

7849 Stockton Boulevard Project

Noise and Vibration Technical Report

September 2023 | 04938.00002.001

Prepared for:

King's Express Tire & Lube, Inc.

7849 Stockton Boulevard
Sacramento, CA 95823

Prepared by:

HELIX Environmental Planning, Inc.

1180 Iron Point Road, Suite 130
Folsom, CA 95630

This page intentionally left blank

Table of Contents

<u>Section</u>	<u>Page</u>
EXECUTIVE SUMMARY	ES-1
1.0 INTRODUCTION.....	1
1.1 Project Location	1
1.2 Project Description	1
1.3 Construction Activities and Phasing	1
2.0 ENVIRONMENTAL SETTING.....	1
2.1 Descriptors.....	1
2.2 Terminology.....	2
2.2.1 Sound, Noise, and Acoustics	2
2.2.2 Frequency	2
2.2.3 Addition of Decibels.....	2
2.3 Groundborne Vibration Descriptors and Terminology.....	3
2.4 Noise and Vibration Sensitive Land uses	3
2.5 Regulatory Framework	4
2.5.1 Federal Regulations	4
2.5.2 State Regulations	4
2.5.3 Local Regulations	4
2.6 Existing Conditions.....	9
2.6.1 Surrounding Land Uses	9
2.6.2 Existing Noise Sources	9
2.6.3 Site Survey	10
3.0 METHODOLOGY, ASSUMPTIONS, AND SIGNIFICANCE CRITERIA.....	11
3.1 Methodology.....	11
3.1.1 Noise Modeling Software	11
3.2 Assumptions.....	11
3.2.1 Construction	11
3.2.2 Operations	13
3.3 Guidelines for the Determination of Significance.....	14
4.0 IMPACTS.....	15
4.1 Issue 1: Excessive Noise Levels	15
4.1.1 Temporary Construction Noise.....	15
4.1.2 Permanent Operational Noise	17
4.1.3 Significance of Impacts	19
4.1.4 Mitigation Framework	19
4.1.5 Significance After Mitigation	20

Table of Contents (cont.)

<u>Section</u>	<u>Page</u>
4.2 Issue 2: Excessive Vibration	20
4.2.1 Construction Vibration.....	20
4.2.2 Operational Vibration	20
4.2.3 Significance of Impacts	21
4.2.4 Mitigation Framework	21
4.2.5 Significance After Mitigation	21
4.3 Issue 3: Airport Noise Exposure	21
4.3.1 Significance of Impacts	21
4.3.2 Mitigation Framework	21
4.3.3 Significance After Mitigation	21
5.0 LIST OF PREPARERS	22
6.0 REFERENCES	23

LIST OF APPENDICES

- A Noise Measurement Sheets
- B Modeling Output

LIST OF FIGURES

<u>No.</u>	<u>Title</u>	<u>Follows Page</u>
1	Site and Vicinity Map	2
2	Aerial Map.....	2
3	Site Plan	2
4	Modeled Receivers	18

Table of Contents (cont.)

LIST OF TABLES

<u>No.</u>	<u>Title</u>	<u>Page</u>
1	Noise Standards for New Uses Affected By Traffic and Railroad Noise.....	5
2	Non-Transportation Noise Standards	6
3	Significant Increases in Traffic and Railroad Noise	7
4	Requirements for Acoustical Analyses Prepared in Sacramento County	7
5	Section 6.68.070(A) Exterior Noise Standards.....	8
6	Section 6.68.070(B) Exterior Noise Standards	8
7	Ambient Noise Measurement Results	10
8	Anticipated Construction Schedule	12
9	Construction Equipment.....	12
10	Construction Equipment Noise Levels	16
11	On-Site Truck Noise.....	17
12	On-Site Truck Noise With Sound Walls.....	18

Acronyms and Abbreviations

ADT	average daily trips
APN	Assessor's Parcel Number
CadnaA	DataKustic Computer Aided Noise Abatement model
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CMU	concrete masonry unit
CNEL	Community Noise Equivalent Level
County	County of Sacramento
CY	cubic yard
dB	decibel
dBA	A-weighted decibel
Hz	Hertz
kHz	kilohertz
L ₅₀	noise level which is exceed 50 percent of the time in a given period
L _{DN}	Day-Night noise level
L _{EQ}	time-averaged noise level
L _{MAX}	maximum noise level
mph	miles per hour
mPa	micro Pascal
NPA	Neighborhood Preservation Area
NSLU	noise sensitive land use
PPV	peak particle velocity
RCNM	Roadway Construction Noise Model
SPL	sound pressure level
S _{WL}	Sound Power Level
TIS	Transportation Impact Study
TNM	Traffic Noise Model
TRU	transport refrigeration unit
USDOT	U.S. Department of Transportation

EXECUTIVE SUMMARY

This report assesses potential construction and operational noise impacts associated with the 7849 Stockton Boulevard Project (project) located the unincorporated South Sacramento community of Sacramento County (County), California. The project would develop a truck parking lot to be used for parking and short-term storage of trucks and truck trailers. The established truck tire business/building and related parking located on the project site would remain and is independent of the project.

Per the County noise ordinance, construction noise is exempt from the provisions of the noise ordinance provided the construction activity does not occur after the hours of 8 p.m. on any night of the week, or before the hours of 6 a.m. on weekday mornings or before 7 a.m. on Saturday and Sunday mornings. Anticipated construction activities would generate temporary elevated noise levels exceeding the County non-transportation noise standards, measured at the existing residence approximately 135 feet east of the project site. Mitigation measure NOI-1 would prohibit nighttime construction in accordance with the County noise ordinance. Project construction noise impacts would be less than significant with mitigation incorporated.

Noise sources for long-term operation of the project truck parking facility would include truck circulation and idling, occasional truck back-up alarms, and additional traffic on roadways in the project vicinity. Operational noise produced on the project site would not exceed the County daytime or nighttime noise standards measured at existing residences east of the project site or at the approved residential subdivision north of the project site. Noise generated by project traffic would not increase noise levels on nearby roadways by significant amounts. Operation of transport refrigeration units (TRUs) on the project site and idling of truck engines longer than 5 minutes on the project site could result in noise exceeding the County standards. Mitigation measure NOI-2 would require signage informing truck drivers of the prohibition of TRU operation and truck engine idling beyond 5 minutes on the project site. Project operational noise impacts would be less than significant with mitigation incorporated.

Project construction would not result in significant vibrations affecting nearby residents or damaging nearby buildings. Project operations would not be a significant source of vibrations. Therefore, project vibration impacts would be less than significant.

The project site is not located within the contours for Sacramento Executive Airport northwest of the project site or Mather Airport northeast of the project site. Therefore, persons working in the project area would not be exposed to substantial noise from airports or aircraft.

This page intentionally left blank

1.0 INTRODUCTION

This report presents an assessment of potential noise and vibration impacts during construction and operation of the proposed 7849 Stockton Boulevard Project (project). This report has been prepared to support environmental review in accordance with the California Environmental Quality Act (CEQA; California Public Resources Code [PRC] §21000 et seq.); State CEQA Guidelines (California Code of Regulations [CCR], Title 14, §15000 et seq.).

1.1 PROJECT LOCATION

The project site is located at the northeast corner of the Stockton Boulevard and Victory Avenue intersection in the unincorporated South Sacramento community of Sacramento County (County), approximately 600 feet east of State Route 99 (SR-99). See Figure 1, *Vicinity Map*, and Figure 2, *Aerial Map*. The project site is located within the Victory Avenue Neighborhood Preservation Area (NPA). The approximately 3.54-acre project site consists of two parcels, Assessor's Parcel Numbers (APNs) 115-0061-031 and 115-0061-032.

1.2 PROJECT DESCRIPTION

The project would develop a truck parking lot to be used for parking and short-term storage of trucks and truck trailers. The established truck tire business/building and related parking located on the project site would remain and is independent of the project. The project does not propose improvements or modifications to the existing building, parking for the existing business, or landscaping around the existing business. The project truck parking lot would not be used for storage of cargo which would require the operation of transport refrigeration units (TRUs) on the project site. The project would provide 70 parking spaces ranging from 40 feet to 75 feet long. Trucks would enter the site via a driveway on Stockton Boulevard. Trucks would exit the project site via driveways on Stockton Boulevard and Victory Avenue. Other project improvements would include security fencing and gates, landscaping along the project perimeter, security lighting, and sidewalk/landscape improvements in the right of way along the project frontage of Stockton Boulevard and Victory Lane. See Figure 3, *Site Plan*.

1.3 CONSTRUCTION ACTIVITIES AND PHASING

Construction of the project is anticipated to begin as early as January 2024 and last approximately four months. Project construction activities would consist of limited demolition (removal of some old concrete, asphalt, fencing; no structures to be demolished), site preparation, grading, construction of truck parking lot improvements, paving, and painting of parking lot lines. Detailed construction activity and equipment assumptions are discussed in Section 3.1, *Methodology*.

2.0 ENVIRONMENTAL SETTING

2.1 DESCRIPTORS

All noise level or sound level values presented herein are expressed in terms of decibels (dB), with A-weighting (dBA) to approximate the hearing sensitivity of humans. Time-averaged noise levels are expressed by the symbol L_{EQ} , with a specified duration. The L_{MAX} level is root mean squared maximum

noise level in a measurement period. The L_{50} is the noise level which is exceeded 50 percent of the time in a given measurement period. The Community Noise Equivalent Level (CNEL) is a 24-hour average, where noise levels during the evening hours of 7:00 p.m. to 10:00 p.m. have an added 5 dBA weighting, and sound levels during the nighttime hours of 10:00 p.m. to 7:00 a.m. have an added 10 dBA weighting. This is similar to the Day Night sound level (L_{DN}), which is a 24-hour average with an added 10 dBA weighting on the same nighttime hours but no added weighting on the evening hours. Sound levels expressed in CNEL or L_{DN} are always based on dBA. These metrics are used to express noise levels for both measurement and municipal regulations, as well as for land use guidelines and enforcement of noise ordinances.

2.2 TERMINOLOGY

2.2.1 Sound, Noise, and Acoustics

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a hearing organ, such as a human ear. Noise is defined as loud, unexpected, or annoying sound.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver contribute to the sound level and characteristics of the noise perceived by the receiver. The field of acoustics deals primarily with the propagation and control of sound.

2.2.2 Frequency

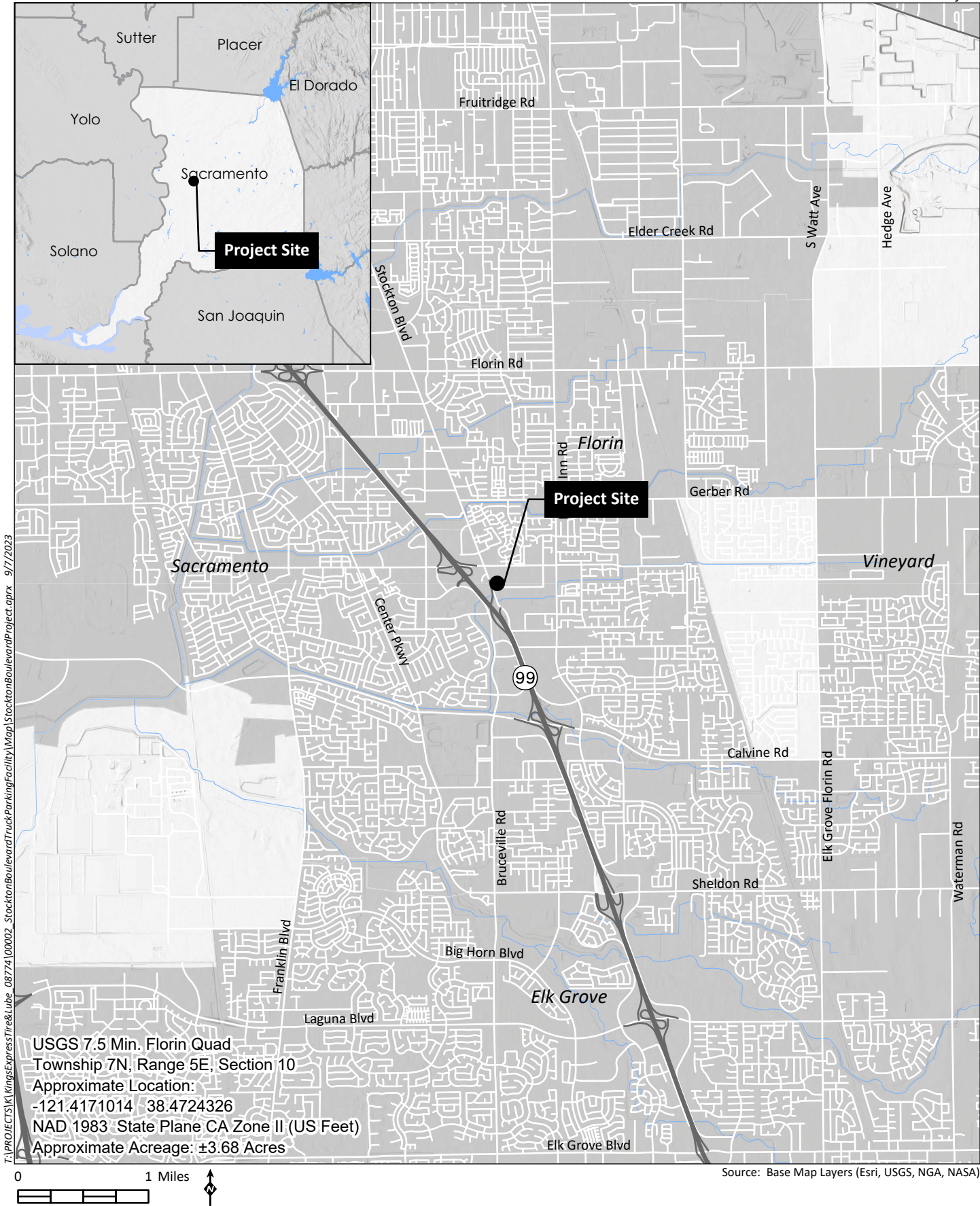
Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or Hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz (kHz), or thousands of Hertz. The audible frequency range for humans is between 20 Hz and 20,000 Hz.

Sound Pressure Levels and Decibels

The amplitude of pressure waves generated by a sound source determines the loudness of that source. Sound pressure amplitude is measured in micro-Pascals (mPa). One mPa is approximately one hundred billionth (0.0000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to 100,000,000 mPa. Because of this wide range of values, sound is rarely expressed in terms of mPa. Instead, a logarithmic scale is used to describe sound pressure level (SPL) in terms of dBA. The threshold of hearing for the human ear is about 0 dBA, which corresponds to 20 mPa.

2.2.3 Addition of Decibels

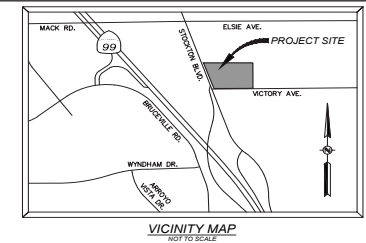
Because decibels are logarithmic units, SPL cannot be added or subtracted through standard arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3 dBA increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dBA higher than from one source under the same conditions.





T:\PROJECTS\KingsExpressTire&Lube_08774\00002_StocktonBoulevardTruckParkingFacility\Map\StocktonBoulevardProject.aprx 9/7/2023





UTILITY CONTACT INFORMATION			
UTILITY	UTILITY CO.	REPRESENTATIVE	PHONE
GAS	PG&E	DEMETRIUS WILLIAMS	(916) 386-5013
ELECTRIC	PG&E	DEMETRIUS WILLIAMS	(916) 386-5013
FIRE	SAC METRO	DIANA SCHMIDT	(916) 859-4323
WATER	CAL AMERICAN WATER	SPENCER PHILLIPS	(916) 568-4210
SEWER	SASD	RAY VASSELLI	(916) 876-6140
SEWAGE	SACRAMENTO COUNTY	LEO ALBA	(916) 874-8846
U.S.A.	UNDERGROUND SERVICE ALERT		1-800-642-2444

HELIX
Environmental Planning

For example, if one automobile produces an SPL of 70 dB when it passes an observer, two cars passing simultaneously would not produce 140 dBA—rather, they would combine to produce 73 dBA. Under the decibel scale, three sources of equal loudness together produce a sound level 5 dBA louder than one source.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear is able to discern 1 dBA changes in sound levels, when exposed to steady, single-frequency (“pure-tone”) signals in the mid-frequency (1,000 Hz to 8,000 Hz) range. In typical noisy environments, changes in noise of 1 to 2 dBA are generally not perceptible. It is widely accepted, however, that people begin to detect sound level increases of 3 dB in typical noisy environments. Further, a 5 dBA increase is generally perceived as a distinctly noticeable increase, and a 10 dBA increase is generally perceived as a doubling of loudness.

No known studies have directly correlated the ability of a healthy human ear to discern specific levels of change in traffic noise over a 24-hour period. Many ordinances, however, specify a change of 3 CNEL or L_{DN} as the significant impact threshold. This is based on the concept of a doubling in noise energy resulting in a 3 dBA change in noise, which is the amount of change in noise necessary for the increase to be perceptible to the average healthy human ear.

2.3 GROUNDBORNE VIBRATION DESCRIPTORS AND TERMINOLOGY

Groundborne vibration consists of rapidly fluctuating motions or waves transmitted through the ground with an average motion of zero. Sources of groundborne vibrations include natural phenomena and anthropogenic causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions). Several different methods are typically used to quantify vibration amplitude. One is the peak particle velocity (PPV); another is the RMS velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. 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. Generally, a PPV of less than 0.08 in/sec does not produce perceptible vibration. At 0.12 PPV in/sec is the level at which continuous vibration may become noticeable to building occupants. A level of 0.50 PPV in/sec is commonly used as a threshold for risk of architectural damage to residential buildings with gypsum board walls (California Department of Transportation [Caltrans] 2020).

2.4 NOISE AND VIBRATION SENSITIVE LAND USES

Noise-sensitive land uses (NSLUs) are land uses that may be subject to stress and/or interference from excessive noise, such as residential dwellings, schools, transient lodgings (hotels), hospitals, educational facilities, and libraries. Industrial and commercial land uses are generally not considered sensitive to noise. Noise receptors are individual locations within an NSLU that may be affected by noise. The nearest existing NSLU to the project site is a single-family residential property approximately 135 feet to the east. Additional existing single-family residence are located further to the east along Victory Avenue and an existing single-family residence is located approximate 370 feet northeast of the project site. The vacant lot adjacent to the property line to the north contains potential future NSLUs—per the approved Raj Subdivision tentative map, the closest residential lots to the project site would be Lots 21 and 25, starting approximately 35 feet to the north, and Lot 30 adjacent to the project site just north of the existing commercial building (Aras Design and Construction 2022). The closest NLUs are shown in

Figure 4, *Modeled Receivers*. At the time of this analysis, no construction had commenced for the Raj Subdivision.

Land uses in which ground-borne vibration could potentially interfere with operations or equipment, such as research, hospitals, and university research operations (Caltrans 2020) are considered “vibration-sensitive.” The degree of sensitivity depends on the specific equipment that would be affected by the ground-borne vibration. In addition, excessive levels of ground-borne vibration of either a regular or an intermittent nature can result in annoyance to residential uses, schools, or transient lodging. Land uses in the project area that are subject to annoyance from vibration include the residences described above. Ground-borne vibration can also cause structural damage or architectural damage (e.g., cracking plaster) to buildings.

2.5 REGULATORY FRAMEWORK

2.5.1 Federal Regulations

2.5.1.1 Noise Control Act of 1972

Under the authority of the Noise Control Act of 1972, the U.S. Environmental Protection Agency (USEPA) established noise emission criteria and testing methods published in Parts 201 through 205 of Title 40 of the Code of Federal Regulations (CFR) that apply to some transportation equipment (e.g., interstate rail carriers, medium trucks, and heavy trucks) and construction equipment. In 1974, USEPA issued guidance levels for the protection of public health and welfare in residential areas of an outdoor L_{DN} of 55 dBA and an indoor L_{DN} of 45 dBA. These guidance levels are not standards or regulations and were developed without consideration of technical or economic feasibility. There are no federal noise standards that directly regulate environmental noise related to the construction or operation of the project.

2.5.2 State Regulations

2.5.2.1 California Noise Control Act of 1973

Sections 46000 through 46080 of the California Health and Safety Code, known as the California Noise Control Act of 1973, finds that excessive noise is a serious hazard to the public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also finds that there is a continuous and increasing bombardment of noise in the urban, suburban, and rural areas. The California Noise Control Act declares that the state has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the state to provide an environment for all Californians free from noise that jeopardizes their health or welfare.

2.5.3 Local Regulations

2.5.3.1 Sacramento County General Plan

The County General Plan Noise Element contains goals and policies for to protect existing and future County residents from the harmful effects of exposure to excessive noise, including policies with standards for new uses affected by transportation noise and non-transportation noise, and new uses

that would include non-transportation noise sources. The following policies would be applicable to the project, or are used in this analysis to evaluate project noise impacts (County 2022):

- NO-1 The noise level standards for noise-sensitive areas of new uses affected by traffic or railroad noise sources in Sacramento County are shown by Table 1. Where the noise level standards of Table 1 are predicted to be exceeded at new uses proposed within Sacramento County which are affected by traffic or railroad noise, appropriate noise mitigation measures shall be included in the project design to reduce projected noise levels to a state of compliance with the Table 1 standards.

Table 1
NOISE STANDARDS FOR NEW USES AFFECTED BY TRAFFIC AND RAILROAD NOISE

New Land Use	Sensitive Outdoor Area (L _{DN}) ¹	Sensitive Interior Area (L _{DN}) ²
All Residential ⁵	65	45
Transient Lodging ^{3, 5}	65	4
Hospitals & Nursing Homes ^{3, 4, 5}	65	545
Theaters & Auditoriums ³	-	35
Churches, Meeting Halls ³	65	40
Schools, Libraries, etc. ³	65	40
Office Buildings ³	65	45
Commercial Buildings ³	-	50
Playgrounds, Parks, etc.	70	-
Industry ³	65	50

Source: Sacramento County General Plan Noise Element (2022)

¹ Sensitive areas = The primary outdoor activity area associated with any given land use at which noise-sensitivity exists and the location at which the County's exterior noise level standards are applied.

² Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.

³ Where there are no sensitive exterior spaces proposed for these uses, only the interior noise level standard shall apply.

⁴ Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.

⁵ If this use is affected by railroad noise, a maximum (L_{MAX}) noise level standard of 70 dB shall be applied to all sleeping rooms to reduce the potential for sleep disturbance during nighttime train passages.

L_{DN} = Day Night sound level; L_{MAX} = maximum noise level; dB = decibels

- NO-6 Where a project would consist of or include non-transportation noise sources, the noise generation of those sources shall be mitigated so as not exceed the interior and exterior noise level standards of Table 2 at existing noise-sensitive areas in the project vicinity.

Table 2
NON-TRANSPORTATION NOISE STANDARDS

Receiving Land Use	Outdoor Area Daytime (L_{50} / L_{MAX}) ^{1, 2}	Outdoor Area Nighttime (L_{50} / L_{MAX}) ¹	Indoor Day and Night (L_{50} / L_{MAX}) ^{1, 3}
All Residential	55 / 75	50 / 70	35 / 55
Transient Lodging ⁴	55 / 75	-	35 / 55
Hospitals & Nursing Homes ^{5, 6}	55 / 75	-	35 / 55
Theaters & Auditoriums ⁶	-	-	30 / 50
Churches, Meeting Halls ⁶	55 / 75	-	35 / 60
Schools, Libraries, etc. ⁶	55 / 75	-	35 / 60
Office Buildings ⁶	60 / 75	-	45 / 65
Commercial Buildings ⁶	-	-	45 / 65
Playgrounds, Parks, etc. ⁶	65 / 75	-	-
Industry ⁶	60 / 80	-	50 / 70

Source: Sacramento County General Plan Noise Element (2022)

- ¹ The Table 2 standards shall be reduced by 5 dB for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the standards of Table 2, then the noise level standards shall be increased at 5 dB increments to encompass the ambient.
- ² Sensitive areas = The primary outdoor activity area associated with any given land use at which noise-sensitivity exists and the location at which the County's exterior noise level standards are applied.
- ³ Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.
- ⁴ Outdoor activity areas of transient lodging facilities are not commonly used during nighttime hours.
- ⁵ Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
- ⁶ The outdoor activity areas of these uses (if any) are not typically utilized during nighttime hours.
- ⁷ Where median (L_{50}) noise level data is not available for a particular noise source, average (L_{EQ}) values may be substituted for the standards of this table provided the noise source in question operates for at least 30 minutes of an hour. If the source in question operates less than 30 minutes per hour, then the maximum noise level standards shown would apply.

L_{50} = sound level exceeded for 50 percent of measurement time; L_{MAX} = maximum noise level; dB = decibels; L_{EQ} = time-averaged noise level

- NO-7** The "last use there" shall be responsible for noise mitigation. However, if a noise generating use is proposed adjacent to lands zoned for uses which may have sensitivity to noise, then the noise generating use shall be responsible for mitigating its noise generation to a state of compliance with the Table 2 standards at the property line of the generating use in anticipation of the future neighboring development.
- NO-8** Noise associated with construction activities shall adhere to the County Code requirements. Specifically, Section 6.68.090(e) addresses construction noise within the County.
- NO-9** For capacity enhancing roadway or rail projects, or the construction of new roadways or railways [...]. If pre-project traffic noise levels for existing uses already exceed the noise standards of Table 1 [above] and the increase is significant as defined below [Table 3], feasible methods of reducing noise to levels consistent with Table 1 standards should be applied. In no case shall the long-term noise exposure for non-industrial uses be greater than 75 dB; long-term noise exposure above this level has the potential to result in hearing loss.

Table 3
SIGNIFICANT INCREASES IN TRAFFIC AND RAILROAD NOISE

Pre-Project Noise Environment (L_{DN})	Significant Increase (dBA)
Less than 60	5
60 to 65	3
Greater than 65	1.5

Source: Sacramento County General Plan Noise Element (2022)

NO-12 All noise analyses prepared to determine compliance with the noise level standards contained within this Noise Element shall be prepared in accordance with Table 4.

Table 4
REQUIREMENTS FOR ACOUSTICAL ANALYSES PREPARED IN SACRAMENTO COUNTY

An acoustical analysis prepared pursuant to the Noise Element shall:
1. Be the responsibility of the applicant.
2. Be prepared by qualified persons experienced in the fields of environmental noise assessment and architectural acoustics.
3. Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions.
4. Estimate projected future (20 year) noise levels in terms of the Standards of Tables 1 and 2, and compare those levels to the adopted policies of the Noise Element.
5. Recommend appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element.
6. Estimate interior and exterior noise exposure after the prescribed mitigation measures have been implemented.

Source: Sacramento County General Plan Noise Element (2022)

NO-13 Where noise mitigation measures are required to satisfy the noise level standards of this Noise Element, emphasis shall be placed on the use of setbacks and site design to the extent feasible, prior to consideration of the use of noise barriers.

2.5.3.2 Sacramento County Code of Ordinances

The following County ordinances would apply to project noise that would affect residential zoned property:

Title 6, Health and Sanitation, Chapter 6.68, Noise Control

Section 6.68.070

- a. The following noise standards, unless otherwise specifically indicated in this chapter, shall apply to all properties within a designated noise area [ordinance table reproduced here as Table 5].

Table 5
Section 6.68.070(a) Exterior Noise Standards

Noise Area	County Zoning Districts	Time Period	Exterior Noise Standard
1	RE-1, RD-1, RE-2, RD-2, RE-3, RD-3, RD-4, R-1-A, RD-5, R-2, RD-10, R-2A, RD-20, R-3, R-D-30, RD-40, RM-1, RM-2, A-1-B, AR-1, A-2, AR-2, A-5, AR-5	7 a.m. - 10 p.m.	55 dBA
1	RE-1, RD-1, RE-2, RD-2, RE-3, RD-3, RD-4, R-1-A, RD-5, R-2, RD-10, R-2A, RD-20, R-3, R-D-30, RD-40, RM-1, RM-2, A-1-B, AR-1, A-2, AR-2, A-5, AR-5	10 p.m. - 7 a.m.	50 dBA

Source: Sacramento County Noise Ordinance Section 6.68.070(a).

- b. It is unlawful for any person at any location within the County to create any noise which causes the noise levels on an affected property, when measured in the designated noise area, to exceed for the duration of time set forth following, the specified exterior noise standards in any one hour by [ordinance table reproduced here as Table 6]:

Table 6
Section 6.68.070(b) Exterior Noise Standards

Cumulative Duration of the Intrusive Sound	Allowance Decibels
1. Cumulative period of 30 minutes per hour	0
2. Cumulative period of 15 minutes per hour	+ 5
3. Cumulative period of 5 minutes per hour	+ 10
4. Cumulative period of 1 minute per hour	+ 15
5. Level not to be exceeded for any time per hour	+ 20

Source: Sacramento County Noise Ordinance Section 6.68.070(a).

6.68.090 Exemptions

The following activities shall be exempted from the provisions of this chapter:

- e. Noise sources associated with construction, repair, remodeling, demolition, paving or grading of any real property, provided said activities do not take place between the hours of 8 p.m. and 6 a.m. on weekdays and Friday commencing at 8 p.m. through and including 7 a.m. on Saturday; Saturdays commencing at 8 p.m. through and including 7 a.m. on the next following Sunday and on each Sunday after the hour of 8 p.m. Provided, however, when an unforeseen or unavoidable condition occurs during a construction project and the nature of the project necessitates that work in process be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work after eight p.m. and to operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner.

6.68.150 General Noise Regulations.

Notwithstanding any other provisions of this chapter and in addition thereto, it is unlawful for any person to willfully make or continue or cause to be made or continued any loud, unnecessary, or

unusual noise which disturbs the peace and quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area.

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

- a. The sound level of the objectionable noise;
- b. The sound level of the ambient noise;
- c. The proximity of the noise to residential sleeping facilities;
- d. The nature and zoning of the area within which the noise emanates;
- e. The density of the inhabitation of the area within which the noise emanates;
- f. The time of day or night the noise occurs;
- g. The duration of the noise and its tonal informational or musical content;
- h. Whether the noise is continuous, recurrent, or intermittent;
- i. Whether the noise is produced by a commercial or noncommercial activity.

2.6 EXISTING CONDITIONS

The project site is located in a generally suburban area with commercial businesses (including truck service business) along Stockton Boulevard and residential areas east of the project site along Victory Avenue. The project site's northern lot is currently occupied by a truck tire business and parking lot. The project site's southern lot is currently vacant and contains no structures, trees, or bushes. The project site has a General Plan land use designation of Commercial/Office and is zoned General Commercial (GC), Neighborhood Preservation Area (NPA)

2.6.1 Surrounding Land Uses

Land uses surrounding the project site include: a vacant parcel with a General Commercial land use designation to the east, a vacant parcel with a Commercial/Offices land use designation to the north, a small retail strip mall to the northwest, a retail strip mall across Stockton Boulevard to the west, and a truck stop/truck service and truck parking business across Victory Avenue to the south (see Figure 2). A residential subdivision project (the Raj Subdivision) with a tentative map for 30 single family lots was approved for the vacant parcel to the north (APN 115-0061-044) on January 25, 2022. As of this analysis, construction activity for the Raj Subdivision had not commenced. The vacant lot to the east (APN 115-0061-030) is owned by the project applicant and, as of this analysis, there are no development plans for the lot. However, the County Department of Community Development has identified the lot to the east as having low-income residential development potential on the Housing Element Vacant Land Inventory (County 2023a).

2.6.2 Existing Noise Sources

The existing noise environment in the area around the project site is dominated by traffic noise on Stockton Boulevard, SR-99, and Elsie Avenue, and noise from the surrounding commercial businesses, including truck noise pass-by noise, truck idling noise, and truck servicing equipment noise (e.g., pneumatic tools, air compressors) from the truck stop/truck service/truck parking lot across

Victory Avenue south of the project site. The existing truck tire service business on the project site would continue to operate and includes noise from tire servicing equipment (e.g., pneumatic tools, tire bead breaking machines, air compressors), truck circulation on the project site, and truck idling.

2.6.2.1 Existing Traffic Volumes

Existing traffic on Stockton Boulevard and Elsie Avenue was estimated from traffic counts taken by the County Department of Transportation. In 2020, the Stockton Boulevard at the Elsie Avenue intersection traffic count was 30,681 ADT. For Elsie Avenue at the Stockton Boulevard intersection, the average of six counts taken between 2018 and 2022 was 25,588 ADT (County 2023b). Peak hour traffic and the percentage of trucks for Stockton Boulevard was assumed to be similar to SR-99 in the project vicinity. Per Caltrans traffic census data, in 2021 SR-99 near the Stockton Boulevard interchange carried 127,000 ADT, the peak hour traffic was 10,109 (7.6 percent of the ADT) and trucks comprised 8.0 percent of ADT.

2.6.3 Site Survey

A site visit with two short-term (15-minute) noise measurements and one long-term (24-hour) noise measurement was conducted on September 14, 2023 (see Appendix A, *Noise Measurement Sheets*, for survey notes). The truck tire shop was not operating during the site survey and the noise environment observed was dominated by traffic noise and noise from the truck stop across Victory Avenue the south. Two Soft dB Piccolo II Integrating Sound Level Meters were used to conduct all measurements. The meters were field calibrated Larson Davis Model CAL150 Calibrator immediately prior to the noise measurements to ensure accuracy. All measurements were made with meters that conforms to the American National Standards Institute (ANSI) specifications for sound level meters (ANSI S1.4 1983 R2001).

Short-term measurements were conducted with the meter mounted on a tripod and set at a height approximately 5 feet above the ground. Short-term measurement ST-1 was conducted near the northeast corner of the project site. Short-term measurement ST-2 was conducted near the southeast corner of the project site. The short-term measured ambient noise levels are shown in Table 7, *Short-Term Noise Measurement Results*. Site visit field sheets are included in Appendix A, Site Visit Noise Measurement Sheets.

Table 7
AMBIENT NOISE MEASUREMENT RESULTS

Measurement	Location	Conditions	Time	dBA L _{EQ}	Notes
ST-1	Approximately 15 feet west and 50 feet south of the project site northeast corner.	85°F, 6 mph wind, 38 percent humidity	2:01 p.m. to 2:16 p.m.	51.4	Dominant noise source: traffic along Stockton Boulevard and SR-99; some truck noise across Victory Avenue
ST-2	Approximately 15 feet west and 30 feet north of the project site southeast corner.	85°F, 6 mph wind, 38 percent humidity	2:18 p.m. to 2:33 p.m.	55.1	Dominant noise source: traffic along Stockton Boulevard and SR-99; some truck noise across Victory Avenue

Long-term measurement LT-1 was conducted with the meter strapped to a utility pole approximately midway along the project's northern property line (180 feet west of the project's northeast corner). The meter was positioned approximately 5 feet above the ground. The measurement was conducted from 2:00 p.m. on September 14, 2023, until 2:00 p.m. on September 15, 2023. The measured hourly L_{EQ} ranged from 50/8 dBA (from 1:00 a.m. to 2: a.m.) to 57.3 dBA (from 8:00 a.m. to 9:00 a.m.). The loudest nighttime hour (between 10:00 p.m. to 7:00 a.m.) was 56.3 dBA from 6:00 a.m. to 7:00 a.m. The calculated L_{DN} (which has a 10 dBA weighting from 10:00 p.m. to 7:00 p.m.) was 60.5.

3.0 METHODOLOGY, ASSUMPTIONS, AND SIGNIFICANCE CRITERIA

3.1 METHODOLOGY

3.1.1 Noise Modeling Software

Modeling of the exterior noise environment for this report was accomplished using computer noise models: Computer Aided Noise Abatement (CadnaA) version 2021; Traffic Noise Model (TNM) version 2.5; and the Roadway Construction Noise Model (RCNM). CadnaA is a model-based computer program developed by DataKustik for predicting noise impacts in a wide variety of conditions. CadnaA assists in the calculation, presentation, assessment, and mitigation of noise exposure. It allows for the input of project related information, such as noise source data, barriers, structures, and topography to create a detailed CadnaA model, and uses the most up-to-date calculation standards to predict outdoor noise impacts.

Project construction noise was analyzed using the Roadway Construction Noise Model Version 1.1 (RCNM; U.S. Department of Transportation [USDOT] 2008), which utilizes estimates of sound levels from standard construction equipment.

Traffic noise was calculated using TNM version 2.5, released in February 2004 by the U.S. Department of Transportation (USDOT). TNM calculates the daytime average hourly L_{EQ} from three-dimensional model inputs and traffic data (USDOT 2004). Input variables included road alignment, lane configuration, projected traffic volumes, projected truck volumes, and vehicle speeds.

3.2 ASSUMPTIONS

3.2.1 Construction

Potential noise from project construction activity was estimated from the assumptions developed in the project Air Quality and Greenhouse Gas Emissions Technical Report (HELIX 2023).

3.2.1.1 Construction Activities

Construction activities would include demolition, site preparation, grading, site construction, paving, and architectural coatings (painting of parking lot lines). Construction was assumed to occur five days per week with equipment operating up to eight hours per day. Demolition would include the removal of old asphalt, concrete, and fencing totaling approximately 160 tons (approximately 20 truckloads). Site preparation would include the removal of vegetation and debris, estimated at approximately

80 cubic yards (CY; approximately 5 truckloads). During grading, approximately 90 CY of soil would be exported (approximately 6 truckloads). The project would not construct any new buildings, the site improvements construction activity would consist of fencing, gates, light standards, and landscaping. During paving, approximately 170 loads of aggregate, concrete, and asphalt would be imported to the project site. The anticipated construction schedule is provided in Table 8, *Anticipated Construction Schedule*.

Table 8
ANTICIPATED CONSTRUCTION SCHEDULE

Construction Activity	Construction Period Start	Construction Period End	Number of Working Days
Demolition	1/1/2024	1/5/2024	5
Site Preparation	1/6/2024	1/10/2024	3
Grading	1/11/2024	1/18/2024	6
Site Improvements Construction	1/19/2024	2/15/2024	20
Paving	2/16/2024	2/29/2024	10
Architectural Coating	3/1/2024	3/4/2024	2

Source: HELIX 2023

3.2.1.2 Construction Off-Road Equipment

Construction would require the use of heavy off-road equipment. Table 9, *Construction Equipment*, presents a summary of the assumed equipment.

Table 9
CONSTRUCTION EQUIPMENT

Equipment	Number
Demolition	
Concrete/Industrial Saws	1
Excavators	1
Rubber-Tired Dozers	1
Site Preparation	
Graders	1
Rubber Tired Dozers	1
Tractors/Loaders/Backhoes	1
Grading	
Excavators	1
Graders	1
Rubber Tired Dozers	1
Tractors/Loaders/Backhoes	1
Site Construction	
Cranes	1
Generator Sets	1
Tractors/Loaders/Backhoes	1
Welders	1

Equipment	Number
<i>Paving</i>	
Cement and Mortar Mixers	1
Paving Macines	1
Rollers	2
Tractors/Loaders/Backhoes	1
<i>Architectural Coating</i>	
Air Compressors	1

Source: HELIX 2023

3.2.1.3 Construction On-Road Trips

Worker trips are anticipated to vary between 10 and 15 trips per day, depending on construction activity. Hauling debris during demolition would result in approximately 8 one-way haul trips per day. Hauling debris during site preparation would result in approximately 3 one-way haul trips per day. Exporting soil to the site during grading would result in approximately 2 one-way haul trips per day. Importing aggregate, asphalt, and concrete to the site during paving would result in approximately 34 one-way haul trips per day. The CalEEMod default worker, vendor and haul trip distances were used in the model.

3.2.2 Operations

Noise sources for long-term operation of the project truck parking facility would include truck circulation and idling, occasional truck back-up alarms, and additional traffic on roadways in the project vicinity. The project truck parking lot would not be used for storage of cargo which would require the operation of transport refrigeration units (TRUs) on the project site. Therefore, TRU noise was not included in the noise analysis.

3.2.2.1 Truck Circulation

The number of new trucks (trucks associated with the project truck parking facility, not including trucks associated with the existing truck tire shop on the project site) anticipated to enter or leave the was based on the generation analysis for the project was provided by the County Department of Transportation in a letter regarding project VMT analysis and local transportation analysis. The proposed truck parking lot would generate 154 average daily trips (ADT) and 15 peak hour trips (County 2023c). The 154 ADT and 15 peak trips for the proposed truck parking lot were assumed to be 50 percent truck trips and 50 percent truck driver commute trips, resulting in 77 ADT truck trips and 8 afternoon peak hour truck trips. The number of trucks anticipated to enter or leave the project at night (10 p.m. to 7 a.m.) was not included in the project trip generation analysis. Based on a study of the typical distribution of traffic by time of day on California urban highways and roads, the project peak nighttime hour would be 4.8 percent of the ADT, or 4 trucks entering or leaving the project site between 6 a.m. and 7 a.m. (Ogden International 1986).

Although the trucks using the project truck parking lot could include a mix of medium and heavy-duty trucks, to be conservative, all trucks were assumed to be heavy duty (more than 33,000 gross vehicle rating). Noise from trucks circulating around the project site was modeled using the default truck noise in the CadnaA/TNM software. Trucks were assumed to enter the project site using the Stockton Boulevard driveway, circulate at an average speed of 10 miles per hour (mph), reverse into a parking spot at 5 mph, and leave the project site using the Victory Avenue driveway.

3.2.2.2 Truck Idling

Each truck was assumed to idle for the maximum allowable time of five minutes after arriving at a parking spot on the project site, and for another 5 minutes prior to exiting the project site, in accordance with California Code of Regulations Title 13, Section 2485. Truck idling was modeled as producing 96 dBA S_{WL} , based on field measurements of truck activity conducted by HELIX.

3.2.2.3 Truck Backup Alarms

There are no California or federal regulations which require on-road trucks to be equipped with backup warning devices (backup alarms). Per the project applicant, less than one percent of the trucks anticipated to use the project site would be equipped with a backup alarm. To be conservative, one of the modeled eight trucks entering the project site during the daytime peak hour and one of the four modeled trucks entering the project site during the nighttime peak hour were assumed to be equipped with a backup alarm. The most common truck backup alarm is a pulsing single tone, typically at one kHz. Recently, in response to noise complaints, backup alarms which produce a less intrusive pulsing broad-spectrum noise have been introduced. All backup alarms were modeled assuming the typical one kHz alarm with a noise level of 106.6 dBA S_{WL} . Backup alarms were assumed to be mounted on the back of the truck at a height of 1 meter (3.3 feet).

3.3 GUIDELINES FOR THE DETERMINATION OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, implementation of the project would result in a significant adverse impact if it would:

Threshold 1: *Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the County General Plan or noise ordinance.*

Per the County General Plan Noise Element, daytime noise generated on the project site would be significant if the level exceeds 55 dBA L_{50} or 75 dBA L_{MAX} , and nighttime noise would be significant if the level exceeds 50 dBA L_{50} or 70 dBA L_{MAX} measured at the receiving residential outdoor use area. These standards from the County General Plan are consistent with the County Noise Ordinance Section 6.68.070 standard for noise with a cumulative duration of 30 or more minutes per hour and the maximum noise level for any period during an hour. Because the cumulative duration of project truck noise during a given hour is unknown, operational L_{EQ} (approximately equivalent to the L_{50}) and L_{MAX} was compared to the County General Plan standards.

The County has not established standards for determining the significance of increases in transportation noise resulting from a development project. County General Plan Policy NO-9 establishes traffic noise level increase standards for transportation projects. These standards would also demonstrate whether the addition of project traffic to existing traffic on area roads would be significant. Project traffic noise would be significant if the addition of project traffic result in an increase in existing traffic noise by 5 dBA if the exiting noise environment is less than 60 L_{DN} ; 3 dBA if the exiting noise environment is between 60 and 65 L_{DN} ; or 1.5 dBA if the exiting noise environment is more than 65 L_{DN} .

Threshold 2: *Generate excessive ground-borne vibration or ground-borne noise levels.*

Ground-borne vibration would be potentially significant if the project would result in ground-borne vibration which exceeds the “strongly perceptible” vibration annoyance potential criteria for human receptors of 0.1 inch per second peak particle velocity (PPV) for nearby residences, or exceed the threshold for architectural damage potential criteria for buildings in good repair with gypsum board walls of 0.4 inch per second PPV, for continuous/frequent intermittent construction sources (such as impact pile drivers, vibratory pile drivers, and vibratory compaction equipment; Caltrans 2020).

Threshold 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 use airport or private airstrip, expose people residing or working in the project area to excessive noise.*

Excessive noise exposure is defined as noise levels that exceed the standards in the County General Plan Noise Element for the associated land use: 65 L_{DN} for industrial sensitive outdoor areas (County 2022).

4.0 IMPACTS

4.1 ISSUE 1: EXCESSIVE NOISE LEVELS

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 County General Plan or noise ordinance?

4.1.1 Temporary Construction Noise

As described in Section 3.2.1, above, construction of the project would require demolition, site preparation, grading, site improvements construction, paving, and architectural coatings. The magnitude of the noise impact would depend on the type of construction activity, equipment, duration of each construction phase, distance between the noise source and receiver, and any intervening structures. Construction would generate elevated noise levels that may disrupt NSLUs in the area. As described in Section 2.4, above, the closest NSLU to the project site is a single-family home approximately 135 feet east of the project site.

4.1.1.1 Construction Equipment Noise

Construction equipment would not all operate at the same time or location and would not be in constant use during the 8-hour operating day. Further, not all the pieces of equipment would be used within 135 feet of the closest off-site residences. It is anticipated that, over the course of an hour, construction demolition and earth moving equipment would be in continuous motion and would operate an average distance of 100 or more feet from the project property lines, an average of 235 or more feet from the closest NSLU. Equipment for construction of site improvements along the project property lines (e.g., fencing, lighting, and landscaping) could be operated continuously for an hour or more near the project property lines, approximately 140 feet from the nearest NLSU. Table 10, *Construction Equipment Noise Levels*, provides the noise levels for equipment anticipated to be used for general construction activities.

Table 10
CONSTRUCTION EQUIPMENT NOISE LEVELS

Equipment	Average Distance to NSLU for 1 Hour	Percent Operating Time	dBA L _{MAX}	dBA L _{EQ}
Backhoe	235	40	64.1	60.1
Concrete/Industrial Saws	235	20	76.1	69.1
Dozer	235	40	68.2	64.2
Excavator	235	40	67.3	63.3
Grader	235	40	71.6	67.6
Paver	235	50	63.8	60.8
Roller	235	20	66.6	59.6
Backhoe	140	40	68.6	64.6
Crane	140	16	71.6	63.6
Air Compressor	140	40	64.2	60.2
Generator	140	50	67.2	64.2
Welder	140	40	60.2	56.6

Source: RCNM

NSLU = noise sensitive land use; dBA = A-weighted decibel; L_{MAX} = maximum noise level; L_{EQ} = time-averaged noise level

As shown in Table 10, the loudest single piece of construction equipment anticipated to be used on the project site would be a concrete/industrial saw which produces 76 dBA L_{MAX} and 69 dBA L_{EQ} at a distance of 235 feet. The loudest construction activity would be demolition when a concrete/industrial saw, dozer, and excavator could be used concurrently producing a combined noise level of 71.1 dBA L_{EQ}. These noise levels would exceed the County General Plan Policy NO-6 daytime limit of 55 dBA L₅₀ and 75 dBA L_{MAX}, and nighttime limit of 50 dBA L₅₀ and 70 dBA L_{MAX}, measured at the nearest existing residential property line. The RCNM output report is included in Appendix B, *Modeling Output*, to this report. Therefore, noise from project construction equipment could result in a substantial temporary increase in ambient noise levels in the project vicinity and the impact would be potentially significant.

4.1.1.2 Construction Traffic Noise

Per the analysis presented in the project Air Quality and Greenhouse Gas Emissions Technical Report, construction of the project could add up to 15 worker trips per day (up to 8 car trips per hour) and 34 haul truck trips per day (up to 5 trucks per hour) to traffic on Stockton Boulevard and Elsie Avenue (HELIX 2023). As discussed in Section 2.6.2, Stockton Boulevard carries approximately 2,319 total vehicles and 186 trucks during the peak hour, Elsie Avenue carries approximately 1,934 total vehicles and 155 trucks during the peak hour (County 2023; Caltrans 2023). As described in Section 2.2, 3 dBA is the approximate level at which an outdoor increase in ambient noise level becomes noticeable. A 3 dBA increase in traffic noise would require an approximate doubling of traffic volume on roadways (a 100 percent increase). The existing traffic noise at a distance of 100 feet from the Elsie Avenue centerline was calculated using TNM and would be approximately 68 dBA. Project construction would add less than 1 percent to total existing vehicle traffic and approximately 3 percent to existing truck traffic on Elsie Avenue, resulting in an undetectable increase in ambient traffic noise of approximately 0.1 dBA. This increase in traffic noise would not exceed the County standard of a 1.5 dBA increase where the existing ambient noise level exceeds 65 L_{DN}. Elsie Avenue Therefore, noise from project construction traffic would not result in a substantial temporary increase in ambient noise levels in the project vicinity and the impact would be less than significant.

4.1.2 Permanent Operational Noise

As described in Section 3.3.2, above, noise sources for long-term operation of the project truck parking facility would include truck circulation and idling, occasional truck back-up alarms, and additional traffic on roadways in the project vicinity.

4.1.2.1 On-site Truck Noise

The noise resulting from trucks circulating around the project truck parking lot, trucks reversing into parking spaces, trucks idling, and occasional truck backup alarms was modeled in CadnaA as described in Sections 3.1.1 and 3.2.2, above. Receivers were placed in the model at three locations on the property line for the closest NSLU, a single-family residence approximately 135 feet east of the project site (receivers ER1, ER2, and ER3) and at the lot line for the closest three future residential lots identified in the Raj Subdivision tentative map: lot 21, approximately 35 feet north of the project site (receiver FR1); lot 25 approximately 35 feet north of the project site (receiver FR2); and lot 35 adjacent to the project site just north of the existing tire shop (FR3). In addition, 3 receivers were placed near the project property line, just inside the vacant commercial lot east of the project site (receivers EL1, EL2, and EL3). See Figure 4.

The results of the truck parking lot noise modeling, without consideration of any noise attenuating barriers except for the existing truck tire shop on the project site, are shown in Table 11, *On-Site Truck Noise*. The noise model input and output tables are included in Appendix B to this report.

Table 11
ON-SITE TRUCK NOISE

Receiver	Peak Daytime L _{EQ} (dBA)	Peak Daytime L _{MAX} (dBA)	Peak Nighttime L _{EQ} (dBA)	Peak Nighttime L _{MAX} (dBA)
ER1	51.9	64.5	47.5	64.5
ER2	52.2	64.7	47.7	64.6
ER3	52.5	64.6	47.8	64.5
FR1	53.8	63.7	47.4	63.5
FR2	52.0	62.1	45.6	61.9
FR3	48.6	56.8	41.4	56.4
EL1	60.2	71.9	55.6	71.7
EL2	60.3	69.5	54.1	69.2
EL3	59.7	69.4	54.9	69.2

Source: CadnaA

L_{EQ} = time-averaged noise level; dBA = A-weighted decibel; L_{MAX} = maximum noise level

As shown in Table 11, the calculated peak hour L_{EQ} and L_{MAX} for the existing residential receivers (ER1, ER2, and ER3) and future residential receivers (FR1, FR2, and FR3) would not exceed the County daytime standard of 55 dBA L_{EQ} / 75 dBA L_{MAX}, or the County nighttime standard of 50 dBA L_{EQ} / 70 dBA L_{MAX}. The vacant lot east of the project site is zoned General Commercial and there are no approved or pending applications for residential uses (or any other NSLU) for the lot. However, if a future residential use were approved for the east lot, the noise levels at the property line (receivers EL1, EL2, and EL3) would exceed both the County residential daytime L_{EQ} standard of 55 dBA and residential nighttime L_{EQ} standard of 50 dBA.

Although noise from project operational on-site noise would not exceed the County standard for receiving residential uses for the existing residence east of the project site, or for the future approved Raj Subdivision north of the project site, modeling was conducted to determine the effect 8-foot-high sound walls along the project's north and east property line would have on sound levels at the modeled receivers. Note – the site plan shows an 8-foot-high concrete masonry unit (CMU) wall along the project north property line, but not along the east property line. The results of the truck parking lot noise modeling, with consideration of these sound walls, are shown in Table 12, *On-Site Truck Noise with Sound Walls*. Note – because noise levels close to the walls would be very low, the receivers on the property line (FR3, EL1, EL2, and EL3) were set back to the point where project truck noise would peak, approximately 12 feet back from the sound walls.

Table 12
ON-SITE TRUCK NOISE WITH SOUND WALLS

Receiver	Peak Daytime L _{EQ} (dBA)	Peak Daytime L _{MAX} (dBA)	Peak Nighttime L _{EQ} (dBA)	Peak Nighttime L _{MAX} (dBA)
ER1	47.1	54.5	40.5	53.8
ER2	47.9	54.6	40.8	53.8
ER3	48.2	54.7	41.0	53.9
FR1	44.7	53.4	38.0	53.1
FR2	43.2	52.0	36.5	51.7
FR3 ¹	40.0	48.0	33.0	47.6
EL1 ¹	52.9	58.5	45.3	57.4
EL2 ¹	53.2	57.9	45.2	56.5
EL3 ¹	49.0	56.5	42.7	56.0

Source: CadnaA

¹ Receivers set back 12 feet from the sound wall.

L_{EQ} = time-averaged noise level; dBA = A-weighted decibel; L_{MAX} = maximum noise level

As shown in Table 8, the calculated peak hour L_{EQ} and L_{MAX} for all modeled receivers would not exceed the County daytime standard of 55 dBA L_{EQ} / 75 dBA L_{MAX}, or the County nighttime standard of 50 dBA L_{EQ} / 70 dBA L_{MAX}. With the 8-foot-high sound walls, noise levels for existing and future receivers (ER1, ER2, ER3, FR1, FR2, and FR3) would be reduced by 4 to 10 dBA and noise levels along the east lot property line would be reduced by 7 to 13 dBA.

The results of the modeling show that sound walls would not be required to reduce project noise levels for the existing residence east of the project site, or for approved future residences north of the project site. However, if a future residential project were to be approved for the vacant lot east of the project site (APN 115-0061-030), a sound wall with a minimum height of 8 feet would reduce noise from project to trucks to below the County standard.

If TRUs were to be operated on the project site, or if trucks were allowed to idle for more than five minutes, project operational truck noise could exceed the County General Plan and noise ordinance standards, the impact would be potentially significant.

4.1.2.2 Operational Traffic Noise

As discussed in Section 3.2.2, above, the project is anticipated to generate 154 average daily trips (ADT) and 15 peak hour trips (County 2023c). Half of the project trips were assumed to be truck driver commute trips (cars and pickups) and half of the project trips were assumed to be truck trips. As



discussed in Section 2.6.2, Stockton Boulevard carries approximately 2,319 total vehicles and 186 trucks during the peak hour, Elsie Avenue carries approximately 1,934 total vehicles and 155 trucks during the peak hour (County 2023; Caltrans 2023). Traffic counts were not available for Victory Avenue. However, commercial truck exceeding seven tons are prohibited on Victory Avenue east of the project site and project trucks would only use approximately 400 feet of Victory Avenue between project driveway and Stockton Boulevard.

As described in Section 2.2, 3 dBA is the approximate level at which an outdoor increase in ambient noise level becomes noticeable. A 3 dBA increase in traffic noise would require an approximate doubling of traffic volume on roadways (a 100 percent increase). The existing traffic noise at a distance of 100 feet from the Elsie Avenue centerline was calculated using TNM and was modeled at approximately 68 dBA. Project operation would add less than 1 percent to total existing vehicle traffic and approximately 5 percent to existing truck traffic on Elsie Avenue, resulting in an undetectable increase in ambient traffic noise of approximately 0.1 dBA. This increase in traffic noise would not exceed the County standard of a 1.5 dBA increase where the existing ambient noise level exceeds 65 L_{DN} . Therefore, noise from project construction traffic would not result in a substantial temporary increase in ambient noise levels in the project vicinity and the impact would be less than significant.

4.1.3 Significance of Impacts

Project construction equipment noise would be potentially significant if noise generating construction activities were to occur at night. Project on-site operational truck noise would be potentially significant if TRUs were to be operated on the project site or if truck engines would idle more than five minutes on the project site. Construction traffic noise and off-site operational traffic noise would be less than significant.

4.1.4 Mitigation Framework

Per the County Code Section 6.68.090(e) and General Plan Noise Element Policy NO-8, construction noise is exempt from the provisions of the County Noise Ordinances and County General Plan Noise Element policy NO-6, provided construction does not take place between the hours of 7 p.m. and 6 a.m. on weekdays and Friday commencing at 8 p.m. through and including 7 a.m. on Saturday; Saturdays commencing at 8 p.m. through and including 7 a.m. on the next following Sunday and on each Sunday after the hour of 8 p.m. Mitigation measure NOI-01 would prohibit project construction noise generating activities during the nighttime hours defined in County Code Section 6.68.090(e).

To ensure TRUs are not operated on the project site and trucks drivers do not allow their engines to idle more than five minutes, mitigation measure NOI-02 would require signage clearly visible to truck driver to be posted at all project entrances listing the prohibition on TRU use and the idling time restriction.

Mitigation Measure NOI-01: Construction Hours

The County shall specify on all grading, and construction permits that any noise-generating construction activities shall be prohibited between the hours of 7 p.m. and 6 a.m. on weekdays and Friday commencing at 8 p.m. through and including 7 a.m. on Saturday; Saturdays commencing at 8 p.m. through and including 7 a.m. on the next following Sunday and on each Sunday after the hour of 8 p.m.

Mitigation Measure NOI-02: Transport Refrigerator Use and Idling Restriction Signage

The project applicant shall ensure truck drivers are informed that the operation of TRUs is prohibited on the project and that idling of truck engines shall not exceed 5 minutes.

Prior to issuing construction permits, the County shall verify that project plans include the requirement for clearly visible and readable (by truck drivers from inside a truck cab) signs posted at all project entrances informing truck drivers that the operation of transport refrigeration units (TRUs) is prohibited on the project site, and that idling of truck engines is prohibited beyond a duration of 5 minutes on the project site. Prior to or during final project inspection, the County shall verify that the required signs are in place and would be easily readable by a truck driver entering the project site.

4.1.5 Significance After Mitigation

With implementation of mitigation measures NOI-01 and NOI-02, the project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the County General Plan or noise ordinance, and the impact would be less than significant with mitigation incorporated.

4.2 ISSUE 2: EXCESSIVE VIBRATION

Would the project generate excessive ground-borne vibration or ground-borne noise levels?

4.2.1 Construction Vibration

Construction activities known to generate excessive ground-borne vibration, such as pile driving, would not be conducted by the project. A possible source of vibration during general project construction activities would be a vibratory roller used for gravel or pavement compaction. A roller could be used 25 feet from the existing truck tire shop on the project site. A large vibratory roller can create approximately 0.210 inch per second PPV at 25 feet (Caltrans 2020), which would not exceed the 0.4 inch per second PPV threshold for damage to buildings in good repair with gypsum wall boards, for continuous/frequent intermittent construction sources. The closest residential building would be a single-family residence appropriately 135 feet east of the project site. A 0.210 inch per second PPV vibration level would equal 0.036 inch per second PPV at a distance of 135 feet.¹ This would be lower than what is considered a “strongly perceptible” level for humans of 0.1 inches per second PPV. Therefore, although a vibratory roller may be perceptible to nearby human receptors within the tire shop building on the project site, temporary impacts associated with the roller (or other construction equipment) would be less than significant.

4.2.2 Operational Vibration

Land uses that may generate substantial operational vibration include heavy industrial or mining operations that would require the use of vibratory equipment. The proposed truck parking lot land use does not include equipment that would generate substantial vibration. Therefore, operational vibration impacts would be less than significant.

¹ Equipment PPV = Reference PPV * (25/D)ⁿ (in/sec), where Reference PPV is PPV at 25 feet, D is distance from equipment to the receiver in feet, and n = 1.1 (the value related to the attenuation rate through the ground); formula from Caltrans 2020.

4.2.3 Significance of Impacts

Construction or long-term operation of the project would not excessive ground-borne vibration or ground borne noise levels, and the impact would be less than significant.

4.2.4 Mitigation Framework

Construction or long-term operation of the project would not exceed ground-borne vibration or ground borne noise levels, the impact would be less than significant, and no mitigation measures would be required.

4.2.5 Significance After Mitigation

Construction or long-term operation of the project would not generate excessive ground-borne vibration or ground borne noise levels, and the impact would be less than significant.

4.3 ISSUE 3: AIRPORT NOISE EXPOSURE

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?

The closest airports to the project site are the Sacramento Executive Airport, approximately 4.5 miles northwest of the project site, and Mather Airport, approximately 7.3 miles northeast of the project site. The project site is not located within the 65 CNEL noise contour of either airport (Sacramento Council of Governments 2023). Therefore, although aircraft may be audible in the airspace around the project site, persons working in the project area would not be exposed to excessive noise levels from aircraft or airports.

4.3.1 Significance of Impacts

The project would not expose people residing or working in the project area to excessive noise levels from aircraft or airports, and the impact would be less than significant.

4.3.2 Mitigation Framework

The project would not expose people residing or working in the project area to excessive noise levels from aircraft or airports, the impact would be less than significant, and no mitigation measures would be required.

4.3.3 Significance After Mitigation

The project would not expose people residing or working in the project area to excessive noise levels from aircraft or airports, and the impact would be less than significant.

5.0 LIST OF PREPARERS

Martin Rolph	Acoustic Analyst
Joanne M. Dramko, AICP	Principal Noise Specialist, QA/QC

HELIX Environmental Planning, Inc.
1180 Iron Point Road, Suite 130
Folsom, CA 95360

6.0 REFERENCES

Aras Design and Construction. 2022. Raj Subdivision Tentative Map.

California Department of Transportation (Caltrans). 2023. Traffic Census Program. Available at: <https://dot.ca.gov/programs/traffic-operations/census>. Accessed September 14.

2020. Transportation and Construction Vibration Guidance Manual. April. Available at: <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf>.

Ogden International. 1986. Road Travel Survey.

Sacramento, County of. 2023a. Letter: Request for Additional Information for 7849 Stockton Blvd. May 18.

2023b. Sacramento County GIS Open Data Site – Traffic Count Data. Available at: <https://data.saccounty.gov/datasets/traffic-count-data>. Accessed September 14.

2023c. Letter: CEQA VMT and Local Transportation Analysis for 7849 Stockton Blvd. May 12.

2023d. Board of Supervisors January 25, 2022 Agenda Item Attachments: Findings and Conditions of Approval Control Number PLNP2016-00356, Raj Subdivision Rezone and Community Plan Amendment, Zoning Ordinance. Amendment, Tentative Subdivision Map, Special Development Permit and Design Review

2022. General Plan Noise Element. Amended December 13. Available at: <https://planning.saccounty.gov/LandUseRegulationDocuments/Documents/General-Plan/14.%20Noise%20Element%20-%20Amended%2012-13-22.pdf>.

Sacramento Council of Governments. 2023. Airport Noise Contours - SACOG Open Data Portal. Available at: <https://data.sacog.org/maps/airport-noise-contours>. Accessed September 14.

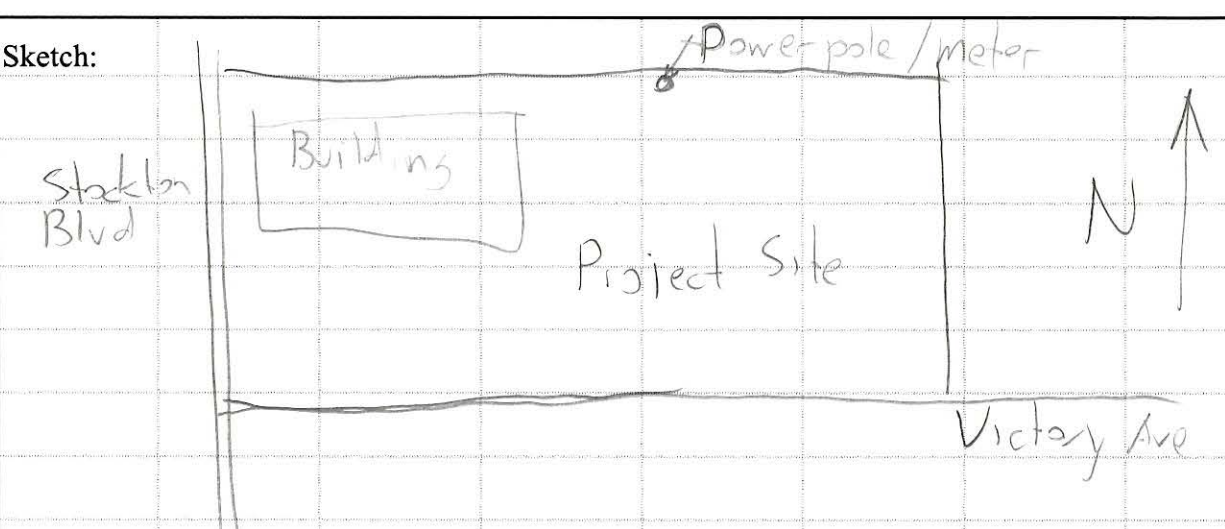
U.S. Department of Transportation (USDOT). 2008. Roadway Construction Noise Model Version 1.1. Available at: https://www.fhwa.dot.gov/environment/noise/construction_noise/rcnm/.

2004. Traffic Noise Model Version 2.5. Available at: https://www.fhwa.dot.gov/environment/noise/traffic_noise_model/tnm_v25/.

This page intentionally left blank

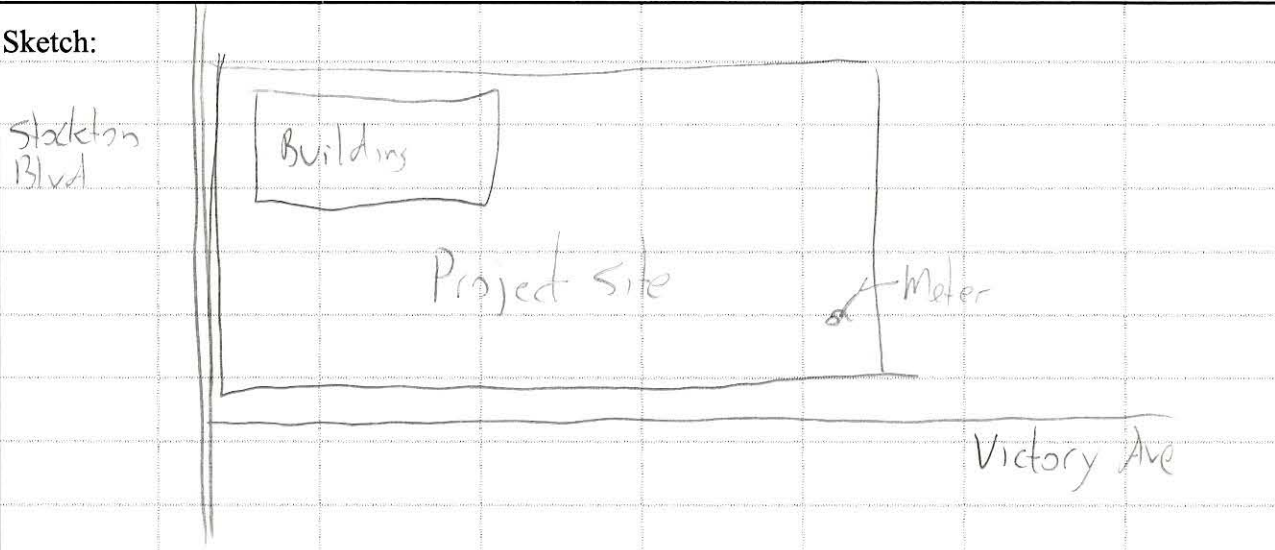
Appendix A

Noise Measurement Sheets

Site Survey			
Job #		Project Name: 7849 Stockton Blvd	
Date: 9/14/23	Site #:	Engineer: M. Rolph	
Address:			
Meter: Piccolo II	Serial #:	Calibrator: CAL ISO	Serial #:
Notes: Meter on power pole on north property line, 5' High Conditions reported are for start of 24-hr measurement.			
Sketch: 			
Temp: 85°F	Wind Spd: 6	mph	Humidity: 38 %
Start of Measurement: 2pm 9/14		End of Measurement: 2pm 9/15	
—		dBA L _{EQ}	
Cars (tally per 5 cars)		Medium Trucks (MT)	Heavy Trucks (HT)
		X	X
Noise Measurement for Information Only			
No Through Roadways			
No Calibration Analysis Will Be Provided			

Site Survey			
Job #		Project Name: 7849 Stockton Blvd	
Date: 9/14/23	Site #:	Engineer: M. Rolph	
Address:			
Meter: Piccolo II	Serial #:	Calibrator: CALISO	Serial #:
Notes: Noise primarily from traffic on Stockton and SR-99 Some noise from Truck stop across Victory			
Sketch:			
Temp: 55°F	Wind Spd: 6	mph	Humidity: 38 %
Start of Measurement: 2:01 pm	End of Measurement: 2:16 pm	51.4 dBA L _{EQ}	
Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)	
Noise Measurement for Information Only			
No Through Roadways			
No Calibration Analysis Will Be Provided			

ST 2

Site Survey			
Job #		Project Name: 7849 Stockton Blvd	
Date: 9/14/23	Site #:	Engineer: M. Rolph	
Address:			
Meter: Piccolo II	Serial #:	Calibrator: CAL 150	Serial #:
Notes: Noise primarily from traffic on Stockton and SR-99 One truck pass by (Star-Sign) on Victory during measurement			
Sketch: 			
Temp: 55°F	Wind Spd: 6	mph	Humidity: 38 %
Start of Measurement: 2:18 pm	End of Measurement: 2:33 pm	55.1 dBA L _{EQ}	
Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)	
Noise Measurement for Information Only			
No Through Roadways			
No Calibration Analysis Will Be Provided			

Appendix B

Modeling Output

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/29/2023

Case Description: 7849 Stockton Boulevard

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
East Residence	Residential	55	55	55

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Backhoe	No	40		77.6	235	0
Concrete Saw	No	20		89.6	235	0
Dozer	No	40		81.7	235	0
Grader	No	40	85		235	0
Paver	No	50		77.2	235	0
Roller	No	20		80	235	0
Backhoe	No	40		77.6	140	0
Crane	No	16		80.6	140	0
Compressor (air)	No	40		77.7	235	0
Generator	No	50		80.6	235	0
Welder / Torch	No	40		74	235	0
Excavator	No	40		80.7	235	0

Calculated (dBA)

Equipment	*Lmax	Leq
Backhoe	64.1	60.1
Concrete Saw	76.1	69.1
Dozer	68.2	64.2
Grader	71.6	67.6
Paver	63.8	60.8
Roller	66.6	59.6
Backhoe	68.6	64.6
Crane	71.6	63.6
Compressor (air)	64.2	60.2
Generator	67.2	64.2
Welder / Torch	60.6	56.6
Excavator	67.3	63.3
Total	76.1	74.9

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 9/29/2023

Case Description: 7849 Stockton Boulevard

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
East Residence	Residential	55	55	55

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Concrete Saw	No	20		89.6	235	0
Dozer	No	40		81.7	235	0
Excavator	No	40		80.7	235	0

Calculated (dBA)

Equipment	*Lmax	Leq
Concrete Saw	76.1	69.1
Dozer	68.2	64.2
Excavator	67.3	63.3
Total	76.1	71.1

*Calculated Lmax is the Loudest value.

7849 Stockton Boulevard Project
 CadnaA Library Table

Name	ID	Type	1/3 Oktave Spectrum (dB)										Source	
			Weight.	31.5	63	125	500	1000	2000	4000	8000	A	lin	
Backup Alarm	ALRM	Li						106.6				106.6	106.6	
Truck Idling	IDLE	Li						96				96	96	

7849 Stockton Boulevard Project
CadnaA Road Source Table

Name	Sel.	M.	ID	Lme	Count Data			exact Count Data				Speed Limit				SCS	Surface			Gradient	Mult. Reflection		
				Day	Evening	Night	DTV	Str.class.	M			p (%)			Auto	Truck	Dist.	Dstro	Type		Drefl	Hbuild	Dist.
				(dBA)	(dBA)	(dBA)			Day	Evening	Night	Day	Evening	Night	(km/h)	(km/h)		(dB)		(%)	(dB)	(m)	(m)
Truck Circulation			TruckC	51.7	0	42.7			4	0	2	100	0	25	16	w9.1	0	1	0	0			
Truck Parking 1 - 70'			TruckP1	49	0	43			1	0	1	100	0	25	8	w	0	1	0	0			
Truck Parking 2 - 70'			TruckP2	49	0	0			1	0	0	100	0	25	8	w	0	1	0	0			
Truck Parking 3 - 75'			TruckP3	49	0	43			1	0	1	100	0	25	8	w	0	1	0	0			
Truck Parking 4 - 75'			TruckP4	49	0	0			1	0	0	100	0	25	8	w	0	1	0	0			
Truck Parking 5 - 75'			TruckP5	49	0	43			1	0	1	100	0	25	8	w	0	1	0	0			
Truck Parking 6 - 75'			TruckP6	49	0	0			1	0	0	100	0	25	8	w	0	1	0	0			
Truck Parking 7 - 40'			TruckP7	49	0	43			1	0	1	100	0	25	8	w	0	1	0	0			
Truck Parking 8 - 40'			TruckP7	49	0	0			1	0	0	100	0	25	8	w	0	1	0	0			

7849 Stockton Boulevard Project
CadnaA Line Source Table

Name	Sel.	M.	ID	Result. PWL			Result. PWL'			Lw / Li		Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Moving Pt. Src				
				Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night	(dB)	(Hz)		Number			Speed
				(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(m²)		(min)	(min)	(min)				Day	Evening	Night	(km/h)
Truck Reversing			TruckR	106.6	106.6	106.6	96.7	96.7	96.7	Lw	ALRM		0	0	0							0		(none)				

7849 Stockton Boulevard Project
CadnaA Point Source Table - LEQ

Name	Sel.	M.	ID	Result. PWL			Lw / Li		Correction				Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Height		Coordinates		
				Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night						X	Y	Z
				(dBA)	(dBA)	(dBA)				dB(A)	dB(A)	dB(A)		(m²)		(min)	(min)	(min)	(dB)	(Hz)		(m)		(m)	(m)	(m)
Truck Idling			IDLE	96	96	96	Lw	IDLE		0	0	0				5	0	5	0	(none)		2 r		638150.28	4259446.16	2
Truck Idling			IDLE	96	96	96	Lw	IDLE		0	0	0				5	0	0	0	(none)		2 r		638142.01	4259445.65	2
Truck Idling			IDLE	96	96	96	Lw	IDLE		0	0	0				5	0	0	0	(none)		2 r		638144.78	4259431.81	2
Truck Idling			IDLE	96	96	96	Lw	IDLE		0	0	0				5	0	0	0	(none)		2 r		638135.92	4259431.93	2
Truck Idling			IDLE	96	96	96	Lw	IDLE		0	0	0				5	0	5	0	(none)		2 r		638144.85	4259394.7	2
Truck Idling			IDLE	96	96	96	Lw	IDLE		0	0	0				5	0	0	0	(none)		2 r		638134.67	4259394.33	2
Truck Idling			IDLE	96	96	96	Lw	IDLE		0	0	0				5	0	5	0	(none)		2 r		638140.52	4259381.79	2
Truck Idling			IDLE	96	96	96	Lw	IDLE		0	0	0				5	0	0	0	(none)		2 r		638134.01	4259382.31	2

7849 Stockton Boulevard Project
CadnaA Point Source Table - LMAX

Name	Sel.	M.	ID	Result. PWL			Lw / Li		Correction				Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Height		Coordinates		
				Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night						X	Y	Z
				(dBA)	(dBA)	(dBA)				dB(A)	dB(A)	dB(A)		(m²)		(min)	(min)	(min)	(dB)	(Hz)		(m)		(m)	(m)	(m)
Truck Idling			IDLE	96	96	96	Lw	IDLE		0	0	0							0		(none)	2	r	638150.28	4259446.16	2
Truck Idling			IDLE	96	96	96	Lw	IDLE		0	0	0							0		(none)	2	r	638142.01	4259445.65	2
Truck Idling			IDLE	96	96	96	Lw	IDLE		0	0	0							0		(none)	2	r	638144.78	4259431.81	2
Truck Idling			IDLE	96	96	96	Lw	IDLE		0	0	0							0		(none)	2	r	638135.92	4259431.93	2
Truck Idling			IDLE	96	96	96	Lw	IDLE		0	0	0							0		(none)	2	r	638144.85	4259394.7	2
Truck Idling			IDLE	96	96	96	Lw	IDLE		0	0	0							0		(none)	2	r	638134.67	4259394.33	2
Truck Idling			IDLE	96	96	96	Lw	IDLE		0	0	0							0		(none)	2	r	638140.52	4259381.79	2
Truck Idling			IDLE	96	96	96	Lw	IDLE		0	0	0							0		(none)	2	r	638134.01	4259382.31	2

7849 Stockton Boulevard Project
CadnaA Receiver Table - LEQ

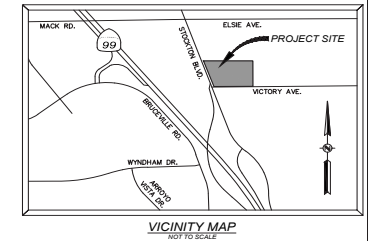
Name	Sel.	M.	ID	Level Lr				Limit. Value				Land Use		Height		Coordinates			
				Day	Night	LmaxD	LmaxN	Day	Night	LmaxD	LmaxN	Type	Auto	Noise Type		X	Y	Z	
				(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(m)	(m)	(m)	(m)	
Exsiting Residence 1			ER1	47.5	40.5	45.2	36.1	0	0	0	0		x	Total	1.52	r	638205.08	4259376.34	1.52
Exsiting Residence 2			ER2	47.9	40.8	45.5	36.5	0	0	0	0		x	Total	1.52	r	638205.45	4259386.74	1.52
Exsiting Residence 3			ER3	48.2	41	45.8	36.8	0	0	0	0		x	Total	1.52	r	638205.63	4259401.61	1.52
Future Residential 1			FR1	44.7	38	41.4	32.4	0	0	0	0		x	Total	1.52	r	638106.96	4259474.27	1.52
Future Residential 2			FR2	43.2	36.5	40.3	31.3	0	0	0	0		x	Total	1.52	r	638082.75	4259473.85	1.52
Future Residential 3			FR3	33.1	25.8	30.1	21.1	0	0	0	0		x	Total	1.52	r	638062.26	4259464.78	1.52
Future Residential 3 Set Back 12'			FR3S	40	33	36.8	27.9	0	0	0	0		x	Total	1.52	r	638062.15	4259467.99	1.52
East Lot 1			EL1	46	40.1	44.2	35.2	0	0	0	0		x	Total	1.52	r	638165.79	4259386.98	1.52
East Lot 1 Set Back 12'			EL1S	52.9	45.3	52.3	43.2	0	0	0	0		x	Total	1.52	r	638168.24	4259387.05	1.52
East Lot 2			EL2	45	38.4	43.4	34.4	0	0	0	0		x	Total	1.52	r	638165.43	4259414.76	1.52
East Lot 2 Set Back 12'			EL2S	53.2	45.2	52.5	43.5	0	0	0	0		x	Total	1.52	r	638168.25	4259414.82	1.52
East Lot 3			EL3	42.6	37.1	39.2	30.2	0	0	0	0		x	Total	1.52	r	638165.16	4259440.77	1.52
East Lot 3 Set Back 12'			EL3S	49	42.7	46.8	37.8	0	0	0	0		x	Total	1.52	r	638168.28	4259440.8	1.52

7849 Stockton Boulevard Project
CadnaA Receiver Table - LMAX

Name	Sel.	M.	ID	Level Lr				Limit. Value				Land Use		Height		Coordinates			
				Day	Night	LmaxD	LmaxN	Day	Night	LmaxD	LmaxN	Type	Auto	Noise Type		X	Y	Z	
				(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(m)	(m)	(m)	(m)	
Exsiting Residence 1			ER1	64.6	64.5	47.3	38.3	0	0	0	0		x	Total	1.52	r	638205.08	4259376.34	1.52
Exsiting Residence 2			ER2	64.7	64.6	47.7	38.7	0	0	0	0		x	Total	1.52	r	638205.45	4259386.74	1.52
Exsiting Residence 3			ER3	64.6	64.5	48	39	0	0	0	0		x	Total	1.52	r	638205.63	4259401.61	1.52
Future Residential 1			FR1	63.7	63.5	50.1	41.1	0	0	0	0		x	Total	1.52	r	638106.96	4259474.27	1.52
Future Residential 2			FR2	62.1	61.9	48.8	39.8	0	0	0	0		x	Total	1.52	r	638082.75	4259473.85	1.52
Future Residential 3			FR3	56.8	56.4	45.2	36.2	0	0	0	0		x	Total	1.52	r	638062.26	4259464.78	1.52
Future Residential 3 Set Back 12'			FR3S	59.4	59.1	45.5	36.5	0	0	0	0		x	Total	1.52	r	638062.15	4259467.99	1.52
East Lot 1			EL1	71.9	71.7	57.4	48.4	0	0	0	0		x	Total	1.52	r	638165.79	4259386.98	1.52
East Lot 1 Set Back 12'			EL1S	71.1	71	55.9	46.9	0	0	0	0		x	Total	1.52	r	638168.24	4259387.05	1.52
East Lot 2			EL2	69.5	69.2	57.9	48.9	0	0	0	0		x	Total	1.52	r	638165.43	4259414.76	1.52
East Lot 2 Set Back 12'			EL2S	69	68.7	56.2	47.3	0	0	0	0		x	Total	1.52	r	638168.25	4259414.82	1.52
East Lot 3			EL3	69.4	69.2	54.5	45.6	0	0	0	0		x	Total	1.52	r	638165.16	4259440.77	1.52
East Lot 3 Set Back 12'			EL3S	68.5	68.3	53.4	44.4	0	0	0	0		x	Total	1.52	r	638168.28	4259440.8	1.52

PRELIMINARY IMPROVEMENT PLANS FOR 7849 STOCKTON BLVD

SACRAMENTO, CA 95823
APN: 115-0061-031 & 032



SHEET INDEX:

- C1 PRELIMINARY SITE PLAN
- C2 EXISTING CONDITIONS
- C3 DEMOLITION PLAN
- C4 PRELIMINARY GRADING & DRAINAGE PLAN

BENCHMARK:

THE BENCHMARK USED FOR THIS SURVEY WAS THE COUNTY OF SACRAMENTO BENCHMARK NO. 25-26, WHICH IS A 7/8" METAL DISC STAMPED "CO BM 25-26", LOCATED IN THE TOP OF A VERTICAL CURB IN A CHISELED SQUARE ABOVE A DI AT THE CENTER OF THE CURB. RETURN AT THE NORTHEAST CORNER OF GERRIER ROAD AND THE STREET TO THE "OLYMPIA MOBILELODGE, 0.3 MILES EAST OF STOCKTON BLVD. ELEVATION = 30.70 (NAVD 88)

BASIS OF BEARINGS:

THE BASIS OF BEARINGS FOR THIS SURVEY IS THE CENTERLINE OF VICTORY AVENUE AS SHOWN ON THE RECORD OF SURVEY MAP FILED IN BOOK 52 OF SURVEYS, AT PAGE 2. THE BEARING OF WHICH IS NORTH 85° 31' 00" EAST AND WAS ESTABLISHED FROM RECORD MONUMENTATION THEREFROM.

TOPOGRAPHIC SURVEY:

CWE (FORMERLY RFE ENGINEERING, INC.)
FIELD SURVEY DATED: 12/20/2022

FLOOD PLAIN:

THE SOUTHERLY PORTION OF THIS PROPERTY IS IN ZONE "AE", WHICH IS A SPECIAL FLOOD HAZARD AREA PER FEMA FLOOD INSURANCE RATE MAP 06067C0306H, DATED 08/16/2012. HOWEVER, SAG MAP SHOWS THE 100 YEAR FLOOD ELEVATION TO BE FROM 29.5' TO 29.7' ACROSS THIS SITE.

PROPERTY OWNER / DEVELOPER:

HARJOT GROUP INVESTMENT, LLC
7849 STOCKTON BLVD.
SACRAMENTO, CA 95823
CONTACT: JI SINGH
PH: (209) 648-9952

ZONING:

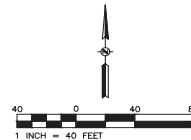
GC (NP) - GENERAL COMMERCIAL (NEIGHBORHOOD PRESERVATION AREA COMBINING ZONING DISTRICT)
-NO CHANGE IN ZONING

JURISDICTION:

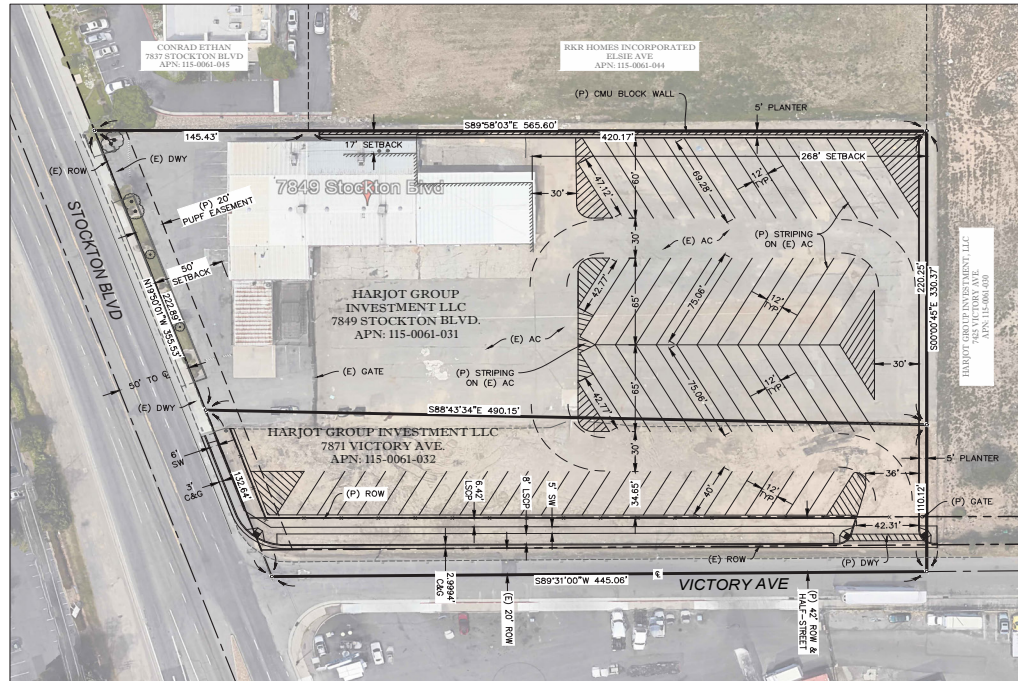
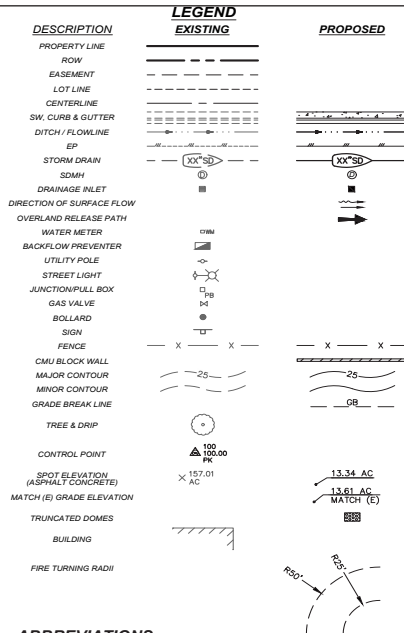
SACRAMENTO COUNTY

PARKING TABLE:

NEW PARKING SPACE DIMENSION	NUMBER OF SPACES PROVIDED
12x49'	14
12x19'	26
12x47'	1
12x43'	2
12x40'	27
TOTAL:	70



Source: CWECorp, 2023



DEVELOPMENT STANDARDS

EXISTING GENERAL PLAN: SACRAMENTO COUNTY GENERAL PLAN OF 2005-2020

ZONE: GC (NP)

ITEM	REQUIREMENTS	PROVIDED
MINIMUM FRONT SETBACK	50'	50'
MINIMUM SIDE SETBACK	50'	268'
MINIMUM REAR SETBACK	15'	17'
PROPERTY AREA: 3.88 AC GROSS 3.85 AC NET		

REFERENCE IS MADE TO THE SACRAMENTO COUNTY ZONING CODE.

UTILITY NOTE:

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. CWE MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. CWE FURTHER DOES NOT GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. CWE HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

TOTAL DISTURBED AREA: 1.10 AC

RAW EARTHWORK SUMMARY

CUT:	595 CY
FILL:	505 CY
NET:	90 CY CUT (EXPORT)

NOTE: EARTHWORK QUANTITIES ARE ESTIMATED TO SUBGRADE AND DO NOT TAKE INTO ACCOUNT SHRINKAGE EXCESS MATERIALS FROM TRENCHING AND MISC. UNKNOWN STRUCTURAL SECTIONS. CONTRACTOR SHOULD VERIFY EARTHWORK QUANTITIES.

UTILITY CONTACT INFORMATION

UTILITY	UTILITY CO.	REPRESENTATIVE	PHONE
GAS	PG&E	DEMETRIUS WILLIAMS	(916) 386-5013
ELECTRIC	PG&E	DEMETRIUS WILLIAMS	(916) 386-5013
FIRE	SAC METRO	DIANA SCHMIDT	(916) 859-4323
WATER	CAL AMERICAN WATER	SPENCER PHILLIPS	(916) 968-4210
SEWER	S&SD	RAY VASSELLI	(916) 876-6140
DRAINAGE	SACRAMENTO COUNTY	LEO ALBA	(916) 874-8846
U.S.A.	UNDERGROUND SERVICE ALERT		1-800-642-2444

