountain Ave to Buena Vista St**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	7,200
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	442	8	3	326	6	2	82	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-4.3	-21.5	-25.5	-5.6	-22.8	-26.8	-11.6	-28.9	-32.8
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	60.8	53.2	54.5	59.4	51.9	53.2	53.4	45.9	47.2
VEHICULAR NOISE	DAY=	62.3	Leq	EVENING=	60.9	Leq	NIGHT=	54.9	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):			Ldn= 63.4
			CNEL= 64.0
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	18 39 84
		CNEL:	20 43 92

Scenario: **EXISTING + P p1**
 Roadway: **Evergreen St**
 Segment: **Duncannon Ave to Highland Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	1,980
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	121	2	1	90	2	1	22	0	0
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-9.9	-27.1	-31.1	-11.2	-28.5	-32.4	-17.2	-34.5	-38.4
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	55.1	47.6	48.9	53.8	46.3	47.6	47.8	40.3	41.6
VEHICULAR NOISE	DAY=	56.7	Leq	EVENING=	55.3	Leq	NIGHT=	49.3	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	57.7
		CNEL=	58.4
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	8 16 35
		CNEL:	8 18 39

Scenario: **EXISTING + P p1** Project: **City of Hope SP**
 Roadway: **Evergreen St** Analyst: **NJF**
 Segment: **Highland Ave to Santo Domingo Av** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	1,130
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	69	1	1	51	1	0	13	0	0
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-12.3	-29.6	-33.5	-13.7	-30.9	-34.8	-19.7	-36.9	-40.9
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	52.7	45.2	46.5	51.4	43.9	45.1	45.4	37.9	39.1
VEHICULAR NOISE	DAY=	54.2	Leq	EVENING=	52.9	Leq	NIGHT=	46.9	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	55.3
		CNEL=	55.9
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	5 11 24
		CNEL:	6 12 27

Scenario: **EXISTING + P p1**
 Roadway: **Three Ranch Rd**
 Segment: **Bradbury Ave to Buena Vista St**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	410
SPEED (mph)	25
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	25	0	0	19	0	0	5	0	0
Speed in MPH	25	25	25	25	25	25	25	25	25
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	59.4	71.1	77.2	59.4	71.1	77.2	59.4	71.1	77.2
ADJUSTMENTS									
Flow	-15.3	-32.5	-36.5	-16.6	-33.8	-37.8	-22.6	-39.8	-43.8
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	44.1	38.5	40.7	42.8	37.2	39.4	36.8	31.2	33.4
VEHICULAR NOISE	DAY=	46.5	Leq	EVENING=	45.2	Leq	NIGHT=	39.2	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	47.6
		CNEL=	48.2
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	2 3 7
		CNEL:	2 4 8

Scenario: **EXISTING + P p1** Project: **City of Hope SP**
 Roadway: **Three Ranch Rd** Analyst: **NJF**
 Segment: **Buena Vista St to Duncannon Ave** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	1,120
SPEED (mph)	25
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	69	1	1	51	1	0	13	0	0
Speed in MPH	25	25	25	25	25	25	25	25	25
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	59.4	71.1	77.2	59.4	71.1	77.2	59.4	71.1	77.2
ADJUSTMENTS									
Flow	-10.9	-28.2	-32.1	-12.2	-29.5	-33.4	-18.2	-35.5	-39.4
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	48.5	42.9	45.1	47.2	41.6	43.8	41.1	35.6	37.7
VEHICULAR NOISE	DAY=	50.9	Leq	EVENING=	49.5	Leq	NIGHT=	43.5	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	52.0
		CNEL=	52.6
NOISE CONTOUR:		70 dBA	65 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	3 7 15
		CNEL:	3 7 16

Scenario: **EXISTING + P p1**
 Roadway: **Business Center Dr**
 Segment: **Fairdale Ave to Highland Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	430
SPEED (mph)	25
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	26	0	0	19	0	0	5	0	0
Speed in MPH	25	25	25	25	25	25	25	25	25
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	59.4	71.1	77.2	59.4	71.1	77.2	59.4	71.1	77.2
ADJUSTMENTS									
Flow	-15.1	-32.3	-36.3	-16.4	-33.6	-37.6	-22.4	-39.6	-43.6
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	44.3	38.7	40.9	43.0	37.4	39.6	37.0	31.4	33.6
VEHICULAR NOISE	DAY=	46.7	Leq	EVENING=	45.4	Leq	NIGHT=	39.4	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	47.8
		CNEL=	48.4
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	2 4 8
		CNEL:	2 4 8

Scenario: **EXISTING + P p1** Project: **City of Hope SP**
 Roadway: **Business Center Dr** Analyst: **NJF**
 Segment: **Highland Ave to Santo Domingo Av** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	990
SPEED (mph)	25
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	61	1	0	45	1	0	11	0	0
Speed in MPH	25	25	25	25	25	25	25	25	25
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	59.4	71.1	77.2	59.4	71.1	77.2	59.4	71.1	77.2
ADJUSTMENTS									
Flow	-11.5	-28.7	-32.6	-12.8	-30.0	-34.0	-18.8	-36.0	-40.0
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	47.9	42.3	44.5	46.6	41.0	43.2	40.6	35.0	37.2
VEHICULAR NOISE	DAY=	50.3	Leq	EVENING=	49.0	Leq	NIGHT=	43.0	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	51.4
		CNEL=	52.0
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	3 6 13
		CNEL:	3 7 15

Scenario: **EXISTING + P p1**
 Roadway: **Duarte Rd**
 Segment: **California Ave to Mountain Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	10,138
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	622	12	5	460	9	3	115	2	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-3.4	-20.6	-24.6	-4.7	-21.9	-25.9	-10.7	-28.0	-31.9
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	64.7	56.4	57.3	63.4	55.1	56.0	57.4	49.1	50.0
VEHICULAR NOISE	DAY=	66.0	Leq	EVENING=	64.6	Leq	NIGHT=	58.6	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):			Ldn= 67.1
			CNEL= 67.7
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	32 69 148
		CNEL:	35 75 163

Scenario: **EXISTING + P p1**
 Roadway: **Duarte Rd**
 Segment: **Mountain Ave to Buena Vista St**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	11,278
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	692	13	5	511	10	4	128	2	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-2.9	-20.2	-24.1	-4.2	-21.5	-25.4	-10.3	-27.5	-31.4
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	65.2	56.9	57.8	63.9	55.6	56.5	57.9	49.6	50.5
VEHICULAR NOISE	DAY=	66.4	Leq	EVENING=	65.1	Leq	NIGHT=	59.1	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn= 67.5	
		CNEL= 68.1	
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn: 34	74 159
		CNEL: 38	81 175

Scenario: **EXISTING + P p1** Project: **City of Hope SP**
 Roadway: **Duarte Rd** Analyst: **NJF**
 Segment: **Buena Vista St to Cinco Roberts Dr** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	16,176
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	992	19	8	733	14	6	184	3	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-1.4	-18.6	-22.6	-2.7	-19.9	-23.9	-8.7	-25.9	-29.9
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	66.7	58.5	59.4	65.4	57.1	58.0	59.4	51.1	52.0
VEHICULAR NOISE	DAY=	68.0	Leq	EVENING=	66.7	Leq	NIGHT=	60.7	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	69.1
		CNEL=	69.7
NOISE CONTOUR:		70 dBA	65 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		60 dBA	
	Ldn:	43	94
	CNEL:	48	103
		202	222

Scenario: **EXISTING + P p1**
 Roadway: **Duarte Rd**
 Segment: **Cinco Roberts Dr to Village Rd**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	15,107
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	927	18	7	685	13	5	172	3	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-1.7	-18.9	-22.9	-3.0	-20.2	-24.2	-9.0	-26.2	-30.2
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	66.5	58.2	59.1	65.1	56.9	57.7	59.1	50.8	51.7
VEHICULAR NOISE	DAY=	67.7	Leq	EVENING=	66.4	Leq	NIGHT=	60.4	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	68.8
		CNEL=	69.4
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	41 89 193
		CNEL:	46 98 212

Scenario: **EXISTING + P p1**
 Roadway: **Duarte Rd**
 Segment: **Village Rd to Hope Dr**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	12,479
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	765	14	6	566	11	4	142	3	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-2.5	-19.7	-23.7	-3.8	-21.0	-25.0	-9.8	-27.1	-31.0
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	65.6	57.3	58.2	64.3	56.0	56.9	58.3	50.0	50.9
VEHICULAR NOISE	DAY=	66.9	Leq	EVENING=	65.5	Leq	NIGHT=	59.5	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):			Ldn= 68.0
			CNEL= 68.6
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):	Ldn:	37	79 170
	CNEL:	40	87 187

Scenario: **EXISTING + P p1**
 Roadway: **Duarte Rd**
 Segment: **Hope Dr to Circle Rd**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	10,265
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	630	12	5	465	9	4	117	2	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-3.3	-20.6	-24.5	-4.6	-21.9	-25.8	-10.7	-27.9	-31.9
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	64.8	56.5	57.4	63.5	55.2	56.1	57.4	49.2	50.1
VEHICULAR NOISE	DAY=	66.0	Leq	EVENING=	64.7	Leq	NIGHT=	58.7	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):			Ldn= 67.1
			CNEL= 67.7
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	32 69 149
		CNEL:	35 76 164

Scenario: **EXISTING + P p1**
 Roadway: **Duarte Rd**
 Segment: **Circle Rd to Highland Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	11,300
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	693	13	5	512	10	4	128	2	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-2.9	-20.2	-24.1	-4.2	-21.5	-25.4	-10.2	-27.5	-31.4
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	65.2	56.9	57.8	63.9	55.6	56.5	57.9	49.6	50.5
VEHICULAR NOISE	DAY=	66.4	Leq	EVENING=	65.1	Leq	NIGHT=	59.1	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	67.5
		CNEL=	68.2
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	34 74 159
		CNEL:	38 81 175

Scenario: **EXISTING + P p1**
 Roadway: **Arrow Hwy**
 Segment: **Longden Ave to Live Oak Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	32,346
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1984	37	15	1466	28	11	367	7	3
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	1.1	-16.1	-20.1	-0.2	-17.4	-21.4	-6.2	-23.4	-27.4
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	71.2	62.3	62.8	69.9	61.0	61.5	63.9	54.9	55.5
VEHICULAR NOISE	DAY=	72.3	Leq	EVENING=	71.0	Leq	NIGHT=	64.9	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	73.4
		CNEL=	74.0
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	84 181 389
		CNEL:	92 199 429

Scenario: **EXISTING + P p1** Project: **City of Hope SP**
 Roadway: **Arrow Hwy** Analyst: **NJF**
 Segment: **Live Oak Ave to Avenida Barbosa** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	24,710
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1516	29	12	1120	21	9	281	5	2
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	0.0	-17.3	-21.2	-1.3	-18.6	-22.5	-7.4	-24.6	-28.6
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	70.1	61.1	61.7	68.7	59.8	60.4	62.7	53.8	54.3
VEHICULAR NOISE	DAY=	71.1	Leq	EVENING=	69.8	Leq	NIGHT=	63.8	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	72.2
		CNEL=	72.8
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	70 151 325
		CNEL:	77 166 358

Scenario: **EXISTING + P p1** Project: **City of Hope SP**
 Roadway: **Arrow Hwy** Analyst: **NJF**
 Segment: **Avenida Barbosa to I-605 SB Off-R** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	28,792
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1766	33	13	1305	25	10	327	6	2
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	0.6	-16.6	-20.6	-0.7	-17.9	-21.9	-6.7	-23.9	-27.9
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	70.7	61.8	62.3	69.4	60.5	61.0	63.4	54.4	55.0
VEHICULAR NOISE	DAY=	71.8	Leq	EVENING=	70.5	Leq	NIGHT=	64.4	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	72.9
		CNEL=	73.5
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	78 167 360
		CNEL:	85 184 397

Scenario: **EXISTING + P p1** Project: **City of Hope SP**
 Roadway: **Arrow Hwy** Analyst: **NJF**
 Segment: **I-605 SB Off-Ramp to I-605 NB On** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	26,472
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1624	31	12	1200	23	9	301	6	2
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	0.3	-17.0	-20.9	-1.0	-18.3	-22.2	-7.1	-24.3	-28.3
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	70.4	61.4	62.0	69.0	60.1	60.6	63.0	54.1	54.6
VEHICULAR NOISE	DAY=	71.4	Leq	EVENING=	70.1	Leq	NIGHT=	64.1	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	72.5
		CNEL=	73.1
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	73 158 341
		CNEL:	81 174 375

Scenario: **EXISTING + P p1**
 Roadway: **Live Oak Ave**
 Segment: **Arrow Hwy to I-605 SB On-ramp**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	20,454
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	84
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1255	24	10	927	18	7	232	4	2
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	-0.9	-18.1	-22.0	-2.2	-19.4	-23.4	-8.2	-25.4	-29.4
Distance	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	72.4	63.4	64.0	71.1	62.1	62.7	65.0	56.1	56.6
VEHICULAR NOISE	DAY=	73.4	Leq	EVENING=	72.1	Leq	NIGHT=	66.1	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	74.5
		CNEL=	75.1
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	100 215 464
		CNEL:	110 237 510

Scenario: **EXISTING + P p1** Project: **City of Hope SP**
 Roadway: **Live Oak Ave** Analyst: **NJF**
 Segment: **I-605 SB On-Ramp to I-605 NB Off** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	21,472
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	84
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1317	25	10	973	18	7	244	5	2
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	-0.6	-17.9	-21.8	-2.0	-19.2	-23.1	-8.0	-25.2	-29.2
Distance	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	72.6	63.6	64.2	71.3	62.3	62.9	65.3	56.3	56.9
VEHICULAR NOISE	DAY=	73.6	Leq	EVENING=	72.3	Leq	NIGHT=	66.3	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):			Ldn= 74.7
			CNEL= 75.3
NOISE CONTOUR:	70 dBA	65 dBA	60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):	Ldn: 103	222	479
	CNEL: 114	245	527

Scenario: **EXISTING + P p1** Project: **City of Hope SP**
 Roadway: **Live Oak Ave** Analyst: **NJF**
 Segment: **I-605 NB Off-Ramp to Rivergrade F** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	21,860
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	84
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1341	25	10	991	19	8	248	5	2
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	-0.6	-17.8	-21.8	-1.9	-19.1	-23.1	-7.9	-25.1	-29.1
Distance	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	72.7	63.7	64.3	71.3	62.4	62.9	65.3	56.4	56.9
VEHICULAR NOISE	DAY=	73.7	Leq	EVENING=	72.4	Leq	NIGHT=	66.4	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):			Ldn= 74.8
			CNEL= 75.4
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	104 225 485
		CNEL:	115 248 534

Scenario: **EXISTING + P p1**
 Roadway: **Mountain Ave**
 Segment: **Huntington Dr to Central Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	14,430
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	885	17	7	654	12	5	164	3	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-1.9	-19.1	-23.1	-3.2	-20.4	-24.4	-9.2	-26.4	-30.4
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	66.3	58.0	58.9	64.9	56.7	57.5	58.9	50.6	51.5
VEHICULAR NOISE	DAY=	67.5	Leq	EVENING=	66.2	Leq	NIGHT=	60.2	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	68.6
		CNEL=	69.2
NOISE CONTOUR:		70 dBA	65 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	40
		CNEL:	44
			87
			95
			187
			206

Scenario: **EXISTING + P p1**
 Roadway: **Mountain Ave**
 Segment: **Central Ave to Evergreen St**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	13,550
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	831	16	6	614	12	5	154	3	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-2.1	-19.4	-23.3	-3.4	-20.7	-24.6	-9.5	-26.7	-30.6
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	66.0	57.7	58.6	64.7	56.4	57.3	58.7	50.4	51.3
VEHICULAR NOISE	DAY=	67.2	Leq	EVENING=	65.9	Leq	NIGHT=	59.9	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):			Ldn= 68.3
			CNEL= 68.9
NOISE CONTOUR:			<i>70 dBA 65 dBA 60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	39 83 179
		CNEL:	42 92 197

Scenario: **EXISTING + P p1**
 Roadway: **Mountain Ave**
 Segment: **Evergreen St to Duarte Rd**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	10,980
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	673	13	5	498	9	4	125	2	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-3.0	-20.3	-24.2	-4.4	-21.6	-25.6	-10.4	-27.6	-31.6
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	65.1	56.8	57.7	63.8	55.5	56.4	57.7	49.5	50.3
VEHICULAR NOISE	DAY=	66.3	Leq	EVENING=	65.0	Leq	NIGHT=	59.0	Leq

RESULTS					
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	67.4		
		CNEL=	68.0		
NOISE CONTOUR:		70 dBA	65 dBA	60 dBA	
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	34	72	156
		CNEL:	37	80	171

Scenario: **EXISTING + P p1**
 Roadway: **Mountain Ave**
 Segment: **Duarte Rd to Hurstview**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	7,040
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	432	8	3	319	6	2	80	2	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-5.0	-22.2	-26.2	-6.3	-23.5	-27.5	-12.3	-29.5	-33.5
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	63.1	54.8	55.7	61.8	53.5	54.4	55.8	47.5	48.4
VEHICULAR NOISE	DAY=	64.4	Leq	EVENING=	63.1	Leq	NIGHT=	57.0	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):			Ldn= 65.5
			CNEL= 66.1
NOISE CONTOUR:			<i>70 dBA 65 dBA 60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	25 54 116
		CNEL:	27 59 127

Scenario: **EXISTING + P p1**
 Roadway: **Buena Vista St**
 Segment: **Royal Oaks Dr to Huntington Dr**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	7,402
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	454	9	3	336	6	3	84	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-4.2	-21.4	-25.4	-5.5	-22.7	-26.7	-11.5	-28.7	-32.7
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	61.3	53.8	55.0	60.0	52.4	53.7	54.0	46.4	47.7
VEHICULAR NOISE	DAY=	62.8	Leq	EVENING=	61.5	Leq	NIGHT=	55.5	Leq

RESULTS					
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	63.9		
		CNEL=	64.5		
NOISE CONTOUR:		70 dBA	65 dBA	60 dBA	
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	20	42	91
		CNEL:	22	46	100

Scenario: **EXISTING + P p1**
 Roadway: **Buena Vista St**
 Segment: **Huntington Dr to Central Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	10,603
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	650	12	5	481	9	4	120	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-2.6	-19.9	-23.8	-3.9	-21.2	-25.1	-9.9	-27.2	-31.1
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	62.8	55.3	56.6	61.5	54.0	55.3	55.5	48.0	49.3
VEHICULAR NOISE	DAY=	64.3	Leq	EVENING=	63.0	Leq	NIGHT=	57.0	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):			Ldn= 65.4
			CNEL= 66.1
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	25 53 115
		CNEL:	27 59 127

Scenario: **EXISTING + P p1** Project: **City of Hope SP**
 Roadway: **Buena Vista St** Analyst: **NJF**
 Segment: **Central Ave to I-210 WB On-Ramp** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	15,014
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	921	17	7	681	13	5	170	3	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-1.1	-18.3	-22.3	-2.4	-19.7	-23.6	-8.4	-25.7	-29.6
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	64.4	56.8	58.1	63.0	55.5	56.8	57.0	49.5	50.8
VEHICULAR NOISE	DAY=	65.9	Leq	EVENING=	64.5	Leq	NIGHT=	58.5	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	67.0
		CNEL=	67.6
NOISE CONTOUR:		70 dBA	65 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):	Ldn:	31	67
	CNEL:	34	74
		145	160

Scenario: **EXISTING + P p1** Project: **City of Hope SP**
 Roadway: **Buena Vista St** Analyst: **NJF**
 Segment: **I-210 WB On-Ramp to Evergreen St** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	14,008
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	859	16	7	635	12	5	159	3	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-1.4	-18.6	-22.6	-2.7	-20.0	-23.9	-8.7	-26.0	-29.9
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	64.1	56.5	57.8	62.7	55.2	56.5	56.7	49.2	50.5
VEHICULAR NOISE	DAY=	65.6	Leq	EVENING=	64.2	Leq	NIGHT=	58.2	Leq

RESULTS					
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	66.6		
		CNEL=	67.3		
NOISE CONTOUR:		70 dBA	65 dBA	60 dBA	
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	30	64	139
		CNEL:	33	71	153

Scenario: **EXISTING + P p1** Project: **City of Hope SP**
 Roadway: **Buena Vista St** Analyst: **NJF**
 Segment: **Evergreen St to Three Ranch Rd** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	14,783
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	907	17	7	670	13	5	168	3	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-1.2	-18.4	-22.4	-2.5	-19.7	-23.7	-8.5	-25.7	-29.7
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	64.3	56.8	58.0	63.0	55.5	56.7	57.0	49.4	50.7
VEHICULAR NOISE	DAY=	65.8	Leq	EVENING=	64.5	Leq	NIGHT=	58.5	Leq

RESULTS					
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	66.9		
		CNEL=	67.5		
NOISE CONTOUR:		70 dBA	65 dBA	60 dBA	
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	31	67	144
		CNEL:	34	74	158

Scenario: **EXISTING + P p1**
 Roadway: **Buena Vista St**
 Segment: **Three Ranch Rd to Duarte Rd**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	14,993
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	920	17	7	680	13	5	170	3	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-1.1	-18.3	-22.3	-2.4	-19.7	-23.6	-8.4	-25.7	-29.6
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	64.3	56.8	58.1	63.0	55.5	56.8	57.0	49.5	50.8
VEHICULAR NOISE	DAY=	65.8	Leq	EVENING=	64.5	Leq	NIGHT=	58.5	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	66.9
		CNEL=	67.6
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	31 67 145
		CNEL:	34 74 160

Scenario: **EXISTING + P p1**
 Roadway: **Buena Vista St**
 Segment: **Duarte Rd to Village Rd**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	10,520
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	645	12	5	477	9	4	119	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-2.6	-19.9	-23.8	-4.0	-21.2	-25.2	-10.0	-27.2	-31.2
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	62.8	55.3	56.5	61.5	54.0	55.2	55.5	48.0	49.2
VEHICULAR NOISE	DAY=	64.3	Leq	EVENING=	63.0	Leq	NIGHT=	57.0	Leq

RESULTS					
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	65.4		
		CNEL=	66.0		
NOISE CONTOUR:		70 dBA	65 dBA	60 dBA	
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	25	53	115
		CNEL:	27	59	126

Scenario: **EXISTING + P p1**
 Roadway: **Buena Vista St**
 Segment: **Village Rd to Avenida Barbosa**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	9,632
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	591	11	4	437	8	3	109	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-3.0	-20.3	-24.2	-4.3	-21.6	-25.5	-10.4	-27.6	-31.6
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	62.4	54.9	56.2	61.1	53.6	54.9	55.1	47.6	48.8
VEHICULAR NOISE	DAY=	63.9	Leq	EVENING=	62.6	Leq	NIGHT=	56.6	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):			Ldn= 65.0
			CNEL= 65.6
NOISE CONTOUR:			<i>70 dBA 65 dBA 60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	23 50 108
		CNEL:	26 55 119

Scenario: **EXISTING + P p1**
 Roadway: **Avenida Barbosa**
 Segment: **Buena Vista St to Arrow Hwy**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	13,602
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	834	16	6	617	12	5	154	3	1
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	-2.6	-19.9	-23.8	-3.9	-21.2	-25.1	-9.9	-27.2	-31.1
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	67.5	58.5	59.1	66.2	57.2	57.8	60.1	51.2	51.7
VEHICULAR NOISE	DAY=	68.5	Leq	EVENING=	67.2	Leq	NIGHT=	61.2	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	69.6
		CNEL=	70.2
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	47 101 218
		CNEL:	52 112 241

Scenario: **EXISTING + P p1**
 Roadway: **Duncannon Ave**
 Segment: **Central Ave to Evergreen St**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	1,340
SPEED (mph)	25
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	82	2	1	61	1	0	15	0	0
Speed in MPH	25	25	25	25	25	25	25	25	25
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	59.4	71.1	77.2	59.4	71.1	77.2	59.4	71.1	77.2
ADJUSTMENTS									
Flow	-10.1	-27.4	-31.3	-11.5	-28.7	-32.6	-17.5	-34.7	-38.7
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	49.2	43.7	45.9	47.9	42.3	44.5	41.9	36.3	38.5
VEHICULAR NOISE	DAY=	51.6	Leq	EVENING=	50.3	Leq	NIGHT=	44.3	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	52.7
		CNEL=	53.4
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	4 8 16
		CNEL:	4 8 18

City of Hope SP
EXISTING + P p2

#	ROADWAY	SEGMENT	ADT	POSTED SPEED LIMIT	LANE DISTANCE	SITE CONDITION	LANES	GRADE (%)	
1	Duncannon Ave	Evergreen St to Three Ranch Rd	1,380	25	12	Soft	2U	0%	1
2	Highland Ave	Royal Oaks Dr to Huntington Dr	4,644	35	36	Soft	4U	0%	2
3	Highland Ave	Huntington Dr to Central Ave	10,150	35	36	Soft	4U	0%	3
4	Highland Ave	Central Ave to Evergreen St	12,930	35	36	Soft	4U	0%	4
5	Highland Ave	Evergreen St to Business Center Dr	11,680	35	36	Soft	4U	0%	5
6	Highland Ave	Business Center Dr to Duarte Rd	11,240	35	36	Soft	4U	0%	6
7									7
8									8
9									9
10									10
11									11
12									12
13									13
14									14
15									15
16									16
17									17
18									18
19									19
20									20
21									21
22									22
23									23
24									24
25									25
26									26
27									27
28									28
29									29
30									30

ANALYST
NJF

ROAD CLASSIFICATION	SPEED	LANE DISTANCE
2U	40	12
4U	40	36
4D	45	48
6D	45	84
2D	40	24

73.6	75.55%
13.6	13.96%
10.22	10.49%

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.42%	DAY	75.5%
% MT	1.84%	EVENING	14.0%
% HT	0.74%	NIGHT	10.5%

Source: Riverside, County of, Department of Public Health, Office of Industrial Hygiene. 2009, November. For Determining and Mitigating Tr
 Riverside County Fleet Mix: Secondary, Collectors, or Smaller

Vehicle	Overall %	Day (7 AM to Evening (7 Night (10 PM to 7 AM)		
Auto	97%	73.60	13.60	10.22
Medium Truck	2%	0.90	0.04	0.90
Heavy Truck	1%	0.35	0.04	0.35
		74.85	13.68	11.47

City of Hope SP
EXISTING + P p2 CONDITIONS NOISE CONTOURS RESULT SUMMARY TABLE

#	ROADWAY	SEGMENT	DAILY TRAFFIC VOLUMES	NOISE LEVEL AT 50 FT. (dBA CNEL)	DISTANCE TO NOISE CONTOUR (FT.)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Duncannon Ave	Evergreen St to Three Ranch Rd	1,380	53.5	4	9	18
2	Highland Ave	Royal Oaks Dr to Huntington Dr	4,644	62.5	16	34	73
3	Highland Ave	Huntington Dr to Central Ave	10,150	65.9	27	57	123
4	Highland Ave	Central Ave to Evergreen St	12,930	66.9	31	67	145
5	Highland Ave	Evergreen St to Business Center Dr	11,680	66.5	29	63	135
6	Highland Ave	Business Center Dr to Duarte Rd	11,240	66.3	28	61	132
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

Scenario: EXISTING + P p2
 Roadway: Duncannon Ave
 Segment: Evergreen St to Three Ranch Rd

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	1,380
SPEED (mph)	25
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	85	2	1	63	1	0	16	0	0
Speed in MPH	25	25	25	25	25	25	25	25	25
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	59.4	71.1	77.2	59.4	71.1	77.2	59.4	71.1	77.2
ADJUSTMENTS									
Flow	-10.0	-27.2	-31.2	-11.3	-28.6	-32.5	-17.3	-34.6	-38.5
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	49.4	43.8	46.0	48.1	42.5	44.7	42.0	36.5	38.7
VEHICULAR NOISE	DAY=	51.8	Leq	EVENING=	50.4	Leq	NIGHT=	44.4	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 52.9 CNEL= 53.5
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	4 8 17
		CNEL:	4 9 18

Scenario: EXISTING + P p2
 Roadway: Highland Ave
 Segment: Royal Oaks Dr to Huntington Dr

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	4,644
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	285	5	2	211	4	2	53	1	0
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-6.2	-23.4	-27.4	-7.5	-24.8	-28.7	-13.5	-30.8	-34.7
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	59.3	51.7	53.0	57.9	50.4	51.7	51.9	44.4	45.7
VEHICULAR NOISE	DAY=	60.8	Leq	EVENING=	59.4	Leq	NIGHT=	53.4	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 61.9 CNEL= 62.5
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	14 31 66
		CNEL:	16 34 73

Scenario: **EXISTING + P p2**
 Roadway: **Highland Ave**
 Segment: **Huntington Dr to Central Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	10,150
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	623	12	5	460	9	3	115	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-2.8	-20.0	-24.0	-4.1	-21.4	-25.3	-10.1	-27.4	-31.3
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	62.7	55.1	56.4	61.3	53.8	55.1	55.3	47.8	49.1
VEHICULAR NOISE	DAY=	64.2	Leq	EVENING=	62.8	Leq	NIGHT=	56.8	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 65.3 CNEL= 65.9
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	24 52 112
		CNEL:	27 57 123

Scenario: **EXISTING + P p2**
 Roadway: **Highland Ave**
 Segment: **Central Ave to Evergreen St**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	12,930
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	793	15	6	586	11	4	147	3	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-1.8	-19.0	-22.9	-3.1	-20.3	-24.3	-9.1	-26.3	-30.3
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	63.7	56.2	57.4	62.4	54.9	56.1	56.4	48.9	50.1
VEHICULAR NOISE	DAY=	65.2	Leq	EVENING=	63.9	Leq	NIGHT=	57.9	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 66.3 CNEL= 66.9
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	28 61 132
		CNEL:	31 67 145

Scenario: **EXISTING + P p2**
 Roadway: **Highland Ave**
 Segment: **Evergreen St to Business Center Dr**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	11,680
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	716	14	5	529	10	4	133	3	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-2.2	-19.4	-23.4	-3.5	-20.7	-24.7	-9.5	-26.8	-30.7
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	63.3	55.7	57.0	61.9	54.4	55.7	55.9	48.4	49.7
VEHICULAR NOISE	DAY=	64.8	Leq	EVENING=	63.5	Leq	NIGHT=	57.4	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 65.9 CNEL= 66.5
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	26 57 123
		CNEL:	29 63 135

Scenario: **EXISTING + P p2**
 Roadway: **Highland Ave**
 Segment: **Business Center Dr to Duarte Rd**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	11,240
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	689	13	5	510	10	4	128	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-2.4	-19.6	-23.6	-3.7	-20.9	-24.9	-9.7	-26.9	-30.9
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	63.1	55.6	56.8	61.8	54.3	55.5	55.8	48.3	49.5
VEHICULAR NOISE	DAY=	64.6	Leq	EVENING=	63.3	Leq	NIGHT=	57.3	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 65.7 CNEL= 66.3
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	26 56 120
		CNEL:	28 61 132

- Traffic Noise Calculations
 - o Project Contributions
 - o Existing Conditions
 - o Existing + Project Conditions
 - o Future Conditions
 - o Future + Project Conditions
 - o Intersection Information

City of Hope SP

FUTURE p1

#	ROADWAY	SEGMENT	ADT	POSTED SPEED LIMIT	LANE DISTANCE	SITE CONDITION	LANES	GRADE (%)
1	Huntington Dr	Mountain Ave to Buena Vista St	25,787	40	48	Soft	4D	0%
2	Huntington Dr	Buena Vista St to Highland Ave	27,892	40	48	Soft	4D	0%
3	Huntington Dr	Highland Ave to Mt Olive Dr	34,887	40	48	Soft	4D	0%
4	Huntington Dr	Mt. Olive Dr to Crestfield Dr	26,775	40	48	Soft	4D	0%
5	Central Ave	I-210 WB On-Ramp to Mountain Ave	10,915	35	12	Soft	2U	0%
6	Central Ave	Mountain Ave to Buena Vista St	15,733	35	12	Soft	2U	0%
7	Central Ave	Buena Vista St to I-210 WB Off-Ramp	13,807	35	12	Soft	2U	0%
8	Central Ave	I-210 WB Off-Ramp to Highland Ave	11,154	35	12	Soft	2U	0%
9	Central Ave	Highland Ave to Santo Domingo Ave	10,970	35	12	Soft	2U	0%
10	Evergreen St	I-210 EB Off-Ramp to Mountain Ave	8,247	35	12	Soft	2U	0%
11	Evergreen St	Mountain Ave to Buena Vista St	8,455	35	12	Soft	2U	0%
12	Evergreen St	Duncannon Ave to Highland Ave	2,613	35	12	Soft	2U	0%
13	Evergreen St	Highland Ave to Santo Domingo Ave	1,256	35	12	Soft	2U	0%
14	Three Ranch Rd	Bradbury Ave to Buena Vista St	519	25	12	Soft	2U	0%
15	Three Ranch Rd	Buena Vista St to Duncannon Ave	1,303	25	12	Soft	2U	0%
16	Business Center Dr	Fairdale Ave to Highland Ave	475	25	12	Soft	2U	0%
17	Business Center Dr	Highland Ave to Santo Domingo Ave	1,119	25	12	Soft	2U	0%
18	Duarte Rd	California Ave to Mountain Ave	11,863	40	48	Soft	4D	0%
19	Duarte Rd	Mountain Ave to Buena Vista St	13,380	40	48	Soft	4D	0%
20	Duarte Rd	Buena Vista St to Cinco Roberts Dr	18,815	40	48	Soft	4D	0%
21	Duarte Rd	Cinco Roberts Dr to Village Rd	17,632	40	48	Soft	4D	0%
22	Duarte Rd	Village Rd to Hope Dr	15,936	40	48	Soft	4D	0%
23	Duarte Rd	Hope Dr to Circle Rd	14,218	40	48	Soft	4D	0%
24	Duarte Rd	Circle Rd to Highland Ave	15,643	40	48	Soft	4D	0%
25	Arrow Hwy	Longden Ave to Live Oak Ave	39,400	45	48	Soft	4D	0%
26	Arrow Hwy	Live Oak Ave to Avenida Barbosa	33,514	45	48	Soft	4D	0%
27	Arrow Hwy	Avenida Barbosa to I-605 SB Off-Ramp	39,651	45	48	Soft	4D	0%
28	Arrow Hwy	I-605 SB Off-Ramp to I-605 NB On-Ramp	36,332	45	48	Soft	4D	0%
29	Live Oak Ave	Arrow Hwy to I-605 SB On-ramp	26,332	45	84	Soft	6D	0%
30	Live Oak Ave	I-605 SB On-Ramp to I-605 NB Off-Ramp	26,975	45	84	Soft	6D	0%
31	Live Oak Ave	I-605 NB Off-Ramp to Rivergrade Rd	27,363	45	84	Soft	6D	0%
32	Mountain Ave	Huntington Dr to Central Ave	15,974	40	48	Soft	4D	0%
33	Mountain Ave	Central Ave to Evergreen St	15,002	40	48	Soft	4D	0%
34	Mountain Ave	Evergreen St to Duarte Rd	12,146	40	48	Soft	4D	0%
35	Mountain Ave	Duarte Rd to Hurstview	7,978	40	48	Soft	4D	0%
36	Buena Vista St	Royal Oaks Dr to Huntington Dr	10,402	35	36	Soft	4U	0%
37	Buena Vista St	Huntington Dr to Central Ave	15,554	35	36	Soft	4U	0%
38	Buena Vista St	Central Ave to I-210 WB On-Ramp	19,491	35	36	Soft	4U	0%
39	Buena Vista St	I-210 WB On-Ramp to Evergreen St	17,623	35	36	Soft	4U	0%
40	Buena Vista St	Evergreen St to Three Ranch Rd	17,313	35	36	Soft	4U	0%
41	Buena Vista St	Three Ranch Rd to Duarte Rd	17,411	35	36	Soft	4U	0%
42	Buena Vista St	Duarte Rd to Village Rd	10,535	35	36	Soft	4U	0%
43	Buena Vista St	Village Rd to Avenida Barbosa	9,913	35	36	Soft	4U	0%
44	Avenida Barbosa	Buena Vista St to Arrow Hwy	15,801	45	48	Soft	4D	0%
45	Duncannon Ave	Central Ave to Evergreen St	1,905	25	12	Soft	2U	0%

ANALYST
NJF

ROAD CLASSIFICATION	SPEED	LANE DISTANCE
2U	40	12
4U	40	36
4D	45	48
6D	45	84
2D	40	24

73.6 75.55%
 13.6 13.96%
 10.22 10.49%

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.42%	DAY	75.5%
% MT	1.84%	EVENING	14.0%
% HT	0.74%	NIGHT	10.5%

Source: Riverside, County of, Department of Public Health, Office of Industrial Hygiene. 2009, November. For Determining and Mitigating Tr
 Riverside County Fleet Mix: Secondary, Collectors, or Smaller

Vehicle	Overall %	Day (7 AM to Evening (7 Night (10 PM to 7 AM)		
Auto	97%	73.60	13.60	10.22
Medium Truck	2%	0.90	0.04	0.90
Heavy Truck	1%	0.35	0.04	0.35
		74.85	13.68	11.47

City of Hope SP
FUTURE p1 CONDITIONS NOISE CONTOURS RESULT SUMMARY TABLE

#	ROADWAY	SEGMENT	DAILY TRAFFIC VOLUMES	NOISE LEVEL AT 50 FT. (dBA CNEL)	DISTANCE TO NOISE CONTOUR (FT.)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Huntington Dr	Mountain Ave to Buena Vista St	25,787	71.7	65	141	303
2	Huntington Dr	Buena Vista St to Highland Ave	27,892	72.1	69	148	319
3	Huntington Dr	Highland Ave to Mt Olive Dr	34,887	73.0	80	172	370
4	Huntington Dr	Mt. Olive Dr to Crestfield Dr	26,775	71.9	67	144	311
5	Central Ave	I-210 WB On-Ramp to Mountain Ave	10,915	65.8	26	56	122
6	Central Ave	Mountain Ave to Buena Vista St	15,733	67.4	33	72	155
7	Central Ave	Buena Vista St to I-210 WB Off-Ramp	13,807	66.8	31	66	142
8	Central Ave	I-210 WB Off-Ramp to Highland Ave	11,154	65.9	27	57	123
9	Central Ave	Highland Ave to Santo Domingo Ave	10,970	65.8	26	57	122
10	Evergreen St	I-210 EB Off-Ramp to Mountain Ave	8,247	64.6	22	47	101
11	Evergreen St	Mountain Ave to Buena Vista St	8,455	64.7	22	48	103
12	Evergreen St	Duncannon Ave to Highland Ave	2,613	59.6	10	22	47
13	Evergreen St	Highland Ave to Santo Domingo Ave	1,256	56.4	6	13	29
14	Three Ranch Rd	Bradbury Ave to Buena Vista St	519	49.2	2	4	10
15	Three Ranch Rd	Buena Vista St to Duncannon Ave	1,303	53.2	4	8	18
16	Business Center Dr	Fairdale Ave to Highland Ave	475	48.9	2	4	9
17	Business Center Dr	Highland Ave to Santo Domingo Ave	1,119	52.6	3	7	16
18	Duarte Rd	California Ave to Mountain Ave	11,863	68.4	39	84	180
19	Duarte Rd	Mountain Ave to Buena Vista St	13,380	68.9	42	91	196
20	Duarte Rd	Buena Vista St to Cinco Roberts Dr	18,815	70.4	53	114	245
21	Duarte Rd	Cinco Roberts Dr to Village Rd	17,632	70.1	51	109	235
22	Duarte Rd	Village Rd to Hope Dr	15,936	69.6	47	102	220
23	Duarte Rd	Hope Dr to Circle Rd	14,218	69.1	44	95	204
24	Duarte Rd	Circle Rd to Highland Ave	15,643	69.6	47	101	217
25	Arrow Hwy	Longden Ave to Live Oak Ave	39,400	74.9	105	227	489
26	Arrow Hwy	Live Oak Ave to Avenida Barbosa	33,514	74.1	95	204	439
27	Arrow Hwy	Avenida Barbosa to I-605 SB Off-Ramp	39,651	74.9	106	228	491
28	Arrow Hwy	I-605 SB Off-Ramp to I-605 NB On-Ramp	36,332	74.5	100	215	463
29	Live Oak Ave	Arrow Hwy to I-605 SB On-ramp	26,332	76.2	130	280	604
30	Live Oak Ave	I-605 SB On-Ramp to I-605 NB Off-Ramp	26,975	76.3	132	285	614
31	Live Oak Ave	I-605 NB Off-Ramp to Rivergrade Rd	27,363	76.4	134	288	620
32	Mountain Ave	Huntington Dr to Central Ave	15,974	69.7	47	102	220
33	Mountain Ave	Central Ave to Evergreen St	15,002	69.4	45	98	211
34	Mountain Ave	Evergreen St to Duarte Rd	12,146	68.5	40	85	183
35	Mountain Ave	Duarte Rd to Hurstview	7,978	66.6	30	64	139
36	Buena Vista St	Royal Oaks Dr to Huntington Dr	10,402	66.0	27	58	125
37	Buena Vista St	Huntington Dr to Central Ave	15,554	67.7	35	76	164
38	Buena Vista St	Central Ave to I-210 WB On-Ramp	19,491	68.7	41	88	190
39	Buena Vista St	I-210 WB On-Ramp to Evergreen St	17,623	68.3	38	83	178
40	Buena Vista St	Evergreen St to Three Ranch Rd	17,313	68.2	38	82	176
41	Buena Vista St	Three Ranch Rd to Duarte Rd	17,411	68.2	38	82	177
42	Buena Vista St	Duarte Rd to Village Rd	10,535	66.0	27	59	126
43	Buena Vista St	Village Rd to Avenida Barbosa	9,913	65.8	26	56	121
44	Avenida Barbosa	Buena Vista St to Arrow Hwy	15,801	70.9	57	123	266
45	Duncannon Ave	Central Ave to Evergreen St	1,905	54.9	5	11	23

Scenario: FUTURE p1
 Roadway: Huntington Dr
 Segment: Mountain Ave to Buena Vista St

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	25,787
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1582	30	12	1169	22	9	293	6	2
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	0.7	-16.6	-20.5	-0.6	-17.9	-21.8	-6.7	-23.9	-27.9
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	68.8	60.5	61.4	67.5	59.2	60.1	61.4	53.2	54.1
VEHICULAR NOISE	DAY=	70.0	Leq	EVENING=	68.7	Leq	NIGHT=	62.7	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 71.1 CNEL= 71.7
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):			Ldn: 59 128 275 CNEL: 65 141 303

Scenario: FUTURE p1
 Roadway: Huntington Dr
 Segment: Buena Vista St to Highland Ave

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	27,892
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1711	32	13	1264	24	10	317	6	2
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	1.0	-16.2	-20.2	-0.3	-17.5	-21.5	-6.3	-23.6	-27.5
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	69.1	60.8	61.7	67.8	59.5	60.4	61.8	53.5	54.4
VEHICULAR NOISE	DAY=	70.4	Leq	EVENING=	69.0	Leq	NIGHT=	63.0	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 71.4 CNEL= 72.1
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	62 135 290
		CNEL:	69 148 319

Scenario: FUTURE p1
 Roadway: Huntington Dr
 Segment: Highland Ave to Mt Olive Dr

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	34,887
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	2140	40	16	1582	30	12	396	7	3
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	2.0	-15.3	-19.2	0.7	-16.6	-20.5	-5.3	-22.6	-26.5
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	70.1	61.8	62.7	68.8	60.5	61.4	62.8	54.5	55.4
VEHICULAR NOISE	DAY=	71.3	Leq	EVENING=	70.0	Leq	NIGHT=	64.0	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 72.4 CNEL= 73.0
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	72 156 337
		CNEL:	80 172 370

Scenario: FUTURE p1
 Roadway: Huntington Dr
 Segment: Mt. Olive Dr to Crestfield Dr

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	26,775
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1642	31	12	1214	23	9	304	6	2
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	0.8	-16.4	-20.4	-0.5	-17.7	-21.7	-6.5	-23.7	-27.7
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	68.9	60.7	61.5	67.6	59.3	60.2	61.6	53.3	54.2
VEHICULAR NOISE	DAY=	70.2	Leq	EVENING=	68.9	Leq	NIGHT=	62.9	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 71.3 CNEL= 71.9
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	61 131 282
		CNEL:	67 144 311

Scenario: FUTURE p1
 Roadway: Central Ave
 Segment: I-210 WB On-Ramp to Mountain Ave

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	10,915
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	669	13	5	495	9	4	124	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-2.5	-19.7	-23.7	-3.8	-21.0	-25.0	-9.8	-27.1	-31.0
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	62.6	55.0	56.3	61.2	53.7	55.0	55.2	47.7	49.0
VEHICULAR NOISE	DAY=	64.1	Leq	EVENING=	62.8	Leq	NIGHT=	56.7	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 65.2 CNEL= 65.8
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	24 51 110
		CNEL:	26 56 122

Scenario: FUTURE p1
 Roadway: Central Ave
 Segment: Mountain Ave to Buena Vista St

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	15,733
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	965	18	7	713	13	5	179	3	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-0.9	-18.1	-22.1	-2.2	-19.5	-23.4	-8.2	-25.5	-29.4
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	64.2	56.6	57.9	62.8	55.3	56.6	56.8	49.3	50.6
VEHICULAR NOISE	DAY=	65.7	Leq	EVENING=	64.3	Leq	NIGHT=	58.3	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 66.7 CNEL= 67.4
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	30 65 141
		CNEL:	33 72 155

Scenario: FUTURE p1
 Roadway: Central Ave
 Segment: Buena Vista St to I-210 WB Off-Ramp

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	13,807
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	847	16	6	626	12	5	157	3	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-1.5	-18.7	-22.7	-2.8	-20.0	-24.0	-8.8	-26.0	-30.0
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	63.6	56.1	57.3	62.3	54.8	56.0	56.3	48.7	50.0
VEHICULAR NOISE	DAY=	65.1	Leq	EVENING=	63.8	Leq	NIGHT=	57.8	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 66.2 CNEL= 66.8
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):			Ldn: 28 60 129 CNEL: 31 66 142

Scenario: FUTURE p1
 Roadway: Central Ave
 Segment: I-210 WB Off-Ramp to Highland Ave

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	11,154
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	684	13	5	506	10	4	127	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-2.4	-19.6	-23.6	-3.7	-20.9	-24.9	-9.7	-27.0	-30.9
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	62.7	55.1	56.4	61.3	53.8	55.1	55.3	47.8	49.1
VEHICULAR NOISE	DAY=	64.2	Leq	EVENING=	62.8	Leq	NIGHT=	56.8	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 65.3 CNEL= 65.9
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	24 52 112
		CNEL:	27 57 123

Scenario: FUTURE p1
 Roadway: Central Ave
 Segment: Highland Ave to Santo Domingo Ave

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	10,970
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	673	13	5	497	9	4	125	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-2.5	-19.7	-23.7	-3.8	-21.0	-25.0	-9.8	-27.0	-31.0
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	62.6	55.1	56.3	61.3	53.8	55.0	55.3	47.7	49.0
VEHICULAR NOISE	DAY=	64.1	Leq	EVENING=	62.8	Leq	NIGHT=	56.8	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 65.2 CNEL= 65.8
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	24 51 111
		CNEL:	26 57 122

Scenario: FUTURE p1
 Roadway: Evergreen St
 Segment: I-210 EB Off-Ramp to Mountain Ave

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	8,247
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	506	10	4	374	7	3	94	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-3.7	-20.9	-24.9	-5.0	-22.3	-26.2	-11.0	-28.3	-32.2
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	61.3	53.8	55.1	60.0	52.5	53.8	54.0	46.5	47.8
VEHICULAR NOISE	DAY=	62.8	Leq	EVENING=	61.5	Leq	NIGHT=	55.5	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 63.9 CNEL= 64.6
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	20 43 92
		CNEL:	22 47 101

Scenario: **FUTURE p1**
 Roadway: **Evergreen St**
 Segment: **Mountain Ave to Buena Vista St**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	8,455
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	519	10	4	383	7	3	96	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-3.6	-20.8	-24.8	-4.9	-22.1	-26.1	-10.9	-28.2	-32.1
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	61.5	53.9	55.2	60.1	52.6	53.9	54.1	46.6	47.9
VEHICULAR NOISE	DAY=	63.0	Leq	EVENING=	61.6	Leq	NIGHT=	55.6	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	64.1
		CNEL=	64.7
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	20 43 93
		CNEL:	22 48 103

Scenario: **FUTURE p1**
 Roadway: **Evergreen St**
 Segment: **Duncannon Ave to Highland Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	2,613
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	160	3	1	118	2	1	30	1	0
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-8.7	-25.9	-29.9	-10.0	-27.2	-31.2	-16.0	-33.3	-37.2
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	56.4	48.8	50.1	55.0	47.5	48.8	49.0	41.5	42.8
VEHICULAR NOISE	DAY=	57.9	Leq	EVENING=	56.5	Leq	NIGHT=	50.5	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	59.0
		CNEL=	59.6
NOISE CONTOUR:		70 dBA	65 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	9
		CNEL:	10
			20
			43
			47

Scenario: **FUTURE p1** Project: **City of Hope SP**
 Roadway: **Evergreen St** Analyst: **NJF**
 Segment: **Highland Ave to Santo Domingo Av** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	1,256
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	77	1	1	57	1	0	14	0	0
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-11.9	-29.1	-33.1	-13.2	-30.4	-34.4	-19.2	-36.4	-40.4
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	53.2	45.7	46.9	51.9	44.3	45.6	45.8	38.3	39.6
VEHICULAR NOISE	DAY=	54.7	Leq	EVENING=	53.4	Leq	NIGHT=	47.4	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	55.8
		CNEL=	56.4
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	6 12 26
		CNEL:	6 13 29

Scenario: **FUTURE p1**
 Roadway: **Three Ranch Rd**
 Segment: **Bradbury Ave to Buena Vista St**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	519
SPEED (mph)	25
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	32	1	0	24	0	0	6	0	0
Speed in MPH	25	25	25	25	25	25	25	25	25
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	59.4	71.1	77.2	59.4	71.1	77.2	59.4	71.1	77.2
ADJUSTMENTS									
Flow	-14.3	-31.5	-35.5	-15.6	-32.8	-36.8	-21.6	-38.8	-42.8
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	45.1	39.5	41.7	43.8	38.2	40.4	37.8	32.2	34.4
VEHICULAR NOISE	DAY=	47.5	Leq	EVENING=	46.2	Leq	NIGHT=	40.2	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	48.6
		CNEL=	49.2
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	2 4 9
		CNEL:	2 4 10

Scenario: **FUTURE p1** Project: **City of Hope SP**
 Roadway: **Three Ranch Rd** Analyst: **NJF**
 Segment: **Buena Vista St to Duncannon Ave** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	1,303
SPEED (mph)	25
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	80	2	1	59	1	0	15	0	0
Speed in MPH	25	25	25	25	25	25	25	25	25
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	59.4	71.1	77.2	59.4	71.1	77.2	59.4	71.1	77.2
ADJUSTMENTS									
Flow	-10.3	-27.5	-31.5	-11.6	-28.8	-32.8	-17.6	-34.8	-38.8
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	49.1	43.5	45.7	47.8	42.2	44.4	41.8	36.2	38.4
VEHICULAR NOISE	DAY=	51.5	Leq	EVENING=	50.2	Leq	NIGHT=	44.2	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	52.6
		CNEL=	53.2
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	3 7 16
		CNEL:	4 8 18

Scenario: **FUTURE p1**
 Roadway: **Business Center Dr**
 Segment: **Fairdale Ave to Highland Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	475
SPEED (mph)	25
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	29	1	0	22	0	0	5	0	0
Speed in MPH	25	25	25	25	25	25	25	25	25
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	59.4	71.1	77.2	59.4	71.1	77.2	59.4	71.1	77.2
ADJUSTMENTS									
Flow	-14.6	-31.9	-35.8	-16.0	-33.2	-37.1	-22.0	-39.2	-43.2
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	44.7	39.1	41.3	43.4	37.8	40.0	37.4	31.8	34.0
VEHICULAR NOISE	DAY=	47.1	Leq	EVENING=	45.8	Leq	NIGHT=	39.8	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	48.2
		CNEL=	48.9
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	2 4 8
		CNEL:	2 4 9

Scenario: **FUTURE p1** Project: **City of Hope SP**
 Roadway: **Business Center Dr** Analyst: **NJF**
 Segment: **Highland Ave to Santo Domingo Av** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	1,119
SPEED (mph)	25
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	69	1	1	51	1	0	13	0	0
Speed in MPH	25	25	25	25	25	25	25	25	25
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	59.4	71.1	77.2	59.4	71.1	77.2	59.4	71.1	77.2
ADJUSTMENTS									
Flow	-10.9	-28.2	-32.1	-12.2	-29.5	-33.4	-18.2	-35.5	-39.4
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	48.5	42.9	45.1	47.1	41.6	43.8	41.1	35.5	37.7
VEHICULAR NOISE	DAY=	50.9	Leq	EVENING=	49.5	Leq	NIGHT=	43.5	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	51.9
		CNEL=	52.6
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	3 7 15
		CNEL:	3 7 16

Scenario: **FUTURE p1**
 Roadway: **Duarte Rd**
 Segment: **California Ave to Mountain Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	11,863
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	728	14	6	538	10	4	135	3	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-2.7	-19.9	-23.9	-4.0	-21.3	-25.2	-10.0	-27.3	-31.2
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	65.4	57.1	58.0	64.1	55.8	56.7	58.1	49.8	50.7
VEHICULAR NOISE	DAY=	66.6	Leq	EVENING=	65.3	Leq	NIGHT=	59.3	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	67.7
		CNEL=	68.4
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	35 76 164
		CNEL:	39 84 180

Scenario: **FUTURE p1**
 Roadway: **Duarte Rd**
 Segment: **Mountain Ave to Buena Vista St**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	13,380
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	821	15	6	607	11	5	152	3	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-2.2	-19.4	-23.4	-3.5	-20.7	-24.7	-9.5	-26.7	-30.7
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	65.9	57.6	58.5	64.6	56.3	57.2	58.6	50.3	51.2
VEHICULAR NOISE	DAY=	67.2	Leq	EVENING=	65.9	Leq	NIGHT=	59.8	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	68.3
		CNEL=	68.9
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	38 82 178
		CNEL:	42 91 196

Scenario: **FUTURE p1** Project: **City of Hope SP**
 Roadway: **Duarte Rd** Analyst: **NJF**
 Segment: **Buena Vista St to Cinco Roberts Dr** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	18,815
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1154	22	9	853	16	6	214	4	2
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-0.7	-17.9	-21.9	-2.0	-19.3	-23.2	-8.0	-25.3	-29.2
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	67.4	59.1	60.0	66.1	57.8	58.7	60.1	51.8	52.7
VEHICULAR NOISE	DAY=	68.6	Leq	EVENING=	67.3	Leq	NIGHT=	61.3	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	69.7
		CNEL=	70.4
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	48 103 223
		CNEL:	53 114 245

Scenario: **FUTURE p1**
 Roadway: **Duarte Rd**
 Segment: **Cinco Roberts Dr to Village Rd**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	17,632
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1081	20	8	799	15	6	200	4	2
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-1.0	-18.2	-22.2	-2.3	-19.5	-23.5	-8.3	-25.5	-29.5
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	67.1	58.8	59.7	65.8	57.5	58.4	59.8	51.5	52.4
VEHICULAR NOISE	DAY=	68.4	Leq	EVENING=	67.0	Leq	NIGHT=	61.0	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	69.5
		CNEL=	70.1
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	46 99 214
		CNEL:	51 109 235

Scenario: **FUTURE p1**
 Roadway: **Duarte Rd**
 Segment: **Village Rd to Hope Dr**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	15,936
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	977	18	7	722	14	5	181	3	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-1.4	-18.7	-22.6	-2.7	-20.0	-23.9	-8.8	-26.0	-29.9
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	66.7	58.4	59.3	65.4	57.1	58.0	59.4	51.1	52.0
VEHICULAR NOISE	DAY=	67.9	Leq	EVENING=	66.6	Leq	NIGHT=	60.6	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	69.0
		CNEL=	69.6
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	43 93 200
		CNEL:	47 102 220

Scenario: **FUTURE p1**
 Roadway: **Duarte Rd**
 Segment: **Hope Dr to Circle Rd**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	14,218
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	872	16	7	645	12	5	161	3	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-1.9	-19.2	-23.1	-3.2	-20.5	-24.4	-9.2	-26.5	-30.4
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	66.2	57.9	58.8	64.9	56.6	57.5	58.9	50.6	51.5
VEHICULAR NOISE	DAY=	67.4	Leq	EVENING=	66.1	Leq	NIGHT=	60.1	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	68.5
		CNEL=	69.1
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	40 86 185
		CNEL:	44 95 204

Scenario: **FUTURE p1**
 Roadway: **Duarte Rd**
 Segment: **Circle Rd to Highland Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	15,643
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	959	18	7	709	13	5	178	3	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-1.5	-18.7	-22.7	-2.8	-20.1	-24.0	-8.8	-26.1	-30.0
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	66.6	58.3	59.2	65.3	57.0	57.9	59.3	51.0	51.9
VEHICULAR NOISE	DAY=	67.8	Leq	EVENING=	66.5	Leq	NIGHT=	60.5	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	68.9
		CNEL=	69.6
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	42 92 197
		CNEL:	47 101 217

Scenario: **FUTURE p1**
 Roadway: **Arrow Hwy**
 Segment: **Longden Ave to Live Oak Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	39,400
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	2417	46	18	1786	34	14	447	8	3
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	2.0	-15.2	-19.2	0.7	-16.6	-20.5	-5.3	-22.6	-26.5
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	72.1	63.1	63.7	70.8	61.8	62.4	64.8	55.8	56.4
VEHICULAR NOISE	DAY=	73.1	Leq	EVENING=	71.8	Leq	NIGHT=	65.8	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	74.2
		CNEL=	74.9
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	96 206 444
		CNEL:	105 227 489

Scenario: **FUTURE p1** Project: **City of Hope SP**
 Roadway: **Arrow Hwy** Analyst: **NJF**
 Segment: **Live Oak Ave to Avenida Barbosa** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	33,514
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	2056	39	16	1519	29	12	381	7	3
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	1.3	-15.9	-19.9	0.0	-17.3	-21.2	-6.0	-23.3	-27.2
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	71.4	62.4	63.0	70.1	61.1	61.7	64.1	55.1	55.7
VEHICULAR NOISE	DAY=	72.4	Leq	EVENING=	71.1	Leq	NIGHT=	65.1	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	73.5
		CNEL=	74.1
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	86 185 399
		CNEL:	95 204 439

Scenario: **FUTURE p1**
 Roadway: **Arrow Hwy**
 Segment: **Avenida Barbosa to I-605 SB Off-R**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	39,651
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	2432	46	18	1798	34	14	450	9	3
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	2.0	-15.2	-19.2	0.7	-16.5	-20.5	-5.3	-22.5	-26.5
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	72.1	63.2	63.7	70.8	61.8	62.4	64.8	55.8	56.4
VEHICULAR NOISE	DAY=	73.2	Leq	EVENING=	71.8	Leq	NIGHT=	65.8	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	74.3
		CNEL=	74.9
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	96 207 446
		CNEL:	106 228 491

Scenario: **FUTURE p1**
 Roadway: **Arrow Hwy**
 Segment: **I-605 SB Off-Ramp to I-605 NB On**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	36,332
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	2228	42	17	1647	31	13	413	8	3
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	1.6	-15.6	-19.6	0.3	-16.9	-20.9	-5.7	-22.9	-26.9
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	71.7	62.8	63.3	70.4	61.5	62.0	64.4	55.4	56.0
VEHICULAR NOISE	DAY=	72.8	Leq	EVENING=	71.5	Leq	NIGHT=	65.5	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	73.9
		CNEL=	74.5
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	91 195 421
		CNEL:	100 215 463

Scenario: **FUTURE p1**
 Roadway: **Live Oak Ave**
 Segment: **Arrow Hwy to I-605 SB On-ramp**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	26,332
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	84
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1615	31	12	1194	23	9	299	6	2
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	0.2	-17.0	-21.0	-1.1	-18.3	-22.3	-7.1	-24.3	-28.3
Distance	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	73.5	64.5	65.1	72.2	63.2	63.8	66.1	57.2	57.7
VEHICULAR NOISE	DAY=	74.5	Leq	EVENING=	73.2	Leq	NIGHT=	67.2	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	75.6
		CNEL=	76.2
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	118 255 549
		CNEL:	130 280 604

Scenario: **FUTURE p1** Project: **City of Hope SP**
 Roadway: **Live Oak Ave** Analyst: **NJF**
 Segment: **I-605 SB On-Ramp to I-605 NB Off** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	26,975
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	84
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1654	31	13	1223	23	9	306	6	2
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	0.3	-16.9	-20.8	-1.0	-18.2	-22.2	-7.0	-24.2	-28.2
Distance	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	73.6	64.6	65.2	72.3	63.3	63.9	66.2	57.3	57.8
VEHICULAR NOISE	DAY=	74.6	Leq	EVENING=	73.3	Leq	NIGHT=	67.3	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	75.7
		CNEL=	76.3
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	120 259 558
		CNEL:	132 285 614

Scenario: **FUTURE p1** Project: **City of Hope SP**
 Roadway: **Live Oak Ave** Analyst: **NJF**
 Segment: **I-605 NB Off-Ramp to Rivergrade F** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	27,363
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	84
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1678	32	13	1240	23	9	311	6	2
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	0.4	-16.8	-20.8	-0.9	-18.1	-22.1	-6.9	-24.2	-28.1
Distance	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	73.6	64.7	65.2	72.3	63.4	63.9	66.3	57.3	57.9
VEHICULAR NOISE	DAY=	74.7	Leq	EVENING=	73.4	Leq	NIGHT=	67.4	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	75.8
		CNEL=	76.4
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	121 261 563
		CNEL:	134 288 620

Scenario: **FUTURE p1**
 Roadway: **Mountain Ave**
 Segment: **Huntington Dr to Central Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	15,974
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	980	19	7	724	14	6	181	3	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-1.4	-18.7	-22.6	-2.7	-20.0	-23.9	-8.7	-26.0	-29.9
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	66.7	58.4	59.3	65.4	57.1	58.0	59.4	51.1	52.0
VEHICULAR NOISE	DAY=	67.9	Leq	EVENING=	66.6	Leq	NIGHT=	60.6	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	69.0
		CNEL=	69.7
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	43 93 200
		CNEL:	47 102 220

Scenario: **FUTURE p1**
 Roadway: **Mountain Ave**
 Segment: **Central Ave to Evergreen St**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	15,002
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	920	17	7	680	13	5	170	3	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-1.7	-18.9	-22.9	-3.0	-20.2	-24.2	-9.0	-26.3	-30.2
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	66.4	58.1	59.0	65.1	56.8	57.7	59.1	50.8	51.7
VEHICULAR NOISE	DAY=	67.7	Leq	EVENING=	66.3	Leq	NIGHT=	60.3	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	68.8
		CNEL=	69.4
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	41 89 192
		CNEL:	45 98 211

Scenario: **FUTURE p1**
 Roadway: **Mountain Ave**
 Segment: **Evergreen St to Duarte Rd**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	12,146
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	745	14	6	551	10	4	138	3	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-2.6	-19.8	-23.8	-3.9	-21.2	-25.1	-9.9	-27.2	-31.1
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	65.5	57.2	58.1	64.2	55.9	56.8	58.2	49.9	50.8
VEHICULAR NOISE	DAY=	66.7	Leq	EVENING=	65.4	Leq	NIGHT=	59.4	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	67.8
		CNEL=	68.5
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	36 77 167
		CNEL:	40 85 183

Scenario: **FUTURE p1**
 Roadway: **Mountain Ave**
 Segment: **Duarte Rd to Hurstview**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	7,978
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	489	9	4	362	7	3	91	2	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-4.4	-21.7	-25.6	-5.7	-23.0	-26.9	-11.8	-29.0	-32.9
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	63.7	55.4	56.3	62.4	54.1	55.0	56.4	48.1	49.0
VEHICULAR NOISE	DAY=	64.9	Leq	EVENING=	63.6	Leq	NIGHT=	57.6	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	66.0
		CNEL=	66.6
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	27 58 126
		CNEL:	30 64 139

Scenario: **FUTURE p1**
 Roadway: **Buena Vista St**
 Segment: **Royal Oaks Dr to Huntington Dr**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	10,402
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	638	12	5	472	9	4	118	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-2.7	-19.9	-23.9	-4.0	-21.2	-25.2	-10.0	-27.3	-31.2
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	62.8	55.2	56.5	61.4	53.9	55.2	55.4	47.9	49.2
VEHICULAR NOISE	DAY=	64.3	Leq	EVENING=	62.9	Leq	NIGHT=	56.9	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	65.4
		CNEL=	66.0
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	25 53 114
		CNEL:	27 58 125

Scenario: **FUTURE p1**
 Roadway: **Buena Vista St**
 Segment: **Huntington Dr to Central Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	15,554
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	954	18	7	705	13	5	177	3	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-1.0	-18.2	-22.1	-2.3	-19.5	-23.5	-8.3	-25.5	-29.5
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	64.5	57.0	58.2	63.2	55.7	56.9	57.2	49.7	50.9
VEHICULAR NOISE	DAY=	66.0	Leq	EVENING=	64.7	Leq	NIGHT=	58.7	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):			Ldn= 67.1
			CNEL= 67.7
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	32 69 149
		CNEL:	35 76 164

Scenario: **FUTURE p1** Project: **City of Hope SP**
 Roadway: **Buena Vista St** Analyst: **NJF**
 Segment: **Central Ave to I-210 WB On-Ramp** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	19,491
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1195	23	9	884	17	7	221	4	2
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	0.0	-17.2	-21.2	-1.3	-18.5	-22.5	-7.3	-24.5	-28.5
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	65.5	58.0	59.2	64.2	56.7	57.9	58.2	50.6	51.9
VEHICULAR NOISE	DAY=	67.0	Leq	EVENING=	65.7	Leq	NIGHT=	59.7	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	68.1
		CNEL=	68.7
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	37 80 173
		CNEL:	41 88 190

Scenario: **FUTURE p1** Project: **City of Hope SP**
 Roadway: **Buena Vista St** Analyst: **NJF**
 Segment: **I-210 WB On-Ramp to Evergreen St** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	17,623
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1081	20	8	799	15	6	200	4	2
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-0.4	-17.6	-21.6	-1.7	-19.0	-22.9	-7.7	-25.0	-28.9
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	65.0	57.5	58.8	63.7	56.2	57.5	57.7	50.2	51.5
VEHICULAR NOISE	DAY=	66.6	Leq	EVENING=	65.2	Leq	NIGHT=	59.2	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn= 67.6	
		CNEL= 68.3	
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn: 35	75 162
		CNEL: 38	83 178

Scenario: **FUTURE p1** Project: **City of Hope SP**
 Roadway: **Buena Vista St** Analyst: **NJF**
 Segment: **Evergreen St to Three Ranch Rd** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	17,313
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1062	20	8	785	15	6	197	4	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-0.5	-17.7	-21.7	-1.8	-19.0	-23.0	-7.8	-25.0	-29.0
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	65.0	57.5	58.7	63.7	56.1	57.4	57.6	50.1	51.4
VEHICULAR NOISE	DAY=	66.5	Leq	EVENING=	65.2	Leq	NIGHT=	59.1	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	67.6
		CNEL=	68.2
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	34 74 160
		CNEL:	38 82 176

Scenario: **FUTURE p1**
 Roadway: **Buena Vista St**
 Segment: **Three Ranch Rd to Duarte Rd**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	17,411
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1068	20	8	789	15	6	198	4	2
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-0.5	-17.7	-21.7	-1.8	-19.0	-23.0	-7.8	-25.0	-29.0
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	65.0	57.5	58.7	63.7	56.2	57.4	57.7	50.2	51.4
VEHICULAR NOISE	DAY=	66.5	Leq	EVENING=	65.2	Leq	NIGHT=	59.2	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	67.6
		CNEL=	68.2
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	35 74 160
		CNEL:	38 82 177

Scenario: **FUTURE p1**
 Roadway: **Buena Vista St**
 Segment: **Duarte Rd to Village Rd**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	10,535
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	646	12	5	478	9	4	120	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-2.6	-19.9	-23.8	-4.0	-21.2	-25.2	-10.0	-27.2	-31.2
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	62.8	55.3	56.6	61.5	54.0	55.2	55.5	48.0	49.2
VEHICULAR NOISE	DAY=	64.3	Leq	EVENING=	63.0	Leq	NIGHT=	57.0	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	65.4
		CNEL=	66.0
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	25 53 115
		CNEL:	27 59 126

Scenario: **FUTURE p1**
 Roadway: **Buena Vista St**
 Segment: **Village Rd to Avenida Barbosa**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	9,913
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	608	11	5	449	8	3	113	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-2.9	-20.1	-24.1	-4.2	-21.5	-25.4	-10.2	-27.5	-31.4
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	62.5	55.0	56.3	61.2	53.7	55.0	55.2	47.7	49.0
VEHICULAR NOISE	DAY=	64.1	Leq	EVENING=	62.7	Leq	NIGHT=	56.7	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn= 65.1	
		CNEL= 65.8	
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn: 24	51 110
		CNEL: 26	56 121

Scenario: **FUTURE p1**
 Roadway: **Avenida Barbosa**
 Segment: **Buena Vista St to Arrow Hwy**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	15,801
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	969	18	7	716	14	5	179	3	1
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	-2.0	-19.2	-23.2	-3.3	-20.5	-24.5	-9.3	-26.5	-30.5
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	68.1	59.2	59.7	66.8	57.8	58.4	60.8	51.8	52.4
VEHICULAR NOISE	DAY=	69.2	Leq	EVENING=	67.8	Leq	NIGHT=	61.8	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	70.3
		CNEL=	70.9
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	52 112 241
		CNEL:	57 123 266

Scenario: **FUTURE p1**
 Roadway: **Duncannon Ave**
 Segment: **Central Ave to Evergreen St**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	1,905
SPEED (mph)	25
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	117	2	1	86	2	1	22	0	0
Speed in MPH	25	25	25	25	25	25	25	25	25
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	59.4	71.1	77.2	59.4	71.1	77.2	59.4	71.1	77.2
ADJUSTMENTS									
Flow	-8.6	-25.8	-29.8	-9.9	-27.2	-31.1	-15.9	-33.2	-37.1
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	50.8	45.2	47.4	49.5	43.9	46.1	43.4	37.9	40.1
VEHICULAR NOISE	DAY=	53.2	Leq	EVENING=	51.8	Leq	NIGHT=	45.8	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	54.3
		CNEL=	54.9
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	4 10 21
		CNEL:	5 11 23

City of Hope SP

FUTURE p2

#	ROADWAY	SEGMENT	ADT	POSTED SPEED LIMIT	LANE DISTANCE	SITE CONDITION	LANES	GRADE (%)	
1	Duncannon Ave	Evergreen St to Three Ranch Rd	1,525	25	12	Soft	2U	0%	1
2	Highland Ave	Royal Oaks Dr to Huntington Dr	5,423	35	36	Soft	4U	0%	2
3	Highland Ave	Huntington Dr to Central Ave	12,872	35	36	Soft	4U	0%	3
4	Highland Ave	Central Ave to Evergreen St	15,905	35	36	Soft	4U	0%	4
5	Highland Ave	Evergreen St to Business Center Dr	14,925	35	36	Soft	4U	0%	5
6	Highland Ave	Business Center Dr to Duarte Rd	14,660	35	36	Soft	4U	0%	6
7									7
8									8
9									9
10									10
11									11
12									12
13									13
14									14
15									15
16									16
17									17
18									18
19									19
20									20
21									21
22									22
23									23
24									24
25									25
26									26
27									27
28									28
29									29
30									30

ANALYST
NJF

ROAD CLASSIFICATION	SPEED	LANE DISTANCE
2U	40	12
4U	40	36
4D	45	48
6D	45	84
2D	40	24

73.6 75.55%
 13.6 13.96%
 10.22 10.49%

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.42%	DAY	75.5%
% MT	1.84%	EVENING	14.0%
% HT	0.74%	NIGHT	10.5%

Source: Riverside, County of, Department of Public Health, Office of Industrial Hygiene. 2009, November. For Determining and Mitigating Tr
 Riverside County Fleet Mix: Secondary, Collectors, or Smaller

Vehicle	Overall %	Day (7 AM to Evening (7 Night (10 PM to 7 AM)		
Auto	97%	73.60	13.60	10.22
Medium Truck	2%	0.90	0.04	0.90
Heavy Truck	1%	0.35	0.04	0.35
		74.85	13.68	11.47

City of Hope SP
 FUTURE p2 CONDITIONS NOISE CONTOURS RESULT SUMMARY TABLE

#	ROADWAY	SEGMENT	DAILY TRAFFIC VOLUMES	NOISE LEVEL AT 50 FT. (dBA CNEL)	DISTANCE TO NOISE CONTOUR (FT.)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Duncannon Ave	Evergreen St to Three Ranch Rd	1,525	53.9	4	9	20
2	Highland Ave	Royal Oaks Dr to Huntington Dr	5,423	63.2	17	38	81
3	Highland Ave	Huntington Dr to Central Ave	12,872	66.9	31	67	144
4	Highland Ave	Central Ave to Evergreen St	15,905	67.8	36	77	166
5	Highland Ave	Evergreen St to Business Center Dr	14,925	67.6	34	74	159
6	Highland Ave	Business Center Dr to Duarte Rd	14,660	67.5	34	73	157
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

Scenario: FUTURE p2
 Roadway: Duncannon Ave
 Segment: Evergreen St to Three Ranch Rd

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	1,525
SPEED (mph)	25
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	94	2	1	69	1	1	17	0	0
Speed in MPH	25	25	25	25	25	25	25	25	25
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	59.4	71.1	77.2	59.4	71.1	77.2	59.4	71.1	77.2
ADJUSTMENTS									
Flow	-9.6	-26.8	-30.8	-10.9	-28.1	-32.1	-16.9	-34.1	-38.1
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	49.8	44.2	46.4	48.5	42.9	45.1	42.5	36.9	39.1
VEHICULAR NOISE	DAY=	52.2	Leq	EVENING=	50.9	Leq	NIGHT=	44.9	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 53.3 CNEL= 53.9
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	4 8 18
		CNEL:	4 9 20

Scenario: FUTURE p2
 Roadway: Highland Ave
 Segment: Royal Oaks Dr to Huntington Dr

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	5,423
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	333	6	3	246	5	2	62	1	0
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-5.5	-22.8	-26.7	-6.8	-24.1	-28.0	-12.9	-30.1	-34.0
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	59.9	52.4	53.7	58.6	51.1	52.4	52.6	45.1	46.3
VEHICULAR NOISE	DAY=	61.4	Leq	EVENING=	60.1	Leq	NIGHT=	54.1	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 62.5 CNEL= 63.2
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	16 34 74
		CNEL:	17 38 81

Scenario: FUTURE p2
 Roadway: Highland Ave
 Segment: Huntington Dr to Central Ave

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	12,872
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	789	15	6	584	11	4	146	3	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-1.8	-19.0	-23.0	-3.1	-20.3	-24.3	-9.1	-26.3	-30.3
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	63.7	56.2	57.4	62.4	54.9	56.1	56.4	48.8	50.1
VEHICULAR NOISE	DAY=	65.2	Leq	EVENING=	63.9	Leq	NIGHT=	57.9	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 66.3 CNEL= 66.9
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	28 61 131
		CNEL:	31 67 144

Scenario: FUTURE p2
 Roadway: Highland Ave
 Segment: Central Ave to Evergreen St

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	15,905
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	976	18	7	721	14	5	181	3	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-0.9	-18.1	-22.0	-2.2	-19.4	-23.4	-8.2	-25.4	-29.4
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	64.6	57.1	58.3	63.3	55.8	57.0	57.3	49.8	51.0
VEHICULAR NOISE	DAY=	66.1	Leq	EVENING=	64.8	Leq	NIGHT=	58.8	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 67.2 CNEL= 67.8
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	33 70 151
		CNEL:	36 77 166

Scenario: FUTURE p2
 Roadway: Highland Ave
 Segment: Evergreen St to Business Center Dr

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	14,925
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	915	17	7	677	13	5	169	3	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-1.1	-18.4	-22.3	-2.4	-19.7	-23.6	-8.5	-25.7	-29.6
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	64.3	56.8	58.1	63.0	55.5	56.8	57.0	49.5	50.7
VEHICULAR NOISE	DAY=	65.8	Leq	EVENING=	64.5	Leq	NIGHT=	58.5	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 66.9 CNEL= 67.6
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	31 67 145
		CNEL:	34 74 159

Scenario: FUTURE p2
 Roadway: Highland Ave
 Segment: Business Center Dr to Duarte Rd

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	14,660
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	899	17	7	665	13	5	166	3	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-1.2	-18.4	-22.4	-2.5	-19.8	-23.7	-8.5	-25.8	-29.7
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	64.2	56.7	58.0	62.9	55.4	56.7	56.9	49.4	50.7
VEHICULAR NOISE	DAY=	65.8	Leq	EVENING=	64.4	Leq	NIGHT=	58.4	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 66.8 CNEL= 67.5
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	31 66 143
		CNEL:	34 73 157

- Traffic Noise Calculations
 - o Project Contributions
 - o Existing Conditions
 - o Existing + Project Conditions
 - o Future Conditions
 - o Future + Project Conditions
 - o Intersection Information

City of Hope SP
FUTURE + PROJECT p1

#	ROADWAY	SEGMENT	ADT	POSTED SPEED LIMIT	LANE DISTANCE	SITE CONDITION	LANES	GRADE (%)	
1	Huntington Dr	Mountain Ave to Buena Vista St	26,025	40	48	Soft	4D	0%	1
2	Huntington Dr	Buena Vista St to Highland Ave	27,985	40	48	Soft	4D	0%	2
3	Huntington Dr	Highland Ave to Mt Olive Dr	35,446	40	48	Soft	4D	0%	3
4	Huntington Dr	Mt. Olive Dr to Crestfield Dr	26,965	40	48	Soft	4D	0%	4
5	Central Ave	I-210 WB On-Ramp to Mountain Ave	10,915	35	12	Soft	2U	0%	5
6	Central Ave	Mountain Ave to Buena Vista St	16,327	35	12	Soft	2U	0%	6
7	Central Ave	Buena Vista St to I-210 WB Off-Ramp	14,199	35	12	Soft	2U	0%	7
8	Central Ave	I-210 WB Off-Ramp to Highland Ave	11,237	35	12	Soft	2U	0%	8
9	Central Ave	Highland Ave to Santo Domingo Ave	11,018	35	12	Soft	2U	0%	9
10	Evergreen St	I-210 EB Off-Ramp to Mountain Ave	8,247	35	12	Soft	2U	0%	10
11	Evergreen St	Mountain Ave to Buena Vista St	8,455	35	12	Soft	2U	0%	11
12	Evergreen St	Duncannon Ave to Highland Ave	2,613	35	12	Soft	2U	0%	12
13	Evergreen St	Highland Ave to Santo Domingo Ave	1,256	35	12	Soft	2U	0%	13
14	Three Ranch Rd	Bradbury Ave to Buena Vista St	519	25	12	Soft	2U	0%	14
15	Three Ranch Rd	Buena Vista St to Duncannon Ave	1,303	25	12	Soft	2U	0%	15
16	Business Center Dr	Fairdale Ave to Highland Ave	475	25	12	Soft	2U	0%	16
17	Business Center Dr	Highland Ave to Santo Domingo Ave	1,119	25	12	Soft	2U	0%	17
18	Duarte Rd	California Ave to Mountain Ave	12,101	40	48	Soft	4D	0%	18
19	Duarte Rd	Mountain Ave to Buena Vista St	13,808	40	48	Soft	4D	0%	19
20	Duarte Rd	Buena Vista St to Cinco Roberts Dr	21,541	40	48	Soft	4D	0%	20
21	Duarte Rd	Cinco Roberts Dr to Village Rd	20,359	40	48	Soft	4D	0%	21
22	Duarte Rd	Village Rd to Hope Dr	17,525	40	48	Soft	4D	0%	22
23	Duarte Rd	Hope Dr to Circle Rd	15,103	40	48	Soft	4D	0%	23
24	Duarte Rd	Circle Rd to Highland Ave	16,273	40	48	Soft	4D	0%	24
25	Arrow Hwy	Longden Ave to Live Oak Ave	39,496	45	48	Soft	4D	0%	25
26	Arrow Hwy	Live Oak Ave to Avenida Barbosa	34,394	45	48	Soft	4D	0%	26
27	Arrow Hwy	Avenida Barbosa to I-605 SB Off-Ramp	39,983	45	48	Soft	4D	0%	27
28	Arrow Hwy	I-605 SB Off-Ramp to I-605 NB On-Ramp	36,664	45	48	Soft	4D	0%	28
29	Live Oak Ave	Arrow Hwy to I-605 SB On-ramp	27,116	45	84	Soft	6D	0%	29
30	Live Oak Ave	I-605 SB On-Ramp to I-605 NB Off-Ramp	27,367	45	84	Soft	6D	0%	30
31	Live Oak Ave	I-605 NB Off-Ramp to Rivergrade Rd	27,363	45	84	Soft	6D	0%	31
32	Mountain Ave	Huntington Dr to Central Ave	16,164	40	48	Soft	4D	0%	32
33	Mountain Ave	Central Ave to Evergreen St	15,192	40	48	Soft	4D	0%	33
34	Mountain Ave	Evergreen St to Duarte Rd	12,336	40	48	Soft	4D	0%	34
35	Mountain Ave	Duarte Rd to Hurstview	7,978	40	48	Soft	4D	0%	35
36	Buena Vista St	Royal Oaks Dr to Huntington Dr	10,464	35	36	Soft	4U	0%	36
37	Buena Vista St	Huntington Dr to Central Ave	15,947	35	36	Soft	4U	0%	37
38	Buena Vista St	Central Ave to I-210 WB On-Ramp	20,275	35	36	Soft	4U	0%	38
39	Buena Vista St	I-210 WB On-Ramp to Evergreen St	19,001	35	36	Soft	4U	0%	39
40	Buena Vista St	Evergreen St to Three Ranch Rd	19,796	35	36	Soft	4U	0%	40
41	Buena Vista St	Three Ranch Rd to Duarte Rd	19,894	35	36	Soft	4U	0%	41
42	Buena Vista St	Duarte Rd to Village Rd	12,345	35	36	Soft	4U	0%	42
43	Buena Vista St	Village Rd to Avenida Barbosa	11,125	35	36	Soft	4U	0%	43
44	Avenida Barbosa	Buena Vista St to Arrow Hwy	17,013	45	48	Soft	4D	0%	44
45	Duncannon Ave	Central Ave to Evergreen St	1,905	25	12	Soft	2U	0%	45

ANALYST
NJF

ROAD CLASSIFICATION	SPEED	LANE DISTANCE
2U	40	12
4U	40	36
4D	45	48
6D	45	84
2D	40	24

73.6	75.55%
13.6	13.96%
10.22	10.49%

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.42%	DAY	75.5%
% MT	1.84%	EVENING	14.0%
% HT	0.74%	NIGHT	10.5%

Source: Riverside, County of, Department of Public Health, Office of Industrial Hygiene. 2009, November. For Determining and Mitigating Tr
 Riverside County Fleet Mix: Secondary, Collectors, or Smaller

Vehicle	Overall %	Day (7 AM to Evening (7 Night (10 PM to 7 AM)		
Auto	97%	73.60	13.60	10.22
Medium Truck	2%	0.90	0.04	0.90
Heavy Truck	1%	0.35	0.04	0.35
		74.85	13.68	11.47

City of Hope SP
 FUTURE + PROJECT p1 CONDITIONS NOISE CONTOURS RESULT SUMMARY TABLE

#	ROADWAY	SEGMENT	DAILY TRAFFIC VOLUMES	NOISE LEVEL AT 50 FT. (dBA CNEL)	DISTANCE TO NOISE CONTOUR (FT.)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Huntington Dr	Mountain Ave to Buena Vista St	26,025	71.8	66	141	305
2	Huntington Dr	Buena Vista St to Highland Ave	27,985	72.1	69	148	320
3	Huntington Dr	Highland Ave to Mt Olive Dr	35,446	73.1	81	174	374
4	Huntington Dr	Mt. Olive Dr to Crestfield Dr	26,965	71.9	67	145	312
5	Central Ave	I-210 WB On-Ramp to Mountain Ave	10,915	65.8	26	56	122
6	Central Ave	Mountain Ave to Buena Vista St	16,327	67.5	34	74	159
7	Central Ave	Buena Vista St to I-210 WB Off-Ramp	14,199	66.9	31	67	145
8	Central Ave	I-210 WB Off-Ramp to Highland Ave	11,237	65.9	27	58	124
9	Central Ave	Highland Ave to Santo Domingo Ave	11,018	65.8	26	57	122
10	Evergreen St	I-210 EB Off-Ramp to Mountain Ave	8,247	64.6	22	47	101
11	Evergreen St	Mountain Ave to Buena Vista St	8,455	64.7	22	48	103
12	Evergreen St	Duncannon Ave to Highland Ave	2,613	59.6	10	22	47
13	Evergreen St	Highland Ave to Santo Domingo Ave	1,256	56.4	6	13	29
14	Three Ranch Rd	Bradbury Ave to Buena Vista St	519	49.2	2	4	10
15	Three Ranch Rd	Buena Vista St to Duncannon Ave	1,303	53.2	4	8	18
16	Business Center Dr	Fairdale Ave to Highland Ave	475	48.9	2	4	9
17	Business Center Dr	Highland Ave to Santo Domingo Ave	1,119	52.6	3	7	16
18	Duarte Rd	California Ave to Mountain Ave	12,101	68.4	39	85	183
19	Duarte Rd	Mountain Ave to Buena Vista St	13,808	69.0	43	93	200
20	Duarte Rd	Buena Vista St to Cinco Roberts Dr	21,541	71.0	58	125	269
21	Duarte Rd	Cinco Roberts Dr to Village Rd	20,359	70.7	56	120	259
22	Duarte Rd	Village Rd to Hope Dr	17,525	70.1	50	109	234
23	Duarte Rd	Hope Dr to Circle Rd	15,103	69.4	46	98	212
24	Duarte Rd	Circle Rd to Highland Ave	16,273	69.7	48	103	223
25	Arrow Hwy	Longden Ave to Live Oak Ave	39,496	74.9	105	227	490
26	Arrow Hwy	Live Oak Ave to Avenida Barbosa	34,394	74.3	96	207	446
27	Arrow Hwy	Avenida Barbosa to I-605 SB Off-Ramp	39,983	74.9	106	229	494
28	Arrow Hwy	I-605 SB Off-Ramp to I-605 NB On-Ramp	36,664	74.5	100	216	466
29	Live Oak Ave	Arrow Hwy to I-605 SB On-ramp	27,116	76.4	133	286	616
30	Live Oak Ave	I-605 SB On-Ramp to I-605 NB Off-Ramp	27,367	76.4	134	288	620
31	Live Oak Ave	I-605 NB Off-Ramp to Rivergrade Rd	27,363	76.4	134	288	620
32	Mountain Ave	Huntington Dr to Central Ave	16,164	69.7	48	103	222
33	Mountain Ave	Central Ave to Evergreen St	15,192	69.4	46	99	213
34	Mountain Ave	Evergreen St to Duarte Rd	12,336	68.5	40	86	185
35	Mountain Ave	Duarte Rd to Hurstview	7,978	66.6	30	64	139
36	Buena Vista St	Royal Oaks Dr to Huntington Dr	10,464	66.0	27	58	126
37	Buena Vista St	Huntington Dr to Central Ave	15,947	67.8	36	77	167
38	Buena Vista St	Central Ave to I-210 WB On-Ramp	20,275	68.9	42	91	195
39	Buena Vista St	I-210 WB On-Ramp to Evergreen St	19,001	68.6	40	87	187
40	Buena Vista St	Evergreen St to Three Ranch Rd	19,796	68.8	41	89	192
41	Buena Vista St	Three Ranch Rd to Duarte Rd	19,894	68.8	42	90	193
42	Buena Vista St	Duarte Rd to Village Rd	12,345	66.7	30	65	140
43	Buena Vista St	Village Rd to Avenida Barbosa	11,125	66.3	28	61	131
44	Avenida Barbosa	Buena Vista St to Arrow Hwy	17,013	71.2	60	130	279
45	Duncannon Ave	Central Ave to Evergreen St	1,905	54.9	5	11	23

Scenario: FUTURE + PROJECT p1
 Roadway: Huntington Dr
 Segment: Mountain Ave to Buena Vista St

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	26,025
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1596	30	12	1180	22	9	296	6	2
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	0.7	-16.5	-20.5	-0.6	-17.8	-21.8	-6.6	-23.9	-27.8
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	68.8	60.5	61.4	67.5	59.2	60.1	61.5	53.2	54.1
VEHICULAR NOISE	DAY=	70.1	Leq	EVENING=	68.7	Leq	NIGHT=	62.7	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 71.1 CNEL= 71.8
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	60 128 277
		CNEL:	66 141 305

Scenario: FUTURE + PROJECT p1
 Roadway: Huntington Dr
 Segment: Buena Vista St to Highland Ave

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	27,985
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1716	32	13	1269	24	10	318	6	2
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	1.0	-16.2	-20.2	-0.3	-17.5	-21.5	-6.3	-23.5	-27.5
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	69.1	60.8	61.7	67.8	59.5	60.4	61.8	53.5	54.4
VEHICULAR NOISE	DAY=	70.4	Leq	EVENING=	69.1	Leq	NIGHT=	63.0	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 71.5 CNEL= 72.1
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	63 135 291
		CNEL:	69 148 320

Scenario: FUTURE + PROJECT p1
 Roadway: Huntington Dr
 Segment: Highland Ave to Mt Olive Dr

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	35,446
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	2174	41	17	1607	30	12	403	8	3
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	2.0	-15.2	-19.1	0.7	-16.5	-20.5	-5.3	-22.5	-26.5
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	70.2	61.9	62.8	68.8	60.6	61.4	62.8	54.5	55.4
VEHICULAR NOISE	DAY=	71.4	Leq	EVENING=	70.1	Leq	NIGHT=	64.1	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 72.5 CNEL= 73.1
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	73 158 340
		CNEL:	81 174 374

Scenario: FUTURE + PROJECT p1
 Roadway: Huntington Dr
 Segment: Mt. Olive Dr to Crestfield Dr

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	26,965
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1654	31	13	1222	23	9	306	6	2
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	0.9	-16.4	-20.3	-0.5	-17.7	-21.6	-6.5	-23.7	-27.7
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	69.0	60.7	61.6	67.7	59.4	60.3	61.6	53.4	54.2
VEHICULAR NOISE	DAY=	70.2	Leq	EVENING=	68.9	Leq	NIGHT=	62.9	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 71.3 CNEL= 71.9
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	61 132 283
		CNEL:	67 145 312

Scenario: FUTURE + PROJECT p1
 Roadway: Central Ave
 Segment: I-210 WB On-Ramp to Mountain Ave

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	10,915
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	669	13	5	495	9	4	124	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-2.5	-19.7	-23.7	-3.8	-21.0	-25.0	-9.8	-27.1	-31.0
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	62.6	55.0	56.3	61.2	53.7	55.0	55.2	47.7	49.0
VEHICULAR NOISE	DAY=	64.1	Leq	EVENING=	62.8	Leq	NIGHT=	56.7	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 65.2 CNEL= 65.8
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	24 51 110
		CNEL:	26 56 122

Scenario: **FUTURE + PROJECT p1**
 Roadway: **Central Ave**
 Segment: **Mountain Ave to Buena Vista St**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	16,327
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1001	19	8	740	14	6	185	4	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-0.7	-18.0	-21.9	-2.1	-19.3	-23.2	-8.1	-25.3	-29.3
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	64.3	56.8	58.1	63.0	55.5	56.7	57.0	49.5	50.7
VEHICULAR NOISE	DAY=	65.8	Leq	EVENING=	64.5	Leq	NIGHT=	58.5	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 66.9 CNEL= 67.5
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	31 67 144
		CNEL:	34 74 159

Scenario: FUTURE + PROJECT p1
 Roadway: Central Ave
 Segment: Buena Vista St to I-210 WB Off-Ramp

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	14,199
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	871	16	7	644	12	5	161	3	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-1.3	-18.6	-22.5	-2.7	-19.9	-23.9	-8.7	-25.9	-29.9
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	63.7	56.2	57.4	62.4	54.9	56.1	56.4	48.9	50.1
VEHICULAR NOISE	DAY=	65.2	Leq	EVENING=	63.9	Leq	NIGHT=	57.9	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 66.3 CNEL= 66.9
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	28 61 132
		CNEL:	31 67 145

Scenario: FUTURE + PROJECT p1
 Roadway: Central Ave
 Segment: I-210 WB Off-Ramp to Highland Ave

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	11,237
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	689	13	5	509	10	4	128	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-2.4	-19.6	-23.6	-3.7	-20.9	-24.9	-9.7	-26.9	-30.9
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	62.7	55.2	56.4	61.4	53.9	55.1	55.4	47.8	49.1
VEHICULAR NOISE	DAY=	64.2	Leq	EVENING=	62.9	Leq	NIGHT=	56.9	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 65.3 CNEL= 65.9
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	24 52 113
		CNEL:	27 58 124

Scenario: FUTURE + PROJECT p1
 Roadway: Central Ave
 Segment: Highland Ave to Santo Domingo Ave

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	11,018
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	676	13	5	499	9	4	125	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-2.4	-19.7	-23.6	-3.8	-21.0	-25.0	-9.8	-27.0	-31.0
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	62.6	55.1	56.3	61.3	53.8	55.0	55.3	47.8	49.0
VEHICULAR NOISE	DAY=	64.1	Leq	EVENING=	62.8	Leq	NIGHT=	56.8	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 65.2 CNEL= 65.8
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	24 52 111
		CNEL:	26 57 122

Scenario: FUTURE + PROJECT p1
 Roadway: Evergreen St
 Segment: I-210 EB Off-Ramp to Mountain Ave

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	8,247
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	506	10	4	374	7	3	94	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-3.7	-20.9	-24.9	-5.0	-22.3	-26.2	-11.0	-28.3	-32.2
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	61.3	53.8	55.1	60.0	52.5	53.8	54.0	46.5	47.8
VEHICULAR NOISE	DAY=	62.8	Leq	EVENING=	61.5	Leq	NIGHT=	55.5	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 63.9 CNEL= 64.6
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	20 43 92
		CNEL:	22 47 101

Scenario: **FUTURE + PROJECT p1**
 Roadway: **Evergreen St**
 Segment: **Mountain Ave to Buena Vista St**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	8,455
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	519	10	4	383	7	3	96	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-3.6	-20.8	-24.8	-4.9	-22.1	-26.1	-10.9	-28.2	-32.1
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	61.5	53.9	55.2	60.1	52.6	53.9	54.1	46.6	47.9
VEHICULAR NOISE	DAY=	63.0	Leq	EVENING=	61.6	Leq	NIGHT=	55.6	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):			Ldn= 64.1
			CNEL= 64.7
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	20 43 93
		CNEL:	22 48 103

Scenario: **FUTURE + PROJECT p1** Project: **City of Hope SP**
 Roadway: **Evergreen St** Analyst: **NJF**
 Segment: **Duncannon Ave to Highland Ave** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	2,613
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	160	3	1	118	2	1	30	1	0
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-8.7	-25.9	-29.9	-10.0	-27.2	-31.2	-16.0	-33.3	-37.2
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	56.4	48.8	50.1	55.0	47.5	48.8	49.0	41.5	42.8
VEHICULAR NOISE	DAY=	57.9	Leq	EVENING=	56.5	Leq	NIGHT=	50.5	Leq

RESULTS					
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	59.0		
		CNEL=	59.6		
NOISE CONTOUR:		70 dBA	65 dBA	60 dBA	
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	9	20	43
		CNEL:	10	22	47

Scenario: **FUTURE + PROJECT p1** Project: **City of Hope SP**
 Roadway: **Evergreen St** Analyst: **NJF**
 Segment: **Highland Ave to Santo Domingo Av** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	1,256
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	77	1	1	57	1	0	14	0	0
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-11.9	-29.1	-33.1	-13.2	-30.4	-34.4	-19.2	-36.4	-40.4
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	53.2	45.7	46.9	51.9	44.3	45.6	45.8	38.3	39.6
VEHICULAR NOISE	DAY=	54.7	Leq	EVENING=	53.4	Leq	NIGHT=	47.4	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	55.8
		CNEL=	56.4
NOISE CONTOUR:		70 dBA	65 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	6 12 26
		CNEL:	6 13 29

Scenario: **FUTURE + PROJECT p1**
 Roadway: **Three Ranch Rd**
 Segment: **Bradbury Ave to Buena Vista St**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	519
SPEED (mph)	25
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	32	1	0	24	0	0	6	0	0
Speed in MPH	25	25	25	25	25	25	25	25	25
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	59.4	71.1	77.2	59.4	71.1	77.2	59.4	71.1	77.2
ADJUSTMENTS									
Flow	-14.3	-31.5	-35.5	-15.6	-32.8	-36.8	-21.6	-38.8	-42.8
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	45.1	39.5	41.7	43.8	38.2	40.4	37.8	32.2	34.4
VEHICULAR NOISE	DAY=	47.5	Leq	EVENING=	46.2	Leq	NIGHT=	40.2	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	48.6
		CNEL=	49.2
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	2 4 9
		CNEL:	2 4 10

Scenario: **FUTURE + PROJECT p1** Project: **City of Hope SP**
 Roadway: **Three Ranch Rd** Analyst: **NJF**
 Segment: **Buena Vista St to Duncannon Ave** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	1,303
SPEED (mph)	25
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	80	2	1	59	1	0	15	0	0
Speed in MPH	25	25	25	25	25	25	25	25	25
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	59.4	71.1	77.2	59.4	71.1	77.2	59.4	71.1	77.2
ADJUSTMENTS									
Flow	-10.3	-27.5	-31.5	-11.6	-28.8	-32.8	-17.6	-34.8	-38.8
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	49.1	43.5	45.7	47.8	42.2	44.4	41.8	36.2	38.4
VEHICULAR NOISE	DAY=	51.5	Leq	EVENING=	50.2	Leq	NIGHT=	44.2	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	52.6
		CNEL=	53.2
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	3 7 16
		CNEL:	4 8 18

Scenario: **FUTURE + PROJECT p1**
 Roadway: **Business Center Dr**
 Segment: **Fairdale Ave to Highland Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	475
SPEED (mph)	25
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	29	1	0	22	0	0	5	0	0
Speed in MPH	25	25	25	25	25	25	25	25	25
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	59.4	71.1	77.2	59.4	71.1	77.2	59.4	71.1	77.2
ADJUSTMENTS									
Flow	-14.6	-31.9	-35.8	-16.0	-33.2	-37.1	-22.0	-39.2	-43.2
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	44.7	39.1	41.3	43.4	37.8	40.0	37.4	31.8	34.0
VEHICULAR NOISE	DAY=	47.1	Leq	EVENING=	45.8	Leq	NIGHT=	39.8	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn= 48.2	
		CNEL= 48.9	
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	2 4 8
		CNEL:	2 4 9

Scenario: **FUTURE + PROJECT p1** Project: **City of Hope SP**
 Roadway: **Business Center Dr** Analyst: **NJF**
 Segment: **Highland Ave to Santo Domingo Av** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	1,119
SPEED (mph)	25
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	69	1	1	51	1	0	13	0	0
Speed in MPH	25	25	25	25	25	25	25	25	25
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	59.4	71.1	77.2	59.4	71.1	77.2	59.4	71.1	77.2
ADJUSTMENTS									
Flow	-10.9	-28.2	-32.1	-12.2	-29.5	-33.4	-18.2	-35.5	-39.4
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	48.5	42.9	45.1	47.1	41.6	43.8	41.1	35.5	37.7
VEHICULAR NOISE	DAY=	50.9	Leq	EVENING=	49.5	Leq	NIGHT=	43.5	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	51.9
		CNEL=	52.6
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	3 7 15
		CNEL:	3 7 16

Scenario: **FUTURE + PROJECT p1**
 Roadway: **Duarte Rd**
 Segment: **California Ave to Mountain Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	12,101
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	742	14	6	549	10	4	137	3	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-2.6	-19.9	-23.8	-3.9	-21.2	-25.1	-9.9	-27.2	-31.1
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	65.5	57.2	58.1	64.2	55.9	56.8	58.2	49.9	50.8
VEHICULAR NOISE	DAY=	66.7	Leq	EVENING=	65.4	Leq	NIGHT=	59.4	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	67.8
		CNEL=	68.4
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	36 77 166
		CNEL:	39 85 183

Scenario: **FUTURE + PROJECT p1**
 Roadway: **Duarte Rd**
 Segment: **Mountain Ave to Buena Vista St**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	13,808
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	847	16	6	626	12	5	157	3	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-2.0	-19.3	-23.2	-3.4	-20.6	-24.6	-9.4	-26.6	-30.6
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	66.1	57.8	58.7	64.7	56.5	57.4	58.7	50.4	51.3
VEHICULAR NOISE	DAY=	67.3	Leq	EVENING=	66.0	Leq	NIGHT=	60.0	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	68.4
		CNEL=	69.0
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	39 84 181
		CNEL:	43 93 200

Scenario: **FUTURE + PROJECT p1** Project: **City of Hope SP**
 Roadway: **Duarte Rd** Analyst: **NJF**
 Segment: **Buena Vista St to Cinco Roberts Dr** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	21,541
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1321	25	10	977	18	7	245	5	2
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-0.1	-17.4	-21.3	-1.4	-18.7	-22.6	-7.4	-24.7	-28.6
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	68.0	59.7	60.6	66.7	58.4	59.3	60.7	52.4	53.3
VEHICULAR NOISE	DAY=	69.2	Leq	EVENING=	67.9	Leq	NIGHT=	61.9	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	70.3
		CNEL=	71.0
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	53 113 244
		CNEL:	58 125 269

Scenario: **FUTURE + PROJECT p1**
 Roadway: **Duarte Rd**
 Segment: **Cinco Roberts Dr to Village Rd**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	20,359
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1249	24	9	923	17	7	231	4	2
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-0.4	-17.6	-21.6	-1.7	-18.9	-22.9	-7.7	-24.9	-28.9
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	67.7	59.5	60.4	66.4	58.1	59.0	60.4	52.1	53.0
VEHICULAR NOISE	DAY=	69.0	Leq	EVENING=	67.7	Leq	NIGHT=	61.7	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	70.1
		CNEL=	70.7
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):	Ldn:	51	109 235
	CNEL:	56	120 259

Scenario: **FUTURE + PROJECT p1**
 Roadway: **Duarte Rd**
 Segment: **Village Rd to Hope Dr**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	17,525
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1075	20	8	794	15	6	199	4	2
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-1.0	-18.3	-22.2	-2.3	-19.6	-23.5	-8.3	-25.6	-29.5
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	67.1	58.8	59.7	65.8	57.5	58.4	59.8	51.5	52.4
VEHICULAR NOISE	DAY=	68.3	Leq	EVENING=	67.0	Leq	NIGHT=	61.0	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	69.4
		CNEL=	70.1
NOISE CONTOUR:		70 dBA	65 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	46
		CNEL:	50
			99
			213
			234

Scenario: **FUTURE + PROJECT p1**
 Roadway: **Duarte Rd**
 Segment: **Hope Dr to Circle Rd**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	15,103
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	926	17	7	685	13	5	172	3	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-1.7	-18.9	-22.9	-3.0	-20.2	-24.2	-9.0	-26.2	-30.2
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	66.4	58.2	59.1	65.1	56.9	57.7	59.1	50.8	51.7
VEHICULAR NOISE	DAY=	67.7	Leq	EVENING=	66.4	Leq	NIGHT=	60.4	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):			Ldn= 68.8
			CNEL= 69.4
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):	Ldn:	41	89 193
	CNEL:	46	98 212

Scenario: **FUTURE + PROJECT p1**
 Roadway: **Duarte Rd**
 Segment: **Circle Rd to Highland Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	16,273
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	998	19	8	738	14	6	185	3	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-1.3	-18.6	-22.5	-2.6	-19.9	-23.8	-8.7	-25.9	-29.9
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	66.8	58.5	59.4	65.5	57.2	58.1	59.4	51.2	52.1
VEHICULAR NOISE	DAY=	68.0	Leq	EVENING=	66.7	Leq	NIGHT=	60.7	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	69.1
		CNEL=	69.7
NOISE CONTOUR:		70 dBA	65 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	44
		CNEL:	48
		60 dBA	202
		65 dBA	94
		60 dBA	223

Scenario: **FUTURE + PROJECT p1**
 Roadway: **Arrow Hwy**
 Segment: **Longden Ave to Live Oak Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	39,496
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	2422	46	18	1790	34	14	448	8	3
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	2.0	-15.2	-19.2	0.7	-16.5	-20.5	-5.3	-22.6	-26.5
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	72.1	63.1	63.7	70.8	61.8	62.4	64.8	55.8	56.4
VEHICULAR NOISE	DAY=	73.1	Leq	EVENING=	71.8	Leq	NIGHT=	65.8	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	74.2
		CNEL=	74.9
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	96 206 445
		CNEL:	105 227 490

Scenario: **FUTURE + PROJECT p1** Project: **City of Hope SP**
 Roadway: **Arrow Hwy** Analyst: **NJF**
 Segment: **Live Oak Ave to Avenida Barbosa** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	34,394
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	2109	40	16	1559	29	12	391	7	3
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	1.4	-15.8	-19.8	0.1	-17.1	-21.1	-5.9	-23.2	-27.1
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	71.5	62.5	63.1	70.2	61.2	61.8	64.2	55.2	55.8
VEHICULAR NOISE	DAY=	72.5	Leq	EVENING=	71.2	Leq	NIGHT=	65.2	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	73.6
		CNEL=	74.3
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	87 188 405
		CNEL:	96 207 446

Scenario: **FUTURE + PROJECT p1** Project: **City of Hope SP**
 Roadway: **Arrow Hwy** Analyst: **NJF**
 Segment: **Avenida Barbosa to I-605 SB Off-R** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	39,983
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	2452	46	19	1813	34	14	454	9	3
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	2.1	-15.2	-19.1	0.7	-16.5	-20.4	-5.3	-22.5	-26.5
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	72.2	63.2	63.8	70.8	61.9	62.4	64.8	55.9	56.4
VEHICULAR NOISE	DAY=	73.2	Leq	EVENING=	71.9	Leq	NIGHT=	65.9	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	74.3
		CNEL=	74.9
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	97 208 448
		CNEL:	106 229 494

Scenario: **FUTURE + PROJECT p1** Project: **City of Hope SP**
 Roadway: **Arrow Hwy** Analyst: **NJF**
 Segment: **I-605 SB Off-Ramp to I-605 NB On** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	36,664
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	2249	42	17	1662	31	13	416	8	3
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	1.7	-15.6	-19.5	0.4	-16.9	-20.8	-5.6	-22.9	-26.8
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	71.8	62.8	63.4	70.5	61.5	62.1	64.4	55.5	56.1
VEHICULAR NOISE	DAY=	72.8	Leq	EVENING=	71.5	Leq	NIGHT=	65.5	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn= 73.9	
		CNEL= 74.5	
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn: 91	196 423
		CNEL: 100	216 466

Scenario: **FUTURE + PROJECT p1**
 Roadway: **Live Oak Ave**
 Segment: **Arrow Hwy to I-605 SB On-ramp**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	27,116
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	84
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1663	31	13	1229	23	9	308	6	2
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	0.4	-16.9	-20.8	-0.9	-18.2	-22.1	-7.0	-24.2	-28.1
Distance	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	73.6	64.6	65.2	72.3	63.3	63.9	66.3	57.3	57.9
VEHICULAR NOISE	DAY=	74.6	Leq	EVENING=	73.3	Leq	NIGHT=	67.3	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	75.7
		CNEL=	76.4
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	121 260 559
		CNEL:	133 286 616

Scenario: **FUTURE + PROJECT p1** Project: **City of Hope SP**
 Roadway: **Live Oak Ave** Analyst: **NJF**
 Segment: **I-605 SB On-Ramp to I-605 NB Off** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	27,367
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	84
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1679	32	13	1241	23	9	311	6	2
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	0.4	-16.8	-20.8	-0.9	-18.1	-22.1	-6.9	-24.2	-28.1
Distance	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	73.6	64.7	65.2	72.3	63.4	63.9	66.3	57.3	57.9
VEHICULAR NOISE	DAY=	74.7	Leq	EVENING=	73.4	Leq	NIGHT=	67.4	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):			Ldn= 75.8
			CNEL= 76.4
NOISE CONTOUR:	70 dBA	65 dBA	60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):	Ldn: 121	261	563
	CNEL: 134	288	620

Scenario: **FUTURE + PROJECT p1** Project: **City of Hope SP**
 Roadway: **Live Oak Ave** Analyst: **NJF**
 Segment: **I-605 NB Off-Ramp to Rivergrade F** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	27,363
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	84
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1678	32	13	1240	23	9	311	6	2
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	0.4	-16.8	-20.8	-0.9	-18.1	-22.1	-6.9	-24.2	-28.1
Distance	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	73.6	64.7	65.2	72.3	63.4	63.9	66.3	57.3	57.9
VEHICULAR NOISE	DAY=	74.7	Leq	EVENING=	73.4	Leq	NIGHT=	67.4	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	75.8
		CNEL=	76.4
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	121 261 563
		CNEL:	134 288 620

Scenario: **FUTURE + PROJECT p1**
 Roadway: **Mountain Ave**
 Segment: **Huntington Dr to Central Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	16,164
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	991	19	8	733	14	6	184	3	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-1.4	-18.6	-22.6	-2.7	-19.9	-23.9	-8.7	-25.9	-29.9
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	66.7	58.5	59.3	65.4	57.1	58.0	59.4	51.1	52.0
VEHICULAR NOISE	DAY=	68.0	Leq	EVENING=	66.7	Leq	NIGHT=	60.7	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):			Ldn= 69.1
			CNEL= 69.7
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	43 94 201
		CNEL:	48 103 222

Scenario: **FUTURE + PROJECT p1**
 Roadway: **Mountain Ave**
 Segment: **Central Ave to Evergreen St**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	15,192
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	932	18	7	689	13	5	173	3	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-1.6	-18.9	-22.8	-2.9	-20.2	-24.1	-9.0	-26.2	-30.2
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	66.5	58.2	59.1	65.2	56.9	57.8	59.1	50.9	51.8
VEHICULAR NOISE	DAY=	67.7	Leq	EVENING=	66.4	Leq	NIGHT=	60.4	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):			Ldn= 68.8
			CNEL= 69.4
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):	Ldn:	42	90 193
	CNEL:	46	99 213

Scenario: **FUTURE + PROJECT p1**
 Roadway: **Mountain Ave**
 Segment: **Evergreen St to Duarte Rd**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	12,336
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	757	14	6	559	11	4	140	3	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-2.5	-19.8	-23.7	-3.9	-21.1	-25.0	-9.9	-27.1	-31.1
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	65.6	57.3	58.2	64.3	56.0	56.9	58.2	50.0	50.9
VEHICULAR NOISE	DAY=	66.8	Leq	EVENING=	65.5	Leq	NIGHT=	59.5	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):			Ldn= 67.9
			CNEL= 68.5
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	36 78 168
		CNEL:	40 86 185

Scenario: **FUTURE + PROJECT p1**
 Roadway: **Mountain Ave**
 Segment: **Duarte Rd to Hurstview**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	7,978
SPEED (mph)	40
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	489	9	4	362	7	3	91	2	1
Speed in MPH	40	40	40	40	40	40	40	40	40
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	67.4	76.3	81.2	67.4	76.3	81.2	67.4	76.3	81.2
ADJUSTMENTS									
Flow	-4.4	-21.7	-25.6	-5.7	-23.0	-26.9	-11.8	-29.0	-32.9
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	63.7	55.4	56.3	62.4	54.1	55.0	56.4	48.1	49.0
VEHICULAR NOISE	DAY=	64.9	Leq	EVENING=	63.6	Leq	NIGHT=	57.6	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	66.0
		CNEL=	66.6
NOISE CONTOUR:		70 dBA	65 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	27
		CNEL:	30
			58
			126
			64
			139

Scenario: **FUTURE + PROJECT p1**
 Roadway: **Buena Vista St**
 Segment: **Royal Oaks Dr to Huntington Dr**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	10,464
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	642	12	5	474	9	4	119	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-2.7	-19.9	-23.9	-4.0	-21.2	-25.2	-10.0	-27.2	-31.2
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	62.8	55.3	56.5	61.5	54.0	55.2	55.5	47.9	49.2
VEHICULAR NOISE	DAY=	64.3	Leq	EVENING=	63.0	Leq	NIGHT=	57.0	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	65.4
		CNEL=	66.0
NOISE CONTOUR:		70 dBA	65 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		60 dBA	
	Ldn:	25	53
	CNEL:	27	58
		114	126

Scenario: **FUTURE + PROJECT p1**
 Roadway: **Buena Vista St**
 Segment: **Huntington Dr to Central Ave**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	15,947
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	978	18	7	723	14	5	181	3	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-0.8	-18.1	-22.0	-2.2	-19.4	-23.3	-8.2	-25.4	-29.4
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	64.6	57.1	58.4	63.3	55.8	57.0	57.3	49.8	51.0
VEHICULAR NOISE	DAY=	66.1	Leq	EVENING=	64.8	Leq	NIGHT=	58.8	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):			Ldn= 67.2
			CNEL= 67.8
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	33 70 151
		CNEL:	36 77 167

Scenario: **FUTURE + PROJECT p1** Project: **City of Hope SP**
 Roadway: **Buena Vista St** Analyst: **NJF**
 Segment: **Central Ave to I-210 WB On-Ramp** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	20,275
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1244	23	9	919	17	7	230	4	2
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	0.2	-17.0	-21.0	-1.1	-18.4	-22.3	-7.1	-24.4	-28.3
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	65.7	58.1	59.4	64.3	56.8	58.1	58.3	50.8	52.1
VEHICULAR NOISE	DAY=	67.2	Leq	EVENING=	65.8	Leq	NIGHT=	59.8	Leq

RESULTS					
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	68.3		
		CNEL=	68.9		
NOISE CONTOUR:		70 dBA	65 dBA	60 dBA	
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	38	82	178
		CNEL:	42	91	195

Scenario: **FUTURE + PROJECT p1** Project: **City of Hope SP**
 Roadway: **Buena Vista St** Analyst: **NJF**
 Segment: **I-210 WB On-Ramp to Evergreen St** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	19,001
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1165	22	9	861	16	7	216	4	2
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-0.1	-17.3	-21.3	-1.4	-18.6	-22.6	-7.4	-24.6	-28.6
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	65.4	57.9	59.1	64.1	56.5	57.8	58.1	50.5	51.8
VEHICULAR NOISE	DAY=	66.9	Leq	EVENING=	65.6	Leq	NIGHT=	59.6	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn= 68.0	
		CNEL= 68.6	
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn: 37	79 170
		CNEL: 40	87 187

Scenario: **FUTURE + PROJECT p1** Project: **City of Hope SP**
 Roadway: **Buena Vista St** Analyst: **NJF**
 Segment: **Evergreen St to Three Ranch Rd** Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	19,796
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1214	23	9	897	17	7	225	4	2
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	0.1	-17.1	-21.1	-1.2	-18.5	-22.4	-7.2	-24.5	-28.4
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	65.6	58.0	59.3	64.2	56.7	58.0	58.2	50.7	52.0
VEHICULAR NOISE	DAY=	67.1	Leq	EVENING=	65.7	Leq	NIGHT=	59.7	Leq

RESULTS					
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	68.2		
		CNEL=	68.8		
NOISE CONTOUR:		70 dBA	65 dBA	60 dBA	
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	38	81	175
		CNEL:	41	89	192

Scenario: **FUTURE + PROJECT p1**
 Roadway: **Buena Vista St**
 Segment: **Three Ranch Rd to Duarte Rd**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	19,894
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1220	23	9	902	17	7	226	4	2
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	0.1	-17.1	-21.1	-1.2	-18.4	-22.4	-7.2	-24.4	-28.4
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	65.6	58.1	59.3	64.3	56.7	58.0	58.2	50.7	52.0
VEHICULAR NOISE	DAY=	67.1	Leq	EVENING=	65.8	Leq	NIGHT=	59.8	Leq

RESULTS					
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	68.2		
		CNEL=	68.8		
NOISE CONTOUR:		70 dBA	65 dBA	60 dBA	
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	38	81	175
		CNEL:	42	90	193

Scenario: **FUTURE + PROJECT p1**
 Roadway: **Buena Vista St**
 Segment: **Duarte Rd to Village Rd**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	12,345
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	757	14	6	560	11	4	140	3	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-2.0	-19.2	-23.1	-3.3	-20.5	-24.5	-9.3	-26.5	-30.5
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	63.5	56.0	57.2	62.2	54.7	55.9	56.2	48.7	49.9
VEHICULAR NOISE	DAY=	65.0	Leq	EVENING=	63.7	Leq	NIGHT=	57.7	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	66.1
		CNEL=	66.7
NOISE CONTOUR:		70 dBA	65 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	27
		CNEL:	30
			59
			65
			128
			140

Scenario: **FUTURE + PROJECT p1**
 Roadway: **Buena Vista St**
 Segment: **Village Rd to Avenida Barbosa**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	11,125
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	682	13	5	504	10	4	126	2	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-2.4	-19.6	-23.6	-3.7	-21.0	-24.9	-9.7	-27.0	-30.9
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	63.1	55.5	56.8	61.7	54.2	55.5	55.7	48.2	49.5
VEHICULAR NOISE	DAY=	64.6	Leq	EVENING=	63.2	Leq	NIGHT=	57.2	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	65.6
		CNEL=	66.3
NOISE CONTOUR:		70 dBA	65 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		60 dBA	
	Ldn:	26	55
	CNEL:	28	61
		119	131

Scenario: **FUTURE + PROJECT p1**
 Roadway: **Avenida Barbosa**
 Segment: **Buena Vista St to Arrow Hwy**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	17,013
SPEED (mph)	45
ROAD NEAR-FAR LN. DIST.	48
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1043	20	8	771	15	6	193	4	1
Speed in MPH	45	45	45	45	45	45	45	45	45
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	69.3	77.6	82.1	69.3	77.6	82.1	69.3	77.6	82.1
ADJUSTMENTS									
Flow	-1.7	-18.9	-22.8	-3.0	-20.2	-24.2	-9.0	-26.2	-30.2
Distance	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	68.4	59.5	60.0	67.1	58.2	58.7	61.1	52.2	52.7
VEHICULAR NOISE	DAY=	69.5	Leq	EVENING=	68.2	Leq	NIGHT=	62.2	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	70.6
		CNEL=	71.2
NOISE CONTOUR:		<i>70 dBA</i>	<i>65 dBA</i> <i>60 dBA</i>
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	55 118 254
		CNEL:	60 130 279

Scenario: **FUTURE + PROJECT p1**
 Roadway: **Duncannon Ave**
 Segment: **Central Ave to Evergreen St**

Project: **City of Hope SP**
 Analyst: **NJF**
 Date: **05-Apr-17**

ROADWAY INPUTS	
ADT	1,905
SPEED (mph)	25
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	117	2	1	86	2	1	22	0	0
Speed in MPH	25	25	25	25	25	25	25	25	25
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	59.4	71.1	77.2	59.4	71.1	77.2	59.4	71.1	77.2
ADJUSTMENTS									
Flow	-8.6	-25.8	-29.8	-9.9	-27.2	-31.1	-15.9	-33.2	-37.1
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	50.8	45.2	47.4	49.5	43.9	46.1	43.4	37.9	40.1
VEHICULAR NOISE	DAY=	53.2	Leq	EVENING=	51.8	Leq	NIGHT=	45.8	Leq

RESULTS			
NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA):		Ldn=	54.3
		CNEL=	54.9
NOISE CONTOUR:		70 dBA	65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	4 10 21
		CNEL:	5 11 23

**City of Hope SP
FUTURE+P p2**

#	ROADWAY	SEGMENT	ADT	POSTED SPEED LIMIT	LANE DISTANCE	SITE CONDITION	LANES	GRADE (%)	
1	Duncannon Ave	Evergreen St to Three Ranch Rd	1,525	25	12	Soft	2U	0%	1
2	Highland Ave	Royal Oaks Dr to Huntington Dr	5,457	35	36	Soft	4U	0%	2
3	Highland Ave	Huntington Dr to Central Ave	13,372	35	36	Soft	4U	0%	3
4	Highland Ave	Central Ave to Evergreen St	16,535	35	36	Soft	4U	0%	4
5	Highland Ave	Evergreen St to Business Center Dr	15,555	35	36	Soft	4U	0%	5
6	Highland Ave	Business Center Dr to Duarte Rd	15,290	35	36	Soft	4U	0%	6
7									7
8									8
9									9
10									10
11									11
12									12
13									13
14									14
15									15
16									16
17									17
18									18
19									19
20									20
21									21
22									22
23									23
24									24
25									25
26									26
27									27
28									28
29									29
30									30

ANALYST
NJF

ROAD CLASSIFICATION	SPEED	LANE DISTANCE
2U	40	12
4U	40	36
4D	45	48
6D	45	84
2D	40	24

73.6	75.55%
13.6	13.96%
10.22	10.49%

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.42%	DAY	75.5%
% MT	1.84%	EVENING	14.0%
% HT	0.74%	NIGHT	10.5%

Source: Riverside, County of, Department of Public Health, Office of Industrial Hygiene. 2009, November. For Determining and Mitigating Tr
 Riverside County Fleet Mix: Secondary, Collectors, or Smaller

Vehicle	Overall %	Day (7 AM to Evening (7 Night (10 PM to 7 AM)		
Auto	97%	73.60	13.60	10.22
Medium Truck	2%	0.90	0.04	0.90
Heavy Truck	1%	0.35	0.04	0.35
		74.85	13.68	11.47

City of Hope SP
 FUTURE+P p2 CONDITIONS NOISE CONTOURS RESULT SUMMARY TABLE

#	ROADWAY	SEGMENT	DAILY TRAFFIC VOLUMES	NOISE LEVEL AT 50 FT. (dBA CNEL)	DISTANCE TO NOISE CONTOUR (FT.)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Duncannon Ave	Evergreen St to Three Ranch Rd	1,525	53.9	4	9	20
2	Highland Ave	Royal Oaks Dr to Huntington Dr	5,457	63.2	18	38	81
3	Highland Ave	Huntington Dr to Central Ave	13,372	67.1	32	69	148
4	Highland Ave	Central Ave to Evergreen St	16,535	68.0	37	79	171
5	Highland Ave	Evergreen St to Business Center Dr	15,555	67.7	35	76	164
6	Highland Ave	Business Center Dr to Duarte Rd	15,290	67.7	35	75	162
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

Scenario: FUTURE+P p2
 Roadway: Duncannon Ave
 Segment: Evergreen St to Three Ranch Rd

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	1,525
SPEED (mph)	25
ROAD NEAR-FAR LN. DIST.	12
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	94	2	1	69	1	1	17	0	0
Speed in MPH	25	25	25	25	25	25	25	25	25
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	59.4	71.1	77.2	59.4	71.1	77.2	59.4	71.1	77.2
ADJUSTMENTS									
Flow	-9.6	-26.8	-30.8	-10.9	-28.1	-32.1	-16.9	-34.1	-38.1
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	49.8	44.2	46.4	48.5	42.9	45.1	42.5	36.9	39.1
VEHICULAR NOISE	DAY=	52.2	Leq	EVENING=	50.9	Leq	NIGHT=	44.9	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 53.3 CNEL= 53.9
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	4 8 18
		CNEL:	4 9 20

Scenario: FUTURE+P p2
 Roadway: Highland Ave
 Segment: Royal Oaks Dr to Huntington Dr

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	5,457
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	335	6	3	247	5	2	62	1	0
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-5.5	-22.7	-26.7	-6.8	-24.1	-28.0	-12.8	-30.1	-34.0
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	60.0	52.4	53.7	58.6	51.1	52.4	52.6	45.1	46.4
VEHICULAR NOISE	DAY=	61.5	Leq	EVENING=	60.1	Leq	NIGHT=	54.1	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 62.6 CNEL= 63.2
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	16 34 74
		CNEL:	18 38 81

Scenario: FUTURE+P p2
 Roadway: Highland Ave
 Segment: Huntington Dr to Central Ave

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	13,372
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	820	15	6	606	11	5	152	3	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-1.6	-18.8	-22.8	-2.9	-20.2	-24.1	-8.9	-26.2	-30.1
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	63.8	56.3	57.6	62.5	55.0	56.3	56.5	49.0	50.3
VEHICULAR NOISE	DAY=	65.4	Leq	EVENING=	64.0	Leq	NIGHT=	58.0	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 66.4 CNEL= 67.1
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	29 62 135
		CNEL:	32 69 148

Scenario: FUTURE+P p2
 Roadway: Highland Ave
 Segment: Central Ave to Evergreen St

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	16,535
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	1014	19	8	750	14	6	188	4	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-0.7	-17.9	-21.9	-2.0	-19.2	-23.2	-8.0	-25.2	-29.2
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	64.8	57.3	58.5	63.5	55.9	57.2	57.4	49.9	51.2
VEHICULAR NOISE	DAY=	66.3	Leq	EVENING=	65.0	Leq	NIGHT=	59.0	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 67.4 CNEL= 68.0
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	33 72 155
		CNEL:	37 79 171

Scenario: FUTURE+P p2
 Roadway: Highland Ave
 Segment: Evergreen St to Business Center Dr

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	15,555
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	954	18	7	705	13	5	177	3	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-1.0	-18.2	-22.1	-2.3	-19.5	-23.5	-8.3	-25.5	-29.5
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	64.5	57.0	58.2	63.2	55.7	56.9	57.2	49.7	50.9
VEHICULAR NOISE	DAY=	66.0	Leq	EVENING=	64.7	Leq	NIGHT=	58.7	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 67.1 CNEL= 67.7
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):			Ldn: 32 69 149 CNEL: 35 76 164

Scenario: FUTURE+P p2
 Roadway: Highland Ave
 Segment: Business Center Dr to Duarte Rd

Project: City of Hope SP
 Analyst: NJF
 Date: 05-Apr-17

ROADWAY INPUTS	
ADT	15,290
SPEED (mph)	35
ROAD NEAR-FAR LN. DIST.	36
DISTANCE ROAD CL (ft)	50
SOFT/HARD CONDITIONS	Soft
GRADE (%)	0%
LEFT VIEW	-90
RIGHT VIEW	90

VEHICLE MIX INPUTS			
DAILY		HOURLY	
% A	97.4%	DAY	75.5%
% MT	1.8%	EVENING	14.0%
% HT	0.7%	NIGHT	10.5%

CALCULATION AREA									
	DAYTIME			EVENING			NIGHT		
	AUTOS	MT	HT	AUTOS	MT	HT	AUTOS	MT	HT
Vehicles per hour	938	18	7	693	13	5	174	3	1
Speed in MPH	35	35	35	35	35	35	35	35	35
Left angle	-90	-90	-90	-90	-90	-90	-90	-90	-90
Right angle	90	90	90	90	90	90	90	90	90
Reference levels (dBA)	65.1	74.8	80.0	65.1	74.8	80.0	65.1	74.8	80.0
ADJUSTMENTS									
Flow	-1.0	-18.3	-22.2	-2.3	-19.6	-23.5	-8.4	-25.6	-29.5
Distance	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Finite Roadway	0	0	0	0	0	0	0	0	0
Barrier	0	0	0	0	0	0	0	0	0
Grade	0	0	0	0	0	0	0	0	0
LEQ	64.4	56.9	58.2	63.1	55.6	56.9	57.1	49.6	50.8
VEHICULAR NOISE	DAY=	65.9	Leq	EVENING=	64.6	Leq	NIGHT=	58.6	Leq

RESULTS			
NOISE LEVELS AT	50	FEET FROM CENTERLINE (dBA):	Ldn= 67.0 CNEL= 67.7
NOISE CONTOUR:			70 dBA 65 dBA 60 dBA
ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET):		Ldn:	32 68 147
		CNEL:	35 75 162

- Traffic Noise Calculations
 - o Project Contributions
 - o Existing Conditions
 - o Existing + Project Conditions
 - o Future Conditions
 - o Future + Project Conditions
 - o Intersection Information

210 WB off ramp & Central

EXISTING

AM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
6	346	0	0	494	4	285	0	66	0	0	6

PM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
11	360	0	0	303	4	302	0	103	2	0	21

210 WB off ramp & Central

Existing							
AM Peak				PM Peak			
N of Int.	E of Int.	S of Int.	W of Int.	N of Int.	E of Int.	S of Int.	W of Int.
16	910	351	1137	38	772	405	997
Daily							
160	9100	3510	11370	380	7720	4050	9970

AM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10.00

PM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10

605 & Huntington

EXISTING

AM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
58	231	251	384	1164	123	873	136	282	54	286	91

PM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
45	781	627	262	400	36	251	188	674	78	286	49

605 & Huntington

Existing							
AM Peak				PM Peak			
N of Int.	E of Int.	S of Int.	W of Int.	N of Int.	E of Int.	S of Int.	W of Int.
748	2238	2212	2668	682	2231	2288	2153
Daily							
7480	22380	22120	26680	6820	22310	22880	21530

AM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10.00

PM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10

605 NB off ramp & Live Oak

EXISTING

AM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
0	321	0	0	1250	0	0	0	615	0	0	507

PM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
0	1146	0	0	964	0	0	0	518	0	0	472

605 NB off ramp & Live Oak

Existing							
AM Peak				PM Peak			
N of Int.	E of Int.	S of Int.	W of Int.	N of Int.	E of Int.	S of Int.	W of Int.
507	2186	615	2078	472	2628	518	2582
Daily							
5070	21860	6150	20780	4720	26280	5180	25820

AM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10.00

PM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10

605 SB off ramp & Arrow

EXISTING

AM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
0	499	0	0	1735	0	0	0	0	380	0	570

PM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
0	1244	0	0	430	0	0	0	0	236	0	241

605 SB off ramp & Arrow

Existing							
AM Peak				PM Peak			
N of Int.	E of Int.	S of Int.	W of Int.	N of Int.	E of Int.	S of Int.	W of Int.
950	2614	0	2804	477	1910	0	1915
Daily							
9500	26140	0	28040	4770	19100	0	19150

AM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10.00

PM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10

605 SB on ramp & Live Oak

EXISTING

AM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
0	288	400	541	1279	0	0	0	0	0	0	0

PM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
0	1073	1054	556	927	0	0	0	0	0	0	0

605 SB on ramp & Live Oak

Existing							
AM Peak				PM Peak			
N of Int.	E of Int.	S of Int.	W of Int.	N of Int.	E of Int.	S of Int.	W of Int.
0	2108	941	1967	0	2556	1610	3054
Daily				1279			
0	21080	9410	19670	0	25560	16100	30540

AM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10.00

PM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10

Avenida Barbosa & Arrow

EXISTING

AM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
236	309	0	0	1711	658	0	0	0	168	0	127

PM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
248	665	0	0	449	224	0	0	0	550	0	337

Avenida Barbosa & Arrow

Existing							
AM Peak				PM Peak			
N of Int.	E of Int.	S of Int.	W of Int.	N of Int.	E of Int.	S of Int.	W of Int.
1189	2846	0	2383	1359	1888	0	1699
Daily							
11890	28460	0	23830	13590	18880	0	16990

AM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10.00

PM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10

--

--

--

Bateman & Buena Vista

EXISTING

AM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
5	7	12	184	8	11	58	266	611	7	108	4

PM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
4	22	77	558	15	11	12	121	341	14	256	1

Bateman & Buena Vista

Existing							
AM Peak				PM Peak			
N of Int.	E of Int.	S of Int.	W of Int.	N of Int.	E of Int.	S of Int.	W of Int.
401	828	1239	94	407	961	1365	131
Daily							
4010	8280	12390	940	4070	9610	13650	1310

AM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10.00

PM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10

Buena Vista & 3 Ranch Road

EXISTING

AM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
3	1	12	13	1	39	9	498	52	6	641	15

PM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
0	4	15	13	1	38	13	891	22	25	399	19

Buena Vista & 3 Ranch Road

Existing							
AM Peak				PM Peak			
N of Int.	E of Int.	S of Int.	W of Int.	N of Int.	E of Int.	S of Int.	W of Int.
1202	112	1225	41	1372	103	1353	52
Daily							
12020	1120	12250	410	13720	1030	13530	520

AM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10.00

PM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10

Buena Vista & 210 EB on ramp

EXISTING

AM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
0	0	0	0	0	0	67	604	0	0	592	223

PM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
0	0	0	0	0	0	260	579	0	0	682	235

Buena Vista & 210 EB on ramp

Existing							
AM Peak				PM Peak			
N of Int.	E of Int.	S of Int.	W of Int.	N of Int.	E of Int.	S of Int.	W of Int.
1419	0	1263	290	1496	0	1521	495
Daily							
14190	0	12630	2900	14960	0	15210	4950

AM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10.00

PM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10

Buena Vista & Central

EXISTING

AM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
0	22	43	370	135	278	38	275	291	40	406	22

PM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
5	88	142	250	121	246	45	327	207	87	524	80

Buena Vista & Central

Existing							
AM Peak				PM Peak			
N of Int.	E of Int.	S of Int.	W of Int.	N of Int.	E of Int.	S of Int.	W of Int.
1021	1136	1423	260	1269	999	1495	481
Daily							
10210	11360	14230	2600	12690	9990	14950	4810

AM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10.00

PM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10

Buena Vista & Duarte

EXISTING

AM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
179	325	31	112	297	116	150	269	110	385	199	103

PM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
202	388	97	118	264	394	76	379	92	119	259	99

Buena Vista & Duarte

Existing							
AM Peak				PM Peak			
N of Int.	E of Int.	S of Int.	W of Int.	N of Int.	E of Int.	S of Int.	W of Int.
1251	1345	871	1085	1452	1375	1021	1126
Daily							
12510	13450	8710	10850	14520	13750	10210	11260

AM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10.00

PM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10

Buena Vista & Evergreen

EXISTING

AM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
294	12	294	0	0	0	0	365	183	216	388	0

PM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
259	372	78	0	0	0	0	586	342	228	435	0

Buena Vista & Evergreen

Existing							
AM Peak				PM Peak			
N of Int.	E of Int.	S of Int.	W of Int.	N of Int.	E of Int.	S of Int.	W of Int.
1263	411	1230	600	1508	942	1441	709
Daily							
12630	4110	12300	6000	15080	9420	14410	7090

--

--

--

AM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10.00

PM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10

Buena Vista & Huntington

EXISTING

AM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
52	252	124	82	1437	106	161	244	109	38	216	78

PM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
104	1072	208	156	499	62	183	262	115	137	229	80

Buena Vista & Huntington

Existing							
AM Peak				PM Peak			
N of Int.	E of Int.	S of Int.	W of Int.	N of Int.	E of Int.	S of Int.	W of Int.
734	2024	936	2104	874	2041	1153	2146
Daily							
7340	20240	9360	21040	8740	20410	11530	21460

--

--

--

AM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10.00

PM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10

Buena Vista & Village

EXISTING

AM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
0	0	0	19	0	11	0	370	266	73	187	0

PM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
0	0	0	166	0	130	0	387	21	8	409	0

Buena Vista & Village

Existing							
AM Peak				PM Peak			
N of Int.	E of Int.	S of Int.	W of Int.	N of Int.	E of Int.	S of Int.	W of Int.
641	369	842	0	934	325	983	0
Daily							
6410	3690	8420	0	9340	3250	9830	0

AM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10.00

PM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10

Cinco Robles & Duarte

EXISTING

AM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
46	747	8	4	470	0	18	0	10	0	0	0

PM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
50	520	11	13	716	0	13	0	4	0	0	0

Circle & Duarte

EXISTING

AM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
1	330	85	205	517	0	5	0	15	0	0	0

PM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
6	532	8	23	273	0	88	0	149	0	0	0

Circle & Duarte

Existing							
AM Peak				PM Peak			
N of Int.	E of Int.	S of Int.	W of Int.	N of Int.	E of Int.	S of Int.	W of Int.
1	1067	310	938	6	977	268	907
Daily							
10	10670	3100	9380	60	9770	2680	9070

AM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10.00

PM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10

Duncannon & Evergreen

EXISTING

AM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
7	15	3	75	4	19	5	15	18	67	22	4

PM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
31	21	1	3	17	30	6	11	1	21	14	34

Duncannon & Evergreen

Existing							
AM Peak				PM Peak			
N of Int.	E of Int.	S of Int.	W of Int.	N of Int.	E of Int.	S of Int.	W of Int.
134	198	138	38	141	93	36	110
Daily							
1340	1980	1380	380	1410	930	360	1100

AM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10.00

PM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10

--

--

--

Highland & Business Center

EXISTING

AM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
13	0	4	12	0	13	6	281	34	40	724	20

PM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
20	1	10	38	0	23	13	667	24	17	237	5

Highland & Business Center

Existing							
AM Peak				PM Peak			
N of Int.	E of Int.	S of Int.	W of Int.	N of Int.	E of Int.	S of Int.	W of Int.
1091	99	1061	43	969	103	989	49
Daily							
10910	990	10610	430	9690	1030	9890	490

AM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10.00

PM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10

Highland & Central

EXISTING

AM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
51	96	70	339	286	64	86	144	124	73	440	104

PM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
67	294	37	69	94	22	48	322	451	157	175	61

Highland & Central

Existing							
AM Peak				PM Peak			
N of Int.	E of Int.	S of Int.	W of Int.	N of Int.	E of Int.	S of Int.	W of Int.
876	982	1203	693	804	1087	1102	601
Daily							
8760	9820	12030	6930	8040	10870	11020	6010

AM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10.00

PM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10

Highland & Evergreen

EXISTING

AM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
38	4	32	1	1	15	7	292	6	86	767	32

PM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
19	0	10	4	3	93	4	709	8	18	247	16

Highland & Evergreen

Existing							
AM Peak				PM Peak			
N of Int.	E of Int.	S of Int.	W of Int.	N of Int.	E of Int.	S of Int.	W of Int.
1230	113	1105	114	1102	126	982	52
Daily							
12300	1130	11050	1140	11020	1260	9820	520

AM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10.00

PM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10

--

--

--

Highland & Huntington

EXISTING

AM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
28	262	58	396	1544	68	80	92	162	57	177	39

PM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
32	1064	143	110	488	38	77	91	211	75	108	51

Highland & Huntington

Existing							
AM Peak				PM Peak			
N of Int.	E of Int.	S of Int.	W of Int.	N of Int.	E of Int.	S of Int.	W of Int.
461	2489	965	2011	395	1986	740	1855
Daily							
4610	24890	9650	20110	3950	19860	7400	18550

AM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10.00

PM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10

Hope & Duarte

EXISTING

AM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
0	398	156	44	480	0	42	0	15	0	0	0

PM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
31	0	515	11	357	0	155	0	20	0	0	0

Hope & Duarte

Existing							
AM Peak				PM Peak			
N of Int.	E of Int.	S of Int.	W of Int.	N of Int.	E of Int.	S of Int.	W of Int.
0	937	257	1076	31	388	701	1058
Daily							
0	9370	2570	10760	310	3880	7010	10580

AM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10.00

PM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10

Live Oak & Arrow

EXISTING

AM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
0	395	0	94	1721	0	1109	0	149	0	0	0

PM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
0	815	2088	262	534	0	783	0	105	0	0	0

Mountain & Central

EXISTING

AM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
0	0	0	230	669	359	180	463	0	0	463	139

PM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
0	0	0	189	222	296	183	471	0	0	731	205

Mountain & Central

Existing							
AM Peak				PM Peak			
N of Int.	E of Int.	S of Int.	W of Int.	N of Int.	E of Int.	S of Int.	W of Int.
1424	1258	1336	988	1703	707	1574	610
Daily							
14240	12580	13360	9880	17030	7070	15740	6100

AM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10.00

PM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10

Mountain & Duarte

EXISTING

AM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
169	213	31	96	364	121	81	242	122	47	132	132

PM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
228	445	75	64	233	108	29	166	87	95	260	243

Mountain & Duarte

Existing							
AM Peak				PM Peak			
N of Int.	E of Int.	S of Int.	W of Int.	N of Int.	E of Int.	S of Int.	W of Int.
843	963	704	990	1100	1032	681	1253
Daily							
8430	9630	7040	9900	11000	10320	6810	12530

AM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10.00

PM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10

Mountain & Evergreen

EXISTING

AM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
268	269	183	0	0	0	0	361	142	294	393	0

PM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
206	1028	138	0	0	0	0	447	178	400	527	0

Mountain & Evergreen

Existing							
AM Peak				PM Peak			
N of Int.	E of Int.	S of Int.	W of Int.	N of Int.	E of Int.	S of Int.	W of Int.
1316	705	1079	720	1580	1606	1290	1372
Daily							
13160	7050	10790	7200	15800	16060	12900	13720

AM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10.00

PM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10

Village & Duarte

EXISTING

AM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
0	557	202	97	429	0	50	0	6	0	0	0

PM PEAK HOUR											
EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
L	T	R	L	T	R	L	T	R	L	T	R
0	462	60	12	496	0	212	0	99	0	0	0

Village & Duarte

Existing							
AM Peak				PM Peak			
N of Int.	E of Int.	S of Int.	W of Int.	N of Int.	E of Int.	S of Int.	W of Int.
0	1089	355	1238	0	1069	383	1230
Daily							
0	10890	3550	12380	0	10690	3830	12300

AM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10.00

PM Peak-to-Day Ratio	
Peak hour total count	
Daily total count	
D/P	10

- Construction Noise Calculations

Noise Levels During Construction

Reference Levels: Construction Noise at 50 Feet (dBA Leq) ¹				
Construction Phase	Distance: Receptor to center of activity	Average Level (dBA Leq) ²	Distance: Receptor to border of site	Maximum Level (dBA Lmax) ³
BBN aggregate noise level	50	88	50	
Construction Noise at Phase 1 nearest receptors				
Construction Phase	Distance: Receptor to center of activity	Average Level (dBA Leq) ²	Distance: Receptor to border of site	Maximum Level (dBA Lmax) ³
BBN aggregate noise level	350	71		
Construction Noise at Phase 2 nearest receptors				
Construction Phase	Distance: Receptor to center of activity	Average Level (dBA Leq) ²	Distance: Receptor to border of site	Maximum Level (dBA Lmax) ³
BBN aggregate noise level	300	72		
Construction Noise at Phase 3 nearest receptors				
Construction Phase	Distance: Receptor to center of activity	Average Level (dBA Leq) ²	Distance: Receptor to border of site	Maximum Level (dBA Lmax) ³
BBN aggregate noise level	400	70		
Construction Noise to Phase 4 nearest receptors				
Construction Phase	Distance: Receptor to center of activity	Average Level (dBA Leq) ²	Distance: Receptor to border of site	Maximum Level (dBA Lmax) ³
BBN aggregate noise level	550	67		

Drop Off
hard=0;
soft=0.5
0

¹ Calculations based on the Roadway Construction Noise Model with the construction information provided by the applicant.

² Average daily noise level including all equipment in use simultaneously considering utilization factors.

³ Maximum instantaneous noise level from the loudest equipment used during the construction phase.

- Construction Vibration Calculations

Construction Generated Vibration

Structural Damage Criteria

$$\text{RMS} = \text{ref} * (25/\text{dist})^{1.5}$$

RMS = maximum vibration level experienced at the receptor (PPV in/sec)

ref = FTA reference vibration level at 25 ft

dist = distance from the boundary of activity to the receptor

Receptor:	Maximum Vibration Levels - Pools	Closest Distance (feet):	15
------------------	---	---------------------------------	-----------

Equipment	Approximate RMS a Velocity at 25 ft, inch/second	Approximate RMS Velocity Level, inch/second
Vibratory Roller	0.210	0.452
Caisson Drill	0.089	0.191
Large bulldozer	0.089	0.191
Small bulldozer	0.003	0.006
Jackhammer	0.035	0.075
Loaded trucks	0.076	0.164
	Criteria	0.200

Receptor:	Maximum Vibration Levels - Houses along Galen St	Closest Distance (feet):	25
------------------	---	---------------------------------	-----------

Equipment	Approximate RMS a Velocity at 25 ft, inch/second	Approximate RMS Velocity Level, inch/second
Vibratory Roller	0.210	0.210
Caisson Drill	0.089	0.089
Large bulldozer	0.089	0.089
Small bulldozer	0.003	0.003
Jackhammer	0.035	0.035
Loaded trucks	0.076	0.076
	Criteria	0.200

Receptor:	Maximum Vibration Levels - Phase 2 houses	Closest Distance (feet):	75
------------------	--	---------------------------------	-----------

Equipment	Approximate RMS a Velocity at 25 ft, inch/second	Approximate RMS Velocity Level, inch/second
Vibratory Roller	0.210	0.040
Caisson Drill	0.089	0.017
Large bulldozer	0.089	0.017
Small bulldozer	0.003	0.001
Jackhammer	0.035	0.007
Loaded trucks	0.076	0.015
	Criteria	0.200

¹. Determined based on use of jackhammers or pneumatic hammers that may be used for pavement demolition at a distance of 25 feet

Notes: RMS velocity calculated from vibration level (VdB) using the reference of one microinch/second.

Source: Based on methodology from the United States Department of Transportation Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*