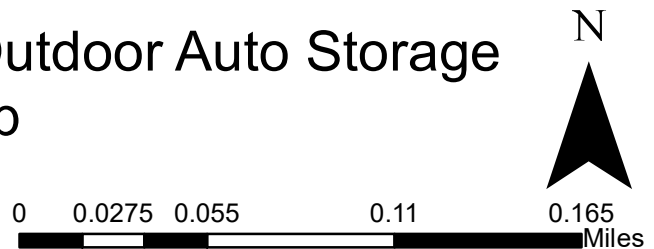
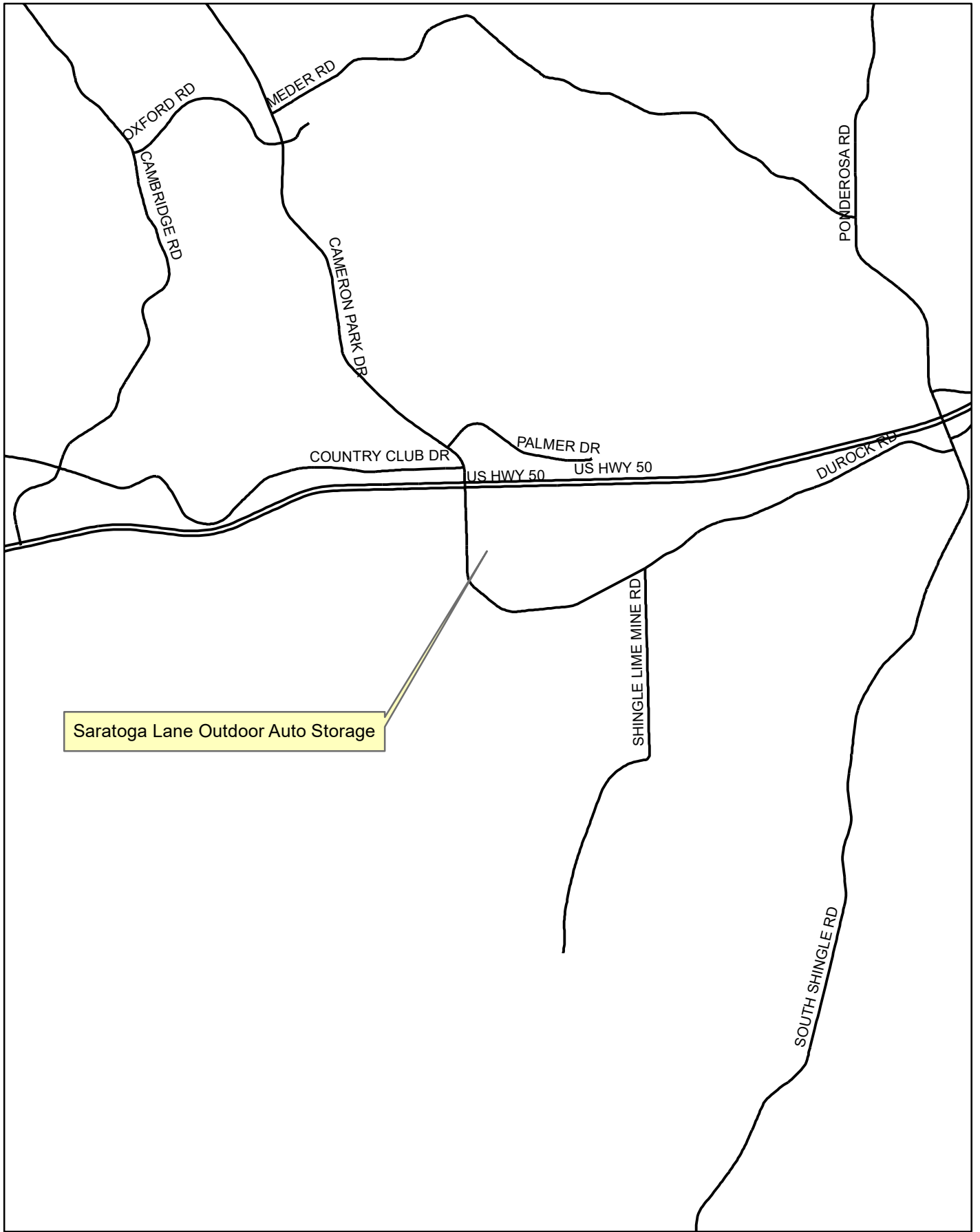
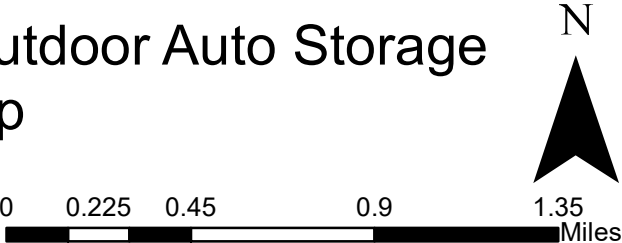


CUP20-0005/Saratoga Lane Outdoor Auto Storage
Vicinity Map
Exhibit A





CUP20-0005/Saratoga Lane Outdoor Auto Storage
Location Map
Exhibit B





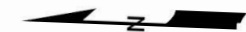
CUP20-0005/Saratoga Lane Outdoor Auto Storage
Site Aerial Map
Exhibit C



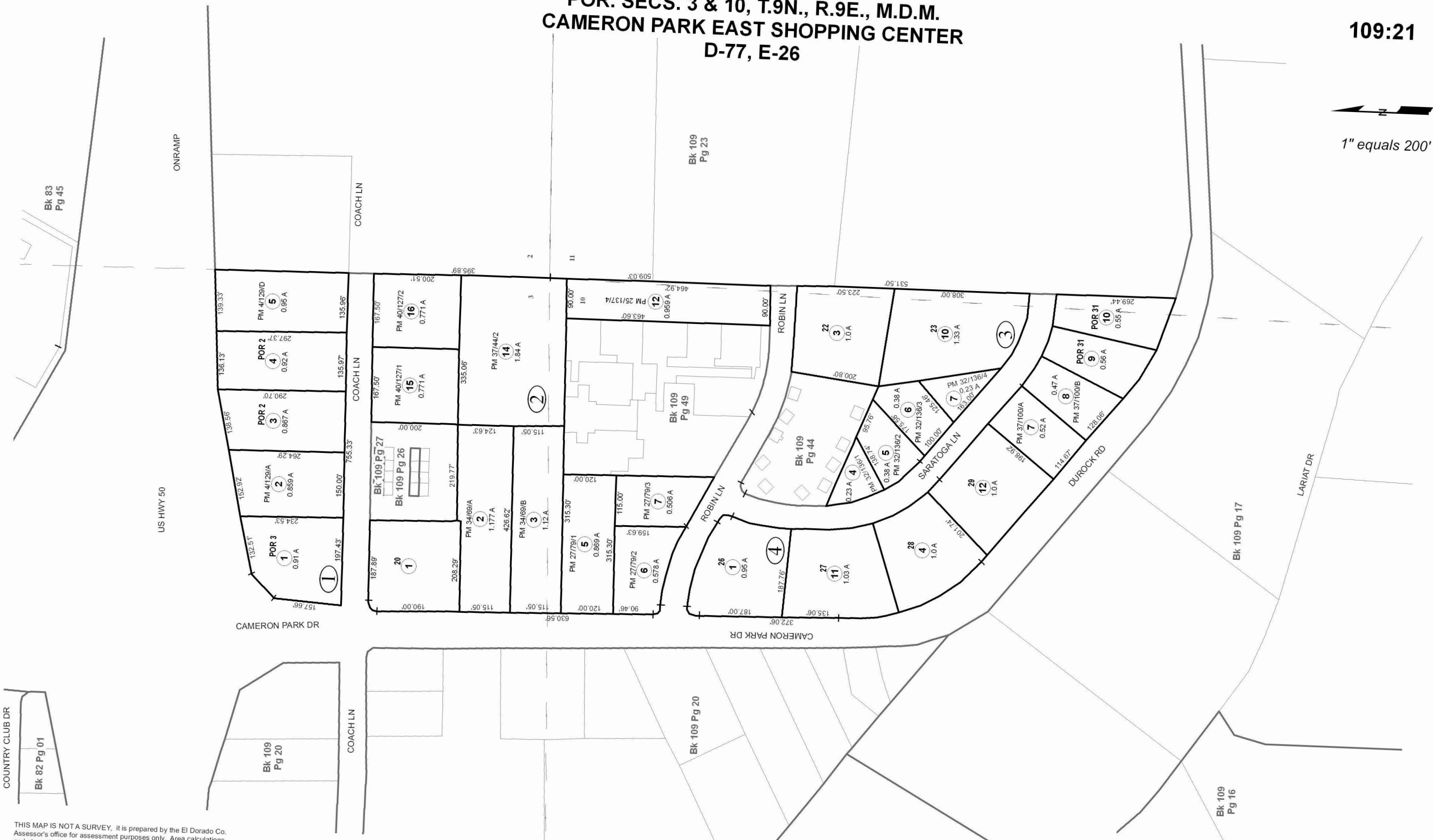
0 0.0075 0.015 0.03 0.045
Miles

POR. SECS. 3 & 10, T.9N., R.9E., M.D.M.
CAMERON PARK EAST SHOPPING CENTER
D-77, E-26

109:21



1" equals 200'



COUNTRY CLUB DR
Bk 82 Pg 01

THIS MAP IS NOT A SURVEY. It is prepared by the El Dorado Co. Assessor's office for assessment purposes only. Area calculations and characteristics are not guaranteed. Users should verify items such as dimensions and acreage.

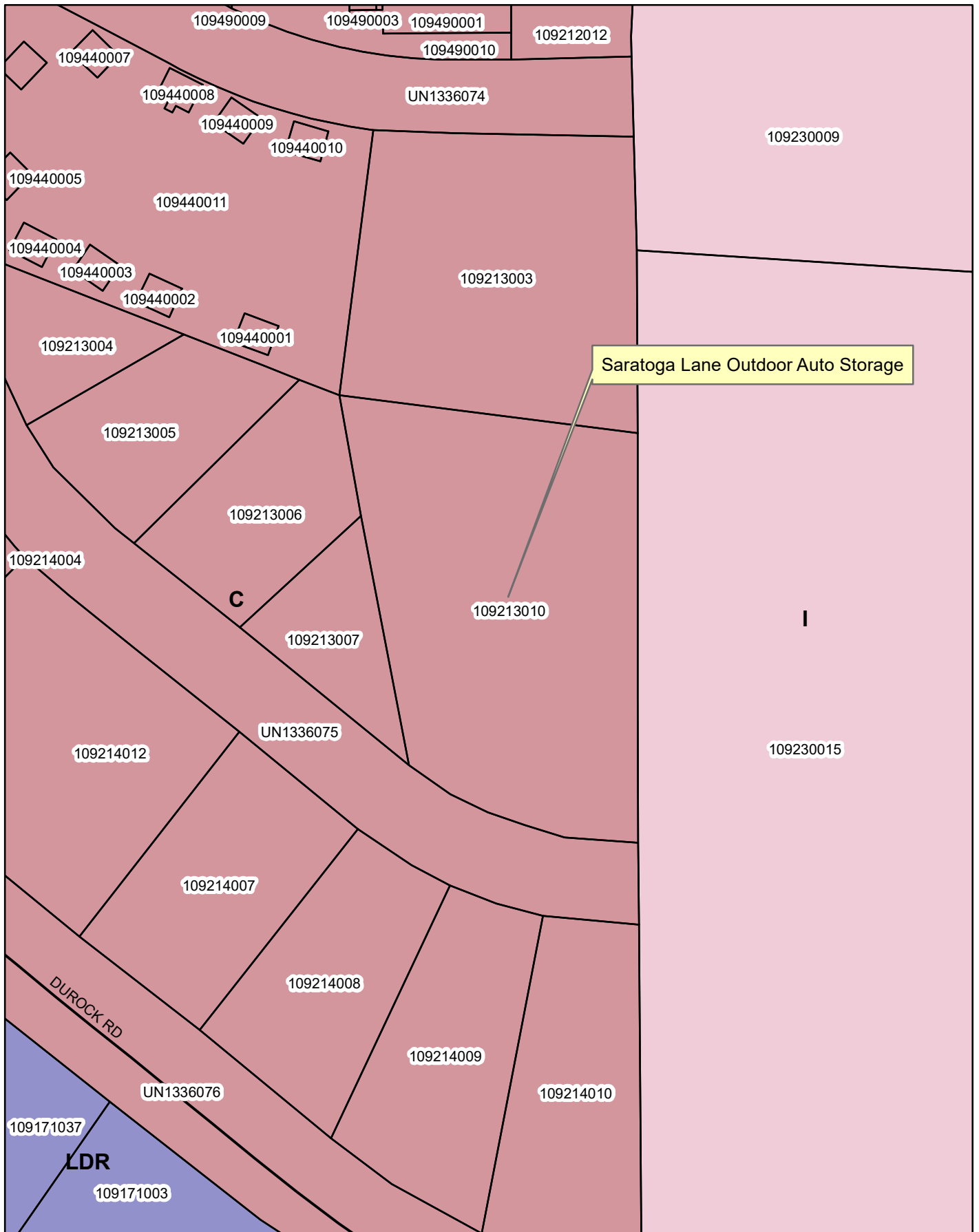
Acreages Are Estimates

Adjacent Map Pages Shown in Grey Text
Assessor's Block Numbers Shown in Ellipses
Assessor's Parcel Numbers Shown in Circles

CUP20-0005 Exhibit D

Rev. Nov. 13, 2006

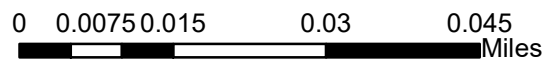
Assessor's Map Bk. 109, Pg. 21
County of El Dorado, CA

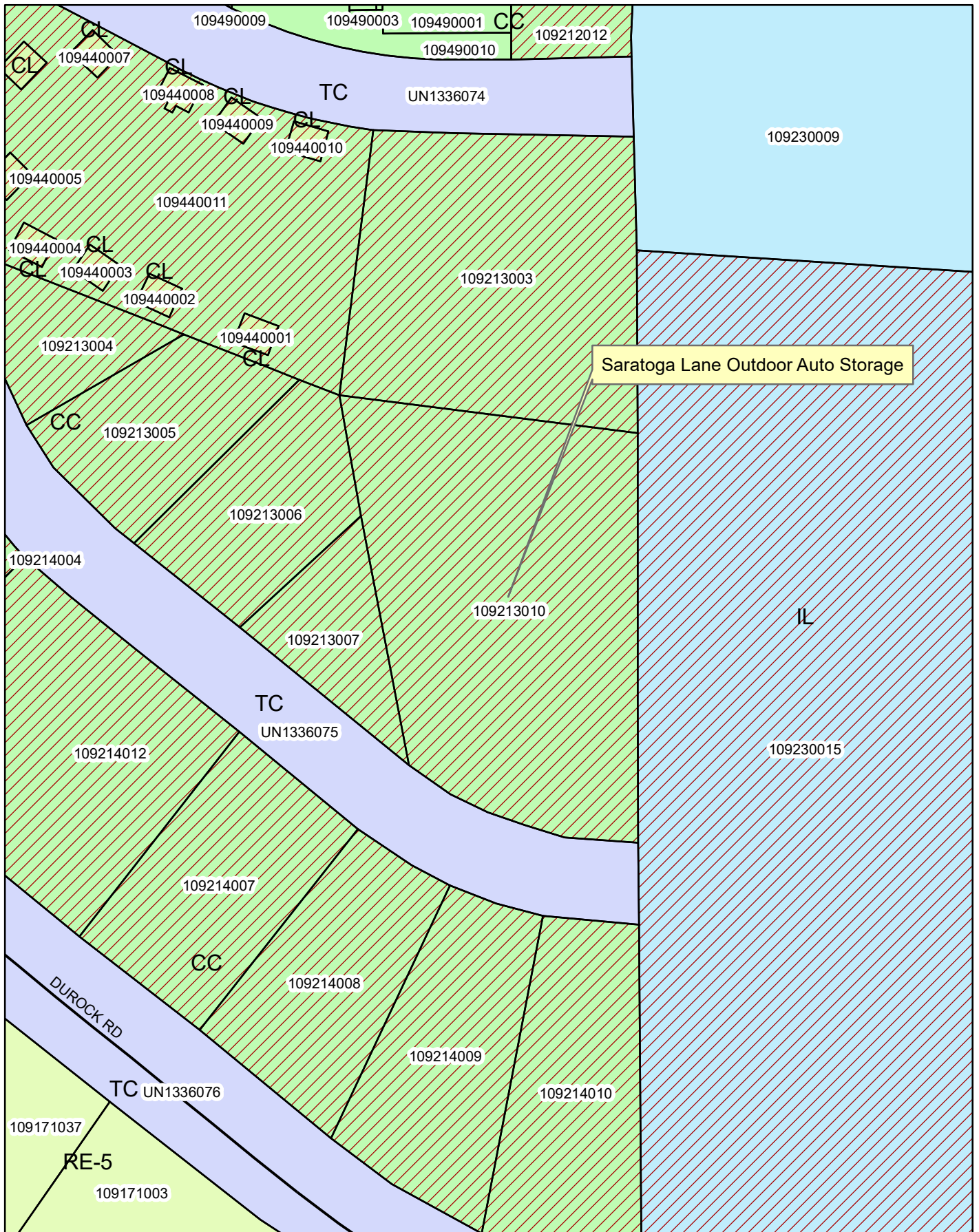


CUP20-0005/Saratoga Lane Outdoor Auto Storage General Plan Land Use Map Exhibit E









- C
- I
- LDR

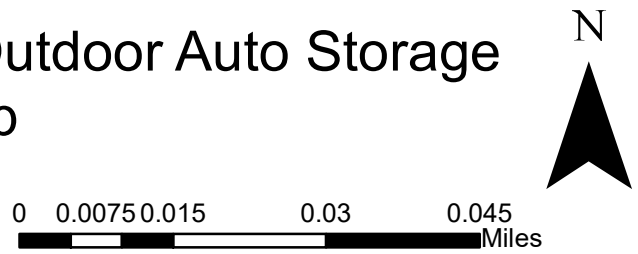




Saratoga Lane Outdoor Auto Storage

-  DC
-  CC
-  CL
-  IL
-  RE-5
-  TC

CUP20-0005/Saratoga Lane Outdoor Auto Storage Zoning Map Exhibit F



PRELIMINARY SITE PLAN
LOT 23 SARATOGA LANE
OUTDOOR VEHICLE
STORAGE & SALES/RENTAL FACILITY
APN: 109-213-010
CAMERON PARK, EL DORADO COUNTY, CALIFORNIA

PROJECT SUMMARY

OWNER/DEVELOPER/APPLICANT
 ATTN: ADAM CROXTON
 5303 BRYANT ROAD
 SHINGLE SPRINGS, CA 95682
 adam.croxton@yahoo.com
 (530)306-0804

ENGINEER
 TSD ENGINEERING, INC
 785 ORCHARD DRIVE, SUITE 110
 FOLSOM, CA 95630
 ATTN: CHRIS SCHULZE
 cschulze@tsdeng.com
 (916)608-0707

ASSESSORS PARCEL NO
 109-213-010

NUMBER OF PARCELS
 1

GENERAL PLAN
 COMMERCIAL

ZONING
 COMMERCIAL, COMMUNITY

AREA CALCULATIONS

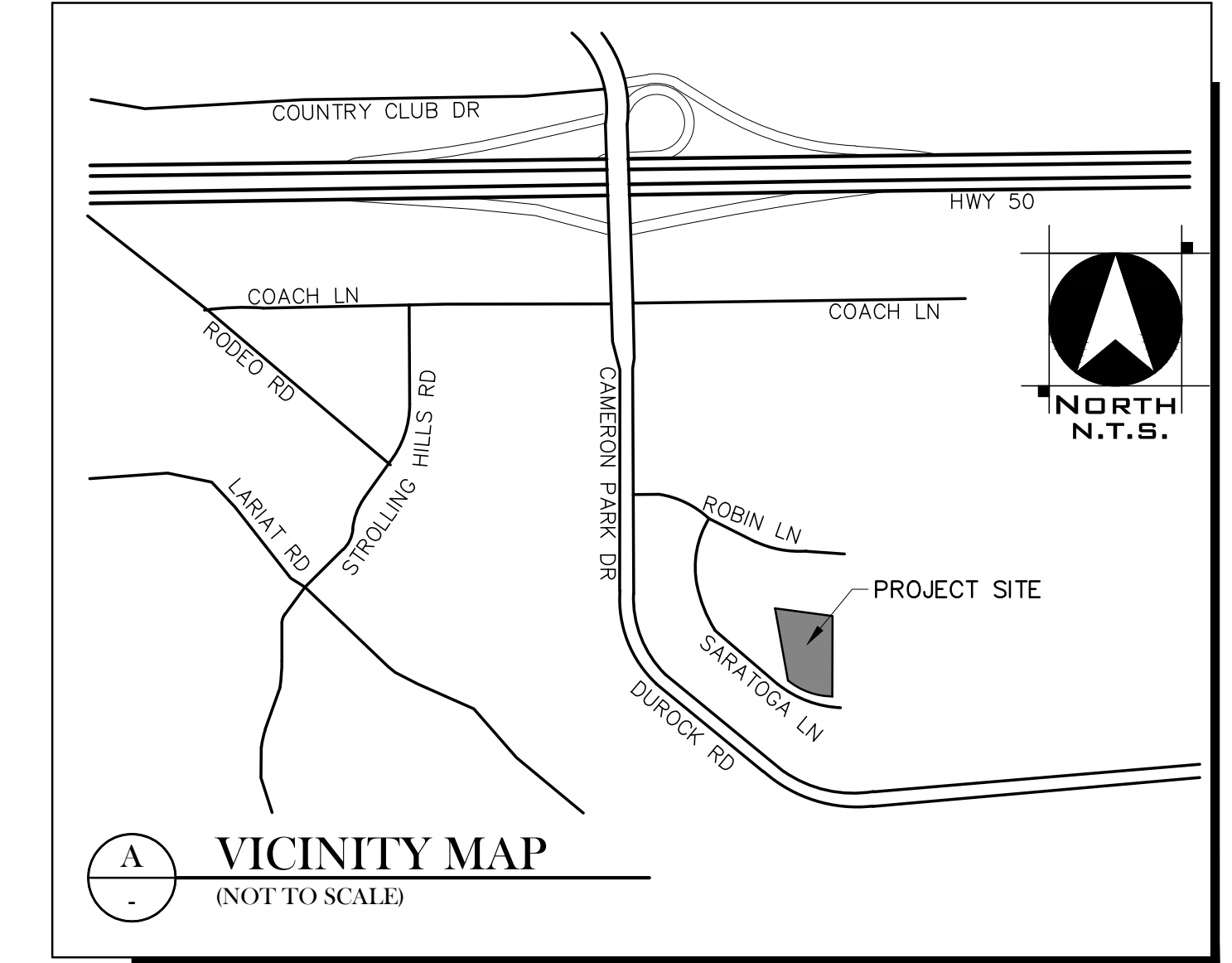
PROPERTY AREA:	±1.33 AC
PORTABLE OFFICE:	216 SF
SANITARY DUMP STATION:	180 SF
OUTDOOR VEHICLE STORAGE AREA:	22,280 SF
OUTDOOR SALES/RENTAL PARKING AREA:	4,685 SF
TOTAL OUTDOOR SALES/RENTAL & STORAGE AREA:	26,965 SF

PARKING REQUIRED

SALES/RENTAL PARKING		
OFFICE:	1 STALL / 400 SF	1 STALL
OUTDOOR LOT:	1 STALL / 3,000 SF	2 STALLS
VEHICLE STORAGE PARKING:		
SELF-STORAGE:		2 STALLS
TOTAL REQUIRED:		5 STALLS

PARKING PROVIDED

STANDARD PARKING (9'x18' MIN.):	5 STALLS
ACCESSIBLE (VAN) PARKING (9'x18' MIN.):	1 STALLS
TOTAL PROVIDED PARKING:	6 STALLS

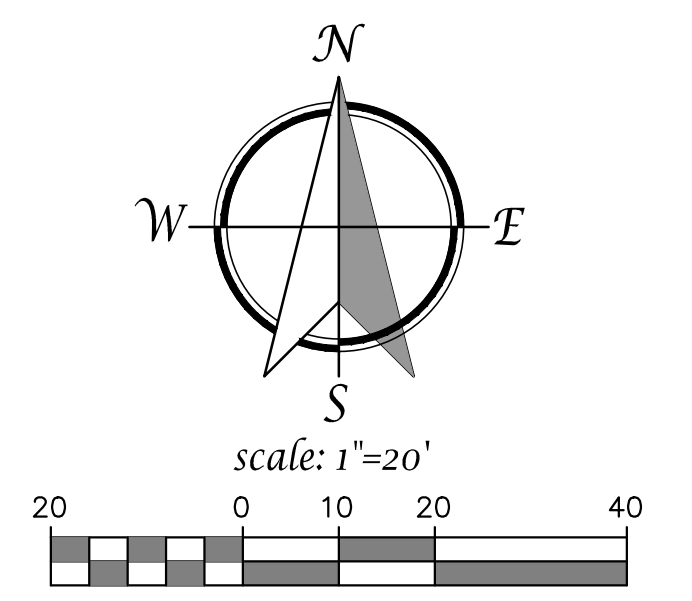


SHEET INDEX

PAGE No.	SHEET	TITLE
1.	C1	PRELIMINARY SITE PLAN
2.	C1A	PRELIMINARY DEVELOPMENT PLAN AREA
3.	C1B	PRELIMINARY LANDSCAPE PLAN
4.	C2	PRELIMINARY UTILITY PLAN
5.	C3	PRELIMINARY GRADING PLAN
6.	C4	PRELIMINARY GRADING SECTIONS
7.	C5	SITE DETAIL EXHIBIT

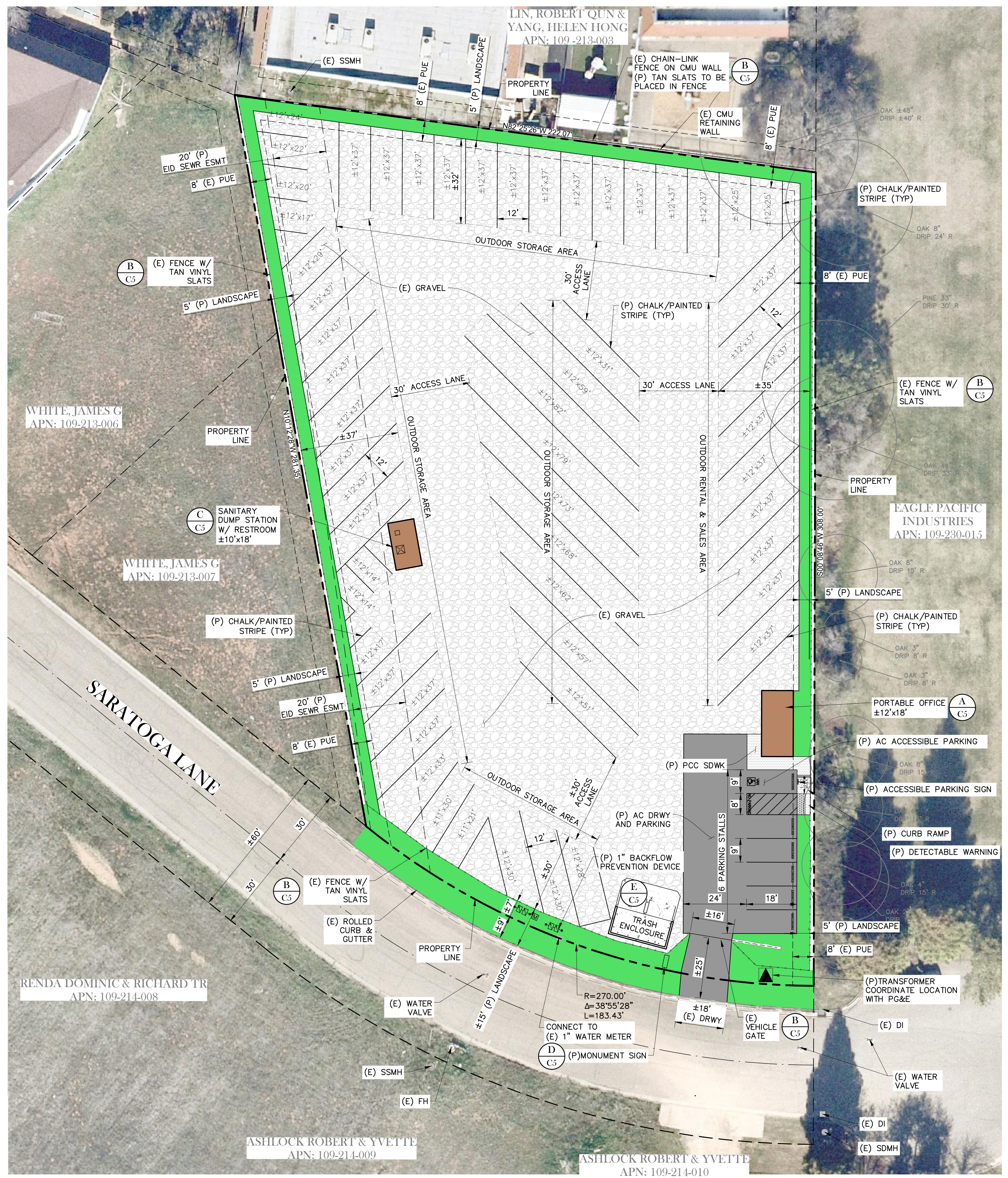
SITE LEGEND

	STORAGE, RENTAL, SALES PARKING AREA (E) CRUSHED ROCK SURFACE ±47,290 SQ.FT. (81% OF DEVELOPMENT AREA)
	ASPHALT PAVEMENT AREA 3" AC ON 6" AB ±3,425 SQ.FT. (6% OF DEVELOPMENT AREA)
	CONCRETE AREA 6" CONC ON 6" AB ±500 SQ.FT. (0.8% OF DEVELOPMENT AREA)
	SIDEWALK AREA 4" CONC ±227 SQ.FT. (0.4% OF DEVELOPMENT AREA)
	BUILDING/STRUCTURES AREA ±396 SQ.FT. (0.8% OF DEVELOPMENT AREA)
	LANDSCAPE AREA ±6,626 SQ.FT. (11% OF DEVELOPMENT AREA)



PRELIMINARY SITE PLAN
 OCTOBER 30, 2020

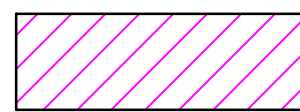
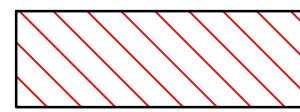

785 Orchard Drive, Suite #110
 Folsom, CA 95630
 Phone: (916) 608-0707
 Fax: (916) 608-0701

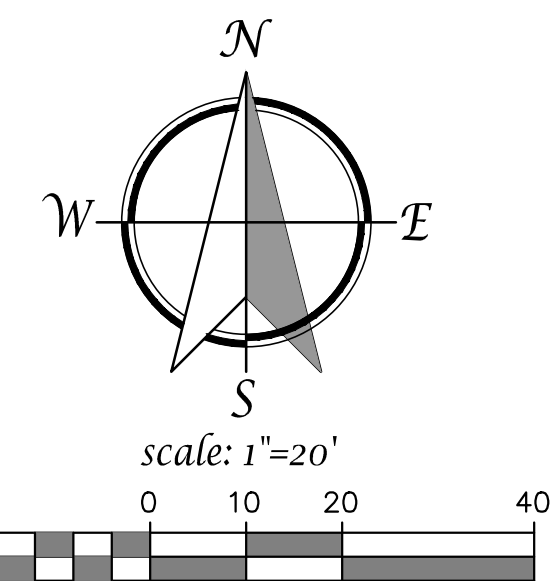
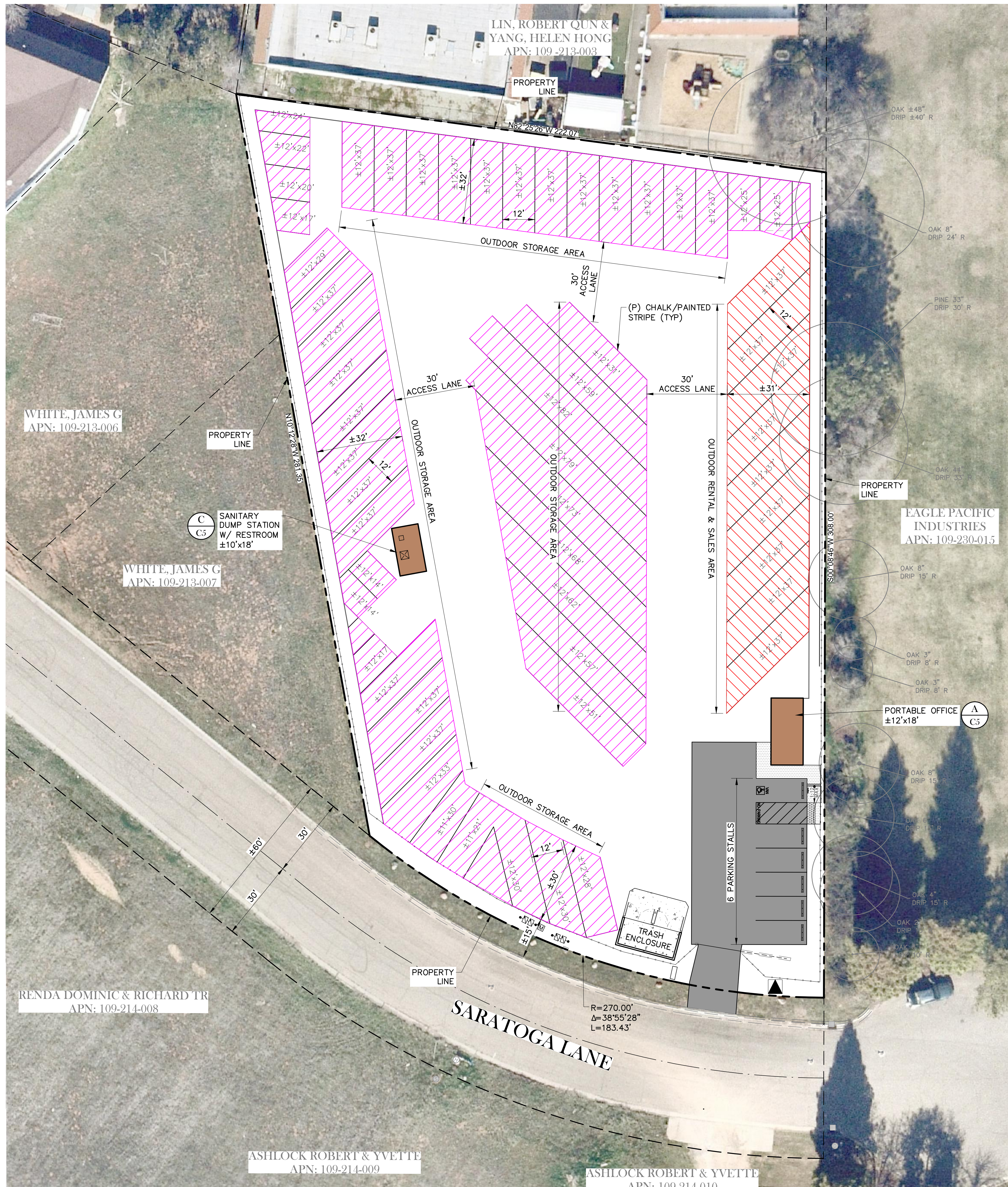


CUP20-0005 Exhibit G

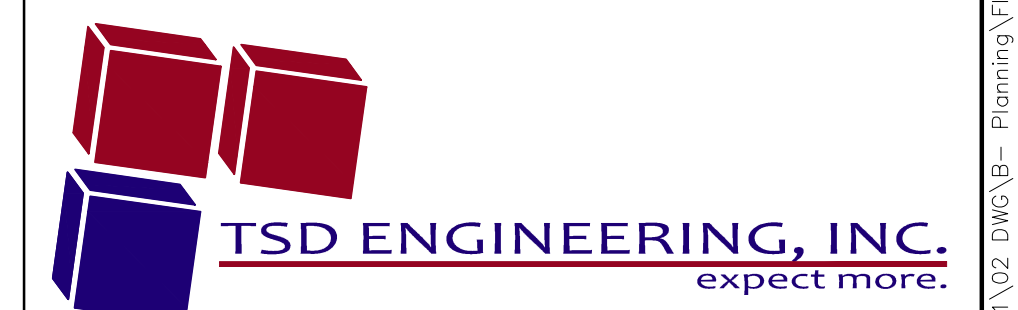
SHEET
 C1
 1 of 7

PRELIMINARY DEVELOPMENT USE AREA PLAN
LOT 23 SARATOGA LANE
OUTDOOR VEHICLE
STORAGE & SALES/RENTAL FACILITY
APN: 109-213-010
CAMERON PARK, EL DORADO COUNTY, CALIFORNIA

DEVELOPMENT USE AREA LEGEND	
	OUTDOOR STORAGE PARKING AREA ±22,280 SQ.FT.
	OUTDOOR SALES & RENTAL PARKING AREA ±4,685 SQ.FT.
	BUILDING/STRUCTURES AREA ±216 SQ.FT. PORTABLE OFFICE ±180 SQ.FT. SANITARY DUMP STATION



PRELIMINARY DEVELOPMENT USE
AREA PLAN
OCTOBER 30, 2020



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Folsom, CA 95630
Phone: (916) 608-0707
Fax: (916) 608-0701

SHEET
C1A
2 OF 7

PRELIMINARY LANDSCAPE PLAN LOT 23 SARATOGA LANE OUTDOOR VEHICLE STORAGE & SALES/RENTAL FACILITY APN: 109-213-010 CAMERON PARK, EL DORADO COUNTY, CALIFORNIA

LANDSCAPE SPECIFICATIONS PER COMMUNITY DESIGN STANDARDS, DATED DECEMBER 15, 2015.

STREET FRONTAGE LANDSCAPING (SECTION 1.6.A.1)

MIN. WIDTH 10 FEET; PROPOSED WIDTH 15 FEET
MAINTAIN SIGHT VISIBILITY AT DRIVEWAY ENTRANCE (30" MAX HEIGHT)

PROPERTY LINE (SIDE AND REAR) LANDSCAPING (SECTION 1.6.A.2)

MIN. WIDTH 5 FEET; PROPOSED WIDTH 5 FEET
MAINTAIN SIGHT VISIBILITY AT DRIVEWAY ENTRANCE (30" MAX HEIGHT)

±183 LF SARATOGA LANE FRONTAGE PLANTING – SPECIFICATION

6 TREES PER 100 LF ($\frac{183}{100} \times 6$) = 11 TREES (5 GALLON)
3 SEPARATE TREE SPECIES
50% OF EVERGREEN SPECIES
50% DROUGHT TOLERANT
24 SHRUBS PER 100 LF ($\frac{183}{100} \times 24$) = 44 SHRUBS (1 GALLON)
3 SEPARATE SHRUB SPECIES
ALL SHRUBS SHALL BE EVERGREEN SPECIES
50% DROUGHT TOLERANT
GROUND COVER SHALL BE BARK/WOOD AND/OR ROCK MULCH

±811 LF PROPERTY LINE PLANTING – SPECIFICATION

6 TREES PER 100 LF ($\frac{811}{100} \times 6$) = 49 TREES (5 GALLON)
NOTE: TOTAL TREE COUNT = 40 (REDUCED DUE TO EXISTING CANOPY EXTENDING OVER PROPERTY LINE).
4 SEPARATE TREE SPECIES
50% OF EVERGREEN SPECIES
50% DROUGHT TOLERANT
24 SHRUBS PER 100 LF ($\frac{811}{100} \times 24$) = 194 SHRUBS (1 GALLON)
3 SEPARATE SHRUB SPECIES
ALL SHRUBS SHALL BE EVERGREEN SPECIES
50% DROUGHT TOLERANT
GROUND COVER SHALL BE BARK/WOOD AND/OR ROCK MULCH

PARKING LOT SHADE – SPECIFICATION

50% PARKING STALL SHALL BE SHADED
PROPOSED PARKING LOT SHADE 55%

LANDSCAPE & IRRIGATIONS PLAN SHALL BE REQUIRED AS PART OF BUILDING PERMIT INCLUDING MWELC CALCULATIONS

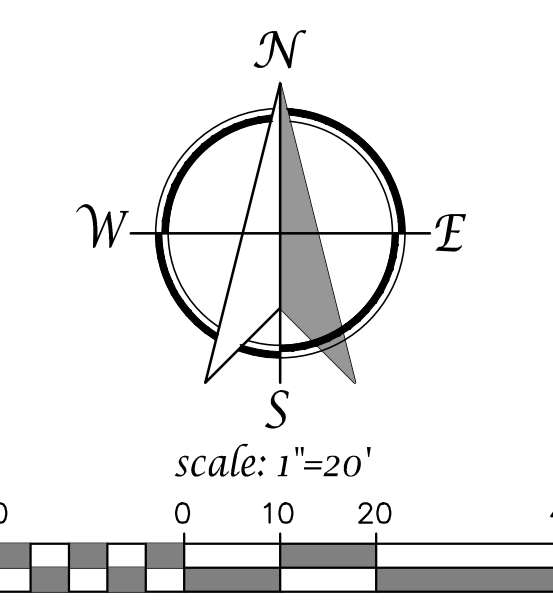
SITE LEGEND

	STORAGE, RENTAL, SALES PARKING AREA (E) CRUSHED ROCK SURFACE
	ASPHALT PAVEMENT AREA 3" AC ON 6" AB
	CONCRETE AREA 6" CONC ON 6" AB
	SIDEWALK AREA 4" CONC
	BUILDING/STRUCTURES AREA ±396 SQ.FT. (0.8% OF DEVELOPMENT AREA)
	LANDSCAPE AREA

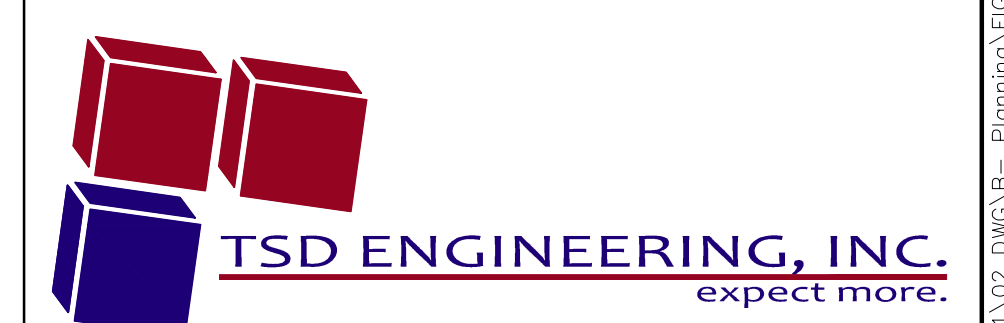
PLANT SCHEDULE

TREES	SHRUBS		
	DEODAR CEDAR (EVERGREEN)		MANZANITA (EVERGREEN)
	INTERIOR LIVE OAK (EVERGREEN)		DWARF COYOTE BUSH (EVERGREEN)
	CALIFORNIA LAUREL (EVERGREEN)		SPICE BRUSH (EVERGREEN)
	CHINESE PISTACHE (DESIDUOUS)		

NOTE: PLANT SCHEDULE IS PRELIMINARY AND SUBJECT TO CHANGE BASED ON FINAL LANDSCAPE DRAWINGS. FINAL PLANT SPECIES SHALL BE SELECTED FROM COMMUNITY DESIGN STANDARDS APPENDIX B & C.



PRELIMINARY LANDSCAPE PLAN
OCTOBER 30, 2020



785 Orchard Drive, Suite #110
Folsom, CA 95630
Phone: (916) 608-0707
Fax: (916) 608-0701

SHEET
C1B
3 OF 7

P:\Projects\467-001\02 DWG\8- Planning\06\467-001 SL-RV C1_Preliminary Site Planning.dwg, Aaron, 08/22/07, 10:30:30

PRELIMINARY UTILITY PLAN
LOT 23 SARATOGA LANE
OUTDOOR VEHICLE
STORAGE & SALES/RENTAL FACILITY
APN: 109-213-010
CAMERON PARK, EL DORADO COUNTY, CALIFORNIA

LIN, ROBERT QUN &
 YANG, HELEN HONG
 APN: 109-213-003

WHITE, JAMES
 APN: 109-213-006
 109-213-007

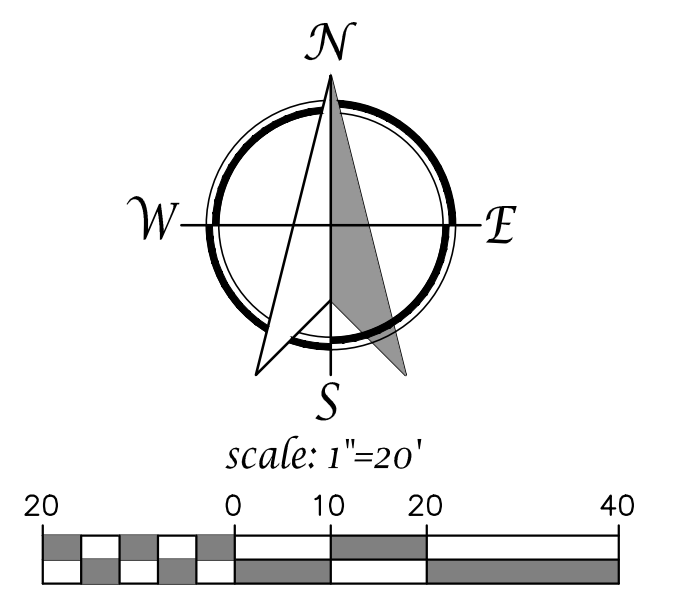
EAGLE PACIFIC
 INDUSTRIES
 APN: 109-230-015

RENDA DOMINIC & RICHARD TR
 APN: 109-214-008

ASHLOCK ROBERT & YVETTE
 APN: 109-214-009

ASHLOCK ROBERT & YVETTE
 APN: 109-214-010

SITE LEGEND	
PROPOSED	EXISTING



PRELIMINARY UTILITY PLAN
 OCTOBER 30, 2020

811
 Know what's below.
 Call before you dig.
 NOTICE TO CALL A MIN.
 48 HOURS PRIOR TO
 CONSTRUCTION.

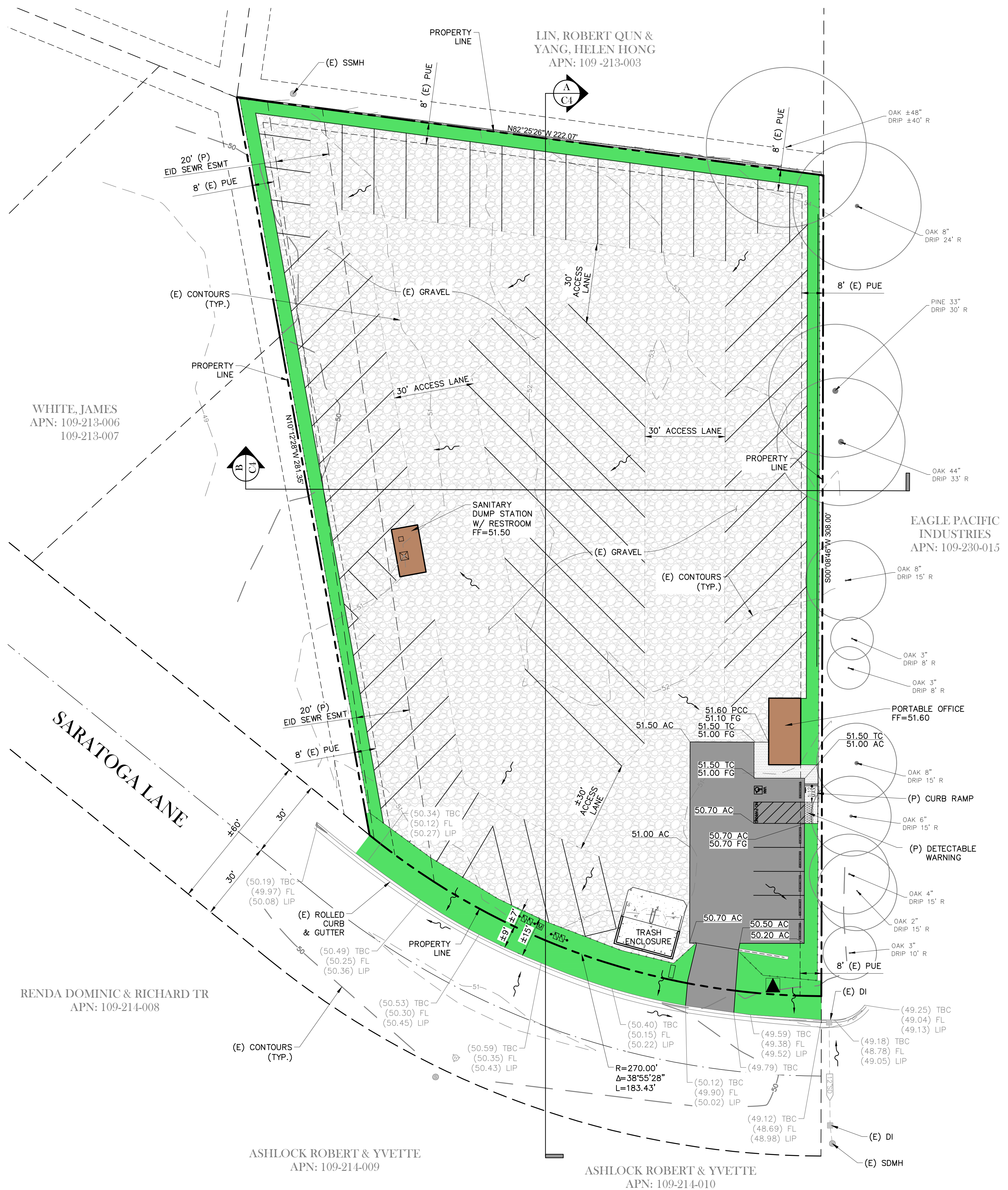
TSD ENGINEERING, INC.
 expect more.
 785 Orchard Drive, Suite #110
 Folsom, CA 95630
 Phone: (916) 608-0707
 Fax: (916) 608-0701

SHEET
 C2
 4 OF 7



P:\Projects\467-001\02 DWG\8- Planning\016\467-001_S1-EV_C2_Preliminary Utility Plan.dwg, Aaron, 09/22/10, 10:30-20

PRELIMINARY GRADING PLAN
LOT 23 SARATOGA LANE
OUTDOOR VEHICLE
STORAGE & SALES/RENTAL FACILITY
APN: 109-213-010
CAMERON PARK
EL DORADO COUNTY, CALIFORNIA

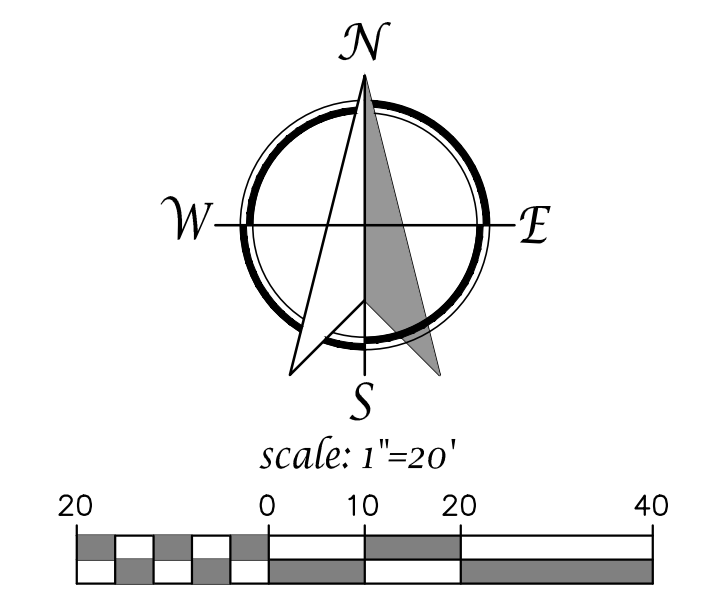


SITE LEGEND	
	STORAGE, RENTAL, SALES PARKING AREA (E) CRUSHED ROCK SURFACE ±47,290 SQ.FT. (81% OF DEVELOPMENT AREA)
	ASPHALT PAVEMENT AREA 3" AC ON 6" AB ±3,425 SQ.FT. (6% OF DEVELOPMENT AREA)
	CONCRETE AREA 6" CONC ON 6" AB ±500 SQ.FT. (0.8% OF DEVELOPMENT AREA)
	SIDEWALK AREA 4" CONC ±227 SQ.FT. (0.4% OF DEVELOPMENT AREA)
	BUILDING/STRUCTURES AREA ±396 SQ.FT. (0.8% OF DEVELOPMENT AREA)
	LANDSCAPE AREA ±6,626 SQ.FT. (11% OF DEVELOPMENT AREA)

- GRADING NOTES:**
- NO GRADING IS PROPOSED FOR ACCESS LANE AND/OR VEHICLE STORAGE & SALES AREA.
 - GRADING FOR PAD OF BOTH PORTABLE OFFICE & SANITARY DUMP STATION SHALL BE REQUIRED.
 - GRADING FOR AC DRIVE AISLE, PARKING, & ACCESSIBLE PARKING SHALL BE REQUIRED.
 - GRADING FOR TRASH ENCLOSURE SHALL BE REQUIRED.

TOPOGRAPHIC SURVEY
 TOPOGRAPHIC SURVEY HAS BEEN GENERATED FROM FIELD SURVEY PERFORMED BY TSD ENGINEERING INC, DATED JANUARY 2020. CONTRACTOR TO VERIFY EXISTING GRADES PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY CONFLICTS.

EARTHWORK CALCULATIONS
 (FOLLOWING NUMBERS ARE FOR PERMITTING PURPOSES ONLY. CONTRACTOR IS RESPONSIBLE FOR THEIR OWN EARTH WORK QUANTITIES)
 CUT: ±20 CU.YD.
 FILL: ±20 CU.YD.
 NET: ±0 CU.YD. (EXPORT)



PRELIMINARY GRADING PLAN
 OCTOBER 30, 2020

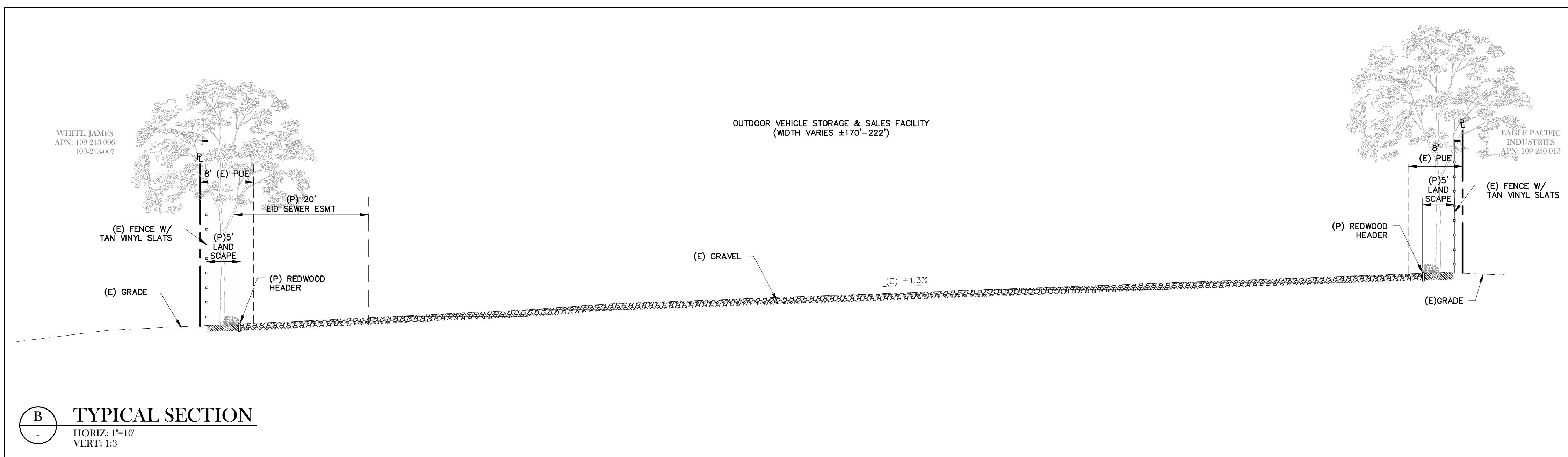
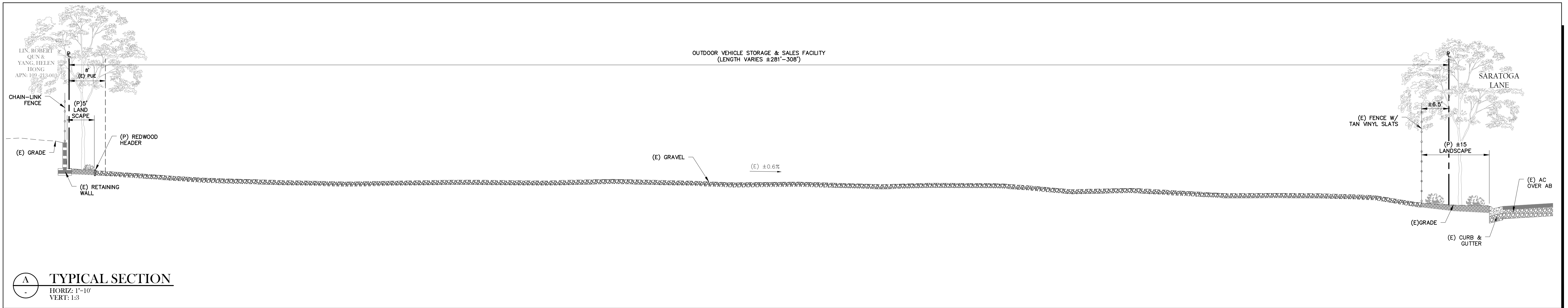
811
 Know what's below.
 Call before you dig.
 NOTICE TO CALL A MIN.
 48 HOURS PRIOR TO
 CONSTRUCTION.

TSD ENGINEERING, INC.
 expect more.
 785 Orchard Drive, Suite #110
 Folsom, CA 95630
 Phone: (916) 608-0707
 Fax: (916) 608-0701

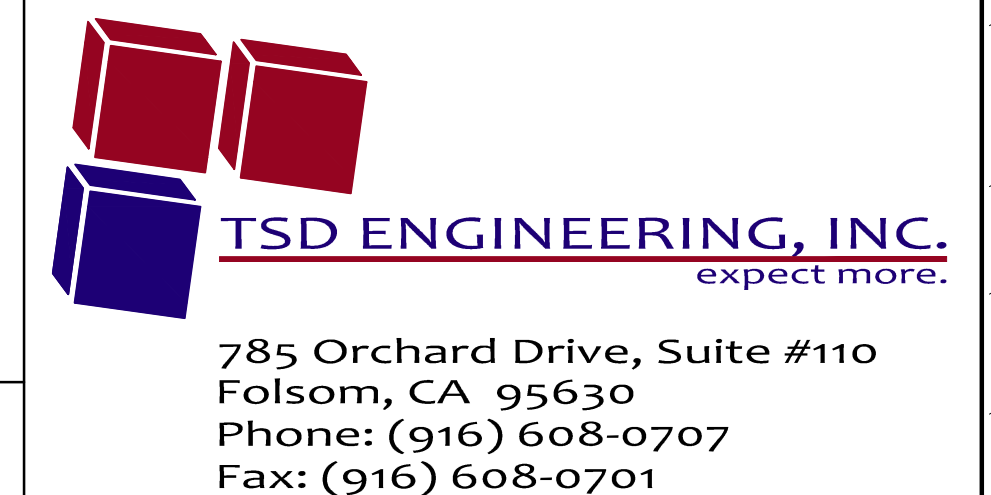
SHEET
 C3
 5 OF 7

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PRELIMINARY GRADING SECTIONS
LOT 23 SARATOGA LANE
OUTDOOR VEHICLE
STORAGE & SALES/RENTAL FACILITY
APN: 109-213-010
CAMERON PARK, EL DORADO COUNTY, CALIFORNIA



PRELIMINARY GRADING SECTIONS
OCTOBER 30, 2020



SHEET
C4
5 OF 7

SITE DETAIL EXHIBIT
LOT 23 SARATOGA LANE
OUTDOOR VEHICLE
STORAGE & SALES/RENTAL FACILITY
APN: 109-213-010
 CAMERON PARK, EL DORADO COUNTY, CALIFORNIA



A PORTABLE OFFICE



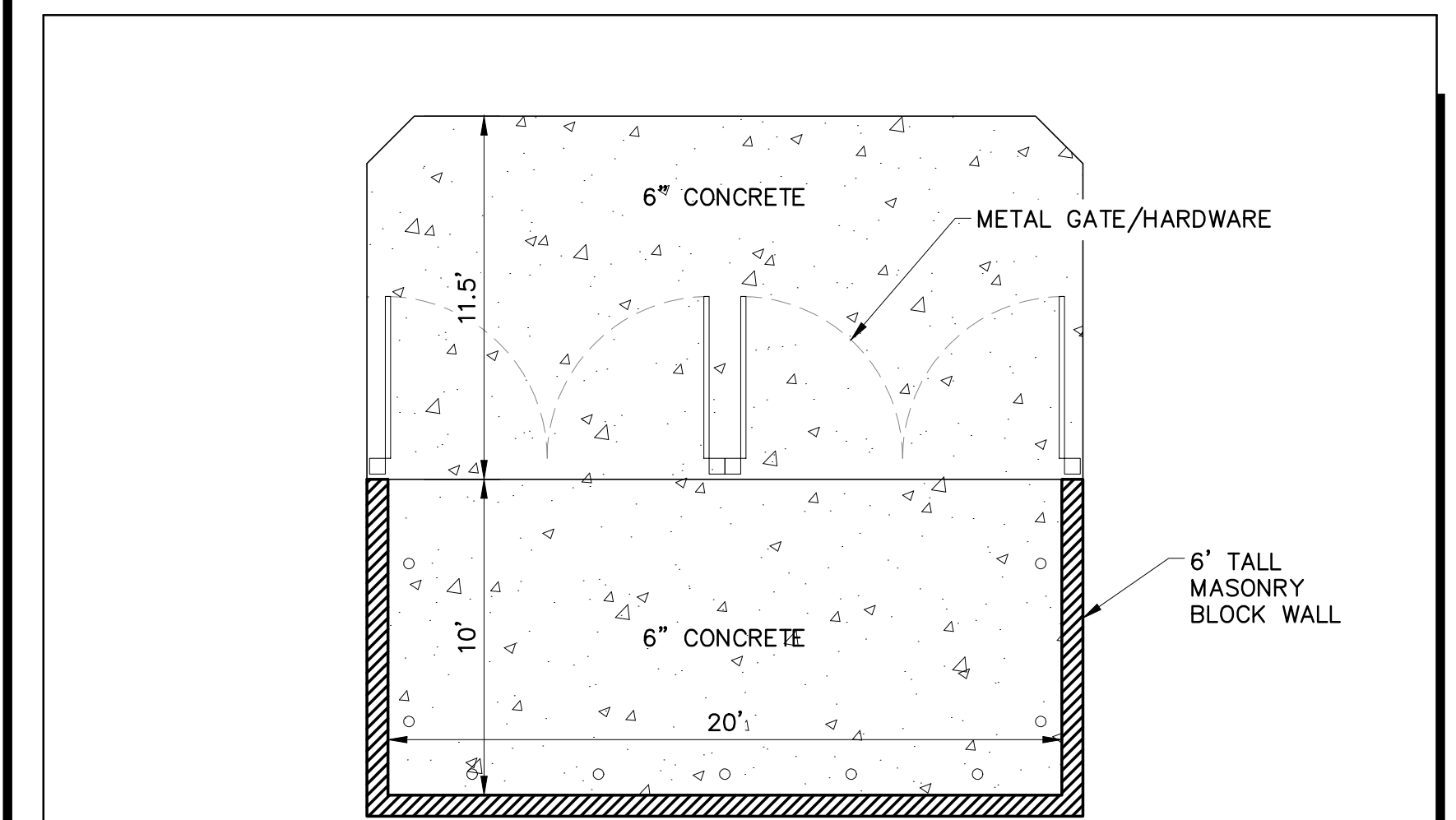
C SANITARY DUMP STATION



D MONUMENT SIGN

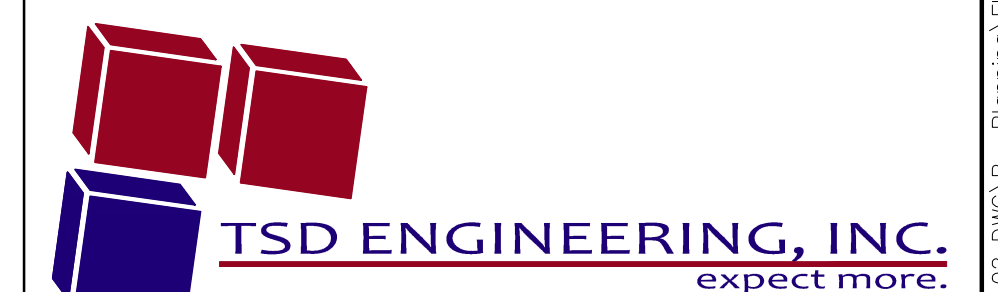


B EXISTING GATE & FENCE
 STREET VIEW



E TRASH ENCLOSURE

SITE DETAIL EXHIBIT
 OCTOBER 30, 2020



785 Orchard Drive, Suite #110
 Folsom, CA 95630
 Phone: (916) 608-0707
 Fax: (916) 608-0701

SHEET
 C5
 7 OF 7

Environmental Noise & Vibration Assessment

Saratoga Lane Outdoor Vehicle Storage & Sales/Rental Facility

Cameron Park (El Dorado County), California

BAC Job # 2021-003

Prepared For:

Adam Croxton

5503 Bryant Road
Shingle Springs, CA 95682

Prepared By:

Bollard Acoustical Consultants, Inc.



Dario Gotchet, Senior Consultant

July 7, 2021



CUP20-0005 Exhibit H

Introduction

The proposed Saratoga Lane Outdoor Vehicle Storage & Sales/Rental Facility (project) is located in Cameron Park (El Dorado County), California. The project is requesting a Conditional Use Permit to utilize the project property (APN: 109-2103-010) for an outdoor vehicle storage, rental, and sales facility. Existing land uses within the immediate project vicinity include a pre-school/day care to the north, industrial to the east, and both vacant and occupied commercial in all other directions. The project area and site plan are shown on Figures 1 and 2, respectively.

The purposes of this assessment are to quantify the existing noise and vibration environments, identify potential noise and vibration impacts resulting from the project, identify appropriate mitigation measures, and provide a quantitative and qualitative analysis of impacts associated with the project. Specifically, impacts are identified if project-related activities would cause a substantial increase in ambient noise or vibration levels at existing sensitive land uses in the project vicinity, or if project-generated noise or vibration levels would exceed applicable federal, state, or local standards at existing sensitive uses.

Noise and Vibration Fundamentals

Noise

Noise is often described as unwanted sound. Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and are designated as sound. The number of pressure variations per second is called the frequency of sound and is expressed as cycles per second, or Hertz (Hz). Definitions of acoustical terminology are provided in Appendix A.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals of pressure) as a point of reference, defined as 0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB. Another useful aspect of the decibel scale is that changes in decibel levels correspond closely to human perception of relative loudness. Noise levels associated with common noise sources are provided in Figure 3.

The perceived loudness of sounds is dependent upon 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 filtering the frequency response of a sound level meter by means of the standardized A-weighting network. There is a strong correlation between A-weighted sound levels (expressed as dBA) and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}). The L_{eq} is the foundation of the day-night average noise descriptor, DNL (or L_{dn}), and shows very good correlation with community response to noise. The day-night average sound level (DNL) is based on the average noise level over a 24-hour day, with a +10-decibel weighting applied to noise occurring during nighttime hours (10:00 p.m. to 7:00 a.m.). The nighttime penalty is based on the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because DNL represents a 24-hour average, it tends to disguise short-term variations in the noise environment.

Vibration

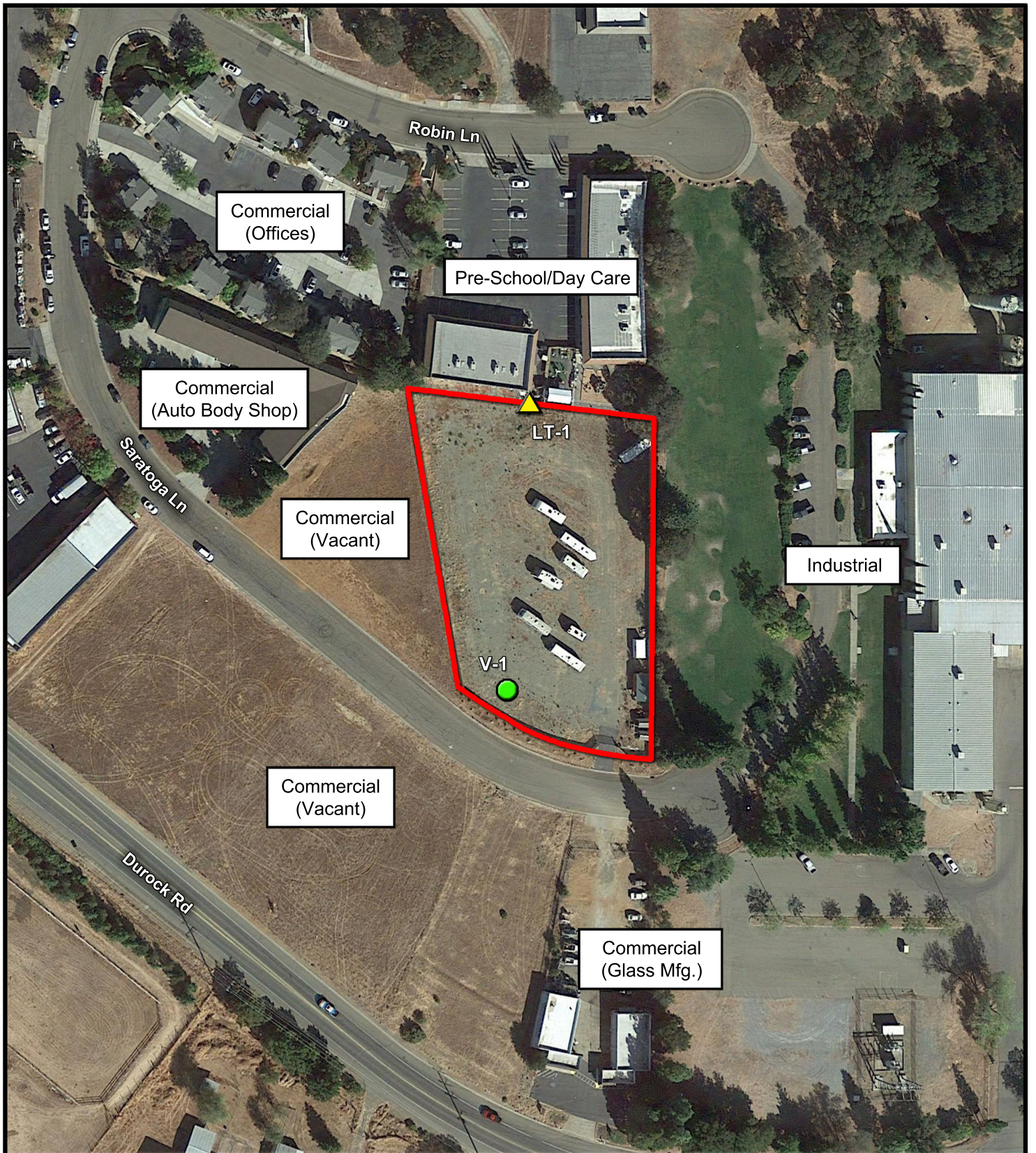
Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that noise is generally considered to be pressure waves transmitted through air, while vibration is usually associated with transmission through the ground or structures. As with noise, vibration consists of an amplitude and frequency. A person's response to vibration will depend on their individual sensitivity as well as the amplitude and frequency of the source.

Vibration can be described in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration in terms of velocity in inches per second peak particle velocity (IPS, PPV) or root-mean-square (VdB, RMS). Standards pertaining to perception as well as damage to structures have been developed for vibration in terms of peak particle velocity as well as RMS velocities.




As vibrations travel outward from the source, they excite the particles of rock and soil through which they pass and cause them to oscillate. Differences in subsurface geologic conditions and distance from the source of vibration will result in different vibration levels characterized by different frequencies and intensities. In all cases, vibration amplitudes will decrease with increasing distance.

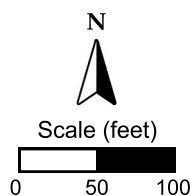
Human response to vibration is difficult to quantify. Vibration can be felt or heard well below the levels that produce any damage to structures. The duration of the event has an effect on human response, as does frequency. Generally, as the duration and vibration frequency increase, the potential for adverse human response increases.

According to the Transportation and Construction-Induced Vibration Guidance Manual (Caltrans, June 2004), operation of construction equipment and construction techniques generate ground vibration. Traffic traveling on roadways can also be a source of such vibration. At high enough amplitudes, ground vibration has the potential to damage structures and/or cause cosmetic damage. Ground vibration can also be a source of annoyance to individuals who live or work close to vibration-generating activities. However, traffic, rarely generates vibration amplitudes high enough to cause structural or cosmetic damage.



Legend

-  Project Border (Approximate)
-  Short-Term Vibration Measurement Location
-  Long-Term Noise Measurement Location

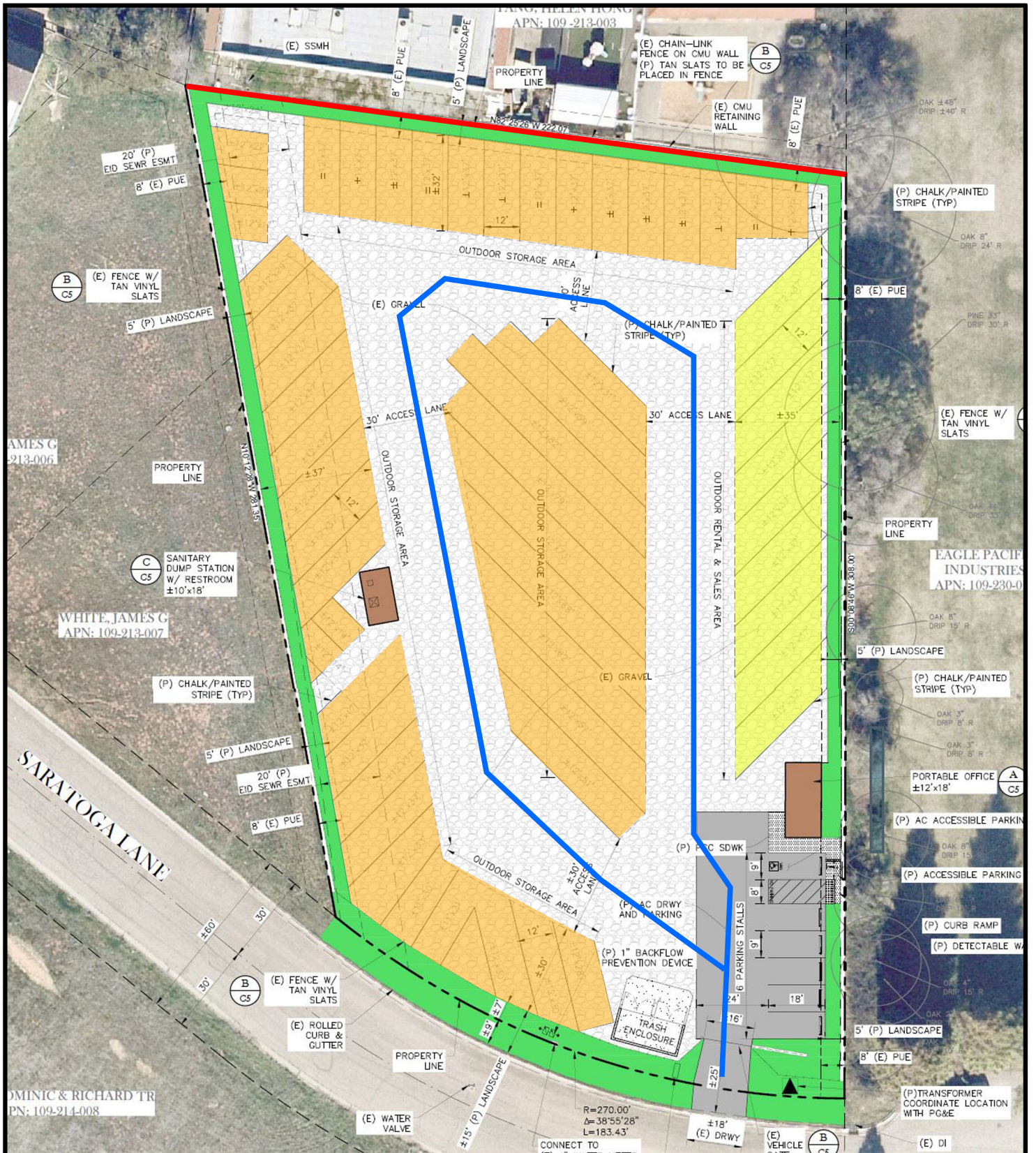


Saratoga Lane Outdoor Vehicle Storage
& Sales/Rental Facility
El Dorado County, California

Project Area

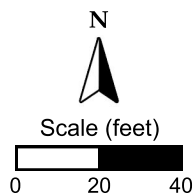
Figure 1





Legend

- Drive Aisle (Vehicle Circulation)
- 6' Solid Noise Barrier (Mitigation Measure 2a)
- Rental and Sales Vehicle Area
- Main Vehicle Storage Areas



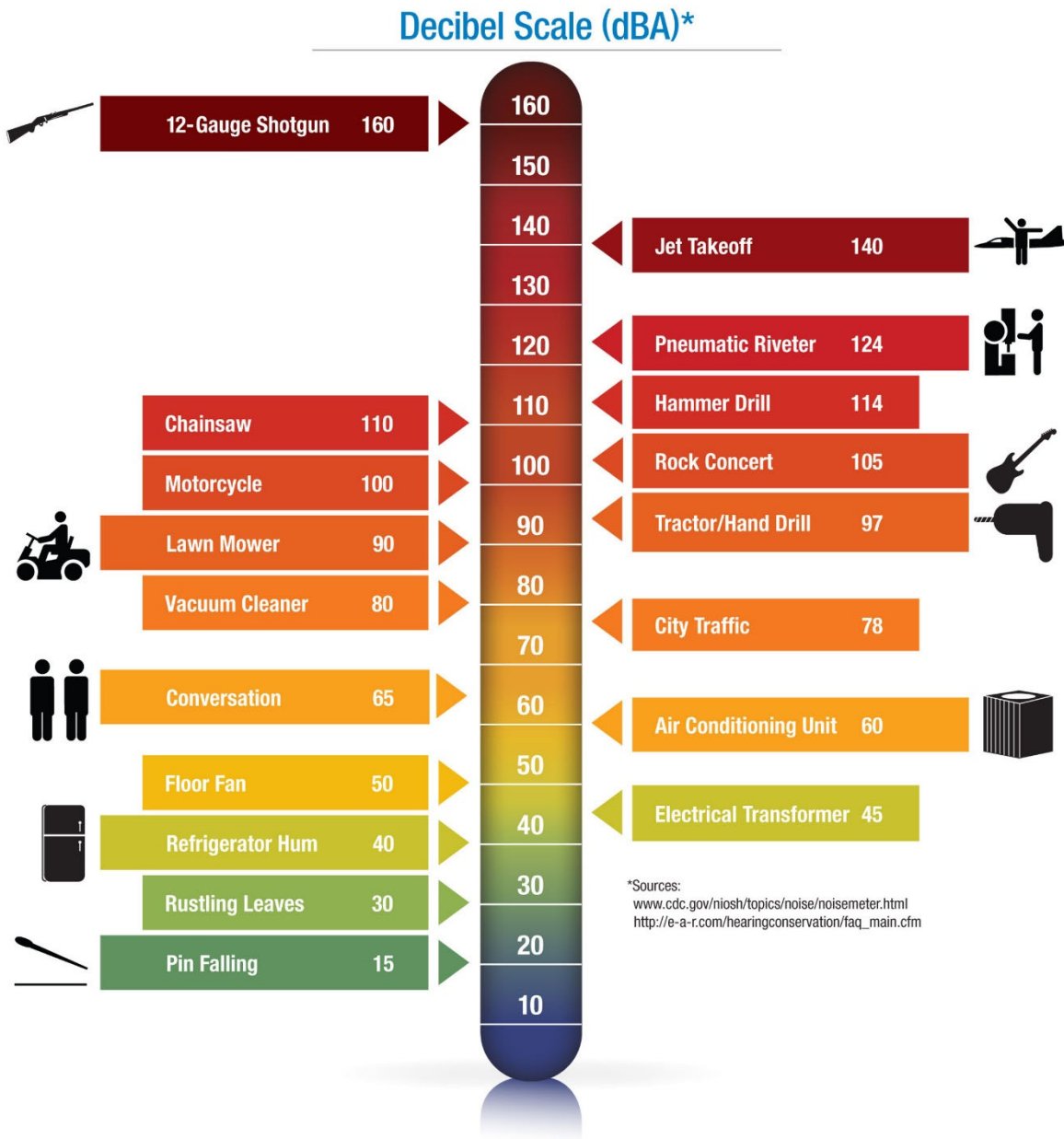
Saratoga Lane Outdoor Vehicle Storage & Sales Facility
 El Dorado County, California

Site Plan

Figure 2



**Figure 3
Noise Levels Associated with Common Noise Sources**



Environmental Setting – Existing Ambient Noise and Vibration Environment

Noise-Sensitive Land Uses in the Project Vicinity

Noise-sensitive land uses are generally defined as locations where people reside or where the presence of unwanted sound could adversely affect the primary intended use of the land. Places where people live, sleep, recreate, worship, and study are generally considered to be sensitive to noise because intrusive noise can be disruptive to these activities. The County of El Dorado has identified the pre-school/day care to the north of the project as a noise-sensitive land use. A combination of existing commercial (both vacant and occupied) and industrial uses are located in all other directions of the project site, which are typically not considered to be noise-sensitive. The project area and surrounding land uses are shown on Figure 1.

Existing Overall Ambient Noise Environment within the Project Vicinity

The existing ambient noise environment within the immediate project vicinity is defined primarily by outdoor play area activities at the pre-school/day care to the north, and by activities at adjacent commercial businesses (including an auto body shop). To quantify existing ambient noise environment within the immediate project vicinity, BAC conducted a long-term (96-hour) ambient noise level survey on the project site from March 27th to 30th, 2021. The long-term noise survey location is shown on Figure 1, identified as site LT-1. Photographs of the noise survey location are provided in Appendix B.

A Larson Davis Laboratories (LDL) Model 820 precision integrating sound level meter was used to complete the long-term noise level survey. The meter was calibrated immediately before and after use with an LDL Model CA200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all specifications of the American National Standards Institute requirements for Type 1 sound level meters (ANSI S1.4). The results of the long-term ambient noise survey are shown numerically and graphically in Appendices C and D (respectively) and are summarized in Table 1.

Table 1
Long-Term Noise Level Measurement Results – March 27-30, 2021¹

Site Description ²	Date	DNL (dB)	Average Measured Hourly Noise Levels (dB)			
			Daytime ³		Nighttime ⁴	
			L _{eq}	L _{max}	L _{eq}	L _{max}
LT-1: Along northern project boundary adjacent to the pre-school/day care	3/27/21	54	53	71	45	61
	3/28/21	52	50	67	44	58
	3/29/21	54	52	68	46	59
	3/30/21	54	52	68	46	59

¹ Detailed summaries of the noise monitoring results are provided in Appendices C and D.
² Long-term ambient noise monitoring location is identified on Figure 1.
³ Daytime hours: 7:00 a.m. to 10:00 p.m.
⁴ Nighttime hours: 10:00 p.m. to 7:00 a.m.
 Source: Bollard Acoustical Consultants, Inc. (2021)

As shown in Table 1, measured day-night average (DNL) and average measured hourly noise levels were consistent throughout the monitoring period. Noise measurements collected at site LT-1, located along the northern project boundary, are believed to be representative of the ambient noise level environment at the adjacent pre-school/day care.

Existing Ambient Vibration Environment

During a site visit on March 26th, 2021, vibration levels were below the threshold of perception at the project site. Nonetheless, to quantify existing vibration levels at the project site, BAC conducted a short-term (15-minute) vibration survey at the location identified on Figure 1 (site V-1). Photographs of the vibration survey location are provided in Appendix B.

A Larson-Davis Laboratories Model LxT precision integrating sound level meter equipped with a vibration transducer was used to complete the measurements. The results are summarized below in Table 2.

**Table 2
Summary of Ambient Vibration Monitoring Results – March 26, 2021**

Site	Time	Average Measured Vibration Level, PPV (in. sec) ¹
V-1: Along the southern project property boundary	10:36 a.m.	<0.001
¹ PPV = Peak Particle Velocity (inches/second) Source: Bollard Acoustical Consultants, Inc. (2021)		

The Table 2 data indicate that measured average vibration levels within the project area were less than 0.001 in/sec PPV.

Regulatory Setting: Criteria for Acceptable Noise and Vibration Exposure

Federal

There are no federal noise or vibration criteria which would be directly applicable to this project.

State of California

California Environmental Quality Act (CEQA)

The State of California has established regulatory criteria that are applicable to this assessment. Specifically, Appendix G of the State of California Environmental Quality Act (CEQA) Guidelines are used to assess the potential significance of impacts pursuant to local General Plan policies, Municipal Code standards, or the applicable standards of other agencies. According to Appendix G of the CEQA guidelines, the project would result in a significant noise or vibration impact if the following occur:

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

It should be noted that audibility is not a test of significance according to CEQA. If this were the case, any project which added any audible amount of noise to the environment would be considered significant according to CEQA. Because every physical process creates noise, the use of audibility alone as significance criteria would be unworkable. CEQA requires a substantial increase in noise levels before noise impacts are identified, not simply an audible change.

California Department of Transportation (Caltrans)

El Dorado County does not currently have adopted standards for groundborne vibration. As a result, the vibration impact criteria developed by the California Department of Transportation (Caltrans) was applied to the project. The Caltrans criteria applicable to damage and annoyance from transient and continuous vibration typically associated with construction activities are presented in Tables 3 and 4. Equipment or activities typical of continuous vibration include: excavation equipment, static compaction equipment, tracked vehicles, traffic on a highway, vibratory pile drivers, pile-extraction equipment, and vibratory compaction equipment. Equipment or activities typical of single-impact (transient) or low-rate repeated impact vibration include impact pile drivers, blasting, drop balls, “pogo stick” compactors, and crack-and-seat equipment (California Department of Transportation 2013).

**Table 3
Guideline Vibration Damage Potential Threshold Criteria**

Structure and Condition	Maximum PPV (inches/second)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.20	0.10
Historic and some old buildings	0.50	0.25
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial/commercial buildings	2.00	0.50

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.
 PPV = Peak Particle Velocity
 Source: California Department of Transportation, Transportation and Construction Vibration Guidance Manual (2013).

**Table 4
Guideline Vibration Annoyance Potential Criteria**

Human Response	Maximum PPV (inches/second)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely perceptible	0.40	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.90	0.10
Severe	2.00	0.40

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.
 PPV = Peak Particle Velocity
 Source: California Department of Transportation, Transportation and Construction Vibration Guidance Manual (2013).

Local

El Dorado County General Plan

The Public Health, Safety, and Noise Element of the El Dorado County General Plan contains the County’s noise-related policies. The specific policies which are generally applicable to this project are reproduced below:

Policy 6.5.1.1 Where noise-sensitive land uses are proposed in areas exposed to existing or projected exterior noise levels exceeding the levels specified in Table 5 (General Plan Table 6-1) or the performance standards of Table 6 (General Plan Table 6-2), an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.

Policy 6.5.1.2 Where proposed non-residential land uses are likely to produce noise levels exceeding the performance standards of Table 6 at existing or planned noise-sensitive uses, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.

Policy 6.5.1.3 Where noise mitigation measures are required to achieve the standards of Tables 5 and Table 6, the emphasis of such measures shall be placed upon site planning and project design. The use of noise barriers shall be considered a means of achieving the noise standards only after all other practical design-related noise mitigation measures have been integrated into the project and the noise barriers are not incompatible with the surroundings.

- Policy 6.5.1.7** Noise created by new proposed non-transportation noise sources shall be mitigated so as not to exceed the noise level standards of Table 6 for noise-sensitive uses.
- Policy 6.5.1.8** New development of noise sensitive land uses will not be permitted in areas exposed to existing or projected levels of noise from transportation noise sources which exceed the levels specified in Table 5 unless the project design includes effective mitigation measures to reduce exterior noise and noise levels in interior spaces to the levels specified in Table 5.
- Policy 6.5.1.9** Noise created by new transportation noise sources, excluding airport expansion but including roadway improvement projects, shall be mitigated so as not to exceed the levels specified in Table 5 at existing noise-sensitive land uses.
- Policy 6.5.1.11** The standards outlined in Tables 7, 8 and 9 (General Plan Tables 6-3, 6-4, 6-5) shall not apply to those activities associated with actual construction of a project as long as such construction occurs between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, and 8:00 a.m. and 5:00 p.m. on weekends, and on federally-recognized holidays. Further, the standards outlined in Tables 7 through 9 shall not apply to public projects to alleviate traffic congestion and safety hazards.
- Policy 6.5.1.12** When determining the significance of impacts and appropriate mitigation for new development projects, the following criteria shall be taken into consideration:
- a) Where existing or projected future traffic noise levels are less than 60 dB L_{dn} at the outdoor activity areas of residential uses, an increase of more than 5 dBA L_{dn} caused by a new transportation noise source will be considered significant.
 - b) Where existing or projected future traffic noise levels range between 60 and 65 dBA L_{dn} at the outdoor activity areas of residential uses, an increase of more than 3 dBA L_{dn} caused by a new transportation noise source will be considered significant; and
 - c) Where existing or projected future traffic noise levels are greater than 65 dBA L_{dn} at the outdoor activity areas of residential uses, an increase of more than 1.5 dBA L_{dn} caused by a new transportation noise source will be considered significant.
- Policy 6.5.1.13** When determining the significance of impacts and appropriate mitigation for new development projects, the following criteria shall be taken into consideration:

- a) In areas in which ambient noise levels are in accordance with the standards in Table 6, increases in ambient noise levels caused by new non-transportation noise sources that exceed 5 dBA shall be considered significant; and
- b) In areas in which ambient noise levels are not in accordance with the standards in Table 6, increases in ambient noise levels caused by new non-transportation noise sources that exceed 3 dBA shall be considered significant.

**Table 5
Maximum Allowable Noise Exposure for Transportation Noise Sources**

Land Use	Outdoor Activity Areas ¹ L _{dn} /CNEL, dB	Interior Spaces	
		L _{dn} /CNEL, dB	L _{eq} , dB ²
Residential	60 ³	45	--
Transient Lodging	60 ³	45	--
Hospitals, Nursing Homes	60 ³	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls, Schools	60 ³	--	40
Office Buildings	--	--	45
Libraries, Museums	--	--	45
Playgrounds, Neighborhood Parks	70	--	--

¹ In Community Regions and Rural Centers, where the location of outdoor activity areas is not clearly defined, the exterior noise level standard shall be applied to the property line of the receiving land use. For residential uses with front yards facing the identified noise source, an exterior noise level criterion of 65 dB Ldn shall be applied at the building facade, in addition to a 60 dB Ldn criterion at the outdoor activity area. In Rural Regions, an exterior noise level criterion of 60 dB Ldn shall be applied at a 100 foot radius from the residence unless it is within Platted Lands where the underlying land use designation is consistent with Community Region densities in which case the 65 dB Ldn may apply. The 100-foot radius applies to properties which are five acres and larger; the balance will fall under the property line requirement.

² As determined for a typical worst-case hour during periods of use.

³ Where it is not possible to reduce noise in outdoor activity areas to 60 dB Ldn/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB Ldn/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

Source: *El Dorado County General Plan, Public Health & Safety Element, Table 6-1*

**Table 6
Noise Level Performance Protection Standards for Noise-Sensitive Land Uses
Affected by Non-Transportation Sources**

Noise Level Descriptor	Daytime 7 am – 7 pm		Evening 7 pm – 10 pm		Nighttime 10 pm – 7 am	
	Community	Rural	Community	Rural	Community	Rural
Hourly, L_{eq}	55	50	50	45	45	40
Maximum, L_{max}	70	60	60	55	55	50

-Each of the noise levels specified above shall be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).
 -The County can impose noise level standards which are up to 5 dB less than those specified above based upon determination of existing low ambient noise levels in the vicinity of the project site.
 -In Community Regions the exterior noise level standard shall be applied to the property line of the receiving property. In Rural Areas the exterior noise level standard shall be applied at a point 100' away from the residence. The above standards shall be measured only on property containing a noise-sensitive land use as defined in Objective 6.5.1.
 Source: *El Dorado County General Plan, Public Health & Safety Element, Table 6-2*

**Table 7
Maximum Allowable Noise Exposure for Non-Transportation Noise Sources in
Community Regions and Adopted Plan Areas – Construction Noise**

Land Use Designation ¹	Time Period	Noise Level (dB)	
		L_{eq}	L_{max}
Higher-Density Residential (MFR, HDR, MDR)	7 am – 7 pm	55	75
	7 pm – 10 pm	50	65
	10 pm – 7 am	45	60
Commercial and Public Facilities (C, R&D, PF)	7 am – 7 pm	70	90
	10 pm – 7 am	65	75
Industrial (I)	Any Time	80	90

¹ Adopted Plan areas should refer to those land use designations that most closely correspond to the similar General Plan land use designations for similar development.
 Source: *El Dorado County General Plan, Public Health & Safety Element, Table 6-3*

**Table 8
Maximum Allowable Noise Exposure for Non-Transportation Noise Sources in
Rural Centers – Construction Noise**

Land Use Designation	Time Period	Noise Level (dB)	
		L _{eq}	L _{max}
All Residential (MFR, HDR, MDR)	7 am – 7 pm	55	75
	7 pm – 10 pm	50	65
	10 pm – 7 am	40	55
Commercial and Public Facilities (C, TR, PF)	7 am – 7 pm	65	75
	10 pm – 7 am	60	70
Industrial (I)	Any Time	70	80
Open Space (OS)	7 am – 7 pm	55	75
	7 pm – 10 pm	50	65

Source: El Dorado County General Plan, Public Health & Safety Element, Table 6-4

**Table 9
Maximum Allowable Noise Exposure for Non-Transportation Noise Sources in
Rural Regions and Adopted Plan Areas – Construction Noise**

Land Use Designation	Time Period	Noise Level (dB)	
		L _{eq}	L _{max}
All Residential (LDR)	7 am – 7 pm	50	60
	7 pm – 10 pm	45	55
	10 pm – 7 am	40	50
Commercial and Public Facilities (C, TR, PF)	7 am – 7 pm	65	75
	10 pm – 7 am	60	70
Industrial (I)	Any Time	70	80
Rural Land, Natural Resources, Open Space, Agricultural Lands (RR, NR, OS, AL)	7 am – 7 pm	65	75
	7 pm – 10 pm	60	70

Source: El Dorado County General Plan, Public Health & Safety Element, Table 6-5

According to Figure LU-1 of the El Dorado County General Plan (Land Use Diagram), the project property and adjacent properties are located within a community region of the county. As a result, the noise level limits and associated criteria applicable to community regions identified in Tables 6 and 7 would be applicable to the project.

Impacts and Mitigation Measures

Thresholds of Significance

For the purposes of this assessment, a noise and vibration impact is considered significant if the project would result in:

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

- Generation of excessive groundborne vibration or groundborne noise levels; or
- 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 following criteria based on standards established by the California Department of Transportation (Caltrans) and El Dorado County General Plan were used to evaluate the significance of environmental noise and vibration resulting from the project:

- A significant noise impact would be identified if the project would expose persons to or generate noise levels that would exceed applicable noise standards presented in the El Dorado County General Plan.
- A significant impact would be identified if off-site traffic noise exposure or on-site activities generated by the project would substantially increase noise levels at existing sensitive receptors in the vicinity. A substantial increase would be identified relative to the noise level increase significance criteria established in Policies 6.5.1.12 (transportation noise sources) and 6.2.1.13 (non-transportation noise sources) of the El Dorado County General Plan.
- A significant impact would be identified if project construction activities or proposed on-site operations would expose noise-sensitive receptors to excessive groundborne vibration levels. Specifically, an impact would be identified if groundborne vibration levels due to these sources would exceed the Caltrans vibration impact criteria.

Noise Impacts Associated with Project-Generated Increases in Off-Site Traffic

Impact 1: Increases in Existing Traffic Noise Levels due to the Project

The project site is accessed via Saratoga Lane on the southern end of the project site. As a result, the greatest impact from project-generated off-site traffic is expected to be on Saratoga Lane.

To assess noise impacts due to project-related traffic increases on Saratoga Lane, BAC utilized the trip generation information obtained from the project applicant with the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA-RD-77-108). The FHWA Model was used in conjunction with the CALVENO reference noise emission curves, and accounts for vehicle volume and speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the project vicinity, and is generally considered to be accurate within 1.5 dB if the input variables are properly accounted for. The FHWA Model was developed to predict hourly L_{eq} values for free-flowing traffic conditions. To calculate a day-night average (DNL), average daily traffic (ADT) volume data is manipulated based on the assumed day/night distribution of traffic.

It is the understanding of BAC that the project is expected to generate approximately 57 vehicle trips per day. Based on that project trip generation estimation, project-generated traffic noise level exposure is predicted to be approximately 44 dB DNL at a distance of 50 feet from the centerline of Saratoga Lane. The FHWA Model inputs and predicted Saratoga Lane traffic noise levels are provided in Appendix E-1 of this report.

Existing traffic volume data for Saratoga Lane were not available from the El Dorado County Department of Transportation at the time of writing this report. For the purposes of this analysis, BAC conservatively assumed an existing average daily traffic volume of 500 for the roadway. Based on an estimated 500 vehicle trips per day, existing day-night average noise level exposure computes to approximately 49 dB DNL at a distance of 50 feet from the centerline of Saratoga Lane. The FHWA Model inputs and predicted existing traffic noise levels on Saratoga Lane are provided in Appendix E-2 of this report.

Pursuant to Policy 6.5.1.12 of the El Dorado County General Plan, a 5 dB DNL increase is the threshold of significance where pre-project (existing) ambient noise levels are below 60 dB. Given a predicted project-generated off-site traffic noise level of 44 dB DNL at 50 feet, and a computed existing traffic noise level of 49 dB DNL at that same distance, the project-related increase in traffic noise levels on Saratoga Lane is calculated to be 1.1 dB DNL. Finally, it should be noted that noise-sensitive uses were not identified within 50 feet of the centerline of Saratoga Lane.

Because project-related traffic is not predicted to result in increases in ambient noise levels that would exceed the significance criteria contained in Policy 6.5.1.12 of the El Dorado County General Plan at existing sensitive uses within the project vicinity, this impact is identified as being ***less than significant***.

Off-Site Noise Impacts Associated with Proposed On-Site Operations

The project proposes an outdoor vehicle storage and sales/rental facility. The primary noise sources associated with on-site operations include vehicle circulation and recreational vehicle (RV) cleaning equipment (i.e., pressure washers and vacuums). This assessment also includes analyses of RV roof-top mounted air-conditioners and RV generators, should they be operated while on the premises. According to the project description, the project proposes operations from 7:00 a.m. to 7:00 p.m. for rental and sales patrons, from 6:00 a.m. to 10:00 p.m. for vehicle storage patrons.

The following section includes analyses of project on-site operations noise levels at the nearest identified existing noise-sensitive use – the pre-school/day care to the north of the project. According to information obtained online, hours of operation for the pre-school/day care are 7:00 a.m. to 6:00 p.m. As a result, the El Dorado County General Plan daytime noise level standards for non-transportation noise sources affecting (community region) sensitive uses were applied to project on-site operations noise sources (Table 6).

It should be noted that the project proposes an on-site sanitary dump station. However, it is our understanding that the station will operate on gravity as opposed to a vacuum system – which would be noise-generating. Because the facility dump station will reportedly not include noise-

generating equipment such as a vacuum system, this assessment does not include an analysis of noise associated with the project sanitary dump station.

Impact 2: Pressure Washer Equipment Noise at Nearest Sensitive Use

According to the project applicant, mobile pressure washing equipment will be used for cleaning the facility’s rental/sales vehicles. The rental/sales vehicle parking stalls are located along the eastern project property line, as illustrated in Figure 2.

It is our understanding that the facility will utilize a Honda Power Stroke 3100 PSI pressure washer for vehicle washing activities. According to information obtained from the project applicant, the proposed pressure washer has a reference noise level of 85 dB at distance of 5 feet. This reference noise level is consistent with noise level data reported online for other similar-sized pressure washers. For the purposes of this analysis, it was reasonably assumed that pressure washing activities would occur within the rental/sales vehicle parking stalls only, as it is expected that vehicle storage patrons would clean personal vehicles off-site. In addition, because it is likely that pressure washing activities would occur either continuously or intermittently throughout the duration of a given hour, noise level exposure associated with the equipment was assessed relative to the General Plan hourly average (L_{eq}) noise level standard.

Based on the reference noise level data above, and assuming standard spherical spreading loss (-6 dB per doubling of distance), pressure washer equipment noise exposure at the property line of the nearest sensitive use (pre-school/day care) was calculated and the results of those calculations are presented in Table 10.

**Table 10
Predicted Pressure Washer Equipment Noise Levels at Nearest Sensitive Use**

Receiver ¹	Distance (ft) ²	Predicted Noise Levels, L_{eq} (dB) ³	County Community Daytime Noise Standards, L_{eq} (dB)
Pre-School/Day Care	40	67	55
¹ Receiver location shown on Figure 1. ² Distance measured from nearest rental/sales vehicle stall to receiver property line using provided site plan. ³ Predicted noise levels based on equipment information provided by project applicant. <i>Source: Bollard Acoustical Consultants, Inc. (2021)</i>			

As indicated in Table 10, noise level exposure from project pressure washing equipment is predicted to exceed the El Dorado County General Plan daytime hourly average (L_{eq}) noise level standard at the property line of the nearest sensitive use (pre-school/day care).

According to the ambient noise level measurement results from site LT-1 (Table 1), which are believed to be representative of the existing ambient noise environment at the nearest sensitive use (pre-school/day care), average measured daytime noise levels during four-day monitoring period ranged from 50 to 53 dB L_{eq} (calculated average of 52 dB L_{eq}) and from 67 to 71 dB L_{max} (calculated average of 69 dB L_{max}). The impact significance criteria contained in General Plan Policy 6.5.1.13 indicate that a 5 dB increase is the threshold of significance where pre-project ambient noise levels are in accordance with the standards contained in Table 6.

As indicated in Table 10, the hourly average (L_{eq}) noise level exposure generated by pressure washing equipment is predicted to be 67 dB L_{eq} at the nearest sensitive receiver. Given an averaged measured daytime noise level of 52 dB L_{eq} , the increase in ambient noise levels resulting from pressure washer equipment is calculated to be approximately 15 dB, which would exceed the applicable General Plan threshold of significance of 5 dB.

Because project pressure washing equipment noise level exposure is predicted to exceed the applicable El Dorado County General Plan daytime hourly average noise level limit at the nearest sensitive use, and because the increase in ambient noise levels resulting from those activities is predicted to exceed the impact significance criteria contained in General Plan Policy 6.5.1.13, this impact is identified as being **potentially significant**.

Mitigation Impact 2:

To satisfy the applicable El Dorado County General Plan daytime hourly average (L_{eq}) noise level standard and General Plan Policy 6.5.1.13 impact significance criteria at the nearest sensitive use, implementation of the following noise mitigation measures would be required:

MM-2a: The construction of a solid noise barrier measuring a minimum of 6-feet in height along the northern project property boundary. Figure 2 shows the location of the required barrier. The construction of a solid noise barrier measuring a minimum of 6-feet in height will result in the satisfaction of the applicable General Plan daytime hourly average noise level standard and applicable General Plan increase significance criteria at the nearest sensitive use (pre-school/day care).

The solid noise barrier could consist of either of masonry or precast concrete panels. A noise barrier constructed of wood (or wood composite) with overlapping slat construction would also be sufficient. The purpose of overlapping slats and using screws rather than nails is to ensure that prolonged exposure to the elements does not result in visible gaps through the slats which would result in reduced noise barrier effectiveness.

MM-2b: Select a quieter pressure washer. Specifically, the overall noise level for the project pressure washer shall not exceed 75 dB at a distance of 5 feet.

After implementation of **MM-2a** and **MM-2b**, project pressure washing equipment is predicted to be 52 dB L_{eq} at the nearest sensitive use (pre-school/day care), which would satisfy the General Plan daytime 55 dB L_{eq} noise level standard. In addition, given an averaged measured daytime noise level of 52 dB L_{eq} , the increase in ambient noise levels resulting from pressure washer equipment after implementation of **MM-2a** and **MM-2b** is calculated to be approximately 3 dB, which would satisfy the applicable General Plan threshold of significance of 5 dB.

Significance of Impact 2 after Mitigation: *Less than Significant*

Impact 3: Vacuum Equipment Noise at Nearest Sensitive Use

A shop vacuum is proposed to be used for cleaning the facility’s rental and sales vehicles. The rental/sales vehicle parking stalls are located along the eastern project property line, as illustrated in Figure 2.

It is our understanding that the facility will utilize a DeWalt 10-gallon (5-horsepower) wet/dry vacuum for cleaning the inside of the rental/sales vehicles. According to information obtained from the project applicant, the proposed vacuum equipment has a reference noise level of 75 dB at distance of 5 feet. This reference noise level is consistent with noise level data reported online for other similar-sized shop vacuums. For the purposes of this analysis, it was reasonably assumed that use of the vacuum would occur within the rental/sales vehicle parking stalls only, as it is expected that vehicle storage patrons would clean personal vehicles off-site. In addition, because it is likely that vacuum use could occur either continuously or intermittently throughout the duration of a given hour, noise level exposure associated with the equipment was assessed relative to the General Plan hourly average (L_{eq}) noise level standard.

Based on the reference noise level data above, and assuming standard spherical spreading loss (-6 dB per doubling of distance), project vacuum equipment noise exposure at the property line of the nearest sensitive use (pre-school/day care) was calculated and the results of those calculations are presented in Table 11.

**Table 11
Predicted Vacuum Equipment Noise Levels at Nearest Sensitive Use**

Receiver ¹	Distance (ft) ²	Predicted Noise Levels, L_{eq} (dB) ³	County Community Daytime Noise Standards, L_{eq} (dB)
Pre-School/Day Care	40	57	55
¹ Receiver location shown on Figure 1. ² Distance measured from nearest rental/sales vehicle stall to receiver property line using provided site plan. ³ Predicted noise levels based on equipment information provided by project applicant. Source: Bollard Acoustical Consultants, Inc. (2021)			

The Table 11 data indicate that noise level exposure from project vacuum equipment is predicted to exceed the El Dorado County General Plan daytime hourly average (L_{eq}) noise level standard at the property line of the nearest existing use (pre-school/day care).

According to the ambient noise level measurement results from site LT-1 (Table 1), which are believed to be representative of the existing ambient noise environment at the nearest sensitive use to the project (pre-school/day care), average measured daytime noise levels during four-day monitoring period ranged from 50 to 53 dB L_{eq} (calculated average of 52 dB L_{eq}) and from 67 to 71 dB L_{max} (calculated average of 69 dB L_{max}). The impact significance criteria contained in General Plan Policy 6.5.1.13 indicate that a 5 dB increase is the threshold of significance where pre-project ambient noise levels are in accordance with the standards contained in Table 6.

As indicated in Table 11, the hourly average (L_{eq}) noise level exposure generated by project vacuum equipment is predicted to be 57 dB L_{eq} at the nearest sensitive receiver. Given an averaged measured daytime noise level of 52 dB L_{eq} , the increase in ambient noise levels

resulting from vacuum equipment is calculated to be approximately 6 dB, which would exceed the applicable General Plan threshold of significance of 5 dB.

Because project vacuum equipment noise level exposure is predicted to exceed the applicable El Dorado County General Plan daytime hourly average noise level limit at the nearest sensitive use, and because the increase in ambient noise levels resulting from that activity is predicted to exceed the impact significant criteria contained in General Plan Policy 6.5.1.13, this impact is identified as being **potentially significant**.

Mitigation Impact 3:

To satisfy the applicable El Dorado County General Plan daytime hourly average (L_{eq}) noise level standard and General Plan Policy 6.5.1.13 impact significance criteria at the nearest sensitive use, implementation of the following noise mitigation measure would be required:

- MM-3:** Implement Mitigation Measure 2a (MM-2a) – the construction of a 6-foot-tall solid noise barrier at the location shown in Figure 2.

After implementation of **MM-3 (MM-2a)**, project vacuum equipment is predicted to be 52 dB L_{eq} at the nearest sensitive use (pre-school/day care), which would satisfy the General Plan daytime 55 dB L_{eq} noise level standard. In addition, given an averaged measured daytime noise level of 52 dB L_{eq} , the increase in ambient noise levels resulting from vacuum activities after implementation of **MM-3 (MM-2a)** is calculated to be approximately 3 dB, which would satisfy the applicable General Plan threshold of significance of 5 dB.

Significance of Impact 3 after Mitigation: *Less than Significant*

Impact 4: Vehicle Generator Noise at Nearest Sensitive Use

It is the understanding of BAC that all on-site vehicles (RV's, campers) will be hooked up to an on-site power source. However, it our further understanding that on-board generators associated with either the outdoor storage or rental/sales vehicles could potentially be turned on for brief durations. The outdoor vehicle storage and rental/sales vehicle areas are shown in Figure 2.

According to an equipment sound-proofing company (Sonic-Shield), most RV generators produce noise levels ranging from 48 to 65 dB at a distance of 50 feet. In addition, because on-site operation of vehicle generators would reportedly occur for brief durations only (assumed to be 5 minutes or less), noise level exposure associated with the equipment was assessed relative to the General Plan maximum (L_{max}) noise level standard.

The center of the nearest outdoor vehicle storage stall maintains a separation of approximately 20 feet from the property line of the nearest sensitive use (pre-school/day care). Based on a reference noise level of 65 dB at 50 feet (conservatively), and assuming standard spherical spreading loss (-6 dB per doubling of distance), vehicle generator noise level exposure is calculated to be 73 dB L_{max} the property line of the nearest sensitive use, which would exceed the El Dorado County General Plan 70 dB L_{max} daytime noise level standard.

According to the ambient noise level measurement results from site LT-1 (Table 1), which are believed to be representative of the existing ambient noise environment at the nearest sensitive use to the project (pre-school/day care), average measured daytime noise levels during four-day monitoring period ranged from 50 to 53 dB L_{eq} (calculated average of 52 dB L_{eq}) and from 67 to 71 dB L_{max} (calculated average of 69 dB L_{max}). The impact significance criteria contained in General Plan Policy 6.5.1.13 indicate that a 5 dB increase is the threshold of significance where pre-project ambient noise levels are in accordance with the standards contained in Table 6.

The predicted maximum (L_{max}) noise level exposure generated from brief generator operation is predicted to be 73 dB L_{max} at the property line of the nearest sensitive use. Given an averaged measured daytime noise level of 69 dB L_{max} , the increase in ambient noise levels resulting from vacuum equipment is calculated to be approximately 6 dB, which would exceed the applicable General Plan threshold of significance of 5 dB.

Because noise level exposure associated with brief on-site operation of vehicle generators is predicted to exceed the applicable El Dorado County General Plan daytime maximum noise level limit at the nearest sensitive use, and because the increase in ambient noise levels resulting from that activity is predicted to exceed applicable impact significant criteria contained in General Plan Policy 6.5.1.13, this impact is identified as being **potentially significant**.

Mitigation Impact 4:

To satisfy the applicable El Dorado County General Plan maximum (L_{max}) noise level standard and General Plan Policy 6.5.1.13 impact significance criteria at the nearest sensitive use, implementation of the following noise mitigation measures would be required:

- MM-4a:** Implement Mitigation Measure 2a (MM-2a) – the construction of a 6-foot-tall solid noise barrier at the location shown in Figure 2.
- MM-4b:** Facility management should discourage patrons from operation of vehicle generators while on-site. However, should generator operation be required while on-site, facility management should diligently enforce a limitation on generator operation to 5 minutes or less.

After implementation of **MM-4a (MM-2a)** and **MM-4b**, vehicle generator noise level exposure is predicted to be 68 dB L_{max} at the nearest sensitive use (pre-school/day care), which would satisfy the General Plan daytime 70 dB L_{max} noise level standard. In addition, given an averaged measured daytime noise level of 69 dB L_{max} , the increase in ambient noise levels resulting from brief generator operation after implementation of **MM-4a (MM-2a)** and **MM-4b** is calculated to be approximately 3 dB, which would satisfy the applicable General Plan threshold of significance of 5 dB.

Significance of Impact 4 after Mitigation: *Less than Significant*

Impact 5: Vehicle Air-Conditioning Unit Noise at Nearest Sensitive Use

It is the understanding of BAC that operation of on-board (roof-top mounted) vehicle air-conditioning units within either the outdoor storage or rental/sales vehicle areas could occur while on-site for brief durations. The outdoor vehicle storage and rental/sales vehicle areas are shown in Figure 2.

To quantify the noise levels generated from on-site operation of vehicle air-conditioning units, BAC utilized reference noise level measurement data obtained from the Advanced RV Research Facility. Specifically, the engineering team at Advanced RV Research Facility conducted noise level testing of four common high output (15,000 BTU) recreational vehicle air-conditioner units. The test results indicate that the measured noise levels of the four units ranged from 63 to 72 dBA at a distance of 4 feet in front of the unit (0° off-axis). Based on the results from this research, a reference noise level of 72 dBA at distance of 4 feet was conservatively used in the prediction of project recreational vehicle air-conditioning equipment noise levels. Finally, because on-site operation of vehicle air-conditioning units would reportedly occur for brief durations only (assumed to be 5 minutes or less), noise level exposure associated with the equipment was assessed relative to the General Plan maximum (L_{max}) noise level standard.

The center of the nearest outdoor vehicle storage stall maintains a separation of approximately 20 feet from the property line of the nearest sensitive use (pre-school/day care). Based on a reference noise level of 72 dB at 4 feet, and assuming standard spherical spreading loss (-6 dB per doubling of distance), vehicle air-conditioning unit noise level exposure is calculated to be 58 dB L_{max} the property line of the nearest sensitive use, which would satisfy the El Dorado County General Plan 70 dB L_{max} daytime maximum noise level standard.

According to the ambient noise level measurement results from site LT-1 (Table 1), which are believed to be representative of the existing ambient noise environment at the nearest sensitive use to the project (pre-school/day care), average measured daytime noise levels during four-day monitoring period ranged from 50 to 53 dB L_{eq} (calculated average of 52 dB L_{eq}) and from 67 to 71 dB L_{max} (calculated average of 69 dB L_{max}). The impact significance criteria contained in General Plan Policy 6.5.1.13 indicate that a 5 dB increase is the threshold of significance where pre-project ambient noise levels are in accordance with the standards contained in Table 6.

The predicted maximum (L_{max}) noise level generated from operation of a vehicle air-conditioning unit is predicted to be 58 dB L_{max} at the property line of the nearest sensitive use. Given an averaged measured daytime noise level of 69 dB L_{max} , the increase in ambient noise levels resulting from operation of an air-conditioning unit is calculated to be less than 1 dB, which would satisfy the applicable General Plan threshold of significance of 5 dB.

Because noise level exposure associated with brief on-site operation of vehicle air-conditioning equipment is predicted to satisfy the applicable El Dorado County General Plan daytime maximum noise level limit at the nearest sensitive use, and because the increase in ambient noise levels resulting from that activity is predicted to satisfy the impact significant criteria contained in General Plan Policy 6.5.1.13, this impact is identified as being **less than significant**.

Impact 6: On-Site Vehicle Circulation Noise at Nearest Sensitive Use

The project proposes an interior drive aisle to accommodate access to storage and rental/sales vehicles on the property. The location of the facility drive aisle is shown in Figure 2. The FHWA Model was utilized with daily trip generation data provided by the project applicant to quantify on-site vehicle circulation noise generated by the project on-site drive aisle.

According to the project applicant, the project is estimated to generate approximately 57 total daily trips. To quantify on-site vehicle circulation noise level exposure relative to the El Dorado County General Plan hourly average (Leq) noise level descriptor, it was conservatively assumed half of the total vehicle daily trips (approximately 29 vehicles) could occur within the same worst-case busy hour within the drive aisle. Based on the trip information above, and assuming an on-site vehicle speed of less than 25 mph within the drive aisle, project on-site traffic circulation noise exposure at the nearest existing sensitive use (pre-school/day care) was calculated. The results of those calculations are presented in Table 12.

**Table 12
Predicted Worst Case On-Site Vehicle Circulation Noise Levels at Nearest Sensitive Use**

Receiver ¹	Distance (ft) ²	Predicted Noise Levels (dB) ³		County Community Daytime Noise Standards (dB)	
		Leq	Lmax ⁴	Leq	Lmax
Pre-School/Day Care	50	45	55	55	70

¹ Receiver location shown on Figure 1.
² Distance measured from center of facility drive aisle to receiver property line using provided site plan.
³ Predicted noise levels based on trip generation information provided by project applicant.
⁴ Predicted maximum (Lmax) noise levels were conservatively estimated to be 10 dB higher than predicted hourly average (Leq) noise levels.
 Source: Bollard Acoustical Consultants, Inc. (2021)

Project on-site traffic circulation noise levels at the nearest existing sensitive use are presented above in Table 12. However, pursuant to the mitigation previously outlined in **MM-2a**, the construction of a 6-foot-tall solid noise barrier along the northern project property boundary is required to reduce on-site operations noise levels to a state of compliance. The construction of said noise barrier would also provide attenuation of project on-site vehicle circulation noise levels at the pre-school/day care. The results presented in Table 13 include implementation of **MM-2a**.

**Table 13
 Predicted Worst Case On-Site Vehicle Circulation Noise Levels at Nearest Sensitive Use
 with Implementation of MM-2a¹**

Receiver ¹	Distance (ft) ²	Predicted Noise Levels (dB)		County Community Daytime Noise Standards (dB)	
		Leq	Lmax	Leq	Lmax
Pre-School/Day Care	50	40	50	55	70

¹ Includes consideration of implementation of MM-2a (6-foot-tall solid noise barrier along northern project property line).
 Source: Bollard Acoustical Consultants, Inc. (2021)

As indicated in Table 13, noise levels generated by worst-case on-site vehicle circulation are predicted to satisfy the El Dorado County General Plan daytime hourly average (Leq) and maximum (Lmax) noise level standards at the property line of the nearest sensitive use (pre-school/day care), including implementation of **MM-2a**.

According to the ambient noise level measurement results from site LT-1 (Table 1), which are believed to be representative of the existing ambient noise environment at the nearest sensitive use to the project (pre-school/day care), average measured daytime noise levels during four-day monitoring period ranged from 50 to 53 dB Leq (calculated average of 52 dB Leq) and from 67 to 71 dB Lmax (calculated average of 69 dB Lmax). The impact significance criteria contained in General Plan Policy 6.5.1.13 indicate that a 5 dB increase is the threshold of significance where pre-project ambient noise levels are in accordance with the standards contained in Table 6.

After implementation of **MM-2a**, hourly average (Leq) noise level exposure generated by worst-case on-site vehicle circulation is predicted to be 40 dB Leq at the nearest sensitive receiver (Table 13). Given an averaged measured daytime noise level of 52 dB Leq, the increase in ambient noise levels resulting from worst-case on-site vehicle circulation is calculated to be less than 1 dB, which would not exceed the applicable General Plan threshold of significance of 5 dB. The Table 13 data also indicate that maximum (Lmax) noise levels generated by worst-case on-site vehicle circulation is predicted to be 50 dB Lmax at the nearest sensitive receiver. Relative to an averaged measured daytime noise level of 69 dB Lmax, the increase in ambient noise levels resulting from worst-case on-site vehicle circulation is calculated to be less than 1 dB, which would not exceed the applicable General Plan threshold of significance of 5 dB.

Because worst-case on-site vehicle circulation noise level exposure is predicted to satisfy the applicable El Dorado County General Plan daytime noise level standards at the nearest identified sensitive use, and because increases in ambient noise levels associated with that activity are not predicted to exceed the applicable General Plan Policy 6.5.1.13 impact significance criteria at the nearest sensitive use, this impact is identified as being **less than significant**.

Impact 7: Cumulative (Combined) Noise Levels from On-Site Operations at Nearest Sensitive Use

The calculated cumulative (combined) noise levels of on-site operations at the nearest sensitive use (pre-school/day care) are presented in Tables 14 and 15. It should be noted that due to the logarithmic nature of the decibel scale, the sum of two noise values which differ by 10 dB equates to an overall increase in noise levels of 0.4 dB. When the noise sources are equivalent, the sum would result in an overall increase in noise levels of 3 dB.

Table 14
Predicted Cumulative Noise Levels from On-Site Operations at Nearest Sensitive Use – Unmitigated

Receiver	Predicted Noise Levels (dB)								County Community Daytime Noise Standards	
	Pressure Washer	Shop Vacuum	Generator	AC Unit	Vehicle Circ.		Cumulative		Leq	Lmax
	Leq	Leq	Lmax	Lmax	Leq	Lmax	Leq	Lmax		
Pre-School/Day Care	67	57	73	58	45	55	67	73	55	70
Source: Bollard Acoustical Consultants, Inc. (2021)										

Table 15
Predicted Cumulative Noise Levels from On-Site Operations at Nearest Sensitive Use – Mitigated¹

Receiver	Predicted Noise Levels (dB)								County Community Daytime Noise Standards	
	Pressure Washer	Shop Vacuum	Generator	AC Unit	Vehicle Circ.		Cumulative		Leq	Lmax
	Leq	Leq	Lmax	Lmax	Leq	Lmax	Leq	Lmax		
Pre-School/Day Care	52	52	68	58	40	50	55	68	55	70
¹ Predicted cumulative noise levels include implementation of the mitigation measures outlined in this report. Source: Bollard Acoustical Consultants, Inc. (2021)										

As indicated in Table 15, cumulative (combined) noise levels from on-site operations are predicted to satisfy the El Dorado County General Plan daytime hourly average (L_{eq}) and maximum (L_{max}) noise level standards at the property line of the nearest sensitive use (pre-school/day care). The predicted compliance includes implementation of the mitigation outlined in this report.

According to the ambient noise level measurement results from site LT-1 (Table 1), which are believed to be representative of the existing ambient noise environment at the nearest sensitive use to the project (pre-school/day care), average measured daytime noise levels during four-day monitoring period ranged from 50 to 53 dB L_{eq} (calculated average of 52 dB L_{eq}) and from 67 to 71 dB L_{max} (calculated average of 69 dB L_{max}). The impact significance criteria contained in General Plan Policy 6.5.1.13 indicate that a 5 dB increase is the threshold of significance where pre-project ambient noise levels are in accordance with the standards contained in Table 6.

After implementation of the mitigation outlined in this report, hourly average (L_{eq}) noise level exposure from cumulative on-site operations is predicted to be 55 dB L_{eq} at the property line of the nearest sensitive use (Table 15). Given an averaged measured daytime noise level of 52 dB L_{eq} , the increase in ambient noise levels resulting from combined on-site operations is calculated to be 5 dB, which would not exceed the applicable General Plan threshold of significance of 5 dB. The Table 15 data also indicate that maximum (L_{max}) noise level exposure from cumulative on-site operations is predicted to be 68 dB L_{max} at the nearest sensitive use. Relative to an averaged measured daytime noise level of 69 dB L_{max} , the increase in ambient noise levels resulting from combined on-site operations is calculated to be 3 dB, which would not exceed the applicable General Plan threshold of significance of 5 dB.

Because cumulative (mitigated) project on-site operations noise levels are predicted to satisfy the applicable El Dorado County General Plan daytime noise level standards at the nearest sensitive use, and because increases in ambient noise levels due to cumulative project on-site operations noise levels at that location are not expected to be significant relative to the General Plan Policy 6.5.1.13 criteria, this impact is considered to be ***less than significant***.

Noise Impacts Associated with Project On-Site Construction Activities

Impact 8: On-Site Construction Noise Levels at Nearest Sensitive Use

According to the project description, the project proposes the development of areas for outdoor vehicle storage and rental/sales. The project also proposes the erection of a portable office, sanitary dump station, trash enclosure, and the construction of landscaping and irrigation. It is our understanding that the facility lot will be primarily gravel as opposed to asphalt.

It is reasonably assumed that smaller heavy equipment, machinery, and various tools will be used for on-site construction. Operation of such equipment would increase ambient noise levels when in use. Noise levels would vary depending on the type of equipment used, how it is operated, and how well it is maintained. Noise exposure at any single point outside the project work area would also vary depending upon the proximity of equipment activities to that point. The nearest property line is located approximately 30 feet away from where construction activities could occur on the project parcel.

Table 16 includes the range of maximum noise levels for equipment commonly used in general construction projects at full-power operation at a distance of 50 feet. Not all of these construction activities would be required of this project. The Table 16 data also include predicted maximum equipment noise levels at the nearest property line located approximately 30 feet away, which assume a standard spherical spreading loss of 6 dB per doubling of distance.

**Table 16
Construction Equipment Reference Noise Levels and Projected Noise Levels at 30 Feet**

Equipment Description	Maximum Noise Level at 50 Feet (dB)	Predicted Maximum Noise Level at 30 Feet (dB)
Air compressor	80	84
Backhoe	80	84
Concrete mixer	85	89
Concrete vibrator	76	80
Generator	82	86
Front-end loader	80	84
Pneumatic tool	85	89
Saw	76	80
Truck	84	88
<i>Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, Table 7-1 (2018)</i>		

Dependent on the type of equipment and duration of use within a given hour, it is possible that a portion of the project construction equipment could result in an exceedance of the El Dorado County General Plan noise level limits applicable to construction noise in community regions presented in Table 7. Further, it is possible that project construction activities could result in substantial short-term (temporary) increases over ambient noise levels at the property lines of the nearest uses.

Policy 6.5.1.11 of the El Dorado County General Plan exempts noise sources associated with on-site construction provided such activities take place between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, and 8:00 a.m. and 5:00 p.m. on weekends, and on federally recognized holidays. Provided project construction activities occur during these hours and days, construction activities would be exempt, and this impact would be considered less than significant.

However, if construction activities are proposed during the hours not exempted by General Plan Policy 6.5.1.11, noise levels generated by construction activities could exceed applicable General Plan noise level standards at adjacent uses. As a result, noise impacts associated with project on-site construction activities are identified as being **potentially significant**.

Mitigation Impact 8: On-Site Construction Noise Control Measures

MM-8: To the maximum extent practical, the following measures should be incorporated into the project on-site construction operations:

- Noise-generating on-site construction activities shall occur within the hours and days identified in Policy 6.5.1.11 of the El Dorado County General Plan.

- All noise-producing project equipment and vehicles using internal-combustion engines shall be equipped with manufacturers-recommended mufflers and be maintained in good working condition.
- All mobile or fixed noise-producing equipment used on the project site that are regulated for noise output by a federal, state, or local agency shall comply with such regulations while in the course of project activity.
- Electrically powered equipment shall be used instead of pneumatic or internal-combustion-powered equipment, where feasible.
- Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive uses.
- Project area and site access road speed limits shall be established and enforced during the construction period.
- Nearby sensitive uses shall be notified of construction schedules so that arrangements can be made, if desired, to limit their exposure to short-term increases in ambient noise levels.

Significance of Impact 8 after Mitigation: *Less than Significant*

Vibration Impacts Associated with Project Activities

Impact 9: Vibration Generated by Project Construction and On-Site Operations

During construction of project features, it is possible that heavy equipment could periodically be used, which would generate localized vibration in the immediate vicinity of those activities. The nearest sensitive structure (pre-school/day care) is located approximately 75 feet from where heavy equipment activities could potentially occur within the project area.

Table 17 includes the range of vibration levels associated with heavy equipment that could potentially be used for project construction at a distance of 25 feet. The Table 17 data also includes predicted equipment vibration levels at the nearest sensitive structure located approximately 75 feet away.

**Table 17
Vibration Source Levels for Construction Equipment and Predicted Levels at 75 Feet**

Equipment	Maximum PPV (inches/second) ¹	
	Maximum PPV at 25 Feet ²	Predicted PPV at 75 Feet
Large bulldozer	0.089	0.017
Loaded trucks	0.076	0.015
Small bulldozer	0.003	0.001

¹ PPV = Peak Particle Velocity
² Reference vibration level obtained from the Federal Transit Administration (FTA), Transit Noise and Vibration Impact Assessment Manual (2018).

As indicated in Table 17, vibration levels generated from on-site construction activities at the nearest sensitive structure are predicted to be well below the strictest Caltrans thresholds for

damage to residential structures of 0.30 in/sec PPV shown in Table 3. Further, the predicted vibration levels are at or slightly above the strictest Caltrans thresholds for annoyance presented in Table 4 (barely perceptible). Therefore, on-site construction within the project area would not result in excessive groundborne vibration levels at nearby sensitive structures.

Results from the ambient vibration level monitoring at the project site (Table 2) indicate that measured average vibration levels were well below the strictest Caltrans thresholds for damage to structures and thresholds for annoyance. Therefore, it is expected that the project would not result in the exposure of persons to excessive groundborne vibration levels at proposed uses of the project.

Finally, the project proposes the development of an outdoor vehicle storage and sales/rental facility which will consist of parking areas, a drive lane, and small structures. It is the experience of BAC these uses do not typically have equipment that generates appreciable vibration. Further, it is our understanding that the project does not propose equipment that will produce appreciable vibration.

Because vibration levels due to the proposed project is predicted to satisfy applicable Caltrans groundborne impact vibration criteria at the nearest existing sensitive structure (pre-school/day care), and because project operations are not expected to result in the exposure of persons to excessive groundborne vibration levels at proposed uses, this impact is identified as being **less than significant**.

Noise Impacts Upon the Development

The California Supreme Court issued an opinion in *California Building Industry Association v. Bay Area Air Quality Management District (2015)* holding that CEQA is primarily concerned with the impacts of a project on the environment and generally does not require agencies to analyze the impact of existing conditions on a project's future users or residents. Nevertheless, El Dorado County has policies that address existing/future conditions affecting the proposed project, which are discussed in the following section.

Impact 10: Airport Operations Noise at the Project Site

The project site is located approximately 9,300 feet (1.75 miles) to the south of Cameron Airpark (a public airport). According to the Safety Factors Map identified in the Cameron Airpark Airport Land Use Compatibility Plan (provided as Appendix F), the project area is geographically located outside of the established Airport Influence Area and Airport Safety Zones. In addition, the Airport Noise Zones Policy Map (provided as Appendix G) shows that the project area is located outside of the 55-60 dB CNEL noise contour.

Based on the information above, the results from the BAC conducted noise level survey at the project site (Table 1), and after consideration of the exterior to interior noise level reduction achieved within standard building construction (typically at least 25 dB with windows closed and approximately 15 dB with windows open), noise generated from normal aircraft operations at the Cameron Airpark is not predicted to exceed the applicable El Dorado County General Plan

exterior or interior noise level criteria at the proposed development. As a result, this impact is considered to be ***less than significant***.

This concludes BAC's noise and vibration assessment of the Saratoga Lane Outdoor Vehicle Storage & Sales/Rental Facility project in El Dorado County, California. Please contact BAC at (916) 663-0500 or dariog@bacnoise.com if you have any comments or questions regarding this report.

Appendix A Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound. A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.
IIC	Impact Insulation Class (IIC): A single-number representation of a floor/ceiling partition's impact generated noise insulation performance. The field-measured version of this number is the FIIC.
L_{dn}	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
L_{max}	The highest root-mean-square (RMS) sound level measured over a given period of time.
Loudness	A subjective term for the sensation of the magnitude of sound.
Masking	The amount (or the process) by which the threshold of audibility is for one sound is raised by the presence of another (masking) sound.
Noise	Unwanted sound.
Peak Noise	The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the "Maximum" level, which is the highest RMS level.
RT₆₀	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
STC	Sound Transmission Class (STC): A single-number representation of a partition's noise insulation performance. This number is based on laboratory-measured, 16-band (1/3-octave) transmission loss (TL) data of the subject partition. The field-measured version of this number is the FSTC.



Legend

- A** LT-1: 38°39'17.57" N, 120°57'59.95" W
- B** South Side of Project Site Facing LT-1
- C** V-1: 38°39'14.97" N, 120°58'0.07" W

Saratoga Lane Outdoor Vehicle
Storage & Sales/Rental Facility
El Dorado County, California

Photographs of Survey Locations

Appendix B



Appendix C-1
Ambient Noise Monitoring Results - Site LT-1
Saratoga Lane Outdoor Vehicle Storage & Sales/Rental Facility
Saturday, March 27, 2021

Hour	Leq	Lmax	L50	L90
12:00 AM	47	72	43	40
1:00 AM	42	57	39	37
2:00 AM	41	62	38	34
3:00 AM	40	53	37	34
4:00 AM	40	56	37	34
5:00 AM	43	57	41	37
6:00 AM	49	68	46	41
7:00 AM	49	63	47	44
8:00 AM	55	78	45	41
9:00 AM	48	67	46	41
10:00 AM	53	71	50	46
11:00 AM	56	81	50	44
12:00 PM	55	73	50	46
1:00 PM	53	71	51	48
2:00 PM	54	71	51	47
3:00 PM	53	71	51	47
4:00 PM	50	67	47	42
5:00 PM	51	73	46	41
6:00 PM	53	80	47	42
7:00 PM	52	74	47	42
8:00 PM	51	69	50	46
9:00 PM	49	61	48	44
10:00 PM	47	59	45	41
11:00 PM	47	62	45	41

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	56	48	53	49	40	45
Lmax (Maximum)	81	61	71	72	53	61
L50 (Median)	51	45	48	46	37	41
L90 (Background)	48	41	44	41	34	38

Computed DNL, dB	54
% Daytime Energy	90%
% Nighttime Energy	10%

GPS Coordinates	38°39'17.57" N
	120°57'59.95" W

Appendix C-2
Ambient Noise Monitoring Results - Site LT-1
Saratoga Lane Outdoor Vehicle Storage & Sales/Rental Facility
Sunday, March 28, 2021

Hour	Leq	Lmax	L50	L90
12:00 AM	44	59	41	38
1:00 AM	42	55	40	37
2:00 AM	41	54	39	35
3:00 AM	41	55	38	34
4:00 AM	42	60	38	34
5:00 AM	44	56	41	36
6:00 AM	47	58	45	40
7:00 AM	50	62	48	44
8:00 AM	46	60	44	40
9:00 AM	45	64	42	38
10:00 AM	49	72	44	40
11:00 AM	50	71	46	41
12:00 PM	50	65	47	42
1:00 PM	51	71	47	42
2:00 PM	52	69	47	42
3:00 PM	51	68	48	42
4:00 PM	50	68	46	39
5:00 PM	49	70	44	37
6:00 PM	48	67	44	38
7:00 PM	51	80	45	40
8:00 PM	51	59	50	46
9:00 PM	49	61	47	44
10:00 PM	46	60	42	39
11:00 PM	44	62	42	37

Statistical Summary						
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	52	45	50	47	41	44
Lmax (Maximum)	80	59	67	62	54	58
L50 (Median)	50	42	46	45	38	41
L90 (Background)	46	37	41	40	34	37

Leq (Average)
Lmax (Maximum)
L50 (Median)
L90 (Background)

Computed DNL, dB	52
% Daytime Energy	86%
% Nighttime Energy	14%

GPS Coordinates	38°39'17.57" N
	120°57'59.95" W

Appendix C-3
Ambient Noise Monitoring Results - Site LT-1
Saratoga Lane Outdoor Vehicle Storage & Sales/Rental Facility
Monday, March 29, 2021

Hour	Leq	Lmax	L50	L90
12:00 AM	40	53	38	34
1:00 AM	43	57	43	34
2:00 AM	42	56	39	33
3:00 AM	40	56	37	33
4:00 AM	43	61	40	37
5:00 AM	49	64	45	39
6:00 AM	52	63	50	45
7:00 AM	54	73	52	47
8:00 AM	48	60	47	44
9:00 AM	52	67	49	43
10:00 AM	52	65	51	47
11:00 AM	55	71	52	48
12:00 PM	55	69	50	45
1:00 PM	50	69	48	45
2:00 PM	49	61	48	45
3:00 PM	53	68	50	47
4:00 PM	52	67	50	47
5:00 PM	51	80	48	46
6:00 PM	49	65	48	45
7:00 PM	50	70	47	45
8:00 PM	47	57	47	44
9:00 PM	49	70	47	44
10:00 PM	46	60	44	39
11:00 PM	44	59	42	39

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	55	47	52	52	40	46
Lmax (Maximum)	80	57	68	64	53	59
L50 (Median)	52	47	49	50	37	42
L90 (Background)	48	43	46	45	33	37

Computed DNL, dB	54
% Daytime Energy	86%
% Nighttime Energy	14%

GPS Coordinates	38°39'17.57" N
	120°57'59.95" W

Appendix C-4
Ambient Noise Monitoring Results - Site LT-1
Saratoga Lane Outdoor Vehicle Storage & Sales/Rental Facility
Tuesday, March 30, 2021

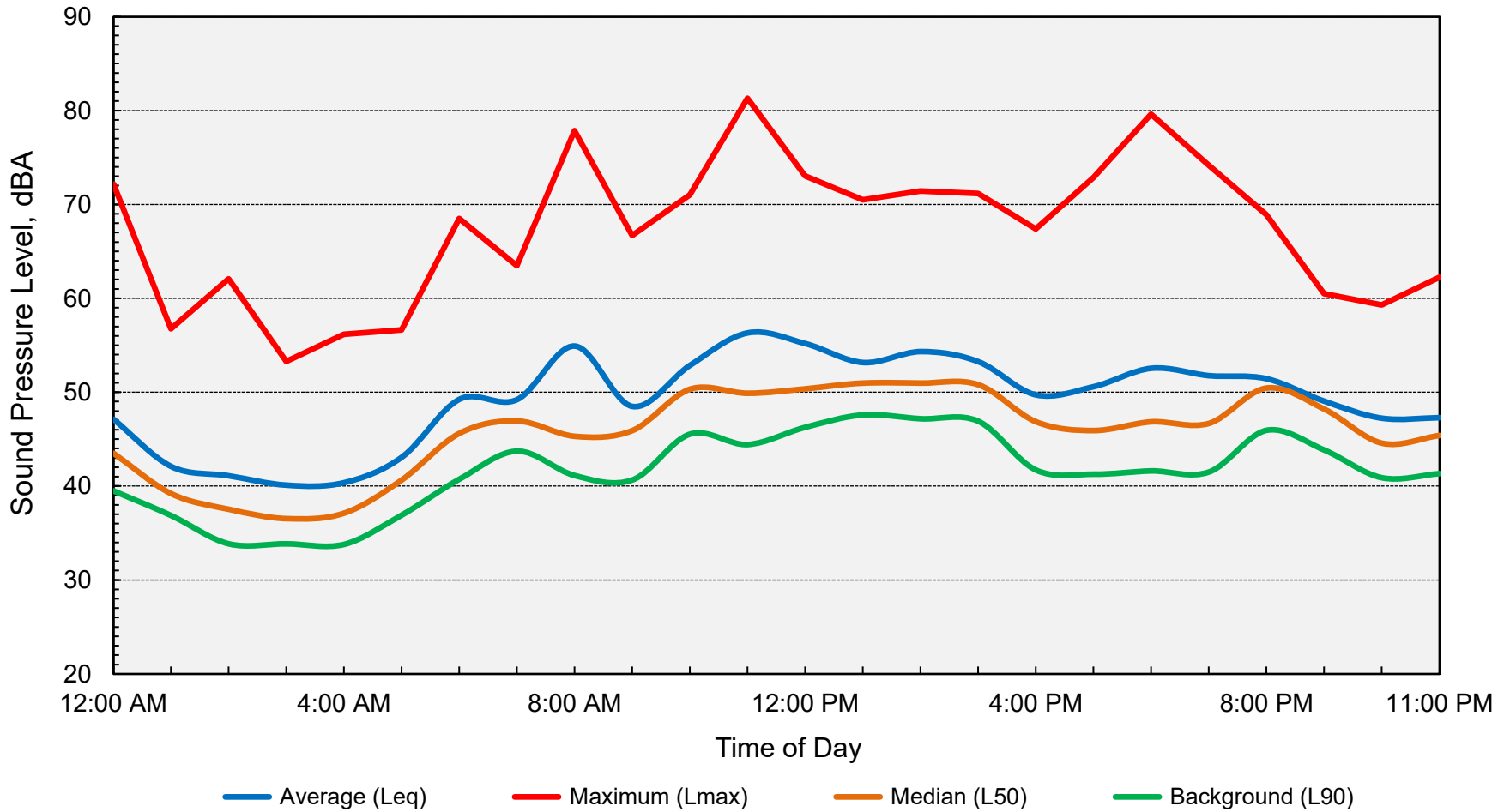
Hour	Leq	Lmax	L50	L90
12:00 AM	42	51	40	36
1:00 AM	41	57	38	35
2:00 AM	42	56	40	36
3:00 AM	43	59	41	37
4:00 AM	45	57	43	40
5:00 AM	49	62	47	43
6:00 AM	51	64	50	48
7:00 AM	53	65	53	51
8:00 AM	50	67	49	46
9:00 AM	52	71	48	44
10:00 AM	56	79	52	47
11:00 AM	54	72	52	49
12:00 PM	51	65	49	45
1:00 PM	53	75	47	45
2:00 PM	51	73	48	45
3:00 PM	54	75	51	47
4:00 PM	54	72	52	49
5:00 PM	51	67	50	48
6:00 PM	49	64	48	46
7:00 PM	49	63	48	45
8:00 PM	47	61	46	43
9:00 PM	45	57	44	40
10:00 PM	45	64	43	38
11:00 PM	43	57	38	35

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	56	45	52	51	41	46
Lmax (Maximum)	79	57	68	64	51	59
L50 (Median)	53	44	49	50	38	42
L90 (Background)	51	40	46	48	35	39

Computed DNL, dB	54
% Daytime Energy	87%
% Nighttime Energy	13%

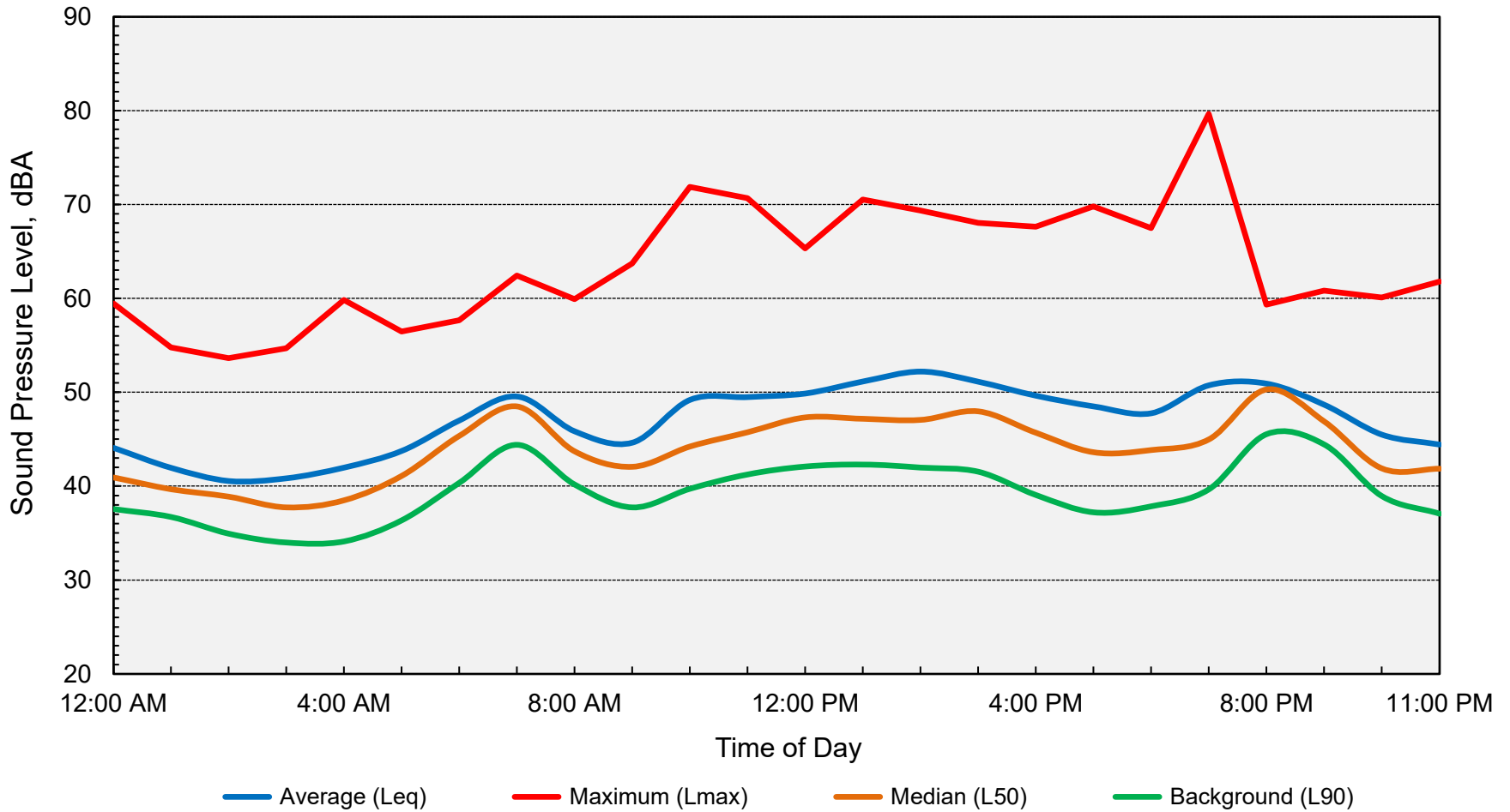
GPS Coordinates	38°39'17.57" N
	120°57'59.95" W

Appendix D-1
Ambient Noise Monitoring Results - Site LT-1
Saratoga Lane Outdoor Vehicle Storage & Sales/Rental Facility
Saturday, March 27, 2021



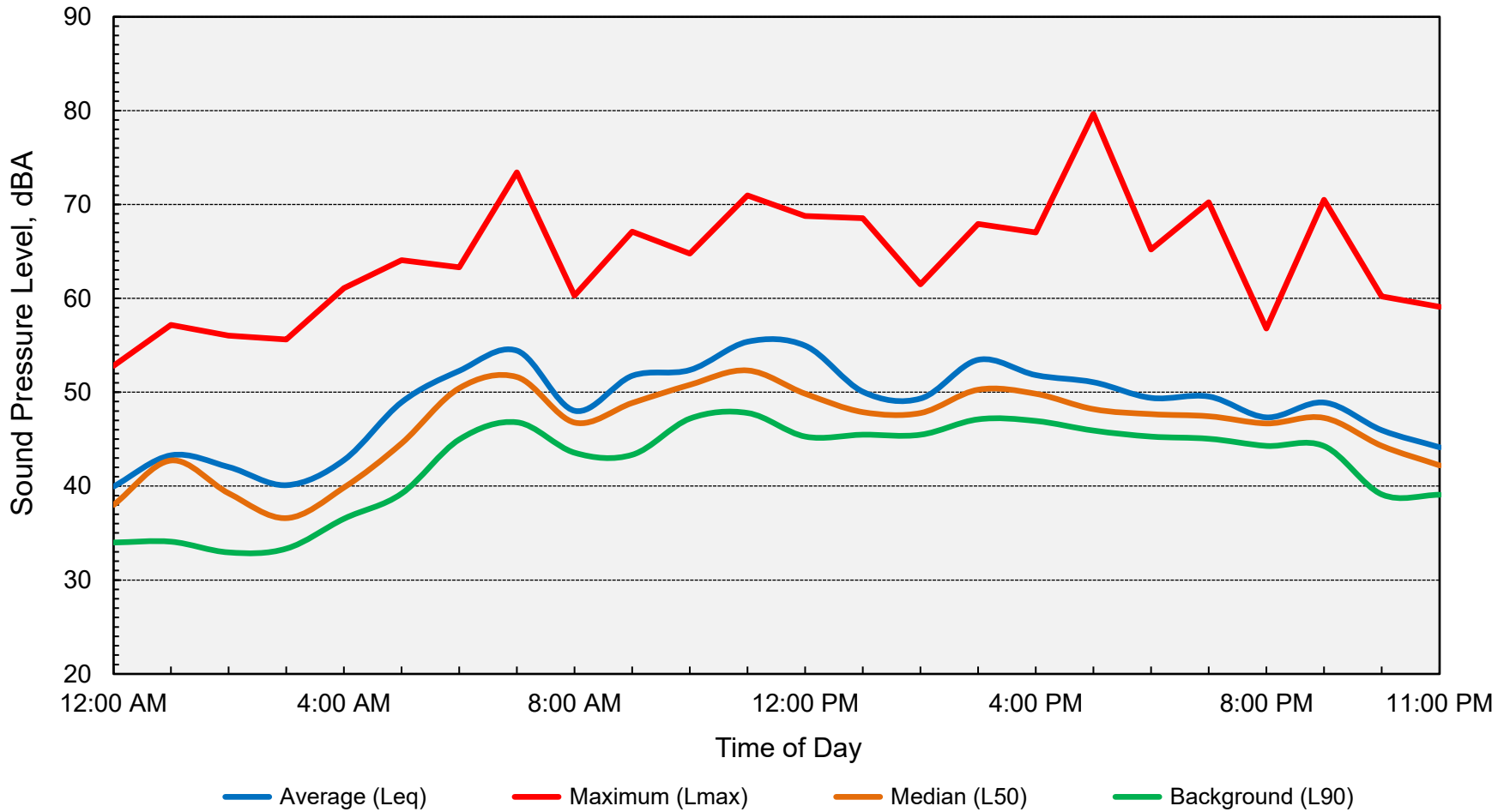
Computed DNL = 54 dB

Appendix D-2
Ambient Noise Monitoring Results - Site LT-1
Saratoga Lane Outdoor Vehicle Storage & Sales/Rental Facility
Sunday, March 28, 2021



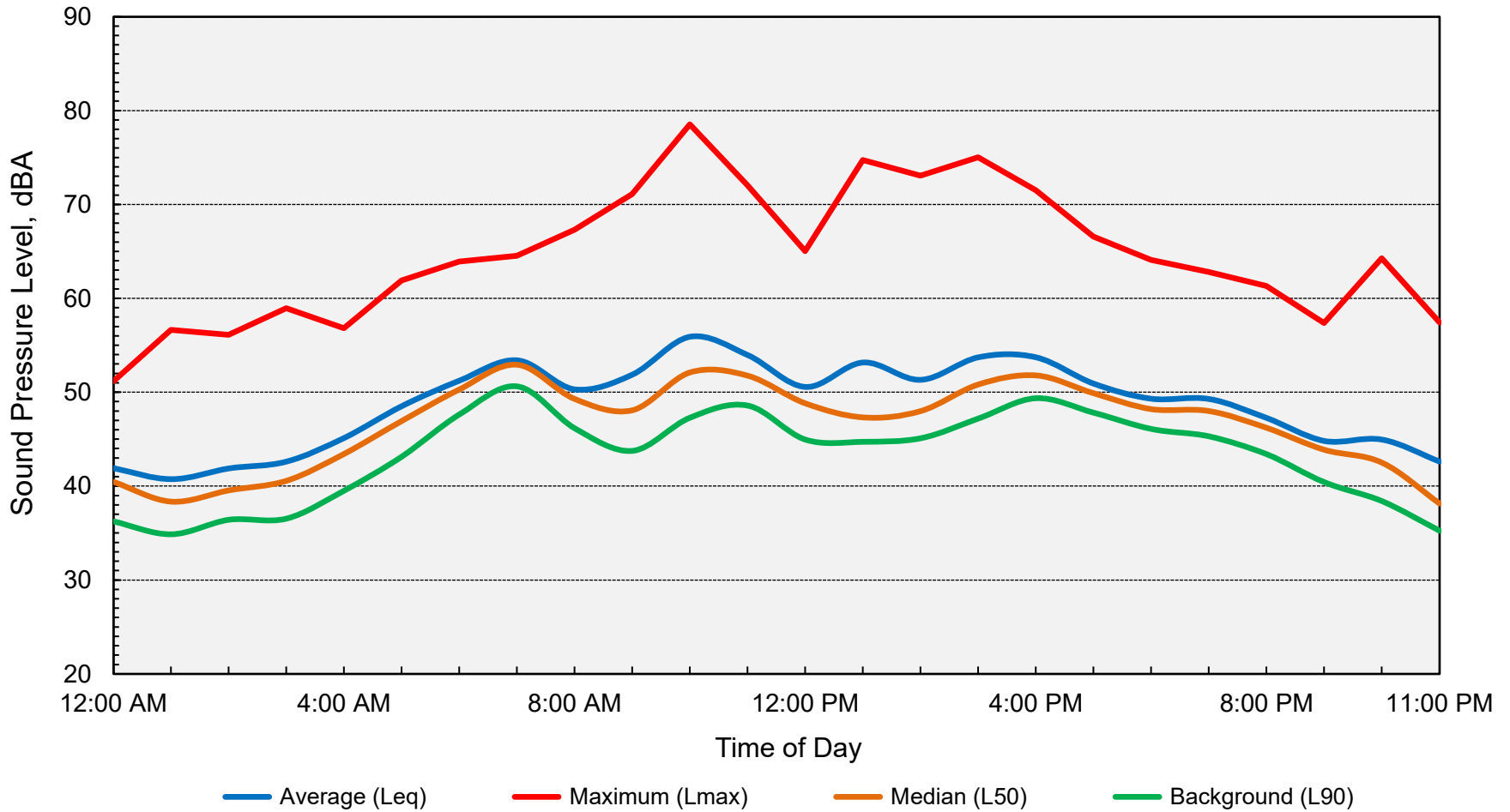
Computed DNL = 52 dB

Appendix D-3
Ambient Noise Monitoring Results - Site LT-1
Saratoga Lane Outdoor Vehicle Storage & Sales/Rental Facility
Monday, March 29, 2021



Computed DNL = 54 dB

Appendix D-4
Ambient Noise Monitoring Results - Site LT-1
Saratoga Lane Outdoor Vehicle Storage & Sales/Rental Facility
Tuesday, March 30, 2021



Computed DNL = 54 dB

Appendix E-1
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Prediction Worksheet

Project Information:

Job Number: 2021-003
 Project Name: Saratoga Lane Outdoor Vehicle Storage & Sales/Rental Facility
 Roadway Name: Saratoga Lane

Traffic Data:

Description: Daily Project-Generated Traffic
 Average Daily Off-Site Traffic Volume: 57
 Percent Daytime Traffic: 99
 Percent Nighttime Traffic: 1
 Percent Medium Trucks (2 axle): 50
 Percent Heavy Trucks (3+ axle): 1
 Assumed Vehicle Speed (mph): 25
 Intervening Ground Type (hard/soft): **Hard**

Traffic Noise Levels:

Location	Description	Distance	Offset (dB)	----- DNL (dB) -----			Total
				Autos	Medium Trucks	Heavy Trucks	
1	Project-Generated Traffic on Saratoga	50	0	31	43	33	44

Traffic Noise Contours (No Calibration Offset):

DNL Contour (dB)	Distance from Centerline (ft)
75	0
70	0
65	0
60	1

Notes: 1. Project-generated off-site average daily traffic volume (vehicle trips per day) for Saratoga Lane was obtained from the project applicant.

**Appendix E-2
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Prediction Worksheet**

Project Information:

Job Number: 2021-003
Project Name: Saratoga Lane Outdoor Vehicle Storage & Sales/Rental Facility
Roadway Name: Saratoga Lane

Traffic Data:

Description: Daily Existing Traffic
Average Daily Off-Site Traffic Volume: 500
Percent Daytime Traffic: 90
Percent Nighttime Traffic: 10
Percent Medium Trucks (2 axle): 1
Percent Heavy Trucks (3+ axle): 1
Assumed Vehicle Speed (mph): 25
Intervening Ground Type (hard/soft): **Hard**

Traffic Noise Levels:

Location	Description	Distance	Offset (dB)	----- DNL (dB) -----			Total
				Autos	Medium Trucks	Heavy Trucks	
1	Existing Traffic on Saratoga	50	0	46	38	45	49

Traffic Noise Contours (No Calibration Offset):

DNL Contour (dB)	Distance from Centerline (ft)
75	0
70	0
65	1
60	4

Notes: 1. Existing average daily traffic volume for Saratoga Lane was conservatively assumed to be 500 based on existing uses on road.

*Cameron Airpark Airport
Land Use Compatibility Plan*
Safety Factors
(June 2012)

Map Feature Key

- Parcels
- Airport Boundary
- Major Roads
- Airport Runway
- Airport Influence Area

Safety Factors Key

- High Terrain Areas
- Generic Safety Zones
 - 1 Runway Protection Zone
 - 2 Inner Approach/Departure Zone
 - 3 Inner Turning Zone
 - 4 Outer Approach/Departure Zone
 - 5 Sideline Zone
 - 6 Traffic Pattern Zone
- Modifications to Generic Zones

Notes

1. Generic safety zones source: California Airport Land Use Planning Handbook (October 2011).
2. Generic safety zones modified to recognize: High terrain south of the airport.
3. Part 77 source: Federal Aviation Regulations Part 77 Safe, Efficient Use, and Preservation of the Navigable Airspace.
4. Source of Part 77 penetration: 35' added to ground elevation in wooded areas.
5. High Terrain Area consists of locations where ground level is within 35 feet of Part 77 surface.

Map Source: El Dorado County Airport Land Use Commission
Base Data Source: El Dorado County

1 inch = 3,000 feet

edcaluc
El Dorado County Airport Land Use Commission
Exhibit CAM - 6

Saratoga Lane Outdoor Vehicle
Storage & Sales/Rental Facility
El Dorado County, California

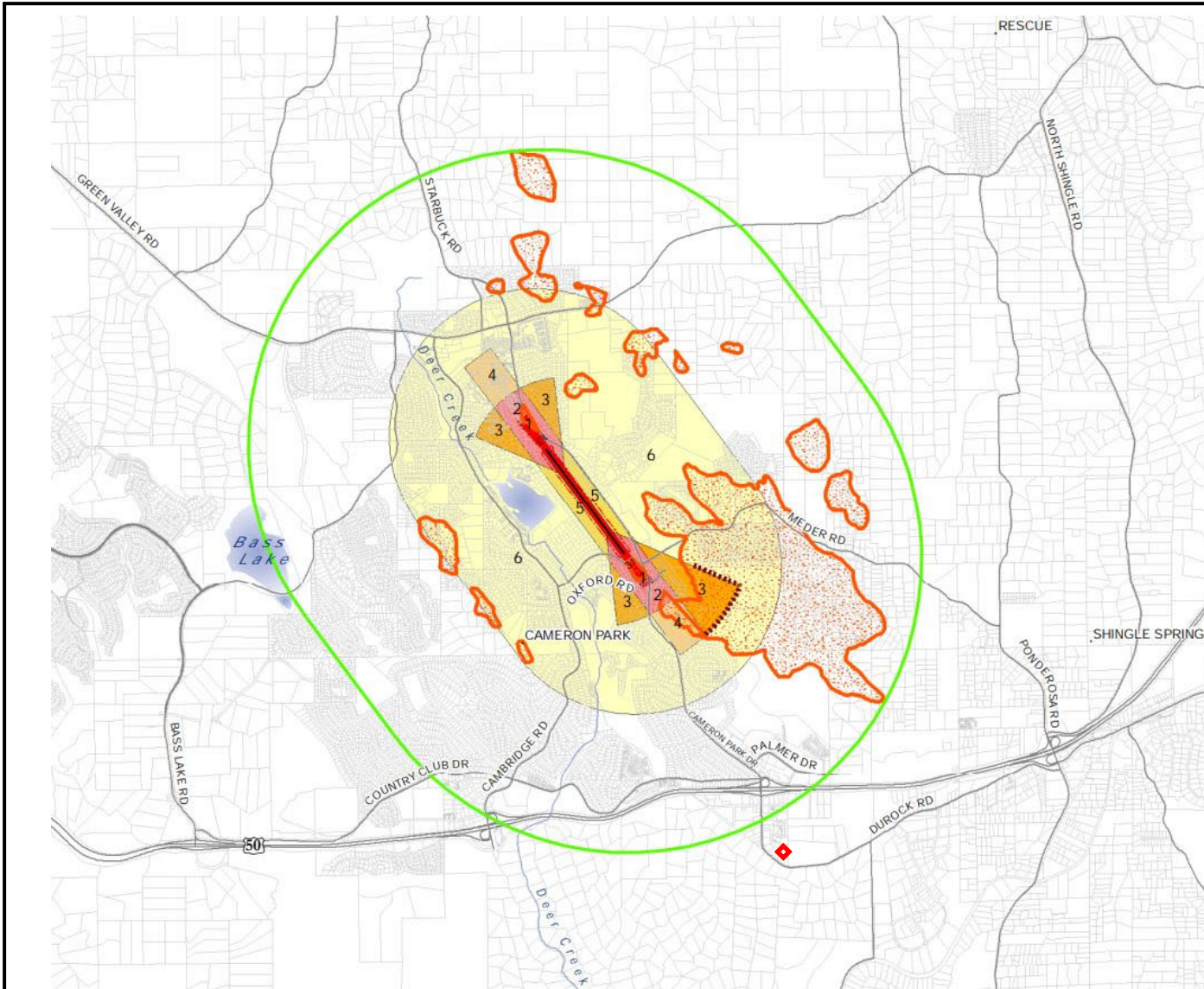
Cameron Airpark Safety Factors Map

Appendix F



Legend

- Project Area (Approximate)







Cameron Airpark Airport Land Use Compatibility Plan Airport Noise Zones Policy Map

(June 2012)

Map Feature Key

-  Parcels
-  Airport Boundary
-  Major Roads
-  Airport Runway
-  Airport Influence Area

Noise Zone Key

-  CNEL* 55-60
-  CNEL* 60-65
-  CNEL* 65-70
-  CNEL* 70+

*Community Noise Equivalent Level (CNEL)

Notes

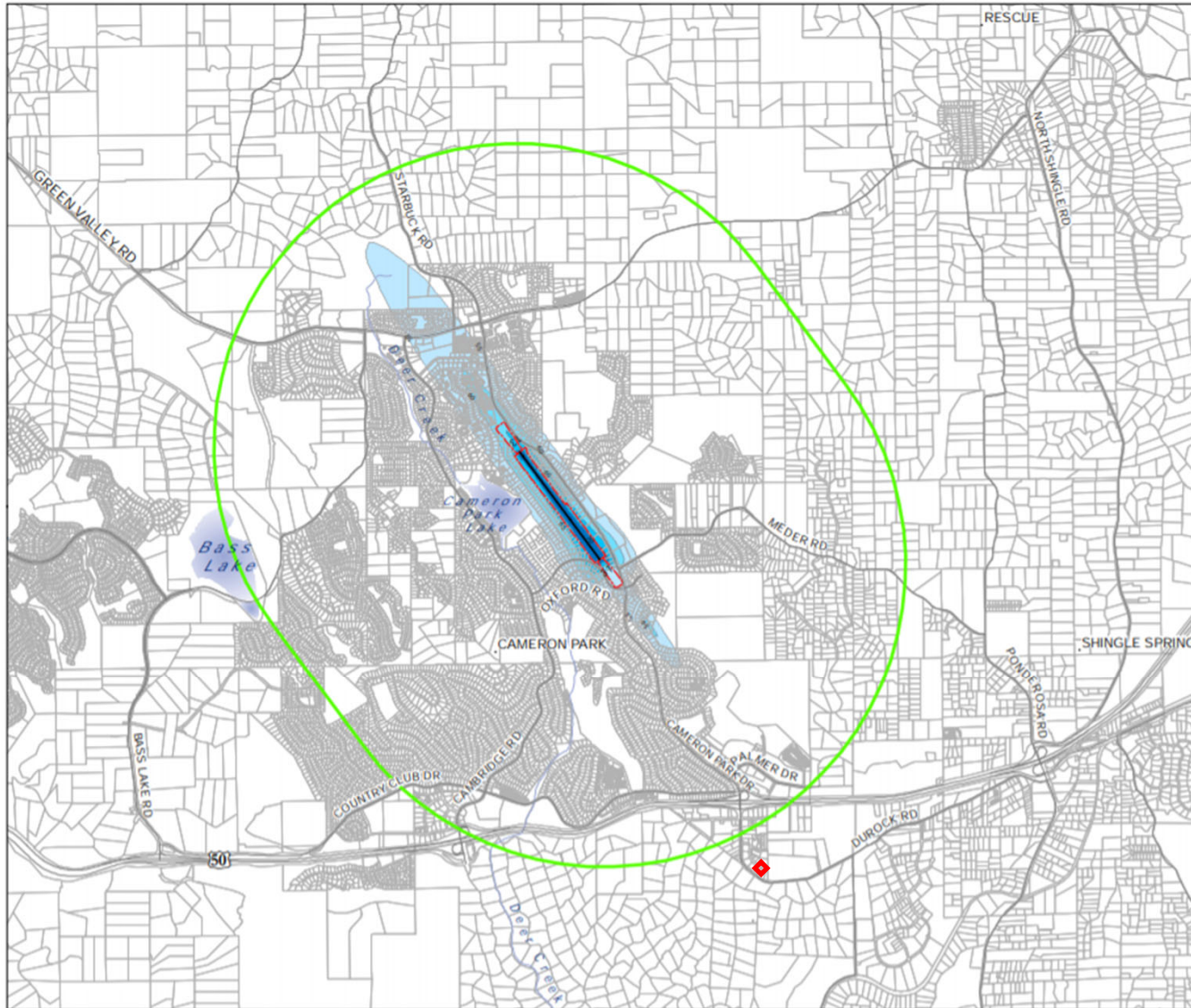
1. Noise contour source: Mead & Hunt, Inc. 2011. Noise contours reflect future scenario of 70,000 annual operations with terrain modeling enabled.
2. See Section 4.2 for policies applicable within each zone.

Map Source: El Dorado County Airport Land Use Commission
Base Data Source: El Dorado County

1 Inch = 3,000 feet



Figure CAM - 2



Legend

-  Project Area (Approximate)

Saratoga Lane Outdoor Vehicle
Storage & Sales/Rental Facility
El Dorado County, California

Cameron Airpark Noise Zones Policy Map

Appendix G



MEETING DATE: August 24, 2020
FILE NO.: CUP20-0005
PROJECT: SARATOGA LANE OUTDOOR VEHICLE RENTAL STORAGE AND SALES FACILITY
APPLICANT: Adam Croxton

DESIGN REVIEW COMMITTEE COMMENTS

Cameron Park Pollock Pines Staff Review

Setbacks:

-

Landscaping And Existing Growth:

Recommend landscape buffer (hedge / trees) at north boundary with existing daycare / preschool. Also recommend landscape buffer at west boundary with empty lot on outside of fence-line to minimize appearance of chain link fence. Also recommend landscape improvements at entry to enhance proposed sign.

Fencing:

Improve gate entry.

Mail Boxes:

Not found.

Signs:

Sign design is OK. Wood with black iron connectors look nice. Do not use black letters on white background for the field of the sign. Will the sign be illuminated? If so, illuminate externally (not a cabinet sign). The exterior sign should have stronger, natural base with landscaping at its base.

Lighting:

Provide adequate lighting to deter unwanted visitors at night, but light shall not be such that it goes beyond the property boundary.

Parking:

See general comments and recommendations on page 2.

Trash Areas:

It was unclear from the drawings what the materials of the trash enclosure are. Provide CMU (split face or other decorative block) trash enclosure with steel gates.

Vehicular Access:

The dumping station should be relocated so that vehicles using the dumping station are not blocking the driveway..

Siding Or Exterior:

Design of portable office is OK. Concerned about accessibility. No portable ramps.

Colors:

Assuming that the photo of the portable office is what is currently on-site, colors are OK.

Roofing Materials:

OK.

Air Conditioning:

Not found.

Roof-Mounted Items:
N/A.

DESIGN REVIEW COMMENTS

PROJECT: CUP20-0005 – SARATOGA LANE OUTDOOR VEHICLE RENTAL STORAGE AND SALES FACILITY

PAGE 2

General Comments:

Concerned about fugitive dust on-site.
Consider paving the perimeter drive loop to reduce potential dust issues.
Plans for a future permanent structure to be brought to the DRC.
Current portable and future permanent structures should consider access for disabled.

Recommendation:

Ensure that there is no naturally occurring asbestos in any gravel material used.
Note that one member of the committee asserted that the whole site should be paved.
If the entire site is not paved, then a provision for maintaining the site against fugitive dust should be ensured.
Landscape plan to include ongoing maintenance required for slats in the chain-link fence so it is not allowed to deteriorate over time.
