APPENDIX J

Acoustical Assessment

Kimley»Horn

Acoustical Assessment
Cherry Commerce Center Project
City of Fontana, California

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TABLE OF CONTENTS

TABLES

EXHIBITS

APPENDICES

LIST OF ABBREVIATED TERMS

APN	Assessor's Parcel Number
ADT	Average daily traffic
dBA	A-weighted sound level
CEQA	California Environmental Quality Act
CLSP	California Landings Specific Plan
CSMA	California Subdivision Map Act
CNEL	Community equivalent noise level
L_{dn}	Day-night noise level
dB	Decibel
du/ac	Dwelling units per acre
L_{eq}	Equivalent noise level
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
HVAC	Heating ventilation and air conditioning
Hz	Hertz
HOA	Homeowner's association
in/sec	Inches per second
L_{max}	Maximum noise level
µPa	Micropascals
L_{min}	Minimum noise level
PPV	Peak particle velocity
RMS	Root mean square
VdB	Vibration velocity level

1 INTRODUCTION

This report documents the results of an Acoustical Assessment completed for the Cherry Commerce Center Project (Project). The purpose of this Acoustical Assessment is to evaluate the potential construction and operational noise and vibration levels associated with the Project. This comparative analysis has been undertaken to analyze whether the proposed Project would result in any new or substantially more severe significant environmental impacts as compared to the conclusions discussed in the certified *Final Program Environmental Impact Report* (Final EIR) *for the Southwest Industrial Park* (SWIP) *Specific Plan Update and Annexation* (May 2012).

1.1 Project Location and Setting

The Project site is located in the southwestern portion of the City of Fontana (City), San Bernardino County (County), California; refer to Exhibit 1: Regional Vicinity. The Project site is located at 11171 Cherry Avenue, on approximately 30 acres and is composed of two parcels (APNs: 0236-191-14 and 0236-191-25). The Project site is situated approximately one mile south of the San Bernardino Freeway (I-10) and is bounded by Cherry Avenue to the west, Jurupa Avenue to the south, Redwood Avenue to the east, and a truck driving academy and recycling facility to the north; refer to Exhibit 2: Site Vicinity.

The Project site is improved with two industrial buildings (approximately 20,300 square feet and 16,200 square feet) located on the northern portion of the site, small portable office structures, a yard for machinery storage and maintenance, a small asphalt-paved parking lot on the western portion of the property, and a fabrication yard on the southeastern portion of the property. Overall, most of the site is used for equipment storage. Other site improvements include limited landscaping and utilities. The Project site is presently developed as the Tutor Perini Corporation Equipment Yard.

The northern adjoining property consists of Truck Driver Academy (11081 Cherry Avenue) and Lopez Pallets, Inc. (11080 Redwood Avenue). The eastern adjoining property consists of American Metal Recycling (11150 Redwood Avenue) and TMT Industries (14774 Jurupa Avenue). The southern adjoining property consists of single-family residences (14698-14606 Argentine Court and 14606-14560 Woodland Drive). The western adjoining property consists of Henry J. Kaiser High School (11155 Almond Avenue). The Project site's existing General Plan land use designation is Light Industrial (I-L), and the zoning is Southwest Industrial Park (SWIP).

1.2 Project Description

The Project proposes two logistics (warehouse) buildings totaling approximately 702,000 square feet. Building 1 would total 477,480 square feet, of which 3,500 square feet would be office space. Building 2 would total 224,315 square feet, of which 3,500 square feet would be office space. The Project would also include 365 automobile parking stalls and 109 trailer parking stalls, curb and gutter, security lighting, perimeter wall and gated access; refer to Exhibit 3: Site Plan.

Building Design

The proposed logistics (warehouse) Buildings No. 1 and No. 2 would be designed in such a way that truck parking stalls and loading docks would be located toward the center of the site and away from the residential development located south of Jurupa Avenue and the Henry J. Kaiser High School located west of Cherry Avenue. Most of the truck and vehicle movement within the Project site would occur around the center of the site, with Buildings No. 1 and No. 2 facing each other and shielding the site from public views into most of the parking areas.

Building No. 1 would be 40 feet height and Building No. 2 would be 36 feet high. The dock doors (91 total) would be centered on the east side of Building 1 (62 dock doors) and the west side of Building 2 (29 dock doors). Additionally, the Project proposes perimeter 6-foot block wall with barbed wire and landscaping.

Landscaping

Landscaping would be provided on approximately 25 percent (143,000 square feet) of the Project site. An approximate 30-foot-wide perimeter landscaping setback would surround the Project site on all sides. Landscaping would meet the City's Zoning and Development Code Section 30-551-Building Design which specifies landscape design guidelines for industrial zoning districts.

Hours of Operation

The tenant(s) of the logistics (warehouse) facility has not been identified; therefore, the precise nature of facility operations cannot be determined at this time. Any future occupant would be required to adhere to the pertinent City regulations. For the purposes of this analysis, the hours of operation are assumed to be 7 days a week, 24 hours per day.

Project Phasing and Construction

Construction of the Project is anticipated to begin in July 2024 with a construction duration of approximately 13 months. Construction of the Project would require the following phases: demolition, site preparation, grading/infrastructure improvements, paving, building construction, and architectural coatings. Earthwork would require approximately 10,000 cubic yards of import.

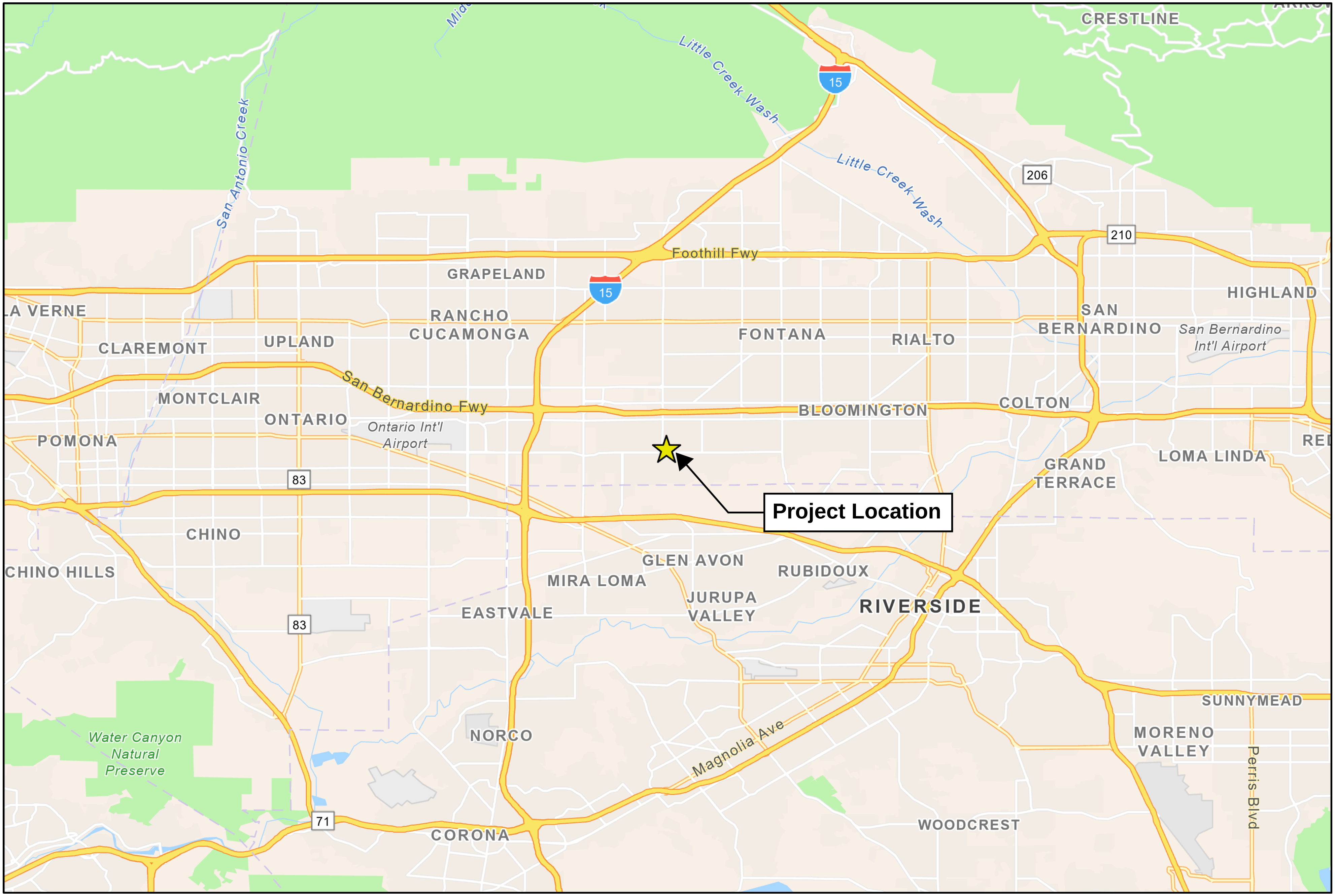

EXHIBIT 1: Regional Vicinity Map
Cherry Avenue Warehouse Project

Not to scale

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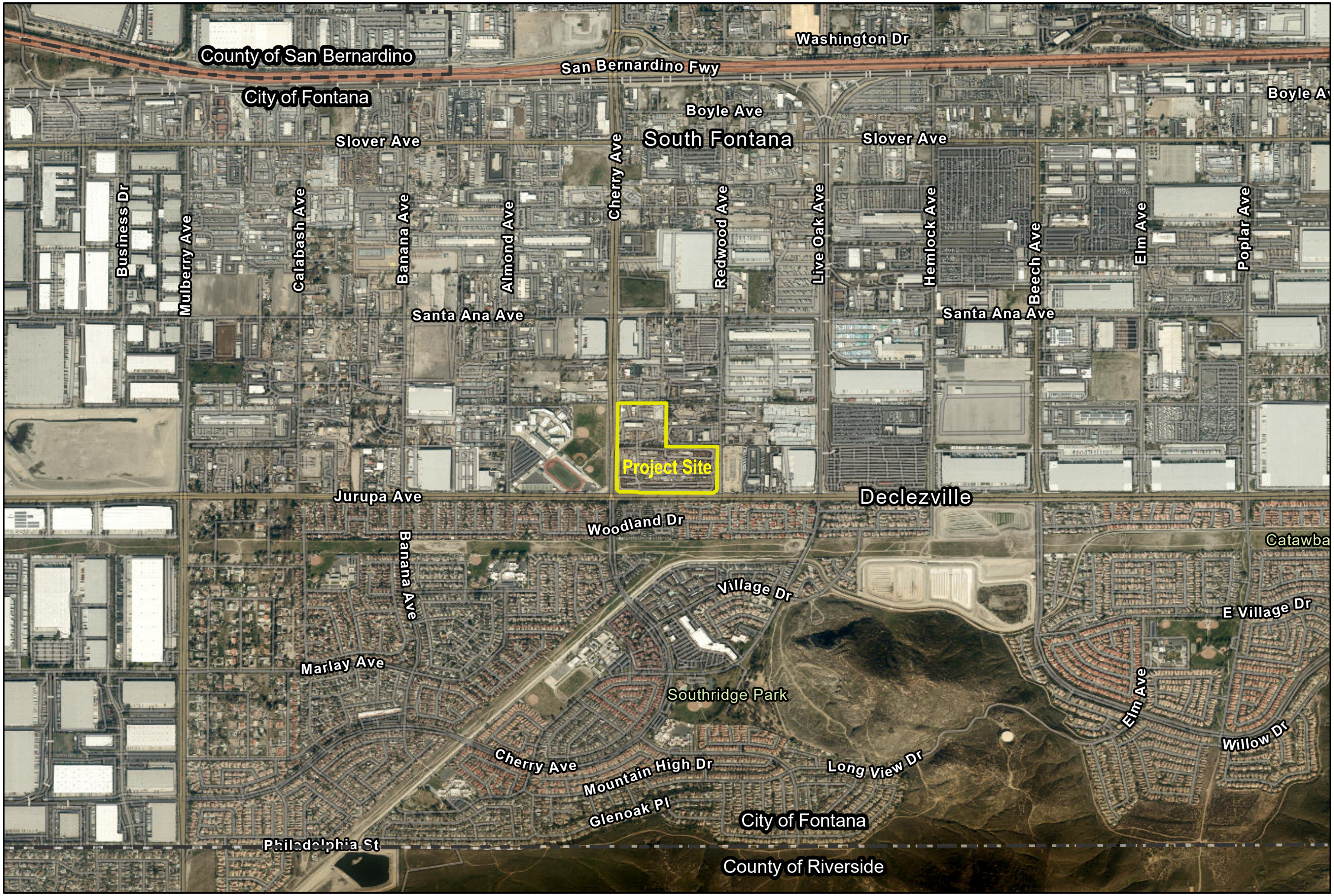
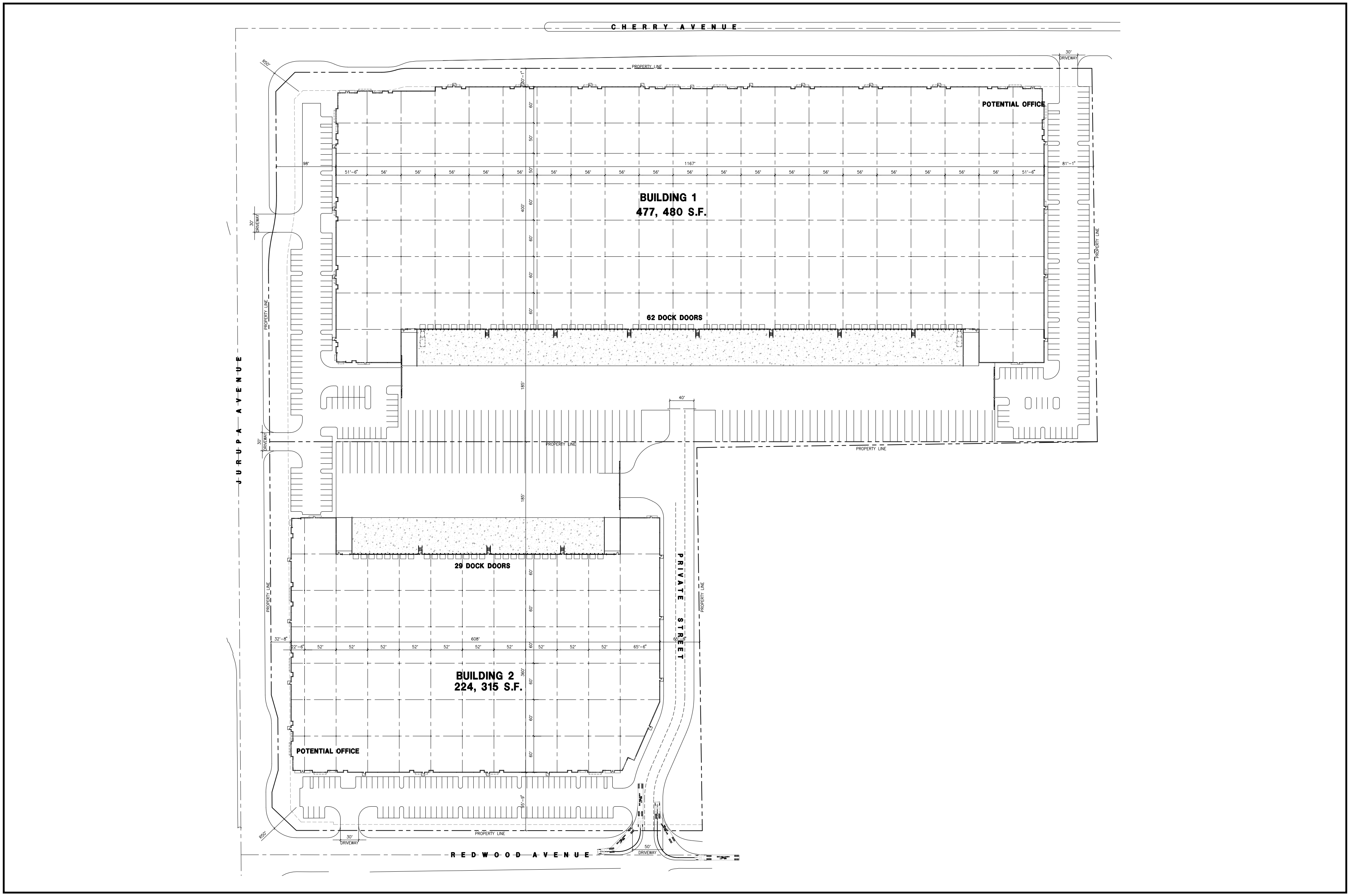


EXHIBIT 2: Site Vicinity Map

Cherry Avenue Warehouse Project

N Not to scale

Kimley»Horn



Source: HPA Architecture, March 22, 2023.

EXHIBIT 3: Site Plan

Cherry Avenue Warehouse Project

Not to scale

Kimley»Horn

2 ACOUSTIC FUNDAMENTALS

2.1 Sound and Environmental Noise

Acoustics is the science of sound. Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a medium (e.g., air) to human (or animal) ear. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound and is expressed as cycles per second, or hertz (Hz).

Noise is defined as loud, unexpected, or annoying sound. The fundamental model consists of a noise source, a receptor, and the propagation path between the two. The loudness of the noise source, obstructions, or atmospheric factors affecting the propagation path, determine the perceived sound level and noise characteristics at the receptor. Acoustics deal primarily with the propagation and control of sound. A typical noise environment consists of ambient noise that is the sum of many distant and indistinguishable noise sources. Superimposed on this ambient noise is the sound from individual local sources. These sources can vary from an occasional aircraft or train passing by to continuous noise from traffic on a major highway. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a large range of numbers. To avoid this, the decibel (dB) scale was devised. The dB scale uses the hearing threshold of 20 micro-pascals (µPa) as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The dB scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels correspond closely to human perception of relative loudness. Table 1: Typical Noise Levels provides typical noise levels.

Table 1: Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	– 110 –	Rock Band
Jet fly-over at 1,000 feet		
	– 100 –	
Gas lawnmower at 3 feet		
	– 90 –	
Diesel truck at 50 feet at 50 miles per hour		Food blender at 3 feet
	– 80 –	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawnmower, 100 feet	**– 70 –**	Vacuum cleaner at 10 feet
Commercial area		Normal Speech at 3 feet
Heavy traffic at 300 feet	**– 60 –**	
		Large business office
Quiet urban daytime	**– 50 –**	
Quiet urban nighttime	**– 40 –**	Theater, large conference room (background)
Quiet suburban nighttime		
	– 30 –	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	– 20 –	
		Broadcast/recording studio
	– 10 –	
Lowest threshold of human hearing	**– 0 –**	Lowest threshold of human hearing

Source: California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013.

Noise Descriptors

The dB scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise, as well as the time of day when the noise occurs. The equivalent noise level (L_{eq}) represents the equivalent continuous sound pressure level over the measurement period, while the day-night noise level (L_{dn}) and Community Equivalent Noise Level (CNEL) are measures of sound energy during a 24-hour period, with dB weighted sound levels from 7:00 p.m. to 7:00 a.m. Most commonly, environmental sounds are described in terms of L_{eq} that has the same acoustical energy as the summation of all the time-varying events. Each is applicable to this analysis and defined in Table 2: Definitions of Acoustical Terms.

Table 2: Definitions of Acoustical Terms

Term	Definitions
Decibel (dB)	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in μPa (or 20 micronewtons per square meter), where 1 pascal is the pressure resulting from a force of 1 newton exerted over an area of 1 square meter. The sound pressure level is expressed in dB as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g. 20 μPa). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level (dBA)	The sound pressure level in dB as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level (L_{eq})	The average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
Maximum Noise Level (L_{max}) Minimum Noise Level (L_{min})	The maximum and minimum dBA during the measurement period.
Exceeded Noise Levels (L_{01}, L_{10}, L_{50}, L_{90})	The dBA values that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Day-Night Noise Level (L_{dn})	A 24-hour average L_{eq} with a 10-dBA weighting added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity at nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.
Community Noise Equivalent Level (CNEL)	A 24-hour average L_{eq} with a 5-dBA weighting during the hours of 7:00 a.m. to 10:00 a.m. and a 10-dBA weighting added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.7 dBA CNEL.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends on its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

The A-weighted decibel (dBA) sound level scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends on the distance between the receptor and the noise source.

A-Weighted Decibels

The perceived loudness of sounds is dependent on many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable and can be approximated by dBA values. There is a strong correlation between dBA and the way the human ear perceives sound. For this reason, the dBA has become the standard tool of environmental noise assessment. All noise levels reported in this document are in terms of dBA, but are expressed as dB, unless otherwise noted.

Addition of Decibels

The dB scale is logarithmic, not linear, and therefore sound levels cannot be added or subtracted through ordinary arithmetic. Two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic dB is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound and twice as loud as a 60-dBA sound.[1] When two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dBA higher than one source under the same conditions.[2] Under the dB scale, three sources of equal loudness together would produce an increase of approximately 5 dBA.

Sound Propagation and Attenuation

Sound spreads (propagates) uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately 6 dB for each doubling of distance from a stationary or point source. Sound from a line source, such as a highway, propagates outward in a cylindrical pattern. Sound levels attenuate at a rate of approximately 3 dB for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics.[3] No excess attenuation is assumed for hard surfaces like a parking lot or a body of water. Soft surfaces, such as soft dirt or grass, can absorb sound, so an excess ground-attenuation value of 1.5 dB per doubling of distance is normally assumed.

Noise levels may also be reduced by intervening structures; generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA.[4] The way older homes in California were constructed generally

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1 FHWA, *Noise Fundamentals,* 2017. Available at: https://www.fhwa.dot.gov/environMent/noise/regulations_and_guidance/polguide/polguide02.cfm
2 Ibid.
3 California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, Page 2-29, September 2013.
4 James P. Cowan, *Handbook of Environmental Acoustics,* 1994.

provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows. The exterior-to-interior reduction of newer residential units is generally 30 dBA or more.

Human Response to Noise

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60 to 70 dBA range, and high above 70 dBA. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet, suburban, residential streets with noise levels around 40 dBA.[5] Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with noisier urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA). Regarding increases in dBA, the following relationships should be noted[6]:

- Except in carefully controlled laboratory experiments, a 1-dBA change cannot be perceived by humans.
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference.
- A minimum 5-dBA change is required before any noticeable change in community response would be expected. A 5-dBA increase is typically considered substantial.
- A 10-dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

Effects of Noise on People

<u>Hearing Loss.</u> While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise. The Occupational Safety and Health Administration has a noise exposure standard that is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over 8 hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

<u>Annoyance.</u> Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that causes

5 Compiled from James P. Cowan, *Handbook of Environmental Acoustics,* 1994 and Cyril M. Harris, Handbook of Noise Control, 1979.

6 Compiled from California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013, and FHWA, *Noise Fundamentals,* 2017.

for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The L_{dn} as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources. A noise level of about 55 dBA L_{dn} is the threshold at which a substantial percentage of people begin to report annoyance.[7]

2.2 Ground-Borne Vibration

Sources of ground-borne vibrations include natural phenomena (earthquakes, volcanic eruptions, sea waves, landslides, etc.) or man-made causes (explosions, machinery, traffic, trains, construction equipment, etc.). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions or heavy equipment use during construction). Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One is vibration decibels (VdB) (the vibration velocity level in decibel scale). Other methods are the peak particle velocity (PPV) and the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. The PPV and RMS vibration velocity amplitudes are used to evaluate human response to vibration.

Table 3: Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibrations**,** displays the reactions of people and the effects on buildings produced by continuous vibration levels. The annoyance levels shown in the table should be interpreted with care since vibration may be found to be annoying at much lower levels than those listed, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. In high noise environments, which are more prevalent where ground-borne vibration approaches perceptible levels, this rattling phenomenon may also be produced by loud airborne environmental noise causing induced vibration in exterior doors and windows.

Ground vibration can be a concern in instances where buildings shake, and substantial rumblings occur. However, it is unusual for vibration from typical urban sources such as buses and heavy trucks to be perceptible. Common sources for ground-borne vibration are planes, trains, and construction activities such as earth-moving which requires the use of heavy-duty earth moving equipment. For the purposes of this analysis, a PPV descriptor with units of inches per second (in/sec) is used to evaluate construction-generated vibration for building damage and human complaints.

[7] Federal Interagency Committee on Noise, *Federal Agency Review of Selected Airport Noise Analysis Issues*, August 1992.

Table 3: Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibrations

Maximum PPV (in/sec)	Vibration Annoyance Potential Criteria	Caltrans Vibration Damage Potential Threshold Criteria	FTA Vibration Damage Criteria
0.008	--	Extremely fragile historic buildings, ruins, ancient monuments	--
0.01	Barely Perceptible	--	--
0.04	Distinctly Perceptible	--	--
0.1	Strongly Perceptible	Fragile buildings	--
0.12	--	--	Buildings extremely susceptible to vibration damage
0.2	--	--	Non-engineered timber and masonry buildings
0.25	--	Historic and some old buildings	--
0.3	--	Older residential structures	Engineered concrete and masonry (no plaster)
0.4	Severe	--	--
0.5	--	New residential structures, Modern industrial/commercial buildings	Reinforced-concrete, steel or timber (no plaster)

PPV = peak particle velocity; in/sec = inches per second; Caltrans = California Department of Transportation; FTA = Federal Transit Administration

Source: California Department of Transportation, *Transportation and Construction Vibration Guidance Manual*, 2020 and Federal Transit administration, *Transit Noise and Vibration Assessment Manual*, 2018.

3 REGULATORY SETTING

To limit population exposure to physically or psychologically damaging as well as intrusive noise levels, the Federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise.

3.1 Federal

Federal Transit Administration Noise and Vibration Guidance

The Federal Transit Administration (FTA) has published the Transit Noise and Vibration Impact Assessment Manual (FTA Transit Noise and Vibration Manual) to provide guidance on procedures for assessing impacts at different stages of transit project development. The report covers both construction and operational noise impacts and describes a range of measures for controlling excessive noise and vibration. The report establishes a threshold of 80 dBA (8-hour L_{eq}) for residential uses and 90 dBA (8-hour L_{eq}) for non-residential uses to evaluate construction noise impacts.[8] In general, the primary concern regarding vibration relates to potential damage from construction. The guidance document establishes criteria for evaluating the potential for damage for various structural categories from vibration.

3.2 State of California

California Government Code

California Government Code Section 65302(f) mandates that the legislative body of each county and city adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines established by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of “normally acceptable”, “conditionally acceptable”, “normally unacceptable”, and “clearly unacceptable” noise levels for various land use types. Single-family homes are “normally acceptable” in exterior noise environments up to 60 CNEL and “conditionally acceptable” up to 70 CNEL. Multiple-family residential uses are “normally acceptable” up to 65 CNEL and “conditionally acceptable” up to 70 CNEL. Schools, libraries, and churches are “normally acceptable” up to 70 CNEL, as are office buildings and business, commercial, and professional uses. Industrial, manufacturing, utilities, and agricultural uses are “normally acceptable” up to 75 CNEL.

Title 24 – Building Code

The State’s noise insulation standards are codified in the California Code of Regulations, Title 24: Part 1, Building Standards Administrative Code, and Part 2, California Building Code. These noise standards are applied to new construction in California for interior noise compatibility from exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential buildings, schools, or hospitals, are located near major transportation noise sources, and where such noise sources create an exterior noise level of 65 dBA CNEL or higher. Acoustical studies that accompany building plans must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels.

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[8] Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, Table 7-2, Page 179, September 2018.

3.3 Local

City of Fontana General Plan

Adopted on November 13, 2018, the Fontana Forward General Plan Update 2015-2035 (Fontana General Plan) identifies noise standards that are used as guidelines to evaluate transportation noise level impacts. These standards are also used to assess the long-term traffic noise impacts on specific land uses. According to the Fontana General Plan, land uses such as residences have acceptable exterior noise levels of up to 65 dBA CNEL. Based on the guidelines in the Fontana General Plan, an exterior noise level of 65 dBA CNEL is generally considered the maximum exterior noise level for sensitive receptors.

Land uses near these significant noise-producers can incorporate buffers and noise control techniques including setbacks, landscaping, building transitions, site design, and building construction techniques to reduce the impact of excessive noise. Selection of the appropriate noise control technique would vary depending on the level of noise that needs to be reduced as well as the location and intended land use. The City has adopted the Noise and Safety Element as a part of the updated Fontana General Plan. The Noise and Safety Element specifies the maximum allowable unmitigated exterior noise levels for new developments impacted by transportation noise sources. Additionally, the Noise and Safety Element identifies transportation noise policies designed to protect, create, and maintain an environment free of harmful noise that could impact the health and welfare of sensitive receptors. The following Fontana General Plan goals, policies, and actions for addressing noise are applicable to the Project:

Goal 8: The City of Fontana protects sensitive land uses from excessive noise by diligent planning through 2035.

Policy 8.2: Noise-tolerant land uses shall be guided into areas irrevocably committed to land uses that are noise-producing, such as transportation corridors.

Policy 8.4: Noise spillover or encroachment from commercial, industrial and educational land uses shall be minimized into adjoining residential neighborhoods or noise-sensitive uses.

Action C: The State of California Office of Planning and Research General Plan Guidelines shall be followed with respect to acoustical study requirements.

Goal 9: The City of Fontana provides a diverse and efficiently operated ground transportation system that generates the minimum feasible noise on its residents through 2035.

Policy 9.1: All noise sections of the State Motor Vehicle Code shall be enforced.

Policy 9.2: Roads shall be maintained such that the paving is in good condition and free of cracks, bumps, and potholes.

Action A: On-road trucking activities shall continue to be regulated in the City to ensure noise impacts are minimized, including the implementation of truck-routes based on traffic studies.

Action B: Development that generates increased traffic and subsequent increases in the ambient noise level adjacent to noise-sensitive land uses shall provide appropriate mitigation measures.

Action D: Explore the use of "quiet pavement" materials for street improvements.

Goal 10: Fontana's residents are protected from the negative effects of "spillover" noise.

Policy 10.1: Residential land uses and areas identified as noise-sensitive shall be protected from excessive noise from non-transportation sources including industrial, commercial, and residential activities and equipment.

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

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

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

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

City of Fontana Municipal Code

Standards established under the City of Fontana Municipal Code (Municipal Code) are used to analyze noise impacts originating from the Project. Operational noise impacts are typically governed by Fontana Municipal Code Sections 18-61 through 18-67. Guidelines for non-transportation and stationary noise source impacts from operations at private properties are found in the Zoning and Development Code in Chapter 30 of the Fontana Municipal Code. Applicable guidelines indicate that no person shall create or cause any sound exceeding the City's stated noise performance standards measured at the property line of any residentially zoned property. Per Fontana Municipal Code Section 30-543(A), the performance standards for exterior noise emanating from industrial uses are 70 dBA between the hours of 7:00 a.m. and 10:00 p.m. and 65 dBA during the noise-sensitive hours of 10:00 p.m. to 7:00 a.m. at residential uses. For this analysis, a 65-dBA nighttime noise level standard is conservatively used to analyze potential noise impacts at off-site residential receptors within the City of Fontana.

The City has also set restrictions to control noise impacts from construction activities. Section 18-63(b)(7) states that the erection (including excavation), demolition, alteration, or repair of any structure shall only occur between the hours of 7:00 a.m. and 6:00 p.m. on weekdays and between the hours of 8:00 a.m. and 5:00 p.m. on Saturdays, except in the case of urgent necessity or otherwise approved by the City of Fontana. Although the Fontana Municipal Code limits the hours of construction, it does not provide specific noise level performance standards for construction.

Southwest Industrial Park (SWIP) Specific Plan

No guiding principles or objectives from the SWIP Specific Plan are applicable to this resource area.

4 EXISTING CONDITIONS

4.1 Existing Noise Levels

The City is impacted by various noise sources. Mobile sources of noise, especially cars, trucks, and trains are the most common and significant sources of noise. Other noise sources are the various land uses (e.g. industrial, commercial, institutional, and residential) throughout the City that generate stationary-source noise. The primary sources of stationary noise in the Project vicinity are those associated with the operations of adjacent truck driving academy to the north, existing traffic associated with residential uses to the south of the Project, warehousing and other light industrial operations located to the east of the Project, and the Henry. J. Kaiser High School to the west of the Project. In addition, Jurupa Avenue and Cherry Avenue are designated truck routes as shown in the City of Fontana General Plan.[9] . Stationary noise sources may include mechanical equipment (use of heating, ventilation, and air conditioning [HVAC] units, etc.) and parking lot activities (cars parking, open and closing doors, etc.). The noise associated with these sources may represent a single-event noise occurrence, short-term, or long-term/continuous noise.

4.2 Noise Measurements

To quantify existing ambient noise levels in the Project area, Kimley-Horn conducted five short-term noise measurements on May 25th, 2023; see Appendix A: Noise Measurement Data. The noise measurement sites (see Exhibit 4: Noise Measurement Locations) were representative of typical existing noise exposure within the Project vicinity. The 10-minute measurements were taken between 11:55 a.m. and 1:40 p.m. near potential sensitive receptors. Short-term L_{eq} measurements are considered representative of the noise levels throughout the day. The noise levels and sources of noise measured at each location are listed in Table 4: Existing Noise Measurements.

Table 4: Existing Noise Measurements

Site	Location	L_{eq} (dBA)	L_{min} (dBA)	L_{max} (dBA)	Start Time
1	Western cul-de-sac on Argentine Court	55.8	44.1	66.3	11:55 a.m.
2	Northwest corner of Jurupa Avenue and Cherry Avenue	71.3	53.3	89.2	12:34 p.m.
3	Almond Avenue, at northwestern corner of Henry J. Kaiser High School	62.4	50.2	78.3	12:45 p.m.
4	End of cul-de-sac on Rose Ct	63.8	60.1	74.4	1:14 p.m.
5	Redwood Avenue at northeastern corner of Project site	59.9	49.8	73.9	1:30 p.m.

Source: Noise measurements taken by Kimley-Horn, May 25th, 2023. See Appendix A for noise measurement results.

4.3 Sensitive Receptors

Sensitive populations are more susceptible to the effects of noise pollution than is the general population. Sensitive receptors that are in proximity to stationary sources of noise and vibration are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Sensitive land uses surrounding the Project consist mostly of single-family residential communities and a high school. Sensitive land uses nearest to the Project are shown in Table 5: Sensitive Receptors.

9 City of Fontana. General Plan Update 2015-2035, Chapter 9 Community Mobility Circulation, Exhibit 9.7

Table 5: Sensitive Receptors

Receptor Description	Distance and Direction from the Project[1]
Single-Family Residences	161 feet to the south
Henry J. Kaiser High School	135 feet to the west
Shadow Hills Elementary School	1,525 feet to the southwest

Source: Google Earth, 2023.
1 Distances measured from the nearest point of the Project property line to the nearest point of the receptor property line.

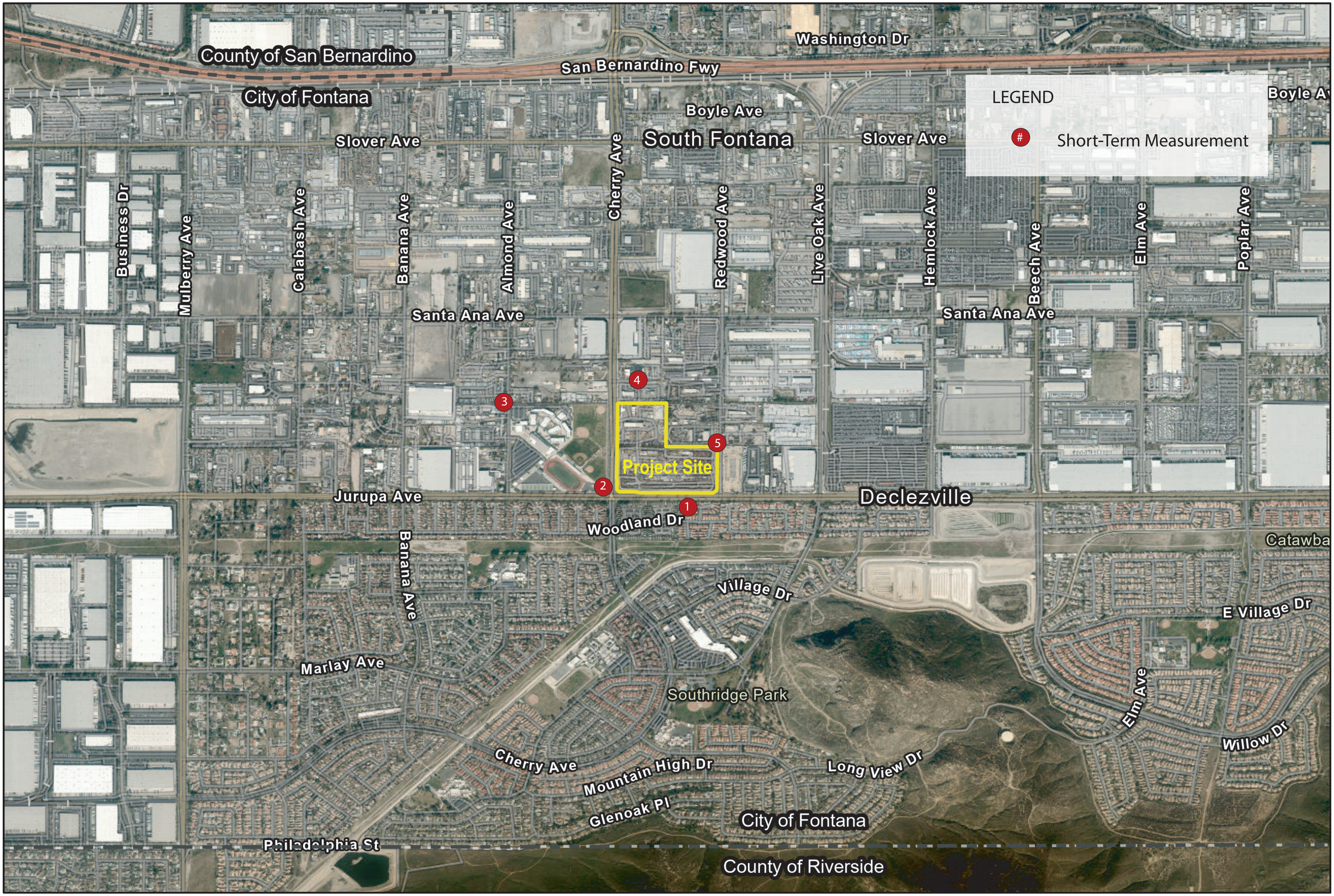


EXHIBIT 4: Noise Measurement Locations
Cherry Avenue Warehouse Project

Not to scale

Kimley»Horn

5 SIGNIFICANCE CRITERIA AND METHODOLOGY

5.1 CEQA Thresholds

Appendix G of the California Environmental Quality Act (CEQA) Guidelines contains analysis guidelines related to noise impacts. These guidelines have been used by the City to develop thresholds of significance for this analysis. A project would create a significant environmental impact if it would:

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

5.2 Methodology

Construction

Construction noise levels were based on typical noise levels generated by construction equipment published by the Federal Transit Administration (FTA) and FHWA. Construction noise is assessed in dBA L_{eq}. This unit is appropriate because L_{eq} can be used to describe noise level from operation of each piece of equipment separately, and levels can be combined to represent the noise level from all equipment operating during a given period.

Reference noise levels are used to estimate operational noise levels at nearby sensitive receptors based on a standard noise attenuation rate of 6 dB per doubling of distance (line-of-sight method of sound attenuation for point sources of noise). Noise level estimates do not account for the presence of intervening structures or topography, which may reduce noise levels at receptor locations. Therefore, the noise levels presented herein represent a conservative, reasonable worst-case estimate of actual temporary construction noise.

Operations

The analysis of the Opening Year and With Project noise environments is based on noise prediction modeling and empirical observations. Reference noise level data are used to estimate the Project operational noise impacts from stationary sources. Noise levels were collected from published sources from similar types of activities and used to estimate noise levels expected with the Project's stationary sources. The reference noise levels are used to represent a worst-case noise environment as noise level from stationary sources can vary throughout the day. Operational noise is evaluated based on the standards within the City's noise standards and General Plan.

Vibration

Ground-borne vibration levels associated with construction activities for the Project were evaluated utilizing typical ground-borne vibration levels associated with construction equipment, obtained from FTA published data for construction equipment. Potential ground-borne vibration impacts related to building/structure damage and interference with sensitive existing operations were evaluated, considering the distance from construction activities to nearby land uses and typically applied criteria for structural damage and human annoyance.

6 POTENTIAL IMPACTS AND MITIGATION

6.1 Acoustical Impacts

Threshold 6.1 Would the Project generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

SWIP EIR Findings

Implementation of the SWIP Specific Plan could cause temporary, localized increases in vibration during construction in excess of established standards. The SWIP EIR concluded that implementation of the SWIP Specific Plan would result in less than significant impacts with implementation of mitigation with regard to construction and stationary operational noise sources. With regard to traffic noise, the SWIP Specific Plan concluded that implementation of the SWIP Specific Plan could permanently increases ambient noise levels in excess of established standards, resulting in a significant and unavoidable impact.

Project Construction

Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., land clearing, grading, excavation, paving). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. During construction, exterior noise levels could affect the residential neighborhoods located to the south and school located to the west of the Project site o. However, construction activities would occur throughout the Project site and would not be concentrated at a single point near sensitive receptors.

Construction activities would include demolition, site preparation, grading, building construction, paving, and architectural coating. Such activities could require concrete/industrial saws, excavators, and dozers during demolition; dozers and tractors during site preparation; excavators, graders, dozers, scrapers, and tractor during grading; cranes, forklifts, generators, tractors, and welders during building construction; pavers, rollers, and paving equipment during paving; and air compressors during architectural coating. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 to 4 minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Typical noise levels associated with individual construction equipment are listed in Table 6: Typical Construction Noise Levels.

Table 6: Typical Construction Noise Levels

Equipment	Typical Noise Level (dBA) at 50 feet from Source
Air Compressor	80
Backhoe	80
Compactor	82
Concrete Mixer	85
Concrete Pump	82
Concrete Vibrator	76
Crane, Derrick	88

Table 6: Typical Construction Noise Levels	
Equipment	**Typical Noise Level (dBA) at 50 feet from Source**
Crane, Mobile	83
Dozer	85
Generator	82
Grader	85
Impact Wrench	85
Jack Hammer	88
Loader	80
Paver	85
Pile-driver (Impact)	101
Pile-driver (Sonic)	95
Pneumatic Tool	85
Pump	77
Roller	85
Saw	76
Scraper	85
Shovel	82
Truck	84

As shown in Table 6, exterior noise levels could affect the nearest existing sensitive receptors in the vicinity. Sensitive uses in the Project site vicinity include existing Henry J. Kaiser High School to the west, single-family residential uses to the south, and Shadow Hills Elementary School to the southwest. These sensitive receptors may be exposed to elevated noise levels during Project construction. Following FTA's methodology for quantitative construction noise assessments, FHWA's Roadway Construction Noise Model (RCNM) was used to predict construction noise. Per the FTA Transit Noise and Vibration Manual which provides guidance for construction noise analyses, when calculating construction noise, all construction equipment is assumed to operate simultaneously at the center of the active construction zone. Under realistic circumstances, equipment would be operating throughout the site during a workday. Multiple pieces of equipment could not realistically be operating at the same time at the same point closest to a specific sensitive receptor. Additionally, there may be instances where multiple types of equipment would not be operated simultaneously. Therefore, assuming the distance between the center of the Project site and a sensitive receptor would account for average noise levels as construction equipment move through the Project site would be reasonable. Therefore, the distance used in the RCNM model was approximately 675 from the center of the Project site to the nearest sensitive receptor (single family residential uses to the south) where every piece of construction equipment assumed for each individual phase is assumed to operate simultaneously; refer to Appendix B for RCNM modeling results.

The noise levels calculated in Table 7: Project Construction Noise Levels, show the exterior construction noise at the nearest sensitive receptor without accounting for attenuation from existing physical barriers. Noise generated during construction activities with the potential to occur simultaneously were added together to provide a composite construction noise level. The City of Fontana does not establish quantitative construction noise standards; therefore, this analysis conservatively uses the FTA's threshold of 80 dBA (8-hour L_{eq}) for residential and school uses to evaluate construction noise impacts.[10] As shown

[10] Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, Table 7-2, Page 179, September 2018.

in Table 7, construction noise levels would not exceed the applicable FTA construction thresholds. The highest exterior noise level at the nearest residential receptors would occur during the overlap of grading/infrastructure and building construction stages and would be 69.2 dBA which is below the FTA's 80 dBA threshold.

It is noted that construction noise would be acoustically dispersed throughout the Project site and not concentrated in one area near surrounding sensitive uses. Further, the City's Municipal Code does not establish quantitative construction noise standards. Instead, the Municipal Code establishes limited hours of construction activities. Municipal Code Section 18-63 states that construction activities may only take place between the hours of 7:00 a.m. and 6:00 p.m. on weekdays and between the hours of 8:00 a.m. and 5:00 p.m. on Saturdays, except in the case of urgent necessity or otherwise approved by the City of Fontana. All motorized equipment used in such activity shall be equipped with functioning mufflers as mandated by the state.

Table 7: Project Construction Noise Levels

Construction Phase	Receptor Location		Worst Case Modeled Exterior Noise Level (dBA L_{eq})	Noise Threshold (dBA L_{eq})	Exceeded?
	Land Use	Distance (feet)[1]			
Demolition	Single Family Residential	675	63.8	80	**No**
	Henry J. Kaiser High School	800	62.4		**No**
	Shadow Hills Elementary School	2,300	53.2		**No**
Site Preparation	Single Family Residential	675	65.0	80	**No**
	Henry J. Kaiser High School	800	63.5		**No**
	Shadow Hills Elementary School	2,300	54.4		**No**
Grading	Single Family Residential	675	65.6	80	**No**
	Henry J. Kaiser High School	800	64.1		**No**
	Shadow Hills Elementary School	2,300	55.0		**No**
Building Construction	Single Family Residential	675	66.7	80	**No**
	Henry J. Kaiser High School	800	65.3		**No**
	Shadow Hills Elementary School	2,300	56.1		**No**
Paving	Single Family Residential	675	63.9	80	**No**
	Henry J. Kaiser High School	800	62.4		**No**
	Shadow Hills Elementary School	2,300	53.3		**No**
Architectural Coating	Single Family Residential	675	51.1	80	**No**
	Henry J. Kaiser High School	800	49.6		**No**
	Shadow Hills Elementary School	2,300	40.5		**No**
Demolition + Site Preparation	Single Family Residential	675	67.5	80	**No**
	Henry J. Kaiser High School	800	66.0		**No**
	Shadow Hills Elementary School	2,300	56.8		**No**
Grading/Infrastructure + Building Construction	Single Family Residential	675	69.2	80	**No**
	Henry J. Kaiser High School	800	67.8		**No**
	Shadow Hills Elementary School	2,300	58.6		**No**
Building Construction + Architectural coating	Single Family Residential	675	66.9	80	**No**
	Henry J. Kaiser High School	800	65.4		**No**
	Shadow Hills Elementary School	2,300	56.2		**No**
Building Construction + Paving	Single Family Residential	675	68.6	80	**No**
	Henry J. Kaiser High School	800	67.1		**No**
	Shadow Hills Elementary School	2,300	57.9		**No**

Note:
1. Distance measured from the center of the project site to the receptor's nearest property line.

Source: Federal Highway Administration, *Roadway Construction Noise Model,* 2006. Refer to Appendix B for noise modeling results.

Construction activities may also cause increased noise along site access routes due to movement of equipment and workers. Compliance with the Municipal Code would minimize impacts from construction noise, as construction would be limited to daytime hours on weekdays and Saturdays.

As discussed above, construction noise levels from the Project would not exceed the FTA's construction noise thresholds and would be required to comply with the Municipal Code standards. Therefore, there is a less than significant noise impact for construction activities. Note, however, that SWIP EIR MMs 4.7-1a and -1b, which serve to minimize construction noise impacts, would apply. SWIP EIR MMs 4.7-1c and -1d are not applicable.

The Project is consistent with the impact findings disclosed in the SWIP EIR. No new impacts or a substantial increase in the severity of a previously identified significant impact evaluated in the SWIP EIR would occur. Additionally, no new information of substantial importance that was not known and could not have been known at the time the SWIP EIR was certified is available that would impact the prior finding of significant and unavoidable under this issue area.

Project Operations

Implementation of the proposed Project would create new sources of noise in the project vicinity. The major noise sources associated with the project including the followings:

- Mechanical equipment (i.e., air conditioners, etc.);
- Slow moving trucks on the Project site, approaching and leaving the loading areas;
- Activities at the loading areas (i.e., maneuvering and idling trucks, equipment noise);
- Back-up safety alarms;
- Parking areas (i.e., car door slamming, car radios, engine start-up, and car pass-by); and
- Off-Site Traffic Noise.

Mechanical Equipment. Potential stationary noise sources related to long-term operation of the project site would include mechanical equipment. Mechanical equipment (e.g., heating ventilation and air conditioning [HVAC] equipment) typically generates noise levels of approximately 52 dBA at 50 feet.[11] At the closest sensitive receptors (Henry J. Kaiser High School) located approximately 160 feet west of the nearest rooftop edge, mechanical equipment noise would attenuate to 41.9 dBA, which is below the City's 70 dBA and 65 dBA daytime and nighttime standards, respectively. Operation of mechanical equipment would not increase ambient noise levels beyond the acceptable compatible land use noise levels. Therefore, the proposed Project would result in a less than significant impact related to stationary noise levels.

Truck and Loading Dock Noise. During loading and unloading activities, noise would be generated by the trucks' diesel engines, exhaust systems, and brakes during low gear shifting braking activities; backing up toward the docks; dropping down the dock ramps; and maneuvering away from the docks. Loading or unloading activities would occur in the center of the Project site. Typically, heavy truck operations

11 Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, July 6, 2010.

generate a noise level of 64.4 dBA at a distance of 50 feet.[12] Proposed loading areas are located approximately 280 feet from the residential uses to the south. This closest receptor would experience truck noise levels of approximately 49.4 dBA, which is below the City's acceptable limits of 70 dBA during daytime hours and 65 dBA during nighttime hours for residential noise. Additionally, these noise levels would also be further attenuated by the intervening structures. Loading dock doors would also be surrounded with protective aprons, gaskets, or similar improvements that, when a trailer is docked, would serve as a noise barrier between the interior logistics (warehouse) activities and the exterior loading area. This would attenuate noise emanating from interior activities, and as such, interior loading and associated activities would be permissible during all hours of the day. Noise levels associated with trucks and loading or unloading activities would not exceed the City's standards and impacts would be less than significant.

Back-Up Safety Alarms**.** Medium and heavy-duty trucks reversing into loading docks would produce noise from back-up safety alarms (also known as back-up beepers). Back-up safety beepers produce a typical volume of 97 dBA at one meter from the source.[13] The residential uses to the south would be located approximately 280 feet west of the project driveway where trucks could be reversing and maneuvering into the loading area. At this distance, exterior noise levels from back-up safety beepers would be approximately 58.4 dBA, which is below the City's acceptable limits of 70 dBA and 65 dBA for residential noise during daytime and nighttime hours, respectively.

Parking Noise. Parking stalls would surround the proposed logistics (warehouse) buildings to the north, east and south. According to the Traffic Impact Study, the Project would generate up to 89 trips during the peak hour. For the purpose of providing a conservative, quantitative estimate of the noise levels that would be generated from the vehicles entering and exiting the parking lot, the methodology recommended by FTA for the general assessment of stationary transit noise sources is used. Using the methodology, the Project's peak hourly noise level that would be generated by the on-site parking levels was estimated using the following FTA equation for a parking lot:

$$L_{eq(h)} = SEL_{ref} + 10 \log (NA/1,000) - 35.6$$

Where:

$L_{eq(h)}$ = hourly L_{eq} noise level at 50 feet

SEL_{ref} = reference noise level for stationary noise source represented in sound exposure level (SEL) at 50 feet

NA = number of automobiles per hour

35.6 is a constant in the formula, calculated as 10 times the logarithm of the number of seconds in an hour

Using the FTA's reference noise level of 92 dBA SEL[14] at 50 feet from the noise source, the Project's highest peak hour vehicle trips would generate noise levels of approximately 45.9 dBA L_{eq} at 50 feet from the parking lot. The nearest sensitive receptor (Henry J. Kaiser High School) is located approximately 140 feet from a parking area. Conservatively assuming that all vehicles would park at a location nearest to sensitive

12 Loading dock reference noise level measurements conducted by Kimley-Horn on December 18, 2018 at the La Palma Neighborhood Walmart, approximately 50 feet from the Walmart loading dock area. Loading dock activities included trucks arriving at the docks, backing up, and loading/unloading using palette jacks.

13 Environmental Health Perspectives, *Vehicle Motion Alarms: Necessity, Noise Pollution, or Both?* https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3018517/, accessed June 2023.

14 Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.

receptors rather than dispersed throughout all available parking and based strictly on distance attenuation, parking lot noise at the nearest receptor would be 37.0 dBA, which is below the City's 70 dBA and 65 dBA daytime and nighttime thresholds. Noise associated with parking lot activities is not anticipated to exceed the City's noise standards during operation. Therefore, noise impacts from parking lots would be less than significant.

Off-Site Traffic Noise. Implementation of the Project would generate increased traffic volumes along nearby roadway segments. According to the Trip Impact Assessment prepared by Translutions, inc. (April 24, 2023), the proposed Project would generate 964 additional daily trips compared to existing site conditions that would result in noise increases of between 0.6 to 2.9 dBA on Project area roadways. In general, a traffic noise increase of less than 3 dBA is barely perceptible to people, while a 5-dBA increase is readily noticeable.[15] Generally, traffic volumes on Project area roadways would have to approximately double for the resulting traffic noise levels to increase by 3 dBA. Therefore, permanent increases in ambient noise levels of less than 3 dBA are considered to be less than significant.

Traffic noise levels for roadways primarily affected by the Project were calculated using the FHWA's Highway Noise Prediction Model (FHWA-RD-77-108). Traffic noise modeling was conducted for conditions with and without the Project, based on traffic volumes obtained from the Traffic Study. The calculated traffic noise levels for the "Opening Year Without Project" and "Opening Year With Project" scenarios are compared in Table 8: Opening Year Traffic Noise Levels. As depicted in Table 8, under the "Opening Year Without Project" scenario, noise levels would range from approximately 51.5 dBA to 65.2 dBA, with the highest noise levels occurring along Jurupa Avenue between Cherry Avenue and Redwood Avenue. The "Opening Year With Project" scenario noise levels would range from approximately 54.4 dBA to 66.5 dBA, with the highest noise levels also occurring along Jurupa Avenue between Cherry Avenue and Redwood Avenue. As depicted in Table 8, the "Opening Year With Project" scenario traffic noise levels would not exceed the 3.0 dBA increase significance threshold along any of the surrounding roadways. As a result, the Project would not result in a perceptible increase in traffic noise levels and impacts would be less than significant.

Table 8: Opening Year Traffic Noise Levels

Roadway Segment	Opening Year Without Project		Opening Year With Project		Change	Significant Impact?
	ADT[1]	dBA CNEL[2]	ADT	dBA CNEL[2]		
Cherry Avenue						
North of Jurupa Ave	14,160	64.9	14,970	65.8	0.9	**No**
Jurupa Avenue						
Between Cherry Avenue and Redwood Avenue	15,535	65.2	17,920	66.5	1.3	**No**
East of Redwood Avenue	15,025	65.1	15,175	65.7	0.6	**No**
Redwood Avenue						
North of Jurupa Avenue	690	51.5	1,160	54.4	2.9	**No**

ADT = average daily trips; dBA = A-weighted decibels; CNEL= Community Equivalent Noise Level
1. Based on traffic data within the Traffic Impact Assessment for the 11171 Cherry Avenue Warehouse Project, prepared by Translutions, Inc. (April 2023)
2. Traffic noise levels are at 100 feet from the roadway centerline.

Source: Based on traffic data provided by Kimley-Horn and Associates, Inc., 2022. Refer to Appendix B for traffic noise modeling results.

15 Federal Highway Administration, *Highway Traffic Noise Analysis and Abatement Policy and Guidance, Noise Fundamentals*, https://www.fhwa.dot.gov/environMent/noise/regulations_and_guidance/polguide/polguide02.cfm, accessed June 2023.

The Project is consistent with the impact findings disclosed in the SWIP EIR. No new impacts or a substantial increase in the severity of a previously identified significant impact evaluated in the SWIP EIR would occur. Additionally, no new information of substantial importance that was not known and could not have been known at the time the SWIP EIR was certified is available that would impact the prior finding of significant and unavoidable under this issue area.

Applicable Mitigation Measures from the SWIP Specific Plan Environmental Impact Report

4.7-1a The following measures shall be implemented when construction is to be conducted within 500 feet of any sensitive structures or has the potential to disrupt classroom activities or religious functions.

- The City shall restrict noise intensive construction activities to the days and hours specified under Section 18-63 of the City of Fontana Municipal Code. These days and hours shall also apply any servicing of equipment and to the delivery of materials to or from the site. [GPEIR MM N-1]

- All construction equipment shall be equipped with mufflers and sound control devices (e.g., intake silencers and noise shrouds) no less effective than those provided on the original equipment and no equipment shall have an unmuffled exhaust [GPEIR MM N-1]

- The City shall require that the contractor maintain and tune-up all construction equipment to minimize noise emissions. [GPEIR MM N-1]

- Stationary equipment shall be placed so as to maintain the greatest possible distance to the sensitive use structures. [GPEIR MM N-1]

- All equipment servicing shall be performed so as to maintain the greatest possible distance to the sensitive use structures. [GPEIR MM N-1]

- If construction noise does provide to be detrimental to the learning environment, the City shall allow for a temporary waiver thereby allowing construction on Weekends and/or holidays in those areas where this construction is to be performed in excess of 500 feet from any residential structures. [GPEIR MM N-1]

- The construction contractor shall provide an on-site name and telephone number of a contact person. Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted at all construction entrances to allow for surrounding owners and residents to contact the job superintendent. If the City or the job superintendent receives a complaint, the superintendent shall investigate, take appropriate corrective action, and report the action taken to the reporting party. In the event that construction noise is intrusive to an educational process, the construction liaison will revise the construction schedule to preserve the learning environment.

4.7-1b Should potential future development facilitated by the proposed project require off-site import/export of fill material during construction, trucks shall utilize a route that is least disruptive to sensitive receptors, preferably major roadways (Interstate 10, Interstate 15, State Route 60, Sierra Avenue, Beech Avenue, Jurupa Avenue, and Solver Avenue). Construction trucks should, to the extent practical, avoid the weekday and Saturday a.m. and p.m. peak hours (7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.).

4.7-2a No new industrial facilities shall be construction within 160 feet of any existing sensitive land use property line without the preparation of a dedicated noise analysis. This analysis shall document the nature of the industrial facility as well as "noise producing" operations associated with that facility. Furthermore, the analysis shall document the placement of any existing or proposed noise-sensitive land uses situated within the 160-foot distance. The analysis shall determine the potential noise levels that could be received at these sensitive land uses and specify very specific measures to be employed by the industrial facility to ensure that these levels do not exceed those City noise requirements of 65 dBA CNEL. Such measures could include, but are not limited to, the use of enclosures for noisy pieces of equipment, the use of noise walls and/or berms for exterior equipment and/or on-site truck operations, and/or restrictions on hours of operations. No development permits or approval of land use applications shall be issued until the noted acoustic analysis is received and approved by the City Staff. [GPEIR MM N-10]

4.7-3b Prior to issuance of a grading permit, a developer shall contract for a site-specific noise study for the parcel. The noise study shall be performed by an acoustic consultant experienced in such studies and the consultant's qualifications and methodology to be used in the study must be presented to City staff for consideration. The site-specific acoustic study shall specifically identify potential noise impacts upon any proposed sensitive uses (addressing General Plan buildout conditions), as well as potential project impacts upon off-site sensitive uses due to construction, stationary and mobile noise sources. Mitigation for mobile noise impacts, where identified as significant, shall consider facility siting and truck routes such that project-related truck traffic utilizes existing established truck routes. Mitigation shall be required if noise levels exceed 65 dBA, as identified in Section 30-182 of the City's Municipal Code. [GPEIR MM N-5]

Project Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold 6.2 Would the Project generate excessive ground-borne vibration or ground-borne noise levels?

SWIP EIR Findings

Implementation of the SWIP Specific Plan could cause temporary, localized increases in vibration during construction in excess of established standards. The SWIP EIR concluded that implementation of the SWIP Specific Plan would result in less than significant impacts with implementation of mitigation.

Project Construction and Operations

Increases in ground-borne vibration levels attributable to the proposed Project would be primarily associated with short-term construction-related activities. Construction on the Project site would have the potential to result in varying degrees of temporary ground-borne vibration, depending on the specific construction equipment used and the operations involved.

The Federal Transit Administration (FTA) has published standard vibration velocities for construction equipment operations in their 2018 *Transit Noise and Vibration Impact Assessment Manual*. The types of construction vibration impacts include human annoyance and building damage. In general, the FTA architectural damage criterion for continuous vibrations (i.e., 0.2 in/sec) appears to be conservative. The types of construction vibration impacts include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time (80 VdB annoyance threshold). Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience any cosmetic damage (e.g., plaster cracks) at distances beyond 30 feet. This distance can vary substantially depending on the soil composition and underground geological layer between vibration source and receiver. In addition, not all buildings respond similarly to vibration generated by construction equipment. For example, for a building that is constructed with reinforced concrete with no plaster, the FTA guidelines show that a vibration level of up to 0.20 in/sec is considered safe and would not result in any construction vibration damage.

Table 9: Typical Construction Equipment Vibration Levels, lists vibration levels at 25 feet and 80 feet (the distance from Project construction activity to the nearest structure located to the north) for typical construction equipment. Ground-borne vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. As indicated in Table 9, based on FTA data, vibration velocities from typical heavy construction equipment operations that would be used during Project construction range from 0.001 to 0.037 in/sec PPV at 80 feet from the source of activity (the distance from active construction zone to the nearest structure) which is below the FTA's 0.20 PPV threshold.

Table 9: Typical Construction Equipment Vibration Levels				
Equipment	**Peak Particle Velocity at 25 Feet (in/sec)**	**Peak Particle Velocity at 80 Feet (in/sec)[1]**	**Approximate VdB at 25 Feet**	**Approximate VdB at 80 Feet[2]**
Vibratory Roller/Compactor	0.210	0.037	87	79
Large Bulldozer	0.089	0.016	87	72
Loaded Trucks	0.076	0.013	86	71
Jackhammer	0.035	0.006	79	64
Small Bulldozer/Tractors	0.003	0.001	58	43

1. Calculated using the following formula: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$, where: PPV_{equip} = the peak particle velocity in in/sec of the equipment adjusted for the distance; PPV_{ref} = the reference vibration level in in/sec from Table 7-4 of the Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, 2018; D = the distance from the equipment to the receiver.
2. Calculated using the following formula: Lv(D) = Lv(25 feet) - (30 x log10(D/25 feet)) per the FTA Transit Noise and Vibration Impact Assessment Manual (2018).

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

In addition, construction VdB levels would be 79 VdB at 80 feet and would not exceed the FTA's 80 VdB annoyance threshold; see Table 9. It is also acknowledged that construction activities would occur throughout the Project site and would not be concentrated at the point closest to the nearest structure(s). Therefore, vibration impacts associated with the Project construction would be less than significant.

Once operational, the Project would not be a significant source of ground-borne vibration. Ground-borne vibration surrounding the Project currently result from heavy-duty vehicular travel (e.g., refuse trucks, heavy duty trucks, delivery trucks, and transit buses) on the nearby local roadways. Operations of the proposed Project would include truck deliveries. Due to the rapid drop-off rate of ground-borne vibration and the short duration of the associated events, vehicular traffic-induced ground-borne vibration is rarely perceptible beyond the roadway right-of-way, and rarely results in vibration levels that cause damage to buildings in the vicinity. According to the FTA's Transit Noise and Vibration Impact Assessment, trucks rarely create vibration levels that exceed 70 VdB (equivalent to 0.012 inches per second PPV) when they are on roadways. Therefore, trucks operating at the Project site or along surrounding roadways would not exceed FTA thresholds for building damage or annoyance. Impacts would be less than significant in this regard. Note, however, that SWIP EIR MMs 4.7-1a and -1b, which serve to minimize construction vibration impacts, would apply.

The Project is consistent with the impact findings disclosed in the SWIP EIR. No new impacts or a substantial increase in the severity of a previously identified significant impact evaluated in the SWIP EIR would occur. Additionally, no new information of substantial importance that was not known and could not have been known at the time the SWIP EIR was certified is available that would impact the prior finding of less than significant impact under this issue area.

Applicable Mitigation Measures from the SWIP Specific Plan Environmental Impact Report

See SWIP EIR Mitigation Measures 4.7-1a and 4.7-1b.

Project Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold 6.3 For a Project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?

SWIP EIR Findings

The SWIP Specific Plan area is located within the 60 Ldn contour of Ontario International Airport. The SWIP EIR concluded that implementation of the Specific Plan would not expose people residing or working in the Specific Plan area to excessive aircraft noise levels. A less than significant impact would occur.

Project Impact

The nearest airport to the Project site is the Ontario International Airport located approximately 7.7 miles to the southwest. The Project is not within 2.0 miles of a public airport or within an airport land use plan. Additionally, there are no private airstrips located within the Project vicinity. Therefore, the Project would not expose people residing or working in the Project area to excessive airport- or airstrip-related noise levels and no mitigation is required.

Applicable Mitigation Measures from the SWIP Specific Plan Environmental Impact Report

None.

Project Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

6.2 Cumulative Noise Impacts

Cumulative Construction Noise

The Project's construction activities would not result in a substantial temporary increase in ambient noise levels. Construction noise would be periodic and temporary noise impacts that would cease upon completion of construction activities. The Project would contribute to other proximate construction project noise impacts if construction activities were conducted concurrently. However, based on the noise analysis above, the Project's construction-related noise impacts would be less than significant following the City of Fontana Municipal Code.

Construction activities at other planned and approved projects near the Project site would be required to comply with applicable City rules related to noise and would take place during daytime hours on the days permitted by the applicable Municipal Code, and projects requiring discretionary City approvals would be required to evaluate construction noise impacts, comply with the City's standard conditions of approval, and implement mitigation, if necessary, to minimize noise impacts. Construction noise impacts are by nature localized. Based on the fact that noise dissipates as it travels away from its source, noise impacts would be limited to the Project site and vicinity. Therefore, Project construction would not result in a cumulatively considerable contribution to significant cumulative impacts, assuming such a cumulative impact existed, and impacts in this regard are not cumulatively considerable.

Cumulative Operational Noise

Cumulative Off-Site Traffic Noise. Cumulative noise impacts describe how much noise levels are projected to increase over existing conditions with the development of the Project and other foreseeable projects. Cumulative noise impacts generally occur as a result of increased traffic on local roadways due to buildout of the Project and other projects in the vicinity. A project's contribution to a cumulative traffic noise increase would be considered significant when the combined effect exceeds the perception level (i.e., auditory level increase) threshold. The following criteria is used to evaluate the combined and incremental effects of the cumulative noise increase.

- *Combined Effect.* The cumulative with Project noise level would cause a significant cumulative impact if a 3.0 dB increase over Existing conditions occurs and the resulting noise level exceeds the applicable exterior standard at a sensitive use. Although there may be a significant noise increase due to a project in combination with other related projects (combined effects), it must also be demonstrated that the project has an incremental effect. In other words, a significant portion of the noise increase must be due to the project.

- *Incremental Effects.* The cumulative plus project noise level causes a 1.0 dBA increase in noise over cumulative noise levels without a project.

A significant impact would result only if the combined and incremental effects criteria have been exceeded and traffic noise increases would result in unacceptable noise levels pursuant to the City's acceptable exterior noise criteria. Noise by definition is a localized phenomenon and reduces as distance from the source increases. Consequently, only the Project and growth due to occur in the general area would contribute to cumulative noise impacts. Table 10: Cumulative Plus Project Buildout Conditions Traffic Noise Levels identifies the traffic noise effects along roadway segments in the vicinity of the Project site for "Existing," "Cumulative Without Project," and "Cumulative With Project," conditions, and net cumulative impacts.

First, it must be determined whether the "Cumulative With Project" 3.0 dB increase above existing conditions (*Combined Effects*) is exceeded. Next, under the *Incremental Effects* criteria, cumulative noise impacts are defined by determining if the forecast ambient ("Cumulative Without Project") noise level is increased by 1.0 dB or more. Although the Incremental Effects criteria (1.0 dB) is exceeded along Jurupa Avenue between Cherry Avenue and Redwood Avenue, the Combined Effects criterion (3.0 dB) is not exceeded along this roadway; refer to Table 10. The Incremental Effects criteria and Combined Effects criteria is projected to be exceeded along Redwood Avenue north of Jurupa Avenue. However, the Cumulative With Project traffic noise level would not result in unacceptable noise levels pursuant to the City's acceptable exterior noise level of 65 dBA for sensitive uses. Therefore, although the Project would exceed both the combined and incremental effects criteria along one roadway, noise levels would remain within acceptable levels. Thus, the Project, in combination with cumulative background traffic noise levels, would not result in a significant cumulative impact and impacts would not be cumulatively considerable.

Table 10: Cumulative Plus Project Buildout Conditions Traffic Noise Levels

Roadway Segment	CNEL @ 100 feet from Centerline			Combined Effects	Incremental Effects	Cumulatively Significant Impact?
	Existing	Cumulative Without Project	Cumulative With Project	dBA Difference: Existing and Cumulative With Project	dBA Difference: Cumulative Without and With Project	
Cherry Avenue						
North of Jurupa Avenue	64.8	65.5	66.3	1.5	0.7	No
Jurupa Avenue						
Between Cherry Avenue and Redwood Avenue	65.4	66.0	67.1	1.7	1.2	No
East of Redwood Avenue	64.9	65.9	66.5	1.6	0.7	
Redwood Avenue						
North of Jurupa Avenue	51.0	51.8	54.4	3.4	2.6	No[1]

ADT = average daily trips; dBA = A-weighted decibels; CNEL = day-night noise level
1. Traffic noise levels are at 100 feet from the roadway centerline.

1. Although cumulative and incremental increases in traffic noise would exceed impact criteria, the Cumulative With Project traffic noise level would not result in unacceptable noise levels pursuant to the City's acceptable exterior noise level of 65 dBA for sensitive uses.

Source: Based on traffic data within the Traffic Impact Assessment for the 11171 Cherry Avenue Warehouse Project, prepared by Translutions, Inc. (April 2023). Refer to **Appendix B** for traffic noise modeling assumptions and results.

Cumulative Stationary Noise. Stationary noise sources of the proposed Project would result in an incremental increase in non-transportation noise sources in the Project vicinity. However, as discussed above, operational noise caused by the proposed Project would be less than significant. Similar to the proposed Project, other planned and approved projects would be required to mitigate for stationary noise impacts at nearby sensitive receptors, if necessary. As stationary noise sources are generally localized, there is a limited potential for other projects to contribute to cumulative noise impacts.

No known past, present, or reasonably foreseeable projects would combine with the operational noise levels generated by the Project to increase noise levels above acceptable standards because each project must comply with applicable City regulations that limit operational noise. Therefore, the Project, together with other projects, would not create a significant cumulative impact, and even if there was such a significant cumulative impact, the Project would not make a cumulatively considerable contribution to significant cumulative operational noises.

Given that noise dissipates as it travels away from its source, operational noise impacts from on-site activities and other stationary sources would be limited to the Project site and vicinity. Thus, cumulative operational noise impacts from related projects, in conjunction with Project specific noise impacts, would not be cumulatively significant.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than Significant.

7 REFERENCES

1. California Department of Transportation, *California Vehicle Noise Emission Levels*, 1987.
2. California Department of Transportation, *Traffic Noise Analysis Protocol*, 2011.
3. California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, 2013.
4. California Department of Transportation, *Transportation Related Earthborne Vibrations*, 2002.
5. California Department of Transportation, *Transportation and Construction Vibration Guidance Manual*, 2013.
6. California Department of Transportation, *Transportation and Construction Vibration Guidance Manual,* 2020
7. City of Fontana, *General Plan*, 2018.
8. City of Fontana, *Municipal Code*, 2018.
9. City of Fontana. 2011. SWIP Specific Plan Update and Annexation Public Review Draft EIR. https://www.fontanaca.gov/DocumentCenter/View/36382/SWIP-Public-Review-Draft-Program-EIR (accessed October 2023).
10. Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, July 6, 2010
11. Environmental Health Perspectives, *Vehicle Motion Alarms: Necessity, Noise Pollution, or Both?* https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3018517/, accessed June 2023.
12. Federal Highway Administration, *Noise Fundamentals,* 2017.
13. Federal Highway Administration, *Roadway Construction Noise Model*, 2006.
14. Federal Highway Administration, *Roadway Construction Noise Model User's Guide Final Report*, 2006.
15. Federal Interagency Committee on Noise, *Federal Agency Review of Selected Airport Noise Analysis Issues*, 1992.
16. Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, 2018.
17. James P. Cowan, *Handbook of Environmental Acoustics,* 1994
18. Translutions, Inc., Traffic Impact Analysis for the 11171 Cherry Avenue Warehouse Project, April 2023.
19. United States Environmental Protection Agency, *Protective Noise Levels (EPA 550/9-79-100)*, 1979.

Appendix A

Noise Measurement Data

Noise Measurement Field Data

Project:	11171 Cherry Avenue Warehouse, Fontana	Job Number:	095996122
Site No.:	ST-1	Date:	5/25/2023
Analyst:	Heather Boland and Kiana Graham	Time:	11:55-12:05
Location:	14650 Argentine Court, Fontana CA 92337		
Noise Sources:	Dogs barking, birds chirping, cars on Jurupa Avenue		
Comments:	There were several bursts of dogs barking in the neighborhood.		

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
55.8	44.1	66.3	90.1

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	66°
Wind (mph):	5 mph
Sky:	Partly Cloudy
Bar. Pressure:	29.86"
Humidity:	56%

Photo:

Kimley»Horn

Summary

File Name on Meter	ST-.102.s
File Name on PC	LxTse_0007061-20230525 115604-ST-.102.ldbin
Serial Number	0007061
Model	SoundExpert® LxT
Firmware Version	2.4
User	
Location	
Job Description	
Note	

Measurement

Description	
Start	2023-05-25 11:56:04
Stop	2023-05-25 12:06:04
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre-Calibration	2023-05-25 09:16:57
Post-Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting			
Peak Weight	A Weighting			
Detector	Slow			
Preamplifier	PRMLxT1L			
Microphone Correction	FF:90 2116			
Integration Method	Linear			
OBA Range	Normal			
OBA Bandwidth	1/1 and 1/3			
OBA Frequency Weighting	A Weighting			
OBA Max Spectrum	At LMax			
Overload	122.5 dB			
	A	C	Z	
Under Range Peak	79.0	76.0	81.0	dB
Under Range Limit	24.2	25.3	31.4	dB
Noise Floor	15.1	16.1	22.2	dB

Results

LAeq	55.8		
LAE	83.600		
EA	1900-01-25 07:03:22	μPa²h	
LApeak (max)	2023-05-25 12:00:34	90.1 dB	
LASmax	2023-05-25 11:56:05	66.3 dB	
LASmin	45071.5 44.1		dB
SEA	-99.9 dB		
LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LApeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LApeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LApeak > 140.0 dB (Exceedance Counts / Duration)	0.0 0.0		s

Community Noise	Ldn	LDay 07:00-22:00	LNight 22:00-07:00	Lden	LDay 07:00-19:00	LEvening 19:00-22:00	LNight 22:00-07:00	
	55.8 55.8		-99.9	55.8	55.8	-99.9	-99.9	dB

LCeq	71.2	dB
LAeq	55.8	dB
LCeq - LAeq	15.4	dB
LAIeq	60.5	dB
LAeq	55.8	dB
LAIeq - LAeq	4.7	dB

	A		C		Z	
	dB	Time Stamp	dB	Time Stamp	dB	Time Stamp
Leq	55.8		71.2			
LS(max)	66.3	2023/05/25 11:56:05				
LS(min)	44.1	2023/05/25 12:03:00				
LPeak(max)	90.1	2023/05/25 12:00:34				

Overload Count	0.0
Overload Duration	0 s
OBA Overload Count	0.0
OBA Overload Duration	0.0 s

Statistics

LA5.00	61.2	dB
LA10.00	59.7	dB
LA33.30	55.3	dB
LA50.00	53.5	dB
LA66.60	51.2	dB
LA90.00	47.7	dB

Calibration History

Preamp	Date	dB re. 1V/Pa	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0	####	####	####	####	####	####	####	####	####	####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	######	######	######	######
PRMLxT1L	2023-05-25 09:16:49	-28.7	80.2	73.1	63.4	60.8	53.8	55.1	52.0	49.9	46.4	38.2	39.8	37.0	47.9	53.7	47.4	40.3	40.9	33.4	32.1	35.1	29.1	27.5	112.5	47.4	19.3	64.2	19.3	59.0	24.1	29.5	20.5	20.8	20.7	21.8	25.6	29.2
PRMLxT1L	2023-04-18 14:15:49	-27.3	43.1	53.8	54.8	56.1	54.0	55.6	52.1	52.3	54.0	57.7	55.8	52.2	50.4	47.9	43.8	40.6	38.9	41.1	41.4	41.6	38.1	39.2	113.4	48.7	31.9	58.4	20.4	58.7	25.1	30.2	21.3	21.8	21.3	22.8	26.5	30.0
PRMLxT1L	2023-04-18 10:51:42	-26.7	72.7	75.8	63.2	65.9	69.7	64.5	65.5	62.0	60.8	64.4	62.6	59.2	51.1	54.0	48.3	52.4	51.7	50.5	54.7	56.5	55.3	58.0	115.2	58.7	54.4	58.7	50.8	60.6	49.9	49.0	46.8	43.5	41.4	41.3	42.9	41.5
PRMLxT1L	2023-04-12 14:55:45	-27.9	77.9	79.8	67.8	71.6	69.3	66.4	68.9	61.7	57.8	58.1	61.5	55.3	53.9	50.6	53.0	49.0	43.7	41.6	41.6	42.1	43.1	48.1	113.7	49.0	34.2	62.0	20.4	59.6	26.5	30.0	21.6	22.2	22.0	23.1	27.0	30.5
PRMLxT1L	2023-04-12 10:35:35	-27.6	50.6	47.3	56.6	55.4	53.0	59.2	61.6	55.9	53.4	51.9	59.9	48.4	52.6	47.4	44.3	46.5	46.7	60.0	58.8	49.0	47.9	52.2	115.1	50.1	36.4	64.2	25.3	60.2	26.3	31.7	22.8	24.2	23.9	24.1	28.4	31.7
PRMLxT1L	2023-03-23 11:12:03	-28.6	85.3	79.3	90.6	86.3	70.8	59.8	49.7	55.7	49.9	51.0	48.9	52.8	43.2	41.0	42.1	36.6	36.4	33.3	32.3	32.6	24.7	29.4	114.5	49.3	19.7	65.9	21.5	61.0	25.7	31.5	22.2	22.5	22.8	23.9	27.7	31.0
PRMLxT1L	2023-03-23 09:47:22	-29.2	2.4	1.4	32.7	39.0	44.5	57.4	60.2	55.7	60.6	63.4	61.1	60.7	59.4	59.9	60.7	59.0	59.3	53.2	51.5	53.6	54.7	56.6	113.4	60.0	55.4	65.2	52.8	60.5	51.0	50.4	49.7	47.5	45.1	41.9	43.2	42.9
PRMLxT1L	2023-03-19 06:43:46	-28.6	45.9	53.6	50.4	48.5	39.7	43.4	37.3	33.9	37.2	37.2	31.5	34.7	34.3	25.7	15.7	19.4	17.0	16.8	17.0	15.8	14.8	27.3	113.9	48.2	18.9	66.2	20.1	59.0	24.3	29.8	21.5	21.8	21.9	22.9	26.8	30.4
PRMLxT1L	2023-03-17 08:13:23	-28.5	67.2	63.8	62.8	55.2	65.4	64.4	66.9	63.6	61.3	58.3	56.8	54.7	52.9	51.6	46.0	64.4	62.6	57.9	57.9	58.4	39.4	32.6	114.0	48.5	24.5	66.3	20.8	59.1	23.2	29.8	22.3	21.9	22.0	23.0	26.8	30.5
PRMLxT1L	2023-03-08 09:41:26	-28.5	63.9	68.9	69.3	67.9	62.3	63.5	59.2	67.5	65.5	62.4	61.7	72.0	62.6	61.2	64.8	57.3	58.9	53.8	51.8	48.4	44.4	32.3	114.1	48.7	20.4	65.9	21.1	60.4	26.9	31.1	21.8	22.4	22.6	23.3	27.1	30.9
PRMLxT1L	44993.4	-28.6	65.5	57.7	60.8	65.3	69.4	62.9	63.4	61.9	69.3	63.1	63.8	62.2	62.4	60.1	63.8	61.3	63.5	54.8	58.0	54.6	47.0	38.6	113.9	48.4	23.4	65.4	21.6	60.1	26.6	30.9	21.4	22.0	21.5	23.2	27.1	30.4

Measurement Report

Report Summary

Meter's File Name	ST-.102.s	Computer's File Name	LxTse_0007061-20230525 115604-ST-.102.ldbin
Meter	LxT SE 0007061		
Firmware	2.404		
User		Location	
Job Description			
Note			

Start Time	2023-05-25 11:56:04	Duration	0:10:00.0		
End Time	2023-05-25 12:06:04	Run Time	0:10:00.0	Pause Time	0:00:00.0

Results

Overall Metrics

LA_{eq}	55.8 dB		
LAE	83.6 dB	SEA	--- dB
EA	25.3 µPa²h		
LA_{peak}	90.1 dB	2023-05-25 12:00:34	
LAS_{max}	66.3 dB	2023-05-25 11:56:05	
LAS_{min}	44.1 dB	2023-05-25 12:03:00	
LA_{eq}	55.8 dB		
LC_{eq}	71.2 dB	LC_{eq} - LA_{eq}	15.4 dB
LAI_{eq}	60.5 dB	LAI_{eq} - LA_{eq}	4.7 dB

Exceedances

Exceedances	Count	Duration
LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight	
55.8 dB	55.8 dB	0.0 dB	

LDEN	LDay	LEve	LNight
55.8 dB	55.8 dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	55.8 dB		71.2 dB		--- dB	
$Ls_{(max)}$	66.3 dB	2023-05-25 11:56:05	--- dB		--- dB	
$LS_{(min)}$	44.1 dB	2023-05-25 12:03:00	--- dB		--- dB	
$L_{Peak(max)}$	90.1 dB	2023-05-25 12:00:34	--- dB		--- dB	

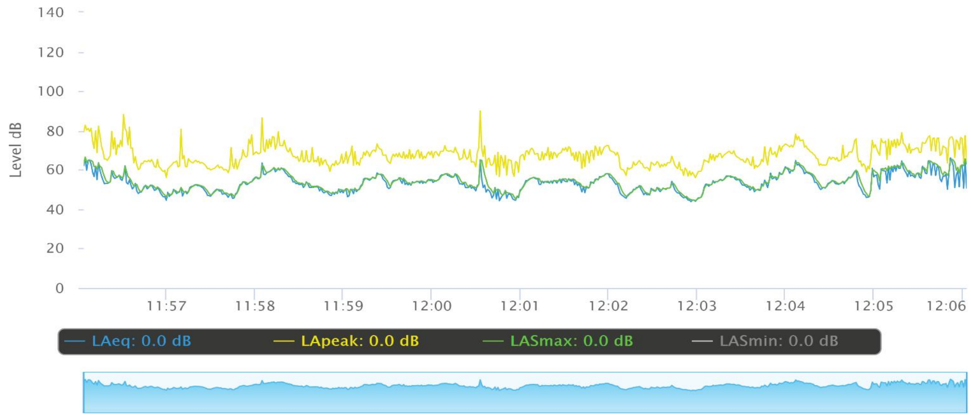
Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	61.2 dB
LAS 10.0	59.7 dB
LAS 33.3	55.3 dB
LAS 50.0	53.5 dB
LAS 66.6	51.2 dB
LAS 90.0	47.7 dB

Time History



Noise Measurement Field Data

Project:	11171 Cherry Avenue Warehouse, Fontana	Job Number:	095996122
Site No.:	ST-2	Date:	5/25/2023
Analyst:	Heather Boland and Kiana Graham	Time:	12:24-12:34pm
Location:	NWC of Jurupa Avenue and Cherry Avenue		
Noise Sources:	Cars on Jurupa Avenue and Cherry Avenue, idling cars at stop light		
Comments:	Lots of semi trucks, loud motorcycle		

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
71.3	53.3	89.2	103.3

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	66°
Wind (mph):	5 mph
Sky:	Partly Cloudy
Bar. Pressure:	29.86"
Humidity:	56%

Photo:

Kimley»Horn

Summary

File Name on Meter	ST-.103.s
File Name on PC	LxTse_0007061-20230525 122255-ST-.103.ldbin
Serial Number	0007061
Model	SoundExpert® LxT
Firmware Version	2.404
User	
Location	
Job Description	
Note	

Measurement

Description	
Start	2023-05-25 12:22:55
Stop	2023-05-25 12:32:55
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre-Calibration	None
Post-Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting		
Peak Weight	A Weighting		
Detector	Slow		
Preamplifier	Direct		
Microphone Correction	FF:90 2116		
Integration Method	Linear		
OBA Range	Normal		
OBA Bandwidth	1/1 and 1/3		
OBA Frequency Weighting	A Weighting		
OBA Max Spectrum	At LMax		
Overload	119.8 dB		
	A	C	Z
Under Range Peak	76.0	73.0	78.0 dB
Under Range Limit	12.0	10.5	14.8 dB
Noise Floor	2.8	1.3	5.6 dB

Results

LAeq	71.3	
LAE	99.1	
EA	895.837 µPa²h	
LApeak (max)	2023-05-25 12:31:59	103.3 dB
LASmax	2023-05-25 12:31:59	89.2 dB
LASmin	2023-05-25 12:25:10	53.3 dB
SEA	-99.9 dB	
LAS > 85.0 dB (Exceedance Counts / Duration)	1	7.8 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

Community Noise	Ldn	LDay 07:00-22:00	LNight 22:00-07:00	Lden	LDay 07:00-19:00	LEvening 19:00-22:00	LNight 22:00-07:00	
	71.3	71.3	-99.9	71.3	71.3	-99.9	-99.9	dB

LCeq	79.6 dB
LAeq	71.3 dB
LCeq - LAeq	8.3 dB
LAIeq	73.4 dB
LAeq	71.3 dB
LAIeq - LAeq	2.1 dB

	A		C		Z	
	dB	Time Stamp	dB	Time Stamp	dB	Time Stamp
Leq	71.3		79.6			
LS(max)	89.2	2023/05/25 12:31:59				
LS(min)	53.3	2023/05/25 12:25:10				
LPeak(max)	103.3	2023/05/25 12:31:59				

Overload Count	0
Overload Duration	0.0 s
OBA Overload Count	0
OBA Overload Duration	0.0 s

Statistics

LA5.00	73.1 dB
LA10.00	71.7 dB
LA33.30	68.8 dB
LA50.00	67.0 dB
LA66.60	64.2 dB
LA90.00	59.2 dB

Calibration History

Preamp	Date	dB re. 1V/Pa	6.3	8.0	10.0
PRMLxT1L	2023-05-25 09:16:49	-28.72	80.15	73.09	63.35
PRMLxT1L	2023-04-18 14:15:49	-27.27	43.13	53.76	54.84
PRMLxT1L	2023-04-18 10:51:42	-26.69	72.70	75.77	63.17
PRMLxT1L	2023-04-12 14:55:45	-27.88	77.92	79.75	67.81
PRMLxT1L	2023-04-12 10:35:35	-27.58	50.63	47.29	56.55
PRMLxT1L	2023-03-23 11:12:03	-28.64	85.31	79.29	90.61
PRMLxT1L	2023-03-23 09:47:22	-29.16	2.44	1.41	32.70
PRMLxT1L	2023-03-19 06:43:46	-28.55	45.86	53.64	50.36
PRMLxT1L	2023-03-17 08:13:23	-28.49	67.24	63.76	62.84
PRMLxT1L	2023-03-08 09:41:26	-28.48	63.94	68.89	69.29
PRMLxT1L	2023-03-08 09:31:17	-28.63	65.51	57.73	60.78

Date	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0	100	125	160	200	250
2023-05-25 09:16:49	60.80	53.78	55.05	52.00	49.89	46.38	38.22	39.81	36.96	47.87	53.66	47.44	40.34	40.89
2023-04-18 14:15:49	56.13	54.02	55.60	52.08	52.32	53.97	57.70	55.80	52.21	50.36	47.93	43.83	40.64	38.89
2023-04-18 10:51:42	65.86	69.74	64.51	65.45	61.96	60.75	64.38	62.60	59.17	51.10	53.97	48.27	52.42	51.73
2023-04-12 14:55:45	71.56	69.33	66.37	68.86	61.67	57.80	58.06	61.54	55.31	53.91	50.56	53.01	48.95	43.69
2023-04-12 10:35:35	55.36	53.00	59.17	61.58	55.88	53.41	51.88	59.91	48.41	52.64	47.42	44.32	46.49	46.71
2023-03-23 11:12:03	86.30	70.84	59.75	49.68	55.70	49.91	50.95	48.87	52.84	43.24	41.01	42.06	36.63	36.36
2023-03-23 09:47:22	38.97	44.48	57.43	60.24	55.69	60.63	63.35	61.10	60.73	59.37	59.85	60.69	59.04	59.25
2023-03-19 06:43:46	48.48	39.74	43.36	37.33	33.88	37.19	37.19	31.45	34.66	34.27	25.71	15.68	19.38	17.03
2023-03-17 08:13:23	55.22	65.39	64.43	66.90	63.56	61.30	58.28	56.83	54.69	52.88	51.62	46.03	64.35	62.64
2023-03-08 09:41:26	67.88	62.26	63.46	59.19	67.50	65.47	62.43	61.68	72.02	62.64	61.15	64.79	57.33	58.87
2023-03-08 09:31:17	65.33	69.35	62.91	63.35	61.91	69.32	63.08	63.81	62.18	62.37	60.06	63.75	61.27	63.49

Date	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000	12500	16000	20000
2023-05-25 09:16:49	33.38	32.12	35.06	29.11	27.49	112.54	47.39	19.32	64.19	19.27	58.97	24.09	29.51	20.51	20.80	20.68	21.84	25.61	29.22
2023-04-18 14:15:49	41.09	41.39	41.60	38.14	39.24	113.39	48.73	31.92	58.36	20.38	58.69	25.13	30.24	21.29	21.76	21.32	22.75	26.49	30.04
2023-04-18 10:51:42	50.51	54.71	56.45	55.29	58.01	115.17	58.70	54.44	58.71	50.81	60.60	49.88	48.99	46.75	43.53	41.43	41.33	42.90	41.45
2023-04-12 14:55:45	41.57	41.56	42.08	43.05	48.14	113.69	48.98	34.19	61.97	20.43	59.64	26.50	30.04	21.61	22.22	21.95	23.13	26.97	30.52
2023-04-12 10:35:35	59.97	58.75	48.99	47.92	52.17	115.05	50.13	36.42	64.24	25.29	60.16	26.30	31.67	22.81	24.22	23.89	24.09	28.37	31.68
2023-03-23 11:12:03	33.27	32.34	32.59	24.67	29.35	114.50	49.32	19.71	65.93	21.50	60.96	25.73	31.48	22.22	22.45	22.77	23.94	27.72	30.95
2023-03-23 09:47:22	53.23	51.50	53.63	54.72	56.60	113.38	59.95	55.36	65.18	52.76	60.50	50.96	50.44	49.70	47.53	45.08	41.92	43.21	42.89
2023-03-19 06:43:46	16.81	17.00	15.82	14.83	27.25	113.92	48.20	18.86	66.16	20.06	59.01	24.32	29.82	21.46	21.83	21.87	22.93	26.83	30.35
2023-03-17 08:13:23	57.92	57.90	58.43	39.36	32.56	113.97	48.52	24.49	66.30	20.77	59.12	23.20	29.79	22.25	21.93	22.00	23.02	26.81	30.45
2023-03-08 09:41:26	53.83	51.83	48.41	44.42	32.26	114.14	48.74	20.37	65.89	21.13	60.39	26.94	31.06	21.77	22.38	22.62	23.27	27.08	30.91
2023-03-08 09:31:17	54.78	58.03	54.64	47.00	38.60	113.92	48.41	23.36	65.36	21.63	60.09	26.59	30.92	21.42	22.03	21.54	23.15	27.12	30.37

Measurement Report

Report Summary

Meter's File Name	ST-.103.s	Computer's File Name	LxTse_0007061-20230525 122255-ST-.103.ldbin
Meter	LxT SE 0007061		
Firmware	2.404		
User		Location	
Job Description			
Note			

Start Time	2023-05-25 12:22:55	Duration	0:10:00.0		
End Time	2023-05-25 12:32:55	Run Time	0:10:00.0	Pause Time	0:00:00.0

Results

Overall Metrics

LA_{eq}	71.3 dB		
LAE	99.1 dB	SEA	--- dB
EA	895.8 µPa²h		
LA_{peak}	103.3 dB	2023-05-25 12:31:59	
LAS_{max}	89.2 dB	2023-05-25 12:31:59	
LAS_{min}	53.3 dB	2023-05-25 12:25:10	
LA_{eq}	71.3 dB		
LC_{eq}	79.6 dB	LC_{eq} - LA_{eq}	8.3 dB
LAI_{eq}	73.4 dB	LAI_{eq} - LA_{eq}	2.1 dB

Exceedances	Count	Duration
LAS > 85.0 dB	1	0:00:07.8
LAS > 115.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 140.0 dB	0	0:00:00.0

Community Noise	LDN	LDay	LNight	
	71.3 dB	71.3 dB	0.0 dB	
	LDEN	LDay	LEve	LNight
	71.3 dB	71.3 dB	--- dB	--- dB

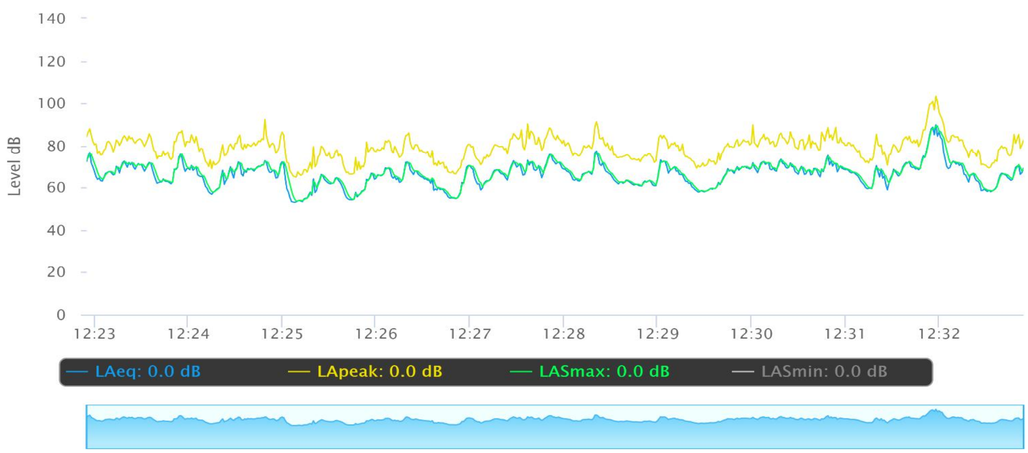
Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	71.3 dB		79.6 dB		--- dB	
$Ls_{(max)}$	89.2 dB	2023-05-25 12:31:59	--- dB		--- dB	
$LS_{(min)}$	53.3 dB	2023-05-25 12:25:10	--- dB		--- dB	
$L_{Peak(max)}$	103.3 dB	2023-05-25 12:31:59	--- dB		--- dB	

Overloads	Count	Duration	OBA Count	OBA Duration
	0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	73.1 dB
LAS 10.0	71.7 dB
LAS 33.3	68.8 dB
LAS 50.0	67.0 dB
LAS 66.6	64.2 dB
LAS 90.0	59.2 dB

Time History



Noise Measurement Field Data

Project:	11171 Cherry Avenue Warehouse, Fontana	Job Number:	095996122
Site No.:	ST-3	Date:	5/25/2023
Analyst:	Heather Boland and Kiana Graham	Time:	12:45-12:55pm
Location:	Between 11155 and 11093 Almond Avenue - West Sidewalk		
Noise Sources:	Birds, idling semi trucks and cars on Almond Avenue		
Comments:			

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
62.4	50.2	78.3	91.4

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	68°
Wind (mph):	6 mph
Sky:	Partly Cloudy
Bar. Pressure:	29.85"
Humidity:	53%

Photo:

Kimley»Horn

Summary			
File Name on Meter	ST-.104.s		
File Name on PC	LxTse_0007061-20230525 124514-ST-.104.ldbin		
Serial Number	0007061		
Model	SoundExpert® LxT		
Firmware Version	2.404		
User			
Location			
Job Description			
Note			

Measurement	
Description	
Start	2023-05-25 12:45:14
Stop	2023-05-25 12:55:14
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre-Calibration	2023-05-25 09:16:49
Post-Calibration	None
Calibration Deviation	---

Overall Settings			
RMS Weight	A Weighting		
Peak Weight	A Weighting		
Detector	Slow		
Preamplifier	PRMLxT1L		
Microphone Correction	FF:90 2116		
Integration Method	Linear		
OBA Range	Normal		
OBA Bandwidth	1/1 and 1/3		
OBA Frequency Weighting	A Weighting		
OBA Max Spectrum	At LMax		
Overload	122.5 dB		
	A	C	Z
Under Range Peak	79.0	76.0	81.0 dB
Under Range Limit	24.2	25.3	31.4 dB
Noise Floor	15.1	16.1	22.2 dB

Results		
LA_{eq}	62.4	
LAE	90.2	
EA	115.841 µPa²h	
$LA_{peak\ (max)}$	2023-05-25 12:46:50	91.4 dB
LAS_{max}	2023-05-25 12:46:50	78.3 dB
LAS_{min}	2023-05-25 12:52:56	50.2 dB

SEA	-99.9 dB	
LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LA_{peak} > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LA_{peak} > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LA_{peak} > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

Community Noise	Ldn	LDay 07:00-22:00	LNight 22:00-07:00	Lden	LDay 07:00-19:00	LEvening 19:00-22:00	LNight 22:00-07:00	
	62.4	62.4	-99.9	62.4	62.4	-99.9	-99.9	dB

LC_{eq}	74.2 dB
LA_{eq}	62.4 dB
LC_{eq} - LA_{eq}	11.8 dB
LAI_{eq}	64.8 dB
LA_{eq}	62.4 dB
LAI_{eq} - LA_{eq}	2.4 dB

	A		C		Z	
	dB	Time Stamp	dB	Time Stamp	dB	Time Stamp
L_{eq}	62.4		74.2			
$L_{S(max)}$	78.3	2023/05/25 12:46:50				
$L_{S(min)}$	50.2	2023/05/25 12:52:56				
$L_{Peak(max)}$	91.4	2023/05/25 12:46:50				

Overload Count	0
Overload Duration	0.0 s
OBA Overload Count	0
OBA Overload Duration	0.0 s

Statistics

LA5.00	69.1 dB
LA10.00	64.8 dB
LA33.30	56.7 dB
LA50.00	54.6 dB
LA66.60	53.0 dB
LA90.00	51.3 dB

Calibration History

Preamp	Date	dB re. 1V/Pa	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
PRMLxT1L	2023-05-25 09:16:49	-28.72	80.15	73.09	63.35	60.80	53.78	55.05	52.00	49.89	46.38	38.22	39.81	36.96
PRMLxT1L	2023-04-18 14:15:49	-27.27	43.13	53.76	54.84	56.13	54.02	55.60	52.08	52.32	53.97	57.70	55.80	52.21
PRMLxT1L	2023-04-18 10:51:42	-26.69	72.70	75.77	63.17	65.86	69.74	64.51	65.45	61.96	60.75	64.38	62.60	59.17
PRMLxT1L	2023-04-12 14:55:45	-27.88	77.92	79.75	67.81	71.56	69.33	66.37	68.86	61.67	57.80	58.06	61.54	55.31
PRMLxT1L	2023-04-12 10:35:35	-27.58	50.63	47.29	56.55	55.36	53.00	59.17	61.58	55.88	53.41	51.88	59.91	48.41
PRMLxT1L	2023-03-23 11:12:03	-28.64	85.31	79.29	90.61	86.30	70.84	59.75	49.68	55.70	49.91	50.95	48.87	52.84
PRMLxT1L	2023-03-23 09:47:22	-29.16	2.44	1.41	32.70	38.97	44.48	57.43	60.24	55.69	60.63	63.35	61.10	60.73
PRMLxT1L	2023-03-19 06:43:46	-28.55	45.86	53.64	50.36	48.48	39.74	43.36	37.33	33.88	37.19	37.19	31.45	34.66
PRMLxT1L	2023-03-17 08:13:23	-28.49	67.24	63.76	62.84	55.22	65.39	64.43	66.90	63.56	61.30	58.28	56.83	54.69
PRMLxT1L	2023-03-08 09:41:26	-28.48	63.94	68.89	69.29	67.88	62.26	63.46	59.19	67.50	65.47	62.43	61.68	72.02
PRMLxT1L	2023-03-08 09:31:17	-28.63	65.51	57.73	60.78	65.33	69.35	62.91	63.35	61.91	69.32	63.08	63.81	62.18

Date	100	125	160	200	250	315	400	500	630	800	1000
2023-05-25 09:16:49	####	####	####	####	####	####	####	####	####	####	#####
2023-04-18 14:15:49	####	####	####	####	####	####	####	####	####	####	#####
2023-04-18 10:51:42	####	####	####	####	####	####	####	####	####	####	#####
2023-04-12 14:55:45	####	####	####	####	####	####	####	####	####	####	#####
2023-04-12 10:35:35	####	####	####	####	####	####	####	####	####	####	#####
2023-03-23 11:12:03	####	####	####	####	####	####	####	####	####	####	#####
2023-03-23 09:47:22	####	####	####	####	####	####	####	####	####	####	#####
2023-03-19 06:43:46	####	####	####	####	####	####	####	####	####	####	#####
2023-03-17 08:13:23	####	####	####	####	####	####	####	####	####	####	#####
2023-03-08 09:41:26	####	####	####	####	####	####	####	####	####	####	#####
2023-03-08 09:31:17	####	####	####	####	####	####	####	####	####	####	#####

Date	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000	12500	16000	20000
2023-05-25 09:16:49	47.39	19.32	64.19	19.27	58.97	24.09	29.51	20.51	20.80	20.68	21.84	25.61	29.22
2023-04-18 14:15:49	48.73	31.92	58.36	20.38	58.69	25.13	30.24	21.29	21.76	21.32	22.75	26.49	30.04
2023-04-18 10:51:42	58.70	54.44	58.71	50.81	60.60	49.88	48.99	46.75	43.53	41.43	41.33	42.90	41.45
2023-04-12 14:55:45	48.98	34.19	61.97	20.43	59.64	26.50	30.04	21.61	22.22	21.95	23.13	26.97	30.52
2023-04-12 10:35:35	50.13	36.42	64.24	25.29	60.16	26.30	31.67	22.81	24.22	23.89	24.09	28.37	31.68
2023-03-23 11:12:03	49.32	19.71	65.93	21.50	60.96	25.73	31.48	22.22	22.45	22.77	23.94	27.72	30.95
2023-03-23 09:47:22	59.95	55.36	65.18	52.76	60.50	50.96	50.44	49.70	47.53	45.08	41.92	43.21	42.89
2023-03-19 06:43:46	48.20	18.86	66.16	20.06	59.01	24.32	29.82	21.46	21.83	21.87	22.93	26.83	30.35
2023-03-17 08:13:23	48.52	24.49	66.30	20.77	59.12	23.20	29.79	22.25	21.93	22.00	23.02	26.81	30.45
2023-03-08 09:41:26	48.74	20.37	65.89	21.13	60.39	26.94	31.06	21.77	22.38	22.62	23.27	27.08	30.91
2023-03-08 09:31:17	48.41	23.36	65.36	21.63	60.09	26.59	30.92	21.42	22.03	21.54	23.15	27.12	30.37

Measurement Report

Report Summary

Meter's File Name	ST-.104.s	Computer's File Name	LxTse_0007061-20230525 124514-ST-.104.ldbin
Meter	LxT SE 0007061		
Firmware	2.404		
User		Location	
Job Description			
Note			

Start Time	2023-05-25 12:45:14	Duration	0:10:00.0		
End Time	2023-05-25 12:55:14	Run Time	0:10:00.0	Pause Time	0:00:00.0

Results

Overall Metrics

LA_{eq}	62.4 dB		
LAE	90.2 dB	SEA	--- dB
EA	115.8 µPa²h		
LA_{peak}	91.4 dB	2023-05-25 12:46:50	
LAS_{max}	78.3 dB	2023-05-25 12:46:50	
LAS_{min}	50.2 dB	2023-05-25 12:52:56	
LA_{eq}	62.4 dB		
LC_{eq}	74.2 dB	LC_{eq} - LA_{eq}	11.8 dB
LAI_{eq}	64.8 dB	LAI_{eq} - LA_{eq}	2.4 dB

Exceedances	Count	Duration
LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 140.0 dB	0	0:00:00.0

Community Noise	LDN	LDay	LNight	
	62.4 dB	62.4 dB	0.0 dB	
	LDEN	LDay	LEve	LNight
	62.4 dB	62.4 dB	--- dB	--- dB

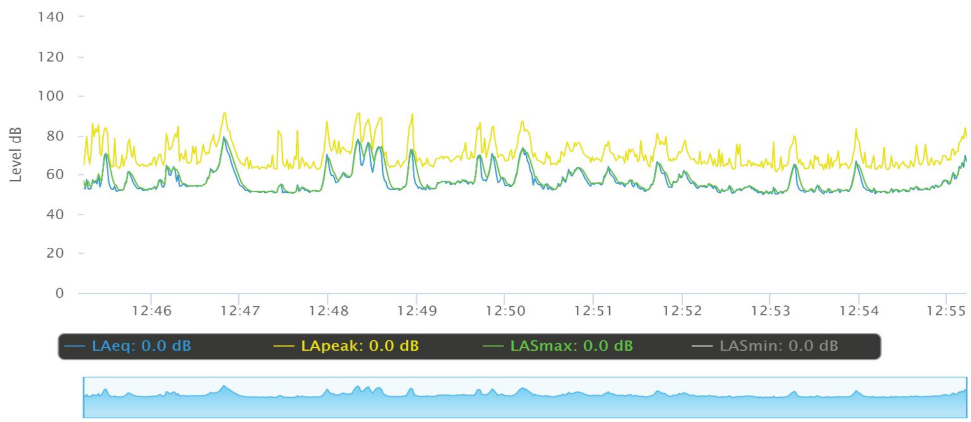
Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	62.4 dB		74.2 dB		--- dB	
$Ls_{(max)}$	78.3 dB	2023-05-25 12:46:50	--- dB		--- dB	
$LS_{(min)}$	50.2 dB	2023-05-25 12:52:56	--- dB		--- dB	
$L_{Peak(max)}$	91.4 dB	2023-05-25 12:46:50	--- dB		--- dB	

Overloads	Count	Duration	OBA Count	OBA Duration
	0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	69.1 dB
LAS 10.0	64.8 dB
LAS 33.3	56.7 dB
LAS 50.0	54.6 dB
LAS 66.6	53.0 dB
LAS 90.0	51.3 dB

Time History



Noise Measurement Field Data

Project:	11171 Cherry Avenue Warehouse, Fontana	Job Number:	095996122
Site No.:	ST-3	Date:	5/25/2023
Analyst:	Heather Boland and Kiana Graham	Time:	1:14-1:24pm
Location:	Cherry Avenue and Rose Court - End of Cul-de-Sac on Rose Ct.		
Noise Sources:	Truck driver academy operations including alarm, cars on Cherry Avenue		
Comments:			

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
63.8	60.1	74.4	91.9

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	68°
Wind (mph):	6 mph
Sky:	Partly Cloudy
Bar. Pressure:	29.85"
Humidity:	53%

Photo:

Kimley»Horn

Summary			
File Name on Meter	ST-.105.s		
File Name on PC	LxTse_0007061-20230525 131341-ST-.105.ldbin		
Serial Number	0007061		
Model	SoundExpert® LxT		
Firmware Version	2.404		
User			
Location			
Job Description			
Note			

Measurement			
Description			
Start	2023-05-25 13:13:41		
Stop	2023-05-25 13:23:41		
Duration	00:10:00.0		
Run Time	00:10:00.0		
Pause	00:00:00.0		
Pre-Calibration	2023-05-25 09:16:49		
Post-Calibration	None		
Calibration Deviation	---		

Overall Settings			
RMS Weight	A Weighting		
Peak Weight	A Weighting		
Detector	Slow		
Preamplifier	PRMLxT1L		
Microphone Correction	FF:90 2116		
Integration Method	Linear		
OBA Range	Normal		
OBA Bandwidth	1/1 and 1/3		
OBA Frequency Weighting	A Weighting		
OBA Max Spectrum	At LMax		
Overload	122.5 dB		
	A	C	Z
Under Range Peak	79.0	76.0	81.0 dB
Under Range Limit	24.2	25.3	31.4 dB
Noise Floor	15.1	16.1	22.2 dB

Results		
LA_{eq}	63.8	
LAE	91.6	
EA	160.640 µPa²h	
$LA_{peak (max)}$	2023-05-25 13:13:52	91.9 dB
LAS_{max}	2023-05-25 13:14:46	74.4 dB
LAS_{min}	2023-05-25 13:23:29	60.1 dB

SEA	-99.9 dB	
LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

Community Noise	Ldn	LDay 07:00-22:00	LNight 22:00-07:00	Lden	LDay 07:00-19:00	LEvening 19:00-22:00	LNight 22:00-07:00	
	63.8	63.8	-99.9	63.8	63.8	-99.9	-99.9	dB

LCeq	73.5 dB
LAeq	63.8 dB
LCeq - LAeq	9.6 dB
LAIeq	66.1 dB
LAeq	63.8 dB
LAIeq - LAeq	2.3 dB

	A		C		Z	
	dB	Time Stamp	dB	Time Stamp	dB	Time Stamp
Leq	63.8		73.5			
LS(max)	74.4	2023/05/25 13:14:46				
LS(min)	60.1	2023/05/25 13:23:29				
LPeak(max)	91.9	2023/05/25 13:13:52				

Overload Count	0
Overload Duration	0.0 s
OBA Overload Count	0
OBA Overload Duration	0.0 s

Statistics

LA5.00	68.6 dB
LA10.00	64.7 dB
LA33.30	62.8 dB
LA50.00	62.1 dB
LA66.60	61.6 dB
LA90.00	60.8 dB

Calibration History

Preamp	Date	dB re. 1V/Pa	6.3	8.0	10.0
PRMLxT1L	2023-05-25 09:16:49	-28.72	80.15	73.09	63.35
PRMLxT1L	2023-04-18 14:15:49	-27.27	43.13	53.76	54.84
PRMLxT1L	2023-04-18 10:51:42	-26.69	72.70	75.77	63.17
PRMLxT1L	2023-04-12 14:55:45	-27.88	77.92	79.75	67.81
PRMLxT1L	2023-04-12 10:35:35	-27.58	50.63	47.29	56.55
PRMLxT1L	2023-03-23 11:12:03	-28.64	85.31	79.29	90.61
PRMLxT1L	2023-03-23 09:47:22	-29.16	2.44	1.41	32.70
PRMLxT1L	2023-03-19 06:43:46	-28.55	45.86	53.64	50.36
PRMLxT1L	2023-03-17 08:13:23	-28.49	67.24	63.76	62.84
PRMLxT1L	2023-03-08 09:41:26	-28.48	63.94	68.89	69.29
PRMLxT1L	2023-03-08 09:31:17	-28.63	65.51	57.73	60.78

Date	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0	100	125	160	200	250	315	400	500	630	800	1000
2023-05-25 09:16:49	60.80	53.78	55.05	52.00	49.89	46.38	38.22	39.81	36.96	####	####	####	####	####	####	####	####	####	####	#####
2023-04-18 14:15:49	56.13	54.02	55.60	52.08	52.32	53.97	57.70	55.80	52.21	####	####	####	####	####	####	####	####	####	####	#####
2023-04-18 10:51:42	65.86	69.74	64.51	65.45	61.96	60.75	64.38	62.60	59.17	####	####	####	####	####	####	####	####	####	####	#####
2023-04-12 14:55:45	71.56	69.33	66.37	68.86	61.67	57.80	58.06	61.54	55.31	####	####	####	####	####	####	####	####	####	####	#####
2023-04-12 10:35:35	55.36	53.00	59.17	61.58	55.88	53.41	51.88	59.91	48.41	####	####	####	####	####	####	####	####	####	####	#####
2023-03-23 11:12:03	86.30	70.84	59.75	49.68	55.70	49.91	50.95	48.87	52.84	####	####	####	####	####	####	####	####	####	####	#####
2023-03-23 09:47:22	38.97	44.48	57.43	60.24	55.69	60.63	63.35	61.10	60.73	####	####	####	####	####	####	####	####	####	####	#####
2023-03-19 06:43:46	48.48	39.74	43.36	37.33	33.88	37.19	37.19	31.45	34.66	####	####	####	####	####	####	####	####	####	####	#####
2023-03-17 08:13:23	55.22	65.39	64.43	66.90	63.56	61.30	58.28	56.83	54.69	####	####	####	####	####	####	####	####	####	####	#####
2023-03-08 09:41:26	67.88	62.26	63.46	59.19	67.50	65.47	62.43	61.68	72.02	####	####	####	####	####	####	####	####	####	####	#####
2023-03-08 09:31:17	65.33	69.35	62.91	63.35	61.91	69.32	63.08	63.81	62.18	####	####	####	####	####	####	####	####	####	####	#####

Date	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000	12500	16000	20000
2023-05-25 09:16:49	47.39	19.32	64.19	19.27	58.97	24.09	29.51	20.51	20.80	20.68	21.84	25.61	29.22
2023-04-18 14:15:49	48.73	31.92	58.36	20.38	58.69	25.13	30.24	21.29	21.76	21.32	22.75	26.49	30.04
2023-04-18 10:51:42	58.70	54.44	58.71	50.81	60.60	49.88	48.99	46.75	43.53	41.43	41.33	42.90	41.45
2023-04-12 14:55:45	48.98	34.19	61.97	20.43	59.64	26.50	30.04	21.61	22.22	21.95	23.13	26.97	30.52
2023-04-12 10:35:35	50.13	36.42	64.24	25.29	60.16	26.30	31.67	22.81	24.22	23.89	24.09	28.37	31.68
2023-03-23 11:12:03	49.32	19.71	65.93	21.50	60.96	25.73	31.48	22.22	22.45	22.77	23.94	27.72	30.95
2023-03-23 09:47:22	59.95	55.36	65.18	52.76	60.50	50.96	50.44	49.70	47.53	45.08	41.92	43.21	42.89
2023-03-19 06:43:46	48.20	18.86	66.16	20.06	59.01	24.32	29.82	21.46	21.83	21.87	22.93	26.83	30.35
2023-03-17 08:13:23	48.52	24.49	66.30	20.77	59.12	23.20	29.79	22.25	21.93	22.00	23.02	26.81	30.45
2023-03-08 09:41:26	48.74	20.37	65.89	21.13	60.39	26.94	31.06	21.77	22.38	22.62	23.27	27.08	30.91
2023-03-08 09:31:17	48.41	23.36	65.36	21.63	60.09	26.59	30.92	21.42	22.03	21.54	23.15	27.12	30.37

Measurement Report

Report Summary

Meter's File Name	ST-.105.s	Computer's File Name	LxTse_0007061-20230525 131341-ST-.105.ldbin
Meter	LxT SE 0007061		
Firmware	2.404		
User		Location	
Job Description			
Note			

Start Time	2023-05-25 13:13:41	Duration	0:10:00.0		
End Time	2023-05-25 13:23:41	Run Time	0:10:00.0	Pause Time	0:00:00.0

Results

Overall Metrics

LA_{eq}	63.8 dB		
LAE	91.6 dB	SEA	--- dB
EA	160.6 µPa²h		
LA_{peak}	91.9 dB	2023-05-25 13:13:52	
LAS_{max}	74.4 dB	2023-05-25 13:14:46	
LAS_{min}	60.1 dB	2023-05-25 13:23:29	
LA_{eq}	63.8 dB		
LC_{eq}	73.5 dB	LC_{eq} - LA_{eq}	9.6 dB
LAI_{eq}	66.1 dB	LAI_{eq} - LA_{eq}	2.3 dB

Exceedances

Exceedances	Count	Duration
LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight	
63.8 dB	63.8 dB	0.0 dB	
LDEN	**LDay**	**LEve**	**LNight**
63.8 dB	63.8 dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	63.8 dB		73.5 dB		--- dB	
$Ls_{(max)}$	74.4 dB	2023-05-25 13:14:46	--- dB		--- dB	
$LS_{(min)}$	60.1 dB	2023-05-25 13:23:29	--- dB		--- dB	
$L_{Peak(max)}$	91.9 dB	2023-05-25 13:13:52	--- dB		--- dB	

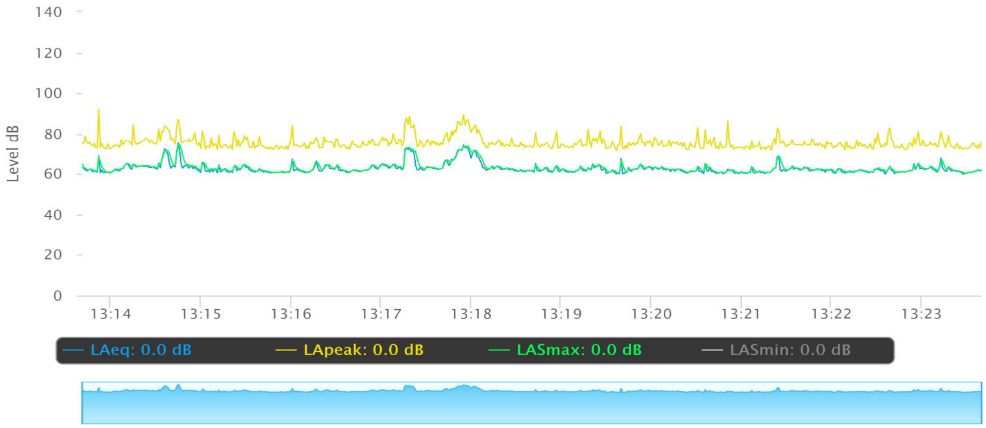
Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	68.6 dB
LAS 10.0	64.7 dB
LAS 33.3	62.8 dB
LAS 50.0	62.1 dB
LAS 66.6	61.6 dB
LAS 90.0	60.8 dB

Time History



Noise Measurement Field Data

Project:	11171 Cherry Avenue Warehouse, Fontana	Job Number:	095996122
Site No.:	ST-5	Date:	5/25/2023
Analyst:	Heather Boland and Kiana Graham	Time:	1:30-1:40 p.m.
Location:	northwest corner of project site on Redwood Avenue		
Noise Sources:	Recycling plant operations, cars on Redwood		
Comments:	Airplane flew over project site during measurement		

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
59.9	49.8	73.9	87.4

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	68°
Wind (mph):	6 mph NE
Sky:	Partly Cloudy
Bar. Pressure:	29.88"
Humidity:	53%

Photo:

Kimley»Horn

Summary

File Name on Meter	ST-.106.s
File Name on PC	LxTse_0007061-20230525 133008-ST-.106.ldbin
Serial Number	0007061
Model	SoundExpert® LxT
Firmware Version	2.404
User	
Location	
Job Description	
Note	

Measurement

Description	
Start	2023-05-25 13:30:08
Stop	2023-05-25 13:40:08
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre-Calibration	2023-05-25 09:16:49
Post-Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting		
Peak Weight	A Weighting		
Detector	Slow		
Preamplifier	PRMLxT1L		
Microphone Correction	FF:90 2116		
Integration Method	Linear		
OBA Range	Normal		
OBA Bandwidth	1/1 and 1/3		
OBA Frequency Weighting	A Weighting		
OBA Max Spectrum	At LMax		
Overload	122.5 dB		
	A	C	Z
Under Range Peak	79.0	76.0	81.0 dB
Under Range Limit	24.2	25.3	31.4 dB
Noise Floor	15.1	16.1	22.2 dB

Results

LAeq	59.9	
LAE	87.7	
EA	65.855 µPa²h	
LApeak (max)	2023-05-25 13:31:33	87.4 dB
LASmax	2023-05-25 13:31:34	73.9 dB
LASmin	2023-05-25 13:39:04	49.8 dB
SEA	-99.9 dB	
LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

Community Noise	Ldn	LDay 07:00-22:00	LNight 22:00-07:00	Lden	LDay 07:00-19:00	LEvening 19:00-22:00	LNight 22:00-07:00	
	59.9	59.9	-99.9	59.9	59.9	-99.9	-99.9	dB

LCeq	70.2 dB
LAeq	59.9 dB
LCeq - LAeq	10.3 dB
LAIeq	62.0 dB
LAeq	59.9 dB
LAIeq - LAeq	2.0 dB

	A		C		Z	
	dB	Time Stamp	dB	Time Stamp	dB	Time Stamp
Leq	59.9		70.2			
Ls(max)	73.9	2023/05/25 13:31:34				
Ls(min)	49.8	2023/05/25 13:39:04				
LPeak(max)	87.4	2023/05/25 13:31:33				

Overload Count	0
Overload Duration	0.0 s
OBA Overload Count	0
OBA Overload Duration	0.0 s

Statistics

LA5.00	66.4 dB
LA10.00	62.8 dB
LA33.30	57.1 dB
LA50.00	55.7 dB
LA66.60	54.5 dB
LA90.00	52.1 dB

Calibration History

Preamp	Date	dB re. 1V/Pa	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
PRMLxT1L	2023-05-25 09:16:49	-28.72	80.15	73.09	63.35	60.80	53.78	55.05	52.00	49.89	46.38	38.22	39.81	36.96
PRMLxT1L	2023-04-18 14:15:49	-27.27	43.13	53.76	54.84	56.13	54.02	55.60	52.08	52.32	53.97	57.70	55.80	52.21
PRMLxT1L	2023-04-18 10:51:42	-26.69	72.70	75.77	63.17	65.86	69.74	64.51	65.45	61.96	60.75	64.38	62.60	59.17
PRMLxT1L	2023-04-12 14:55:45	-27.88	77.92	79.75	67.81	71.56	69.33	66.37	68.86	61.67	57.80	58.06	61.54	55.31
PRMLxT1L	2023-04-12 10:35:35	-27.58	50.63	47.29	56.55	55.36	53.00	59.17	61.58	55.88	53.41	51.88	59.91	48.41
PRMLxT1L	2023-03-23 11:12:03	-28.64	85.31	79.29	90.61	86.30	70.84	59.75	49.68	55.70	49.91	50.95	48.87	52.84
PRMLxT1L	2023-03-23 09:47:22	-29.16	2.44	1.41	32.70	38.97	44.48	57.43	60.24	55.69	60.63	63.35	61.10	60.73
PRMLxT1L	2023-03-19 06:43:46	-28.55	45.86	53.64	50.36	48.48	39.74	43.36	37.33	33.88	37.19	37.19	31.45	34.66
PRMLxT1L	2023-03-17 08:13:23	-28.49	67.24	63.76	62.84	55.22	65.39	64.43	66.90	63.56	61.30	58.28	56.83	54.69
PRMLxT1L	2023-03-08 09:41:26	-28.48	63.94	68.89	69.29	67.88	62.26	63.46	59.19	67.50	65.47	62.43	61.68	72.02
PRMLxT1L	2023-03-08 09:31:17	-28.63	65.51	57.73	60.78	65.33	69.35	62.91	63.35	61.91	69.32	63.08	63.81	62.18

Date	100	125	160	200	250	315	400	500	630	800	1000
2023-05-25 09:16:49	####	####	####	####	####	####	####	####	####	####	#####
2023-04-18 14:15:49	####	####	####	####	####	####	####	####	####	####	#####
2023-04-18 10:51:42	####	####	####	####	####	####	####	####	####	####	#####
2023-04-12 14:55:45	####	####	####	####	####	####	####	####	####	####	#####
2023-04-12 10:35:35	####	####	####	####	####	####	####	####	####	####	#####
2023-03-23 11:12:03	####	####	####	####	####	####	####	####	####	####	#####
2023-03-23 09:47:22	####	####	####	####	####	####	####	####	####	####	#####
2023-03-19 06:43:46	####	####	####	####	####	####	####	####	####	####	#####
2023-03-17 08:13:23	####	####	####	####	####	####	####	####	####	####	#####
2023-03-08 09:41:26	####	####	####	####	####	####	####	####	####	####	#####
2023-03-08 09:31:17	####	####	####	####	####	####	####	####	####	####	#####

Date	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000	12500	16000	20000
2023-05-25 09:16:49	47.39	19.32	64.19	19.27	58.97	24.09	29.51	20.51	20.80	20.68	21.84	25.61	29.22
2023-04-18 14:15:49	48.73	31.92	58.36	20.38	58.69	25.13	30.24	21.29	21.76	21.32	22.75	26.49	30.04
2023-04-18 10:51:42	58.70	54.44	58.71	50.81	60.60	49.88	48.99	46.75	43.53	41.43	41.33	42.90	41.45
2023-04-12 14:55:45	48.98	34.19	61.97	20.43	59.64	26.50	30.04	21.61	22.22	21.95	23.13	26.97	30.52
2023-04-12 10:35:35	50.13	36.42	64.24	25.29	60.16	26.30	31.67	22.81	24.22	23.89	24.09	28.37	31.68
2023-03-23 11:12:03	49.32	19.71	65.93	21.50	60.96	25.73	31.48	22.22	22.45	22.77	23.94	27.72	30.95
2023-03-23 09:47:22	59.95	55.36	65.18	52.76	60.50	50.96	50.44	49.70	47.53	45.08	41.92	43.21	42.89
2023-03-19 06:43:46	48.20	18.86	66.16	20.06	59.01	24.32	29.82	21.46	21.83	21.87	22.93	26.83	30.35
2023-03-17 08:13:23	48.52	24.49	66.30	20.77	59.12	23.20	29.79	22.25	21.93	22.00	23.02	26.81	30.45
2023-03-08 09:41:26	48.74	20.37	65.89	21.13	60.39	26.94	31.06	21.77	22.38	22.62	23.27	27.08	30.91
2023-03-08 09:31:17	48.41	23.36	65.36	21.63	60.09	26.59	30.92	21.42	22.03	21.54	23.15	27.12	30.37

Measurement Report

Report Summary

Meter's File Name	ST-.106.s	Computer's File Name	LxTse_0007061-20230525 133008-ST-.106.ldbin
Meter	LxT SE 0007061		
Firmware	2.404		
User		Location	
Job Description			
Note			

Start Time	2023-05-25 13:30:08	Duration	0:10:00.0		
End Time	2023-05-25 13:40:08	Run Time	0:10:00.0	Pause Time	0:00:00.0

Results

Overall Metrics

LA_{eq}	59.9 dB		
LAE	87.7 dB	SEA	--- dB
EA	65.9 µPa²h		
LA_{peak}	87.4 dB	2023-05-25 13:31:33	
LAS_{max}	73.9 dB	2023-05-25 13:31:34	
LAS_{min}	49.8 dB	2023-05-25 13:39:04	
LA_{eq}	59.9 dB		
LC_{eq}	70.2 dB	LC_{eq} - LA_{eq}	10.3 dB
LAI_{eq}	62.0 dB	LAI_{eq} - LA_{eq}	2.0 dB

Exceedances

	Count	Duration
LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight	
59.9 dB	59.9 dB	0.0 dB	
LDEN	**LDay**	**LEve**	**LNight**
59.9 dB	59.9 dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	59.9 dB		70.2 dB		--- dB	
$Ls_{(max)}$	73.9 dB	2023-05-25 13:31:34	--- dB		--- dB	
$LS_{(min)}$	49.8 dB	2023-05-25 13:39:04	--- dB		--- dB	
$L_{Peak(max)}$	87.4 dB	2023-05-25 13:31:33	--- dB		--- dB	

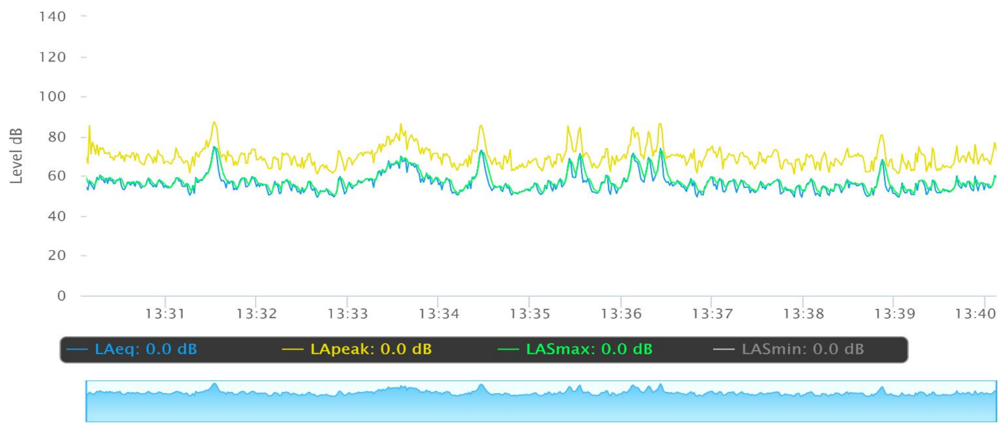
Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	66.4 dB
LAS 10.0	62.8 dB
LAS 33.3	57.1 dB
LAS 50.0	55.7 dB
LAS 66.6	54.5 dB
LAS 90.0	52.1 dB

Time History



Appendix B

Noise Modeling Results

Project: 11171 Cherry Warehouse

Construction Noise Impact on Sensitive Receptors

Parameters

Construction Hours:	Daytime hours (7 am to 7 pm)	8
	Evening hours (7 pm to 10 pm)	0
	Nighttime hours (10 pm to 7 am)	0
Leq to L10 factor		3

	Receptor (Land Use)	Distance (feet)	Shielding	Direction
1	Single Family Residential (S)	675	0	S
2	Heny J. Kaiser High School (W)	800	0	W
3	Shadow Hills Elementary School (SW)	2,300	0	SW

					RECEPTOR 1		RECEPTOR 2		RECEPTOR 3	
Construction Phase	Equipment Type	No. of Equip.	Acoustical Usage Factor	Reference Noise Level at 50ft per Unit, Lmax	Noise Level at Receptor 1, Lmax	Noise Level at Receptor 1, Leq	Noise Level at Receptor 2, Lmax	Noise Level at Receptor 2, Leq	Noise Level at Receptor 3, Lmax	Noise Level at Receptor 3, Leq
Demolition										
	Concrete Saw	1	20%	90	67.0	60.0	65.5	58.5	56.3	49.4
	Excavator	3	40%	81	62.9	58.9	61.4	57.4	52.2	48.2
	Dozer	2	40%	82	62.1	58.1	60.6	56.6	51.5	47.5
Combined LEQ						63.8		62.4		53.2
Site Preparation										
	Dozer	3	40%	82	63.9	59.9	62.4	58.4	53.2	49.2
	Tractor	4	40%	84	67.4	63.4	65.9	62.0	56.8	52.8
Combined LEQ						65.0		63.5		54.4
Grading										
	Excavator	2	40%	81	61.1	57.1	59.6	55.6	50.5	46.5
	Grader	1	40%	85	62.4	58.4	60.9	56.9	51.7	47.8
	Dozer	1	40%	82	59.1	55.1	57.6	53.6	48.4	44.5
	Scraper	2	40%	84	64.0	60.0	62.5	58.5	53.4	49.4
	Tractor	2	40%	84	64.4	60.4	62.9	58.9	53.8	49.8
Combined LEQ						65.6		64.1		55.0
Building Construction										
	Crane	1	16%	81	58.0	50.0	56.5	48.6	47.3	39.4
	All Other Equipment > 5 HP	3	50%	85	67.2	64.2	65.7	62.7	56.5	53.5
	Generator	1	50%	81	58.0	55.0	56.5	53.5	47.3	44.3
	Tractor	3	40%	84	66.2	62.2	64.7	60.7	55.5	51.5
	Welder/Torch	1	40%	74	51.4	47.4	49.9	45.9	40.7	36.8
Combined LEQ						66.7		65.3		56.1
Paving										
	Paver	2	50%	77	57.6	54.6	56.1	53.1	47.0	43.9
	Pavement Scarafier	2	20%	90	69.9	62.9	68.4	61.4	59.3	52.3
	Roller	2	20%	80	60.4	53.4	58.9	51.9	49.8	42.8
Combined LEQ						63.9		62.4		53.3
Architecftural Coating										
	Compressor (air)	1	40%	78	55.1	51.1	53.6	49.6	44.4	40.5
Combined LEQ						51.1		49.6		40.5
Overlapping Phases										
Demolition + Site Preparation						67.5		66.0		56.8
Grading/Infrastructure + Building Construction						69.2		67.8		58.6
Building Construction + Architectural Coating						66.9		65.4		56.2
Building Construction + Paving						68.6		67.1		57.9
Maximum Noise Level						69.2		67.8		58.6

Source for Ref. Noise Levels: RCNM, 2005

Receptor	Phase	Direction	Distance to Center of Site	Project Construction Noise Level dBA Leq
1 Single Family Residential (S)	Demolition	S	675	63.8
	Site Preparation			65.0
	Grading			65.6
	Building Construction			66.7
	Paving			63.9
	Architecftural Coating			51.1
	Demolition + Site Preparation			67.5
	Grading/Infrastructure + Building Construction			69.2
	Building Construction + Architectural Coating			66.9
	Building Construction + Paving			68.6
2 Heny J. Kaiser High School (W)	Demolition	W	800	62.4
	Site Preparation			63.5
	Grading			64.1
	Building Construction			65.3
	Paving			62.4
	Architecftural Coating			49.6
	Demolition + Site Preparation			66.0
	Grading/Infrastructure + Building Construction			67.8
	Building Construction + Architectural Coating			65.4
	Building Construction + Paving			67.1
3 Shadow Hills Elementary School (SW)	Demolition	SW	2300	53.2
	Site Preparation			54.4
	Grading			55.0
	Building Construction			56.1
	Paving			53.3
	Architecftural Coating			40.5
	Demolition + Site Preparation			56.8
	Grading/Infrastructure + Building Construction			58.6
	Building Construction + Architectural Coating			56.2
	Building Construction + Paving			57.9

Project: 11171 Cherry Ave
Mechanical Equipment Noise Calculations

Receptor	Reference Level (dBA)	Reference Distance (feet)	Distance to Receptor (feet)	Level at Receptor (dBA)	Daytime Threshold	Nighttime Threshold	Significant (Day)?	Significant (Night)?
Single Family Residential (S)	52	50	250	38.0	65.0	60.0	No	No
Henry J. Kaiser High School (W)	52	50	160	41.9	65.0	60.0	No	No
Shadow Hills Elementary School (SW)	52	50	1700	21.4	65.0	60.0	No	No

1. Source for reference level: Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values* , July 6, 2010.

2. Distance estimated using location of nearest Project rooftop equipment as indiciated on Site Plan

Project: 11171 Cherry Ave
Truck / Loading

Receptor	Reference Level (dBA)[1]	Reference Distance (feet)	Distance to Receptor (feet)[2]	Level at Receptor (dBA)	Daytime Threshold	Nighttime Threshold	Significant (Day)?	Significant (Night)?
Single Family Residential (S)	64.4	50	280	49.4	65.0	60.0	No	No
Henry J. Kaiser High School (W)	64.4	50	550	43.6	65.0	60.0	No	No
Shadow Hills Elementary School (SW)	64.4	50	2050	32.1	65.0	60.0	No	No

1. Loading dock reference noise level measurements conducted by Kimley-Horn on December 18, 2018.

2. Distance estimated using location of trash room as indiciated on Site Plan

Project: 11171 Cherry Ave
Back-Up Alarms

Receptor	Reference Level (dBA)[1]	Reference Distance (feet)	Distance to Receptor (feet)[2]	Level at Receptor (dBA)	Daytime Threshold	Nighttime Threshold	Significant (Day)?	Significant (Night)?
Single Family Residential (S)	97	3.3	280	58.4	65.0	60.0	No	No
Henry J. Kaiser High School (W)	97	3.3	550	52.6	65.0	60.0	No	No
Shadow Hills Elementary School (SW)	97	3.3	2050	41.1	65.0	60.0	No	No

1. Environmental Health Perspectives, Vehicle Motion Alarms: Necessity, Noise Pollution, or Both? https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3018517/, accessed September 2022

2. Distance estimated using location of loading area as indiciated on Site Plan

Project: 11171 Cherry Ave
Parking

Receptor	Reference Level (dBA)[1]	Reference Distance (feet)	Distance to Receptor (feet)[2]	Level at Receptor (dBA)	Daytime Threshold	Nighttime Threshold	Significant (Day)?	Significant (Night)?
Single Family Residential (S)	45.9	50	200	33.9	65.0	60.0	No	No
Henry J. Kaiser High School (W)	45.9	50	140	37.0	65.0	60.0	No	No
Shadow Hills Elementary School (SW)	45.9	50	1630	15.6	65.0	60.0	No	No

1. FTA's reference noise level is 92 dBA SEL at 50 feet from the noise source for a parking lot

2. Distance estimated using location of parking as indiciated on Site Plan

Parking Lot Noise

Number of Vehicles Per Hour:	89
Hourly L_{eq} at 50 feet:	45.9

$L_{eq(h)} = SEL_{ref} + 10\log(NA/1{,}000) – 35.6$

Where:

$L_{eq(h)}$	=	45.9	hourly L_{eq} noise level at 50 feet
SEL_{ref}	=	92	reference noise level for stationary noise source represented in sound exposure level (SEL) at 50 feet
NA	=	89	number of automobiles per hour
35.6	=	35.6	Constant, calculated as 10 times the logarithm of the number of seconds in an hour

FTA's reference noise level is 92 dBA SEL at 50 feet from the noise source for a parking lot

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

		Existing			Opening Year 2024 No Project			Opening Year 2024 + Project			Future 2045 No Project			Future 2045 + Project		
		AM	PM	ADT	AM	PM	ADT	AM	PM	ADT	AM	PM	ADT	AM	PM	ADT
Cherry Ave	n/o Jurupa Ave	1319	1,415	13,670	1,469	1,363	14,160	1,497	1,497	14,970	1,654	1,622	16,380	1,682	1,657	16,695
Jurupa Ave	btwn Cherry Ave and Redwood Ave	1477	1,747	16,120	1,313	1,794	15,535	1,461	2,123	17,920	1,438	2,257	18,475	1,594	2,577	20,855
Jurupa Ave	e/o Redwood Ave	1212	1,709	14,605	1,249	1,756	15,025	1,263	1,772	15,175	1,397	2,213	18,050	1,411	2,229	18,200
Redwood Ave	n/o Jurupa Ave	55	68	615	62	76	690	115	117	1,160	67	82	745	109	123	1,160

Project Trucks		AM	PM	ADT
Cherry Ave	n/o Jurupa Ave	16	24	200
Jurupa Ave	btwn Cherry Ave and Redwood Ave	16	24	200
Jurupa Ave	e/o Redwood Ave	0	0	0
Redwood Ave	n/o Jurupa Ave	16	24	200

TRUCK PERCENTAGE

	Peak Hour Volume				
Vehicle Class	AM	PM	Average AM & PM		2-Axle & 3-Axle Total (Medium
Total	1,497	1,497	1497		
Passenger Vehicle	3903	5363	4633	Fleet Mix %	
2-Axle	239	194	216.5	0.123927	0.1702919
3-Axle	73	89	81	0.046365	
4-Axle (Heavy Truck)	222	239	230.5	0.13194	

	Existing Trucks	Project's Trucks	Total Trucks	Fleet Mix %	
Medium Truck	273.40	100	373.4	0.0249	0.025
Heavy Trucks	136.70	100	236.7	0.0158	0.016

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name: 11171 Cherry Warehouse
Project Number:
Scenario: Existing
Ldn/CNEL: CNEL

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

								Vehicle Mix			Distance from Centerline of Roadway			
				Median	ADT	Speed	Alpha	Medium	Heavy	CNEL at	Distance to Contour			
#	Roadway	Segment	Lanes	Width	Volume	(mph)	Factor	Trucks	Trucks	100 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL
1	Cherry Ave	n/o Jurupa Ave	6	12	13,670	45	0	2.0%	1.0%	64.8	-	95	299	945
2	Jurupa Ave	btwn Cherry Ave and Redwood Ave	5	12	16,120	45	0	2.0%	1.0%	65.4	-	109	345	1,090
3	Jurupa Ave	e/o Redwood Ave	5	12	14,605	45	0	2.0%	1.0%	64.9	-	99	312	988
4	Redwood Ave	n/o Jurupa Ave	2	12	615	45	0	2.0%	1.0%	51.0	-	-	-	40

[1] Distance is from the centerline of the roadway segment to the receptor location.

"-" = contour is located within the roadway right-of-way.

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name: 11171 Cherry Warehouse
Project Number:
Scenario: Opening Year
Ldn/CNEL: CNEL

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

								Vehicle Mix			Distance from Centerline of Roadway			
				Median	ADT	Speed	Alpha	Medium	Heavy	CNEL at	Distance to Contour			
#	**Roadway**	**Segment**	**Lanes**	**Width**	**Volume**	**(mph)**	**Factor**	**Trucks**	**Trucks**	**100 Feet**	**70 CNEL**	**65 CNEL**	**60 CNEL**	**55 CNEL**
1	Cherry Ave	n/o Jurupa Ave	6	12	14160	45	0	2.0%	1.0%	64.9	-	98	310	979
2	Jurupa Ave	btwn Cherry Ave and Redwood Ave	5	12	15535	45	0	2.0%	1.0%	65.2	-	105	332	1,050
3	Jurupa Ave	e/o Redwood Ave	5	12	15025	45	0	2.0%	1.0%	65.1	-	102	321	1,016
4	Redwood Ave	n/o Jurupa Ave	2	12	690	45	0	2.0%	1.0%	51.5	-	-	-	45

[1] Distance is from the centerline of the roadway segment to the receptor location.

"-" = contour is located within the roadway right-of-way.

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name: 11171 Cherry Warehouse
Project Number:
Scenario: Opening Year Plus Project
Ldn/CNEL: CNEL

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

								Vehicle Mix			Distance from Centerline of Roadway			
				Median	ADT	Speed	Alpha	Medium	Heavy	CNEL at	Distance to Contour			
#	Roadway	Segment	Lanes	Width	Volume	(mph)	Factor	Trucks	Trucks	100 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL
1	Cherry Ave	n/o Jurupa Ave	6	12	14970	45	0	2.5%	1.6%	65.8	-	120	378	1,197
2	Jurupa Ave	btwn Cherry Ave and Redwood Ave	5	12	17920	45	0	2.5%	1.6%	66.5	-	140	443	1,401
3	Jurupa Ave	e/o Redwood Ave	5	12	15175	45	0	2.5%	1.6%	65.7	-	119	375	1,186
4	Redwood Ave	n/o Jurupa Ave	2	12	1160	45	0	2.5%	1.6%	54.4	-	-	-	87

[1] Distance is from the centerline of the roadway segment to the receptor location.

"-" = contour is located within the roadway right-of-way.

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name: 11171 Cherry Warehouse
Project Number:
Scenario: Horizon Year
Ldn/CNEL: CNEL

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

								Vehicle Mix		Distance from Centerline of Roadway				
				Median	ADT	Speed	Alpha	Medium	Heavy	CNEL at	Distance to Contour			
#	**Roadway**	**Segment**	**Lanes**	**Width**	**Volume**	**(mph)**	**Factor**	**Trucks**	**Trucks**	**100 Feet**	**70 CNEL**	**65 CNEL**	**60 CNEL**	**55 CNEL**
1	Cherry Ave	n/o Jurupa Ave	6	12	16380	45	0	2.0%	1.0%	65.5	-	113	358	1,132
2	Jurupa Ave	btwn Cherry Ave and Redwood Ave	5	12	18475	45	0	2.0%	1.0%	66.0	-	125	395	1,249
3	Jurupa Ave	e/o Redwood Ave	5	12	18050	45	0	2.0%	1.0%	65.9	-	122	386	1,220
4	Redwood Ave	n/o Jurupa Ave	2	12	745	45	0	2.0%	1.0%	51.8	-	-	-	48

[1] Distance is from the centerline of the roadway segment to the receptor location.

"-" = contour is located within the roadway right-of-way.

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name: 11171 Cherry Warehouse
Project Number:
Scenario: Horizon Year Plus Project
Ldn/CNEL: CNEL

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

								Vehicle Mix		Distance from Centerline of Roadway				
				Median	ADT	Speed	Alpha	Medium	Heavy	CNEL at	Distance to Contour			
#	Roadway	Segment	Lanes	Width	Volume	(mph)	Factor	Trucks	Trucks	100 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL
1	Cherry Ave	n/o Jurupa Ave	6	12	16695	45	0	2.5%	1.6%	66.3	-	133	422	1,334
2	Jurupa Ave	btwn Cherry Ave and Redwood Ave	5	12	20855	45	0	2.5%	1.6%	67.1	-	163	515	1,630
3	Jurupa Ave	e/o Redwood Ave	5	12	18200	45	0	2.5%	1.6%	66.5	-	142	450	1,423
4	Redwood Ave	n/o Jurupa Ave	2	12	1160	45	0	2.5%	1.6%	54.4	-	-	-	87

[1] Distance is from the centerline of the roadway segment to the receptor location.

"-" = contour is located within the roadway right-of-way.

11171 CHERRY AVENUE WAREHOUSE

TRAFFIC IMPACT ANALYSIS

APRIL 24, 2023

PREPARED FOR:

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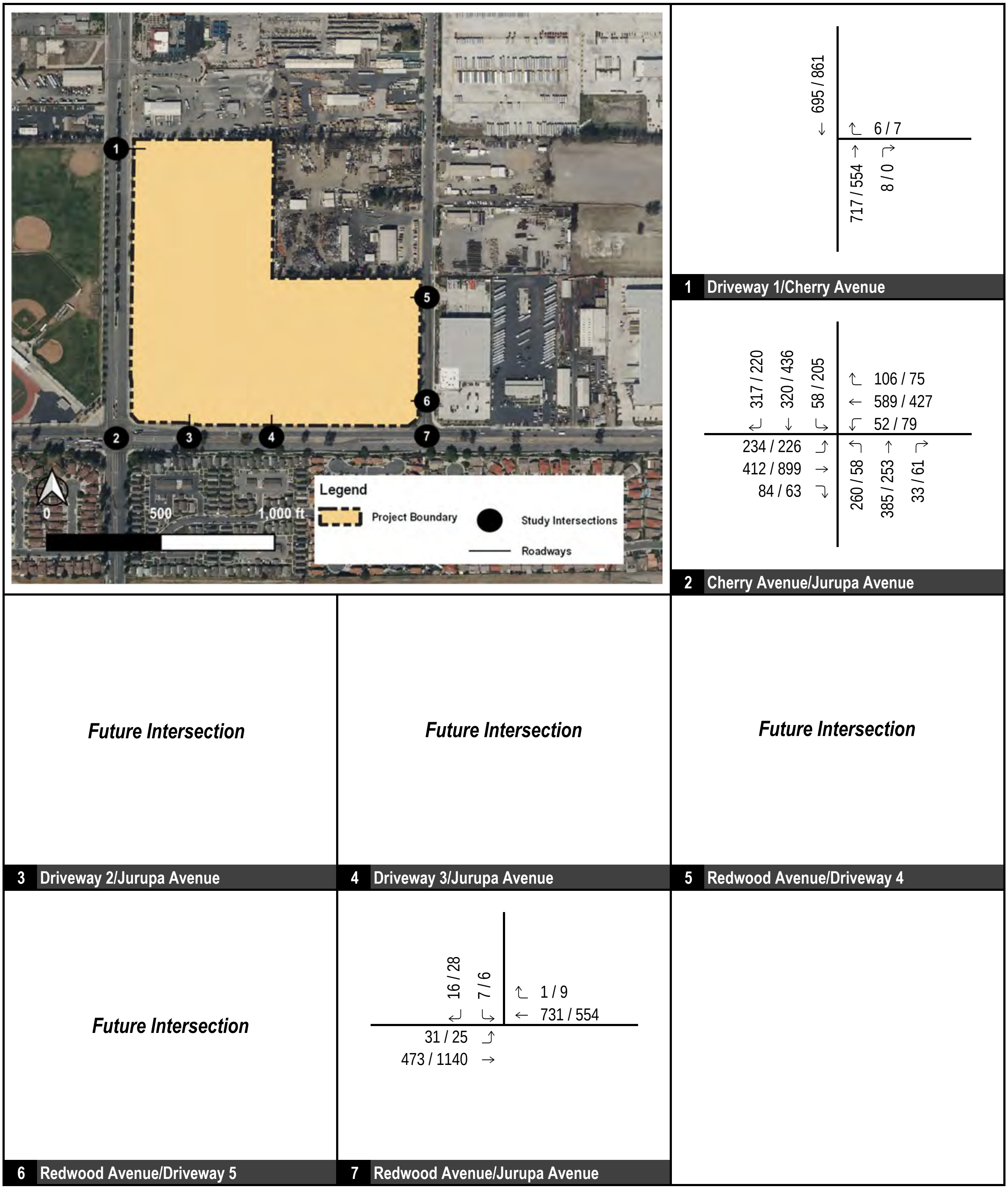

FIGURE 15

XXX / YYY AM / PM PCE Volumes

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11171 Cherry Avenue Warehouse
Existing Peak Hour Traffic Volumes (PCEs)

P:\Hillwood - Fontana Cherry Avenue\analysis\Z12 Vol Exist 4/24/2023

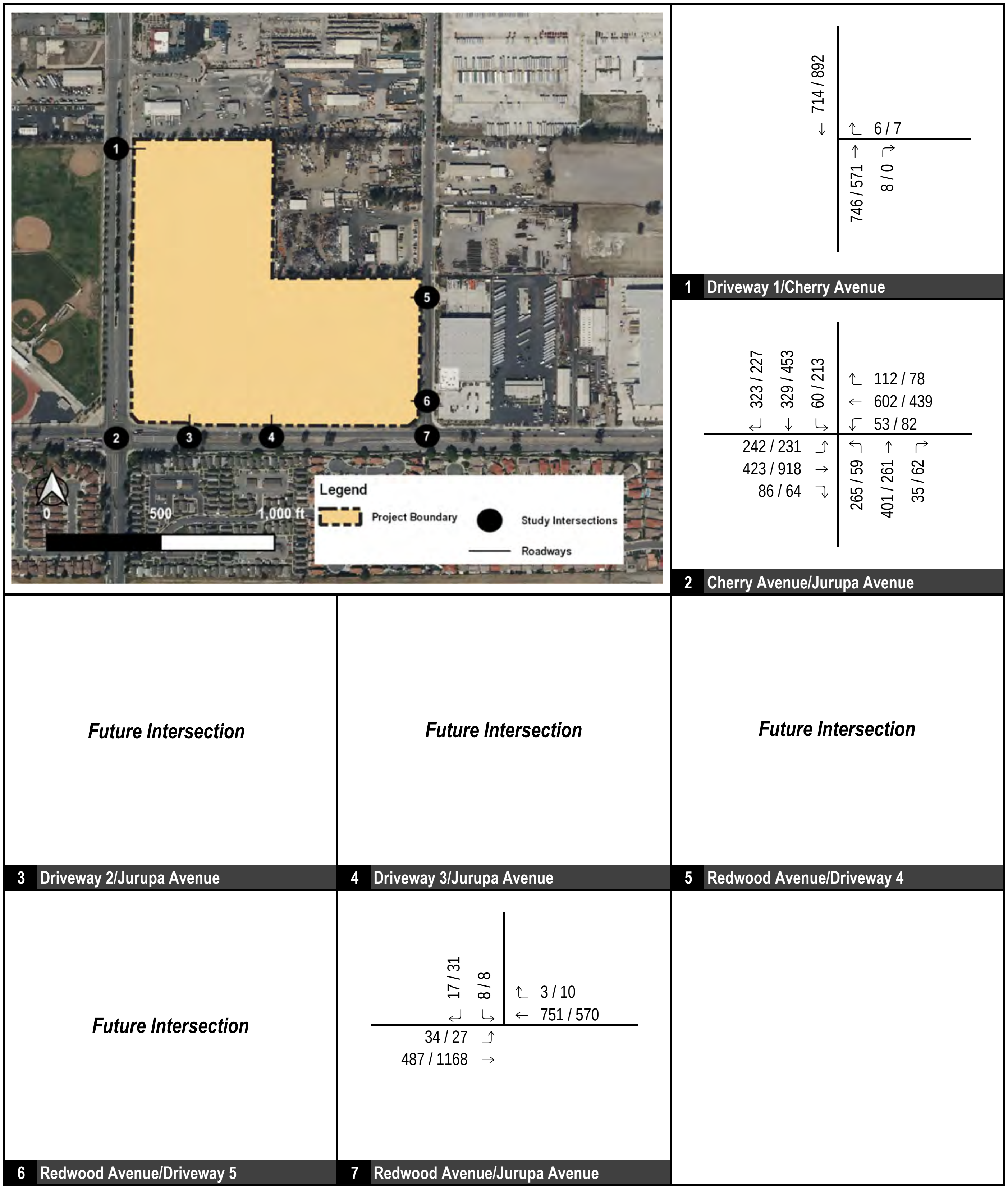

FIGURE 17

XXX / YYY AM / PM PCE Volumes

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11171 Cherry Avenue Warehouse
Opening Year (2024) Without Project Peak Hour Traffic Volumes (PCEs)

P:\Hillwood - Fontana Cherry Avenue\analysis\Z12 Vol OY 4/24/2023

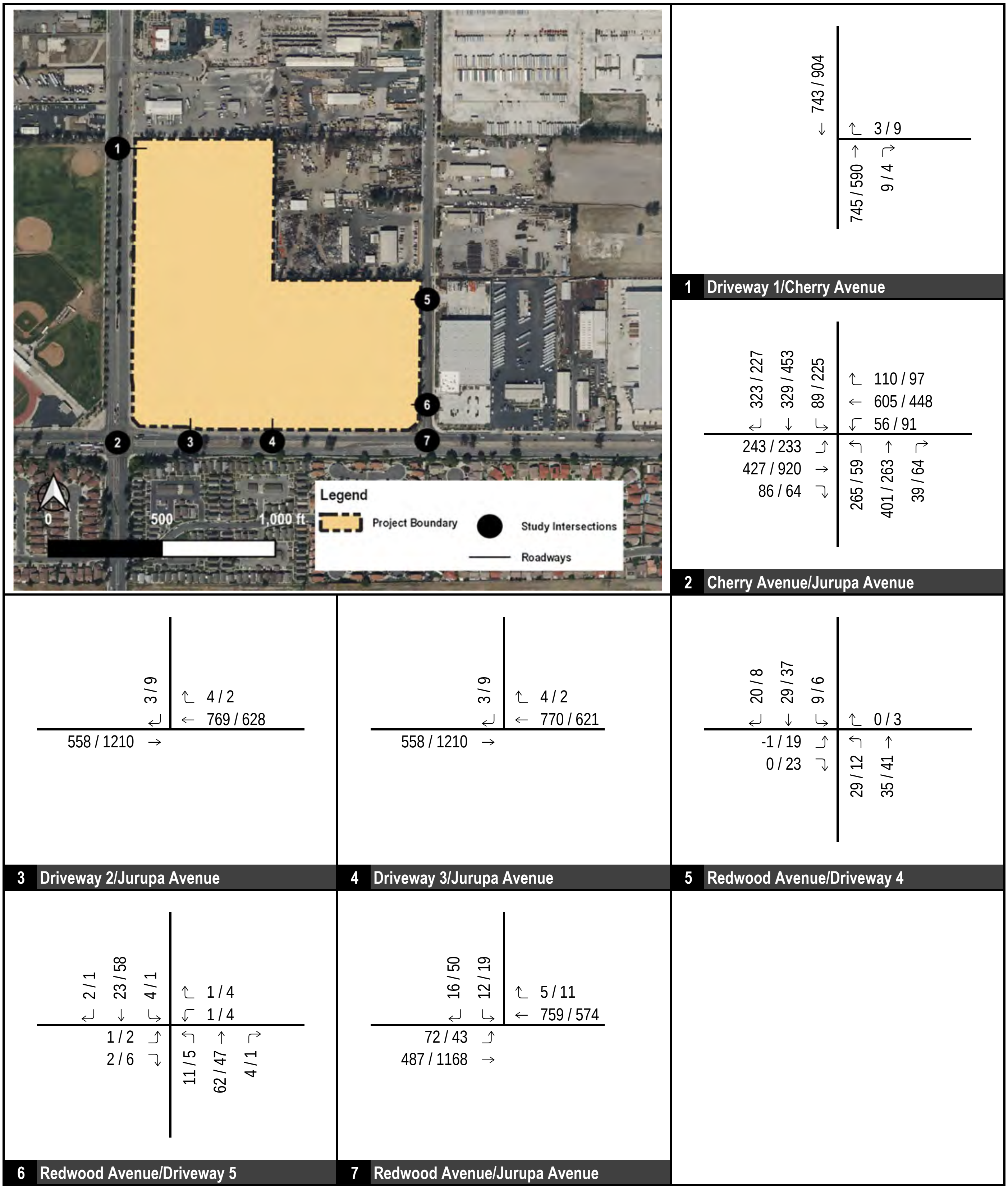

FIGURE 19

XXX / YYY AM / PM PCE Volumes

11171 Cherry Avenue Warehouse
Opening Year (2024) With Project Peak Hour Traffic Volumes (PCEs)

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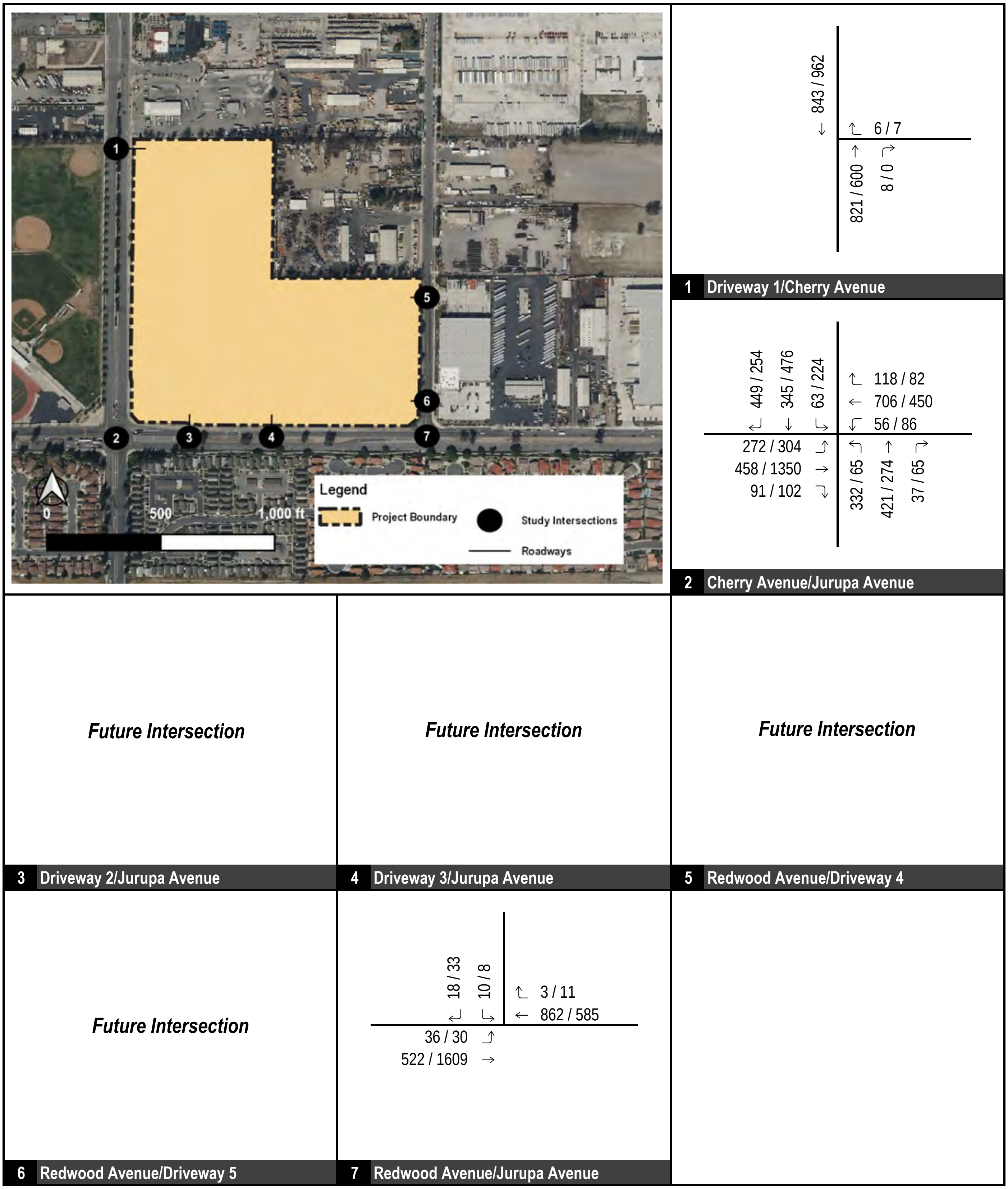

FIGURE 20

XXX / YYY AM / PM PCE Volumes

11171 Cherry Avenue Warehouse

Future Build-Out Year 2045 Without Project Peak Hour Traffic Volumes (PCEs)

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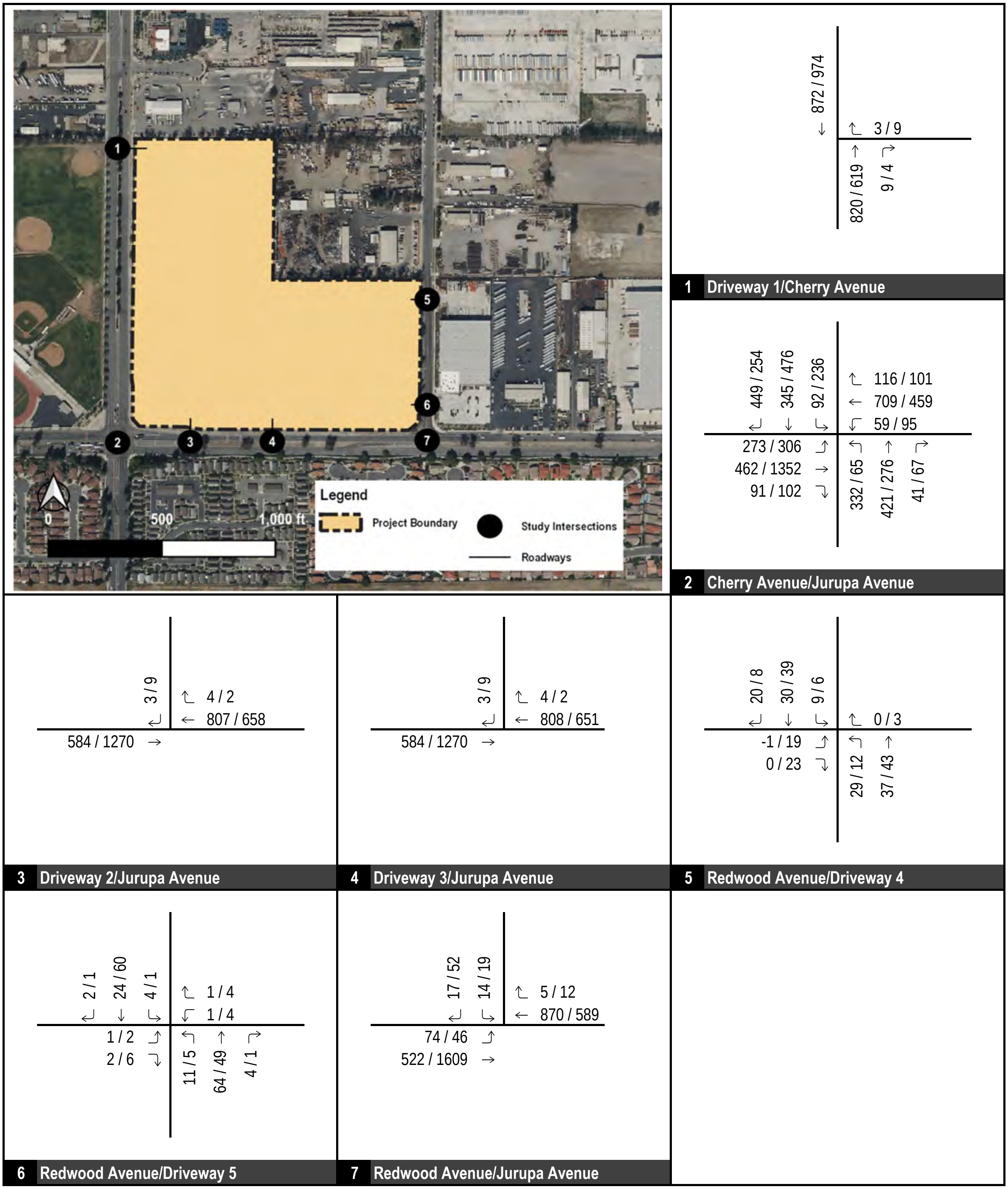

FIGURE 21

XXX / YYY AM / PM PCE Volumes

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11171 Cherry Avenue Warehouse

Future Build-Out Year 2045 With Project Peak Hour Traffic Volumes (PCEs)