PUBLIC REVIEW DRAFT

INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION

FOR THE

HIGHWAY 113 TRUCK YARD

17812 HIGHWAY 113
SUTTER COUNTY, CA

SUTTER COUNTY PROJECT #U22-0006 (THIARA)

AUGUST 2023

Prepared for:
SUTTER COUNTY DEVELOPMENT SERVICES DEPARTMENT
1130 CIVIC CENTER BOULEVARD
YUBA CITY, CA 95993

Prepared by:
BASECAMP ENVIRONMENTAL, INC.
802 W. LODI AVENUE
LODI, CA 95240

BaseCamp Environmental, Inc.

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LIST OF ACRONYMS AND ABBREVIATONS USED IN THIS DOCUMENT

AB	Assembly Bill
BMP	Best Management Practice
CalEEMod	California Emissions Estimator Model
CAP	Climate Action Plan
CARB	California Air Resources Board
Caltrans	California Department of Transportation
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CO	carbon monoxide
CO_2e	carbon dioxide equivalent
CUPA	Certified Unified Program Agency
dBA	decibel, A-weighted
DPM	diesel particulate matter
EIR	Environmental Impact Report
FEMA	Federal Emergency Management Agency
FRAQMD	Feather River Air Quality Management District
GHG	greenhouse gas
Leq	equivalent sound level
LOS	Level of Service
NAHC	Native American Heritage Commission
NOx	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
OPR	Governor's Office of Planning and Research
PG&E	Pacific Gas and Electric Company
PM10	particulate matter 10 microns or less in diameter
PM2.5	particulate matter 2.5 microns or less in diameter
PPV	peak particle velocity
ROG	reactive organic gases
SB	Senate Bill
STAA	Surface Transportation Authorization Act
SWPPP	Storm Water Pollution Prevention Plan
TA	Terminal Access
USDA	United States Department of Agriculture
USFWS	U.S. Fish and Wildlife Service

VdB	vibration decibel
VMT	vehicle miles traveled

Sutter County
Initial Study

1. Project Title:	Project #U22-0006 (Thiara)
2. Lead Agency Name and Address:	Sutter County Development Services Dept. Planning Division 1130 Civic Center Boulevard Yuba City, CA 95993
3. Contact Person and Phone Number:	Raveena Sroya, Assistant Planner 530-822-7400
4. Project Sponsor Name and Address:	Project Applicant Sarbjit Thiara c/o Milestone Associates 1000 Lincoln Road, Suite H202 Yuba City, CA 95991 Project Representative Julio Tinajero Milestone Associates 1000 Lincoln Road, Suite H202 Yuba City, CA 95991
5. Project Location & APN:	17812 State Highway 113, on the east side of State Highway 113 and the west side of Reclamation Road, within the Rural Community of Robbins in southern Sutter County; APN 29-080-007.
6. General Plan Designation:	Industrial
7. Zoning Classification:	M-1 (Light Industrial) District

8. Project Description:

The project site (Figures 1-1 to 1-5) consists of one parcel totaling approximately 6.7 acres. The project site has eight buildings in various conditions and of unknown uses. The remainder of the site primarily contains a mix of bare soil, grasses, and weeds, with some trees and shrubs along the western and southern boundaries.

The project applicant seeks to obtain a Use Permit for phased development of a truck yard to be used for parking only. The truck yard would be constructed on the project site, as shown on Figure 1-6. The project would also be subject to Design Review by the County for consistency with Table 1500-07-3 of the Sutter County Zoning Code, as well as with the parking standards specified in Article 20 of the County Zoning Code. The truck yard would provide 81 truck/trailer parking spaces, each approximately 75 feet long by 12.5 feet wide. Most of the truck parking spaces are proposed to be located along the southern

boundary of the project site, with additional spaces located along the eastern boundary of the site and in the site center. An additional 54 spaces are proposed to be provided for automobiles, each approximately 18 feet long by 9 feet wide. Three of these spaces would be accessible for drivers with disabilities, one of which would be van-accessible. The automobile spaces would be located in the northern portion of the project site. The truck yard is proposed to be paved with concrete asphalt pavement, consistent with County requirements. The initial phase of the development would consist of the construction of 58 truck parking spaces and 54 passenger vehicle spaces. The second phase would require demolition of two structures and would add 15 additional truck spaces. The third and final phase would include demolition of three existing buildings and would add an additional 8 truck spaces.

The proposed truck yard would be self-serve; it would not have an attendant. Project site operations would involve trucks accessing the site intermittently, 24 hours per day, 7 days per week. A six-foot chain link fence with privacy slats will be installed around the perimeter of the site to provide additional security and screening for the site. However, the proposed site plan does not depict a security gate to enter the site from State Highway 113. The project applicant has indicated that all trucks that would use the proposed facility would be “long haul” trucks, rather than local trucks making local trips. It is expected that truck drivers would travel by automobile to and from the project site before beginning or ending trips. Some of the truck drivers would park their personal automobiles at the site, while others would be dropped off. A bicycle rack that can hold four bicycles would be provided in the automobile parking area.

An existing building in the southeastern corner of the project site is proposed to remain. This building would be available for minor truck repair work that is limited to windshield, wiper, and headlight replacement work as allowed per County Zoning Code. No materials such as truck parts, tires, and related items are proposed to be stored on the property. Only trucks using the truck yard would have access to this facility; it would not be available for free public use.

Restroom facilities for drivers would consist of portable, trailer-mounted restrooms, located in the northeast corner of the project site. A total of four restrooms would be provided. The restrooms would be accessible 24 hours per day, 7 days per week. The restrooms would be self-contained and would be pumped as needed by a septic pumper registered with Sutter County.

Sixteen trash receptacles, each with a capacity of 55 gallons, would be placed throughout the truck parking areas. A chain link fence, six feet in height and with privacy slats, would be installed around the perimeter of the project site. The project proposes 16 pole lights with LED fixtures and a maximum height of 25 feet to be installed in the parking areas. Luminaires would be directed to prevent light spillage onto adjacent properties and road right-of-way.

Proposed landscaping includes trees to be planted along all property boundaries, with associated shrubs and ground cover. Low-water plant species are proposed to be incorporated into the planting plan for the project. Trees would be irrigated with a root watering system and a surface supplemental bubbler. Shrubs and groundcover would be irrigated with low-volume, point source drip/bubblers to provide water to the plant root

zone. Site irrigation would be controlled by a “smart” controller with weather sensing capabilities. An existing onsite well would provide water for landscape irrigation.

The main access to the project site would be provided off State Highway 113 by a driveway approximately 45 feet in width, to be installed in the same place as an existing, narrower driveway. The driveway is required to be constructed in accordance with the standards of the California Department of Transportation (Caltrans). An existing 20-foot-wide driveway from the eastern portion of the project site to Reclamation Road would remain. Use of this driveway, which is unpaved and gated, is expected to be limited to automobiles and trucks that are not Surface Transportation Assistance Act (STAA) trucks (see below).

The project applicant has indicated that STAA trucks would be parked at the project site. STAA trucks are typically truck-tractors with sleeper units and a trailer that when combined exceed the 65-foot "California Legal" threshold. Large general truck yards may only be established in the M-1 Zoning District with approval of a use permit and when located immediately adjacent to a State Highway or designated STAA T- or S-route. An existing STAA route has been established along State Highway 113, and STAA trucks would use the State Highway 113 driveway to the project site.

The project would be constructed in three phases, the schedules for which currently have not been established. The first phase would involve the installation of 59 truck parking spaces and all 54 automobile parking spaces. To accommodate these spaces, two of the existing buildings would require removal. The second phase would involve the removal of two additional existing buildings and the installation of 15 additional truck parking spaces, located in the southern portion of the site. The third phase would involve the demolition of three additional buildings and the installation of eight additional truck parking spaces in the northern portion of the site.

9. Surrounding Land Uses and Setting:

The project site is located within the unincorporated community of Robbins, which contains a mix of residential, agricultural, and commercial land uses. A group of residences are located approximately 600 feet to the east. The Robbins Canal is adjacent to and east of the project site. Bear West Enterprises, a warehousing/self-storage business oriented to the transportation sector, is adjacent to and northwest of the project site. Agricultural lands are located further west beyond State Highway 113 and south of the project site.

10. Other Public Agencies Whose Approval is Required: None

11. Have California Native American tribes affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, has consultation begun?

No requests for consultation have been received by the County.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" prior to mitigation, as indicated by the checklist on the following pages.

	Aesthetics		Agriculture/Forestry Resources	✓	Air Quality
	Biological Resources	✓	Cultural Resources		Energy
✓	Geology/Soils		Greenhouse Gas Emissions		Hazards/Hazardous Materials
✓	Hydrology/Water Quality		Land Use		Mineral Resources
✓	Noise		Population/Housing		Public Services
	Recreation	✓	Transportation	✓	Tribal Cultural Resources
	Utilities/Service Systems		Wildfire	✓	Mandatory Findings of Significance

DETERMINATION

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

✓ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Applicant Mitigation Agreement:

CEQA allows a project proponent to make revisions to a project, and/or to agree to and comply with mitigation measures that reduce the project impacts such that the project will not have a significant effect on the environment. CEQA Guidelines Section 15064.

As the applicant/representative for this proposed project, I hereby agree to implement the proposed mitigation measures and mitigation monitoring program identified within this document.

7-28-2023

Signature of Applicant/Representative — Date

7/27/2023

Neal Hay, Director of Development Services
Environmental Control Officer — Date

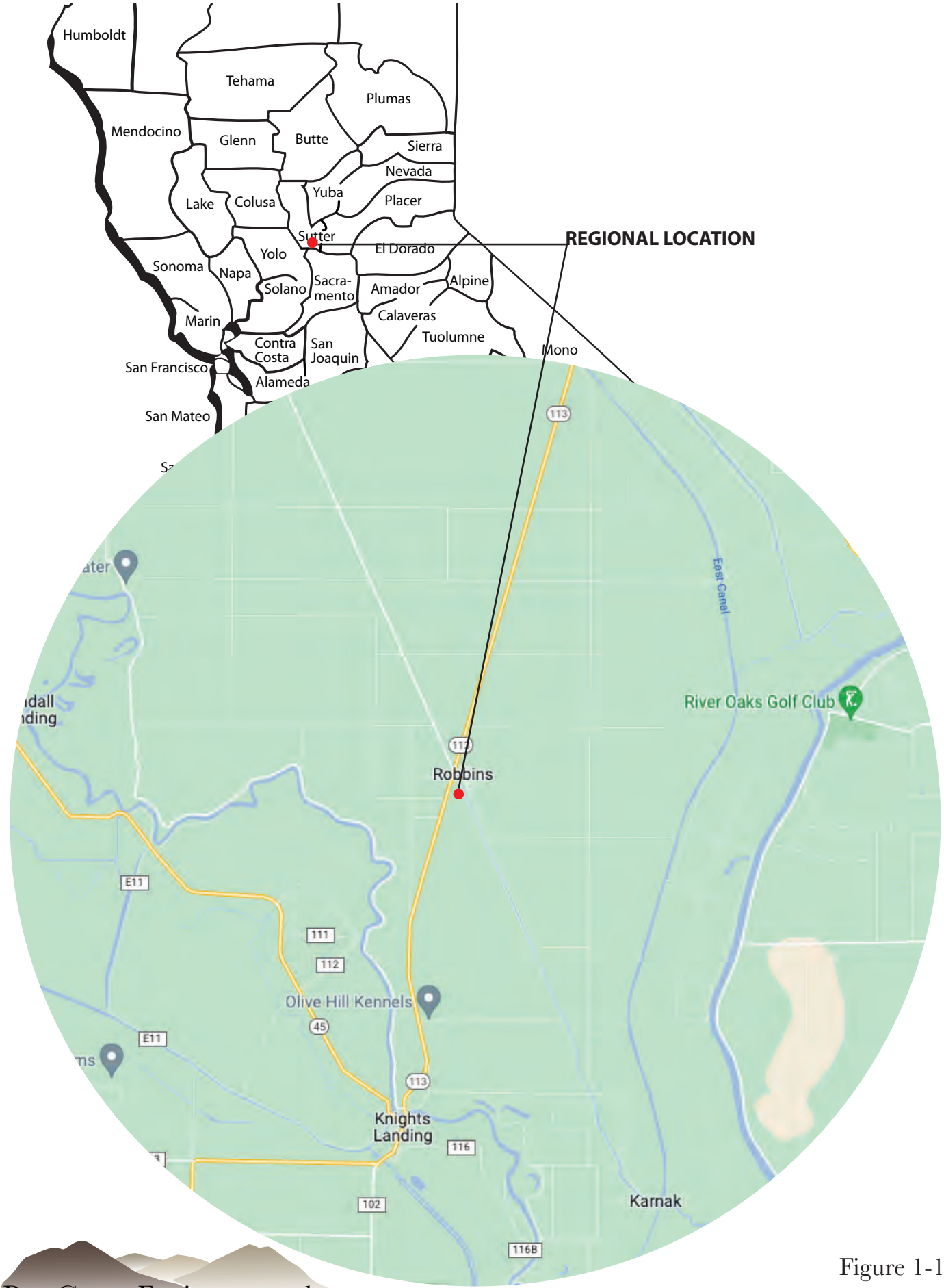
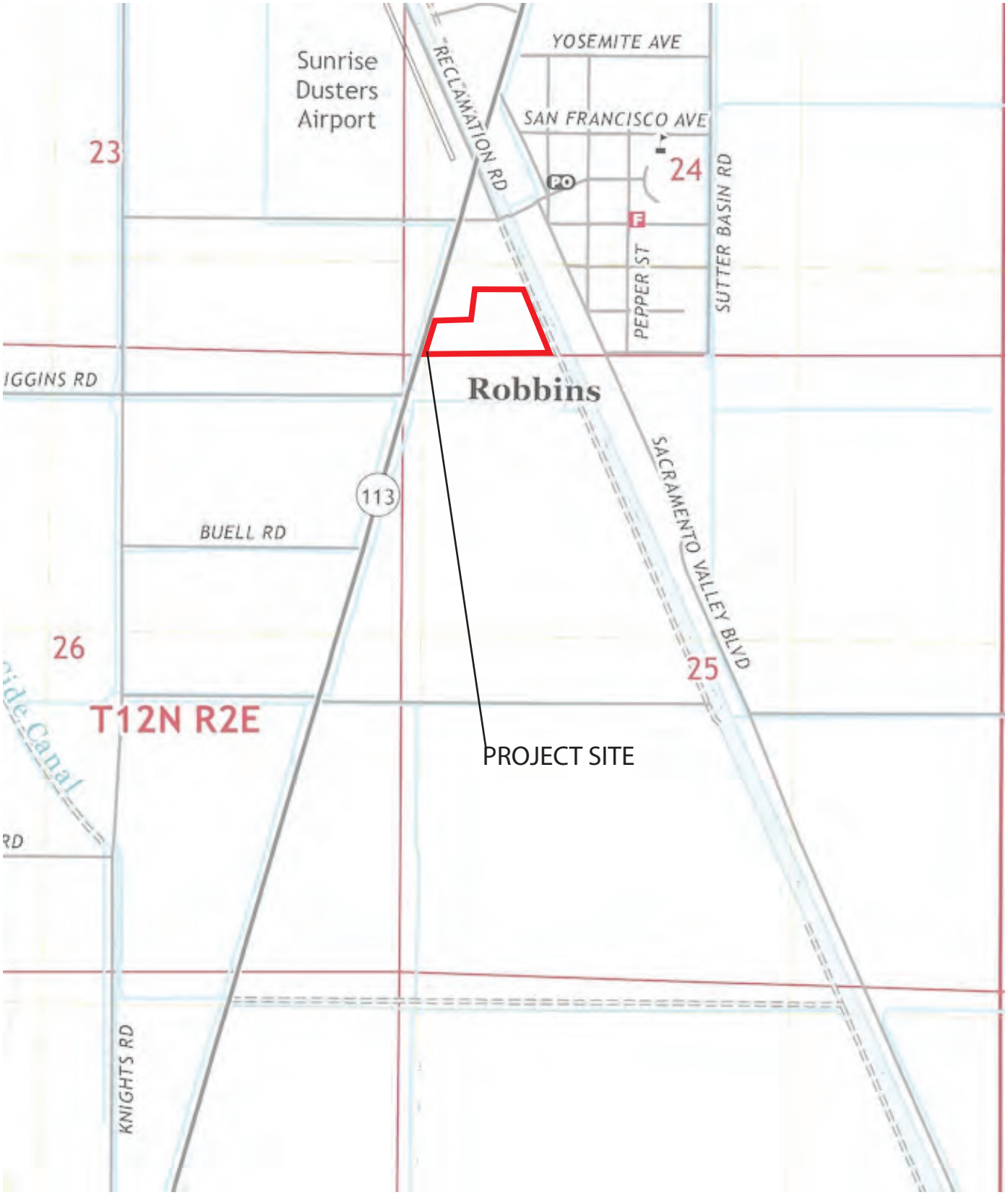


Figure 1-1
REGIONAL LOCATION MAP



SOURCE: Google Maps

Figure 1-2
STREET MAP



SOURCE: USGS Quadrangle Map, Knights Landing, CA 2022

Figure 1-3
USGS Map



SOURCE: Google Earth

BaseCamp Environmental

Figure 1-4
AERIAL PHOTO

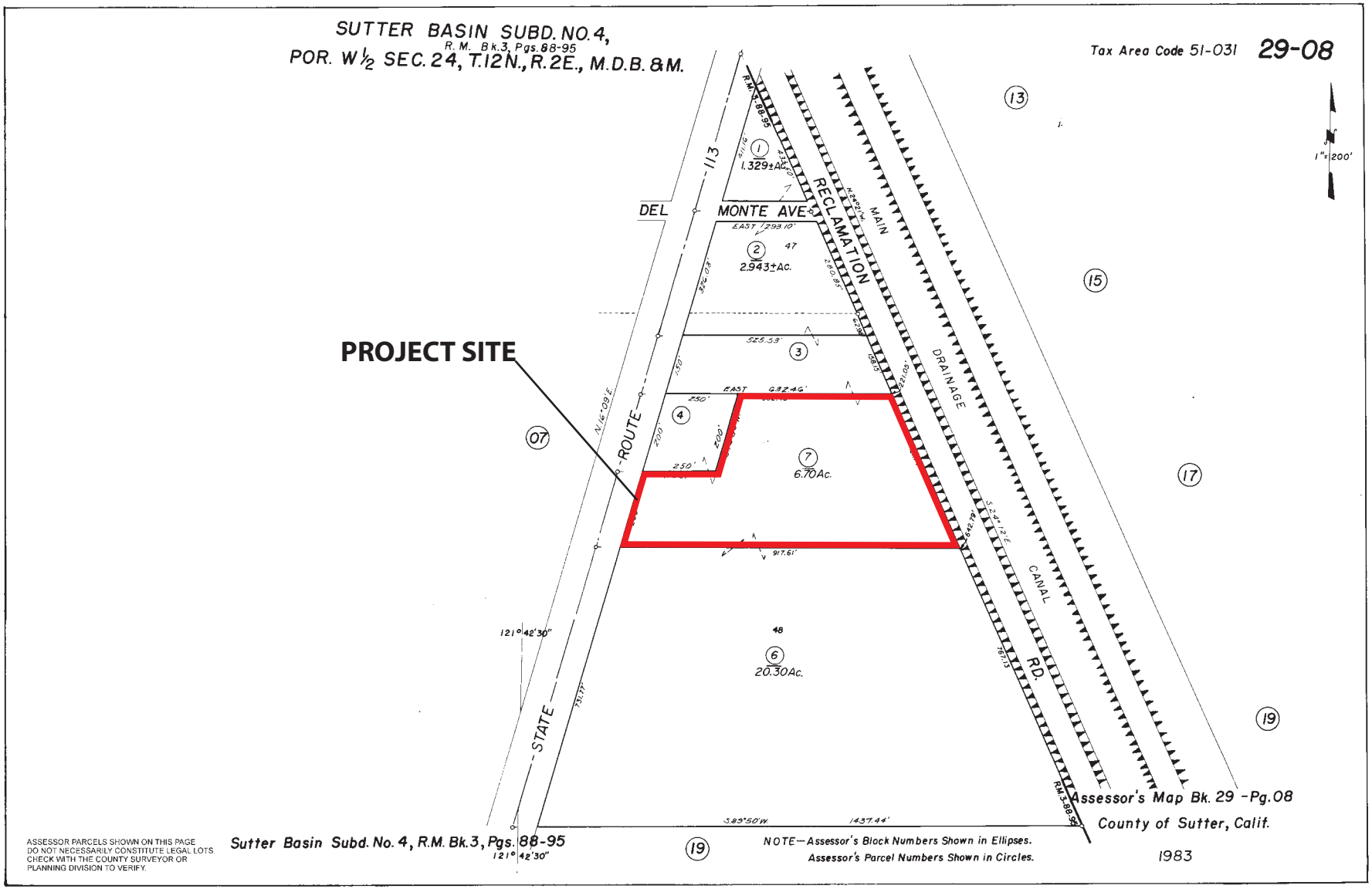
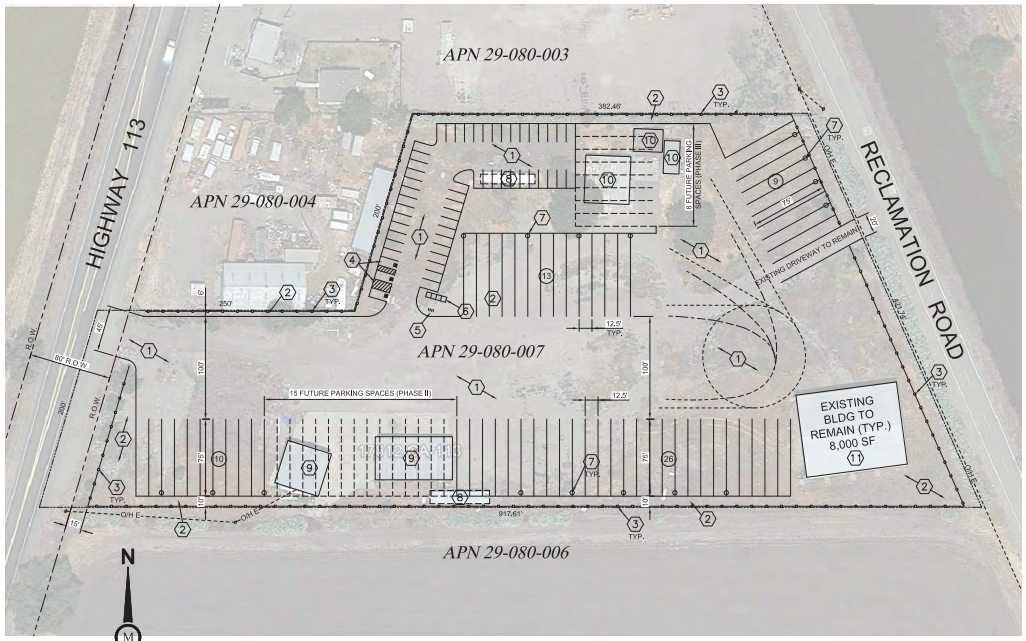


Figure 1-5
ASSESSOR PARCEL MAP

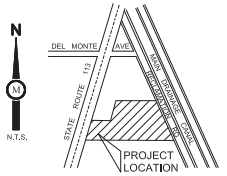
PROPOSED TRUCK YARD

17812 HIGHWAY 113
KNIGHTS LANDING, CA
A.P.N. 29-080-007



SITE PLAN
1" = 50'

SUTTER COUNTY



VICINITY MAP
NOT TO SCALE

CONSTRUCTION NOTES

1. NEW ASPHALT CONCRETE PAVEMENT
2. NEW LANDSCAPE / DRAINAGE AREA. LANDSCAPING WILL BE WITHIN PLANTERS SEPARATED FROM PARKING AND DRIVEWAYS WITH SIX-INCH CONCRETE CURBING.
3. NEW 6' HIGH CHAIN-LINK FENCE WITH PRIVACY SLATS ALONG PERIMETER OF SITE. PRIVACY SLATS MUST HAVE A MINIMUM PRIVACY RATING OF 90 PERCENT OR GREATER.
4. NEW ACCESSIBLE PARKING SPACES (1 VAN ACCESSIBLE)
5. NEW BICYCLE RACK (4 SPACES PROVIDED)
6. NEW PORTABLE TRAILER MOUNTED RESTROOM FACILITIES (4 RESTROOMS PROVIDED)
7. NEW 55-GALLON TRASH RECEPTACLE (16 PROVIDED)
8. EXISTING BUILDING TO BE REMOVED
9. EXISTING BUILDING TO BE REMOVED AS PART OF PHASE II, PROVIDING 15 ADDITIONAL PARKING SPACES
10. EXISTING BUILDING TO BE REMOVED AS PART OF PHASE III, PROVIDING 8 ADDITIONAL PARKING SPACES
11. EXISTING 8,000 S.F. STRUCTURE WILL BE LIMITED TO WINDSHIELD, WIPER, AND HEADLIGHT REPLACEMENT WORK AS OUTLINED UNDER ZONING CODE SECTION 1500-07-030 B. 3. M. NO MATERIALS SUCH TRUCK PARTS, TIRES, AND RELATED ITEMS SHALL BE STORED ON THE PROPERTY.

LOT DATA:

A.P.N.:	29-080-007
TOTAL ACREAGE:	291,852 SF (6.7 AC)
EXISTING PARCELS:	1
PROPOSED PARCELS:	1
EXISTING ZONE:	M-1 LIGHT INDUSTRIAL
PROPOSED ZONE:	M-1 LIGHT INDUSTRIAL
EXISTING USE:	INDUSTRIAL
PROPOSED USE:	TRUCK YARD / INDUSTRIAL USES
TRUCK PARKING SPACE:	12.5' x 75'
TRUCK PARKING SPACES:	81 SPACES

ACCESS TO PARKING LOT IS TO BE FROM HIGHWAY 113 AND RECLAMATION ROAD

PARKING DATA:

TRUCK PARKING SPACE:	81 SPACES
AUTO PARKING (1 PER 1.5 TRUCKS):	54 SPACES
REQUIRED:	135 SPACES
TRUCK PARKING SPACE (12.5'x75') (INCLUDES 23 FUTURE SPACES)	81 SPACES
AUTO PARKING SPACE (9'x18')	51 SPACES
ACCESSIBLE PARKING SPACE (9'x18')	3 SPACES
PROVIDED:	135 SPACES

PROPERTY DESCRIPTION

REAL PROPERTY IN THE COUNTY OF SUTTER, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

ALL THAT PORTION OF LOT 48 AS SHOWN ON THAT CERTAIN MAP ENTITLED "MAP OF SUTTER BASIN SUBDIVISION NO 4" FILED IN THE OFFICE OF THE COUNTY RECORDER OF SUTTER COUNTY, CALIFORNIA, ON MAY 06, 1921 IN BOOK 3 OF SURVEYS , PAGE 88

SITE UTILITIES

SEWAGE DISPOSAL:	PRIVATE ONSITE
WATER SUPPLY:	PRIVATE ONSITE
DRAINAGE:	SUTTER COUNTY

APPLICANT

SARBJIT THIARA
CAPITAL FARM & MANAGEMENT COMPANY
(530) 682-2484

SHEET INDEX

1 SITE PLAN / PROJECT DATA
2 LANDSCAPE CONCEPT PLAN
3 PHOTOMETRIC PLAN

Milestone Associates Imagineering, Inc.
1000 Lincoln Road, Suite H202, Yuba City, CA 95991
(530) 755-4700

PROPOSED TRUCK YARD
17812 HWY 113, KNIGHTS LANDING, CA

SITE PLAN / PROJECT DATA 1

03-6-23

Checklist

I. AESTHETICS

Except as provided in Public Resources Code Section 21099, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?				✓
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				✓
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			✓	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			✓	

Responses:

a) **No impact.** This project would not have a substantial adverse effect on a scenic vista. The General Plan does not inventory any scenic vista on the subject property, and there are no scenic vistas proximate to the project site. The General Plan Technical Background Report identifies geographic features such as the Sutter Buttes, Feather River, Sacramento River, and Bear River as scenic resources within the County. This project is not located within the Sutter Buttes Overlay Zone and is not located in the immediate vicinity of the Bear River, Feather River, or Sacramento River. As a result, this project would have no impact on scenic vistas.

b) **No impact.** This project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. There are no state scenic highway designations in Sutter County. Also, the project site has been developed, and there are no designated historic buildings on the site. Therefore, no impact is anticipated.

c) **Less than significant impact.** The proposed project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings. The surrounding area is largely rural and agricultural. While truck parking is not a typical land use associated with the area, it is consistent with agricultural activities that use trucks, such as processing plants. Additionally, the project proposes to improve the streetscape and perimeter of the truck parking area with new landscaping treatments, including new shrubs and shade trees, that will enhance the aesthetic quality of the site from public viewpoints along State Highway 113 and Reclamation Road. Screening of the truck yard would also include use of a perimeter fence with privacy slats.

The County's Zoning Code Table 1500-07-3 (Commercial and Employment Design Checklist) includes requirements for landscaping and screening. The County's Commercial and Employment Districts, contain specific design requirements for landscaping, which are designed in part to improve the appearance of a site and create a cohesive look (Zoning Code Section 1500-07-050 E). These requirements would apply to large general truck yards such as this project. The project applicant proposes to install landscaping in accordance with Zoning Code requirements prior to use of the site for truck and trailer and vehicle parking and shall be continuously maintained, which will be included as a proposed project condition. As noted, trees with associated shrubs would be planted along the project site boundaries. The proposed landscaping would reduce the visibility of the parking area, as well as enhance the visual quality of the site entrance.

The existing visual character is not considered of high quality, as it consists mostly of vacant structures, grasses and weeds, and bare soils. As this project complies with the design requirements of the Zoning Code Design Checklist and is consistent with the General Plan designation of the property, this project is not anticipated to substantially degrade the existing visual character or quality of the site or its surroundings; in fact, the project would likely improve the visual character of the site with the removal of weeds and landscaping. A less-than-significant impact is anticipated, and impacts are considered beneficial.

d) **Less than significant impact.** The project would add new lighting to a site that currently has none. This could cause indirect illumination of residences approximately 450 feet east of the project site, beyond the Robbins Canal, at a level that could disturb the sleep of residents.

The County's Zoning Code contains specific requirements for exterior lighting for large general truck yards (Zoning Code Section 1500-07-030 B. 3. d.). These requirements specify that light pole and fixture height shall not exceed 25 feet and that truck parking areas shall incorporate motion activated lighting that shall not spill onto adjoining properties. These requirements also specify that exterior lighting shall be provided consistent with Zoning Code Table 1500-07-3 (Commercial and Employment Design Checklist). These requirements specify that luminaries be oriented and shielded to direct the light downward onto the property and not spill onto adjacent properties or road rights-of-way. The requirements also specify illumination requirements for parking lots and driveways and require that a point-by-point photometric plan be submitted to demonstrate compliance with the lighting standards.

Pole-mounted LED light fixtures are proposed around the perimeter of the new parking area. A photometric plan for the project site indicates that illumination would not increase lighting levels at the residences to the east, or at any point along project site boundaries. All new lighting would be required to meet County lighting requirements, including shielding and pole heights. Outdoor lighting would be required to be installed in accordance with the prepared lighting plan prior to use of the site for truck/trailer and vehicle parking, which will be included as a proposed project condition. As a result, it is not anticipated this project would create a new source of substantial light or glare in this area. In addition, the project site is set lower than the Reclamation Road grade, and the proposed landscaping would further screen lighting from residences to the east. A less-than-significant impact is anticipated.

(County of Sutter, General Plan Technical Background Report. 2008)

(County of Sutter, Zoning Code. 2022)

II. AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				✓
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?				✓
d) Result in the loss of forest land or conversion of forest land to non-forest use?				✓
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?			✓	

Responses:

a) **No impact**. As noted in the CEQA Guidelines Appendix G Environmental Checklist, which is used in this analysis, Farmland is defined as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. According to the 2018 Sutter County Important Farmland map, prepared pursuant to the Farmland Mapping and Monitoring Program, the entire project site is designated as Urban and Built-Up Land. Since the project site does not have a Farmland designation, the project would not convert Farmland to a non-agricultural use. In fact, the project site is already developed. The project would have no impact on Farmland conversion.

b) **No impact**. This project would not conflict with existing zoning for agricultural uses or a Williamson Act contract. The project site is zoned M-1, which is an industrial zone. As

such, the project site is not encumbered by a Williamson Act contract. No impact is anticipated.

c) **No impact.** This project does not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)), because the project site and surrounding area does not contain forest land. The project site is not zoned for forest land or timberland nor is it adjacent to land that is zoned for forest land or timberland. This project is in the Sacramento Valley, a non-forested region. No impact is anticipated.

d) **No Impact.** This project would not result in the loss of forest land or conversion of forest land to a non-forest use because of its location within Sutter County. Sutter County is located on the valley floor of California's Central Valley, and, as such, does not contain forest land. No impact is anticipated.

e) **Less than significant impact.** This project would not involve other changes to the existing environment which could result in the conversion of Farmland to a non-agricultural use or conversion of forest land to a non-forest use. This project proposes a large general truck yard on a partially developed parcel. Agricultural uses in the vicinity would continue, and conflicts between the proposed project and nearby agricultural uses are not anticipated.

Section 1500-19-020 of the County Zoning Code states that permanent agricultural buffers are required for any new or expanded non-agricultural use or development adjacent to agricultural uses, including industrial development. The project site is adjacent to agricultural land to the south. The agricultural buffer provisions apply only to lands outside established City Sphere of Influence boundaries or rural community boundaries and to project sites located within these boundaries but adjacent to properties located outside the boundaries. The County General Plan indicates that the project site is within the boundaries of the Robbins rural community and is adjacent to land located outside the Robbins boundary. As such, the agricultural buffer provisions of the County Zoning Code apply to the project. The agricultural buffering standards require a 300-foot setback or buffer between the rice fields to the west and non-agricultural uses on the project site.

The applicant is requesting a reduction of the agricultural buffer to allow truck parking spaces to be located on the western end of the property. The adjacent parcels to the north already have non-agricultural uses established within the buffer area and the project site is currently developed. The project site is also separated from nearby agricultural land by an 80-foot-wide Caltrans right-of-way. A less-than-significant impact is anticipated.

This project does not propose infrastructure or other features that would present an opportunity for the conversion of farmland in the vicinity to a non-agricultural use. As noted in d), there is no forest land in Sutter County, so there would be no opportunity to convert forest land to non-forest use. Therefore, the project would have a less-than-significant impact related to indirect conversion of Farmland or forest land.

(California Dept. of Conservation, Farmland Mapping and Monitoring Program. 2018)

(County of Sutter, General Plan Draft Environmental Impact Report. 2008)

(County of Sutter, Zoning Code. 2022)

III. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?		✓		
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?			✓	
c) Expose sensitive receptors to substantial pollutant concentrations?			✓	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			✓	

Responses:

a) **Less than significant with mitigation incorporated.** This project would not conflict with or obstruct implementation of an applicable air quality plan. Both the federal and State governments have established ambient air quality standards, based on their respective Clean Air Acts, for various air pollutants identified as “criteria” air pollutants. The federal Clean Air Act identifies six criteria pollutants: reactive organic gases (ROG), nitrogen oxides (NOx), carbon monoxide (CO), sulfur dioxide, lead, and particulate matter less than 10 micrometers in diameter (PM10), a subset of which is particulate matter less than 2.5 micrometers in diameter (PM2.5). The California Clean Air Act identifies these six federal criteria pollutants, along with four others.

Under both Clean Air Acts, air basins are classified as being in “attainment” or “nonattainment” of these ambient air quality standards, or they are “unclassified”. Any air district that has been designated as a nonattainment area relative to federal and/or State ambient air quality standards for ozone, CO, sulfur dioxide or nitrogen dioxide is required to prepare and submit a plan for attaining and maintaining the standards for which it is in nonattainment.

The project site is within the boundaries of the Feather River Air Quality Management District (FRAQMD), which covers both Sutter and Yuba Counties. The FRAQMD is either in attainment of or unclassified for all federal and State ambient air quality except for federal standards for ozone and PM10. Portions of Sutter County are also in nonattainment of State standards for ozone. The FRAQMD, in cooperation with other air districts in the northern Sacramento Valley, has prepared the Northern Sacramento Valley Planning Area Air Quality Attainment Plan for the attainment of State ozone standards. Plans have also been prepared for the attainment of federal ozone and PM10 standards.

To determine air quality impacts resulting from the proposed project, the applicant hired Environmental Permitting Specialists to prepare an air quality analysis. A copy of this analysis is included as Appendix A to this Initial Study, and the analysis had been forwarded to FRAQMD for its review. The air quality analysis describes existing air quality

in the project area and the surrounding region, details the associated regulatory setting, and presents an analysis of potential impacts of air pollutant emissions from project construction and operation on air quality. It should be noted that the air quality analysis was conducted for a project that originally had 82 truck spaces and 55 automobile spaces. The current version of the project has 81 truck spaces and 54 automobile spaces. Since this is only a small decrease, the air quality analysis remains valid and provides a conservative estimate of pollutant emissions.

The significance of the impacts was determined using emission thresholds established by FRAQMD for ROG and NOx, the main ingredients for ozone, as well as for PM10. Table 1 below shows the FRAQMD significance thresholds. These thresholds have been established only for the criteria pollutants for which FRAQMD is in nonattainment status.

TABLE 1
FRAQMD SIGNIFICANCE THRESHOLDS AND PROJECT EMISSIONS

	ROG	NO_x	PM_{10}
Significance Thresholds (pounds/day)[1]	**25**[2]	**25**[2]	**80**
Construction Emissions (pounds/day)	9.08	7.04	6.90
Exceeds threshold?	*No*	*No*	*No*
Operational Emissions (pounds/day)	0.06	5.51	0.10
Exceeds threshold?	*No*	*No*	*No*

[1] Applies to both construction and operational emissions.
[2] Construction emissions not to exceed 4.5 tons per year.

Short-Term Construction Impacts

Construction activities for the proposed project would emit criteria air pollutants from a variety of activities, including operation of heavy equipment and use of worker vehicles, vendor trucks, and hauling trucks. Emissions of ozone precursors (ROG and NOx) are primarily generated by mobile sources and largely vary as a function of vehicle trips per day and the type, quantity, intensity, and frequency of heavy-duty, off-road equipment used. Typically, a large portion of construction-related ROG emissions results from the application of asphalt on to parking areas, and the application of architectural coatings. Construction-related fugitive dust emissions of PM10 would vary from day to day, depending on the level and type of activity, silt content of the soil, and the weather.

As part of the air quality analysis for the project, construction emissions were estimated using the California Emissions Estimate Model (CalEEMod) computer model, version 2020.4.0. Estimated construction emissions for the proposed project are reported and compared to the FRAQMD thresholds of significance in Table 1 above. As shown in Table 1, emissions of NOx, ROG, and PM10 generated during construction of the proposed project would not exceed FRAQMD thresholds of significance. Therefore, project construction activities would not interfere with the implementation of air quality attainment plans for ozone or PM10. Project construction impacts on air quality would be less than significant.

Long-Term Operational Impacts

The proposed project would result in long-term operational emissions, as it would generate an increase in the number of trucks that would travel to and from the site on a regular basis. The air quality analysis for the project, prepared by Environmental Permitting Specialists and dated July 20, 2022, used the EMFAC 2021 computer model to estimate vehicle exhaust emissions and data from the California Air Resources Board (CARB) to estimate fugitive road dust emissions. The results of this analysis are summarized and compared to the FRAQMD operational thresholds of significance in Table 1 above. As shown in Table 1, total project operational emissions would not exceed the FRAQMD thresholds of significance for emissions of ROG, NOx, or PM10. Therefore, project operations would not interfere with the implementation of air quality attainment plans for ozone or PM10.

Since the proposed project has an operational phase, the project is characterized by FRAQMD as a Type 1 project. According to the FRAQMD indirect source review guidelines, if operational emissions of a Type 1 project do not exceed the thresholds of significance, it is recommended that the project proponent implement the Standard Mitigation Measures. These include the implementation of a Fugitive Dust Control Plan to control dust emissions during construction activities. The project would implement the following mitigation measure, which requires the application of the FRAQMD Standard Mitigation Measures.

> **Mitigation Measure No. 1 (Air Quality):** IMPLEMENT FEATHER RIVER AIR QUALITY MANAGEMENT DISTRICT (FRAQMD) STANDARD MITIGATION MEASURES. The project applicant shall implement the following FRAQMD-recommended Standard Mitigation Measures for projects that do not exceed construction or operational thresholds of significance.
>
> - Implement the Fugitive Dust Control Plan prior to any on-site grading, landscaping, or construction activities. The applicant shall submit the fugitive dust control plan to the FRAQMD for review and approval. A copy of the approved plan shall be submitted to the Development Services Department. During the construction phase, the project shall be responsible for adhering to District Rule 3.16 which states that the developer or contractor are required to control dust emissions from earth moving activities, handling, or storage activity from leaving the project site.
>
> - Construction equipment exhaust emissions shall not exceed FRAQMD Regulation III, Rule 3.0, Visible Emissions limitations (40 percent opacity or Ringlemann 2.0).
>
> - The contractor shall be responsible to ensure that all construction equipment is properly tuned and maintained prior to and for the duration of onsite operation.
>
> - Limit idling time to 5 minutes – saves fuel and reduces emissions in accordance with 13 California Code of Regulations (CCR) Chapter 10 Section 2485 and 13 CCR Chapter 9 Article 4.8 Section 2449.
>
> - Utilize existing power sources or clean fuel generators rather than temporary power generators.

- Develop traffic plans to minimize traffic flow interference from construction activities. The plan may include advance public notice of routing, use of public transportation, and satellite parking areas with a shuttle service. Schedule operations affecting traffic for off-peak hours. Minimize obstruction of through-traffic lanes. Provide a flag person to guide traffic properly and ensure safety at construction sites.

- Portable engines and portable engine-driven equipment units used at the project work site, with the exception of on-road and off-road motor vehicles, may require California Air Resources Board (CARB) Portable Equipment Registration with the State or a local district permit. The owner/operator shall be responsible for arranging appropriate consultation with CARB or FRAQMD to determine registration and permitting requirements prior to equipment operation at the site.

Because this project would not generate emissions above FRAQMD's thresholds of significance for construction and operational activities and would implement the relevant mitigation listed above, a less-than-significant impact on air quality is anticipated.

b) **Less than significant impact.** This project would not result in a net increase of any criteria pollutant. The focus of the analysis is related to the ground-level ozone and PM10, for which FRAQMD is in non-attainment. PM2.5, CO, and SO2 were not a component of the analysis, since FRAQMD does not have numerical thresholds of significance for these pollutants, and in any case FRAQMD is in attainment of standards for these pollutants. This project's cumulative impacts regarding air quality are discussed in the Mandatory Findings of Significance Section of this checklist.

As noted, neither project construction nor operations would generate emissions that exceed the FRAQMD thresholds of significance. In addition, as noted in a) above, the project would implement the FRAQMD-recommended Standard Mitigation Measures. Therefore, the project would not result in a significant net increase of criteria air pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. A less-than-significant impact is anticipated.

c) **Less than significant impact.** This project would not expose sensitive receptors to substantial pollutant concentrations. Potential sensitive receptors include the adjacent residences north and south of the project site. As discussed in a) above, project construction and operational emissions would not exceed FRAQMD significance thresholds. As such, the nearby sensitive receptors would not be exposed to substantial amounts of pollutant emissions, especially when Mitigation Measure No. 1 is implemented.

The project would generate emissions of diesel particulate matter (DPM), which is considered a toxic air contaminant that could lead to increased cancer risk with prolonged exposure. DPM emissions would be generated by the operation of off-road construction equipment (e.g., excavators, loaders, cranes, graders) and on-road diesel heavy-duty vehicles.

The Environmental Permitting Specialists analysis for the project included a screening level risk analysis that evaluated the potential health risks to nearby residences of the estimated DPM operational emissions. Construction DPM emissions were not considered, as construction work is estimated to take only 30 days, and measurable health risks from

DPM emissions occur only with prolonged exposure. The emission rate of exhaust PM10 estimated by CalEEMod, with a few refinements, is considered a surrogate for DPM. Annual DPM operational emissions generated by the project were estimated at 0.15 pounds per year.

Toxic air contaminant emissions are considered significant if the emissions lead to a cancer risk of 10 cancers per million people and the Non-Cancer Hazard Index is 1.0. The analysis found that for the closest distance to the project site (0 to 100 meters), the cancer risk would be approximately 0.325 per million – well below the significance threshold for cancer risk. The Non-Cancer Hazard Index at 0 to 100 meters would be approximately 0.0005, also well below the significance threshold. For both indices, scores would be lower at greater distances.

In summary, construction and operational emissions from the proposed project would not generate substantial criteria pollutant emissions, nor would it generate DPM emissions that would pose a substantial health risk to sensitive receptors – the nearby residences. Therefore, the project would not expose sensitive receptors to substantial pollutant concentrations and the impact is considered less than significant.

d) **Less than significant impact.** This project would not result in other emissions, such as those leading to odors, adversely affecting a substantial number of people. FRAQMD has identified various types of facilities that are known sources of odors, including wastewater treatment plants, sanitary landfills, painting/coating operations, food processing facilities, and green waste and recycling operations. The proposed project would not include operation of any of the types of odor-generating facilities.

The project proposes the demolition of seven structures currently existing on the project site. Demolition of structures could release hazardous materials into the atmosphere, particularly asbestos. It is not known if these structures contain asbestos material. However, California Health and Safety Code Section 39658(b)(1) establishes the National Emissions Standards for Hazardous Air Pollutants for asbestos, which includes airborne toxic control measures. Compliance with this Health and Safety Code section would minimize asbestos releases. Therefore, the project is not anticipated to generate odors or other emissions that would affect a substantial number of people, and the impact would be less than significant.

(Environmental Permitting Specialists, Draft Analysis of Impacts to Air Quality and Greenhouse Gas from Proposed Truck Yard, Knights Landing, California. 2022)

(Feather River Air Quality Management District, Indirect Source Review Guidelines. 2010)

(County of Sutter, General Plan 2030. 2011)

IV. BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?			✓	
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				✓
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				✓
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				✓
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				✓
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				✓

Responses:

a) **Less than significant impact.** This project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS). The Sutter County General Plan Environmental Impact Report (EIR) assessed the presence of special-status species in Sutter County through a search of the California Natural Diversity Database. The results identified one special-status species identified as potentially occurring in the vicinity – giant garter snake, listed as threatened under both federal and California Endangered Species Acts. The Robbins Canal and adjacent banks provide potential habitat for this species. However, the project would not affect the Robbins Canal or its banks; the closest approach of the project would be approximately 60 feet, and a levee separates the project site from the canal. In addition, the USFWS Critical Habitat Mapper indicated no critical habitat for any species listed under the federal Endangered Species Act, including giant garter snake, in the project vicinity.

Additionally, the project site has been previously developed. Such sites are generally of limited use to wildlife due to the level of disturbance and typically are devoid of native plant species or habitat. The uses occurring in the area are not conducive for wildlife to locate within the project site, and none have been inventoried. Therefore, a less-than-significant impact is anticipated.

b) **No impact.** This project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS. There are no natural streams or rivers in the immediate vicinity. The Robbins Canal, adjacent to the project site, contains limited riparian vegetation, but the project would not affect the canal. No other sensitive natural communities exist on site or near the property; nearby lands are either agricultural or developed. Therefore, no impact is anticipated.

c) **No impact.** This project would not have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other. As noted, there are no streams or rivers on the project site. As noted, there are no streams or rivers in the immediate vicinity. The project site is developed; as such, there are no waters on the site. The National Wetlands Inventory of the USFWS classified the adjacent Robbins Canal as a Riverine water. However, as noted, the project would not affect the canal. Therefore, no impact is anticipated.

d) **No impact.** This project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of a native wildlife nursery site because the area is predominantly developed. The project is not anticipated to significantly interfere with wildlife movement since the site has no trees other than ornamentals, which are not considered desirable nesting sites for migratory birds. The limited riparian vegetation along Robbins Canal could be used for nesting. However, as noted, the project would not affect the canal. No impact is anticipated.

e) **No impact.** This project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, because Sutter County has not adopted such policies or ordinances. There are no oak trees located on the property, so no impact is anticipated.

f) **No impact.** The proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan, because no such plans are applicable to this project site. As a result, no impacts are anticipated.

(County of Sutter, General Plan Draft Environmental Impact Report. 2008)

(County of Sutter, General Plan Technical Background Report. 2008)

(U.S. Fish and Wildlife Service, Critical Habitat Mapper, 2022)

(U.S. Fish and Wildlife Service, National Wetlands Inventory, 2022)

V. CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?			✓	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?			✓	
c) Disturb any human remains, including those interred outside of dedicated cemeteries?		✓		

Responses:

a-b) **Less than significant impact.** The proposed project would not cause a substantial adverse change in the significance of a historical resource or archaeological resource pursuant to California Environmental Quality Act (CEQA) Guidelines §15064.5. In Section 4.6 of the General Plan Technical Background Report, Figure 4.6-1 does not list the property as being a historic site. The site is not listed on the National Register of Historic Places. There are no unique features or historical resources located on the project site. The project site is not located within the vicinity of the Bear River, Sacramento River, or Feather River, where archaeological resources are more likely to occur. There is no evidence on the project site indicating that historical or archaeological resources exist.

The project site has been previously developed. Since the property has been extensively disturbed to varying depths due to past development, it is unlikely that any intact cultural resources exist. A less-than-significant impact to cultural resources is anticipated.

c) **Less than significant with mitigation incorporated.** The proposed project is not expected to disturb any human remains, including those interred outside of dedicated cemeteries. The property is not located near a cemetery. The project site is not located within the vicinity of the Bear River, Sacramento River, or Feather River, where burials are more likely to occur.

California Health and Safety Code §7050.5 states that when human remains are discovered, no further site disturbance can occur until the County Coroner has made the necessary findings as to the origin of the remains and their disposition pursuant to Public Resources Code Section 5097.98. If the remains are recognized to be those of a Native American, the coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours.

Public Resources Code §5097.98 states that whenever the NAHC receives notification of a discovery of Native American human remains from a county coroner, it shall immediately notify the most likely descendent from the deceased Native American. The descendants may inspect the site and recommend to the property owner a means for treating or disposing the human remains. If the Commission cannot identify a descendent, or the descendent identified fails to make a recommendation, or the landowner rejects the recommendation of the descendent, the landowner shall rebury the human remains on the property in a location not subject to further disturbance.

To mitigate potential impacts, a mitigation measure is proposed to prevent disturbance of human remains should they be encountered.

> **Mitigation Measure No. 2 (Cultural Resources):** California Health and Safety Code §7050.5 states that when human remains are discovered, no further site disturbance can occur until the County Coroner has made the necessary findings as to the origin of the remains and their disposition pursuant to Public Resources Code §5097.98. If the remains are recognized to be those of a Native American, the County Coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC shall initiate the process of contacting the most likely descendant and the disposition of the remains pursuant to Public Resources Code §5097.98.

(County of Sutter, General Plan Technical Background Report. 2008)

(National Park Service, National Register of Historic Places. 2021)

VI. ENERGY

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?			✓	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			✓	

Responses:

a-b) **Less than significant impact.** The proposed project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation or conflict with or obstruct a state or local plan for renewable energy or energy efficiency. This project proposes a truck yard that would provide truck and automobile parking. No new buildings are proposed.

Overall, the project would not require the creation of a new source of energy generation. Construction of the parking area would require the consumption of diesel and gasoline to power construction equipment and delivery trucks. As stated in the air quality analysis completed for this project, the project would take approximately 30 days to construct. Additionally, construction equipment fleet turnover and increasingly stringent state and federal regulations on engine efficiency, combined with state regulations limiting engine idling times, would further reduce transportation fuel demand during project construction. There are no unusual project characteristics or construction processes that would be more energy-intensive than are used for comparable activities, and no equipment would be used that would not conform to current emissions standards and related fuel efficiencies. For these reasons, it is expected that fuel consumption associated with project construction would not be any more inefficient, wasteful, or unnecessary than similar development projects of this nature within Sutter County.

This project does not require, and would not utilize, a substantial amount of energy due to the limited use of the site as a parking area for trucks, trailers, and automobiles. Proposed outdoor lighting at the project site would be required to comply with the energy requirements of the State Building Codes, including the California Energy Code (Part 6 of Title 24) related to lighting design and installation, luminaire, and lighting controls. The energy efficiency standards of the State of California are some of the most stringent in the nation. As a result, the project would not result in a wasteful, inefficient, or unnecessary consumption of energy resources, and a less-than-significant impact is anticipated.

VII. GEOLOGY AND SOILS

Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				✓
ii) Strong seismic ground shaking?			✓	
iii) Seismic-related ground failure, including liquefaction?			✓	
iv) Landslides?				✓
b) Result in substantial soil erosion or the loss of topsoil?		✓		
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			✓	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			✓	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				✓
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			✓	

Responses:

a-i) **No impact.** This project would not directly or indirectly cause potential substantial adverse effects from rupture of a known earthquake fault, because the subject property is not located in an Alquist-Priolo Earthquake Fault Zone and would involve minor grading activities that would not exacerbate existing seismic hazards in the region. No impact is anticipated.

a-ii,-iii) **Less than significant impact.** This project would not directly or indirectly cause potential substantial adverse effects from strong seismic ground shaking or seismic-related ground failure, including liquefaction. Figure 5.1-1 in the General Plan Technical Background Report does not identify any active earthquake faults in Sutter County as defined by the California Mining and Geology Board. The faults identified in Sutter County include Quaternary faults in the northern section of the County within the Sutter Buttes and a pre-Quaternary fault in the southeastern corner of the County just east of where Highway 70 enters the County. Although these faults have the potential for seismic activity, they are listed as non-active faults. Therefore, the potential for ground shaking or other seismic events such as liquefaction being generated by these faults is unlikely. A less-than-significant impact is anticipated.

a-iv) **No impact.** This project would not directly or indirectly cause potential substantial adverse effects from landslides. The project site is relatively level with no significant slopes in the vicinity. The project is not located in the Sutter Buttes, the only area identified by the General Plan Technical Background Report as having landslide potential. Therefore, the potential for landslides is unlikely, and no impact is anticipated.

b) **Less than significant with mitigation incorporated.** This project would not result in substantial soil erosion or the loss of topsoil. According to the U.S. Department of Agriculture (USDA) Soil Conservation Service Soil Survey of the County, on-site soils consist solely of Clear Lake clay, 0 to 1 percent slopes. This soil is unlikely to be susceptible to erosion, because runoff is very slow and the hazard of water erosion is slight. The General Plan Technical Background Report indicates that soils with a 0 to 9 percent slope have only slight erodibility.

However, site grading has the potential to result in soil erosion due to loosened soils. Any grading or site improvements shall be done per an approved plan and in accordance with Sutter County Development Standards. The plan shall be reviewed and approved by the Director of Development Services prior to the start of construction.

Since the project size is more than one acre, the applicant is required to prepare a Storm Water Pollution Prevention Plan (SWPPP) and obtain a National Pollution Discharge Elimination System (NPDES) General Construction Permit through the Regional Water Quality Control Board to ensure that soil is not released in storm water from the project site. To ensure that a less-than-significant impact occurs, the following mitigation measure is included.

> **Mitigation Measure No. 3 (Geology and Soils):** STORM WATER QUALITY PROTECTION – DURING CONSTRUCTION.
>
> SWPPP - Prior to the start of construction, the applicant shall prepare and submit a Storm Water Pollution Prevention Plan (SWPPP) to be executed through all phases of grading and project construction. The SWPPP shall incorporate Best Management Practices (BMPs) to ensure that potential water quality impacts during construction phases are minimized. These measures shall be consistent with the County's Improvement Standards and Land Grading and Erosion Control Ordinance and the requirements of the National Pollution Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities. The SWPPP shall be submitted to the County for review and to the Central Valley Regional Water Quality Control

Board (RWQCB) as required by the NPDES General Permit in effect during construction. During construction, the applicant shall implement actions and procedures established to reduce the pollutant loadings in storm drain systems. The project applicant shall implement BMPs in accordance with the SWPPP and the County's Improvement Standards. The project applicant(s) shall submit a state storm water permit Waste Discharger Identification number for each construction project.

NPDES GENERAL CONSTRUCTION PERMIT – Since the project size is more than one acre, prior to construction the applicant shall file a Notice of Intent with the Central Valley RWQCB to obtain coverage under the California State Water Resources - General Construction Activity Storm Water Permit. Permits are issued by the State Water Resources Control Board, which can provide all information necessary to complete and file the necessary documents. Applicant shall comply with the terms of the General Construction Permit, the County's ordinances, and the NPDES Waste Discharge Requirements for the Sutter County Phase II NPDES Permit.

c) **Less than significant impact.** This project is not located on a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. As stated above in b), soils at the site have a 0 to 1 percent slope with only a slight hazard of water erosion. The General Plan Technical Background Report indicates that soils with a 0 to 9 percent slope have slight erodibility. Also, as stated in a-iv), the project site has no landslide potential. A less-than-significant impact is anticipated.

d) **Less than significant impact.** According to the USDA Soil Conservation Service Soil Survey of the County, Clear Lake clay has a high shrink-swell potential. All future construction is required to comply with the adopted California Building Code, specifically Chapter 18 for soils conditions and foundation systems, to address potential expansive soils that may require special foundation design, a geotechnical survey, and engineering for foundation design. The Building Inspection Division would implement these standards as part of any future building permit process. A less-than-significant impact is anticipated.

e) **No impact.** The project site has no wastewater disposal facilities, including septic tanks, and does not propose any such facilities. As noted in the Project Description, portable restrooms would be made available for driver use. The restrooms would be self-contained and would be pumped as needed by a septic pumper registered with Sutter County. No impact is anticipated.

f) **Less than significant impact.** The proposed project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. There are no known unique paleontological resources or unique geologic features located in the vicinity of the project. Given past development, it is unlikely the project site has any intact paleontological resources. A less-than-significant impact is anticipated.

(County of Sutter, General Plan Technical Background Report. 2008)

(USDA Soil Conservation Service, Sutter County Soil Survey. 1988)

(USDA Natural Resources Conservation Service, Custom Soil Survey, Sutter County – 17812 Highway 113. 2022)

VIII. GREENHOUSE GAS EMISSIONS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			✓	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			✓	

Responses:

a) **Less than significant impact.** This project would not generate additional greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment. The Sutter County Climate Action Plan (CAP) was prepared and adopted in 2010 as part of the General Plan to ensure compliance with Assembly Bill (AB) 32, the Global Warming Solutions Act. Sutter County's CAP includes a GHG inventory, an emission reduction target, and reduction measures to reach the target. The CAP also includes screening tables used to assign points for GHG mitigation measures. Projects that achieve 100 points or more do not need to quantify GHG emissions and are assumed to have a less-than-significant impact. Sutter County's screening tables apply to all project sizes. Small projects with little or no proposed development and minor levels of GHG emissions typically cannot achieve the 100-point threshold.

Since the adoption of the CAP, further analysis to determine if a project can be too small to provide the level of GHG emissions reductions expected from the screening tables or alternative emissions analysis methods has been performed. In June 2016, Sutter County adopted new GHG Pre-Screening Measures to be applied to new projects. Sutter County has concluded that projects generating less than 3,000 metric tons of carbon dioxide equivalent (CO_2e) would not require further GHG emissions analysis and are assumed to have a less-than-significant impact. The Environmental Permitting Specialists air quality analysis for the project (see Appendix A) indicates that the project GHG emissions from vehicle traffic – the only source for such emissions – would be 817.4 metric tons CO_2e per year. This is well below the threshold of 3,000 metric tons CO_2e per year. Based on this evaluation, the project would not generate GHG emissions that would have a significant impact on the environment. A less-than-significant impact is anticipated. As noted in Section III, Air Quality, the air quality analysis provides a conservative estimate of pollutant emissions, including GHGs.

b) **Less than significant impact**. This project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. As noted, Sutter County has adopted a CAP that screens projects based on a threshold of 3,000 metric tons CO_2e per year. As noted in a) above, this project would not generate emissions that exceed this threshold. Therefore, this project would be consistent with the County CAP. A less-than-significant impact is anticipated.

(County of Sutter, General Plan Technical Background Report. 2008)

(County of Sutter, General Plan 2030 Climate Action Plan. 2011)

(County of Sutter, Greenhouse Gas Pre-Screening Measures for Sutter County. June 28, 2016.)

(Environmental Permitting Specialists, Draft Analysis of Impacts to Air Quality and Greenhouse Gas from Proposed Truck Yard, Knights Landing, California. 2022)

IX. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			✓	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			✓	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				✓
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				✓
e) For a project located within 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 result in a safety hazard or excessive noise for people residing or working in the project area?				✓
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			✓	
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?			✓	

Responses:

a-b) **Less than significant impact.** This project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or the creation of a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. The truck parking area is not expected to use or discharge hazardous materials, other than small-scale fuel and oil discharges from vehicles that can be contained by the proposed storm drainage system once required mitigation measures are implemented (see Section X, Hydrology and Water Quality). The project proposes to retain an existing building for minor truck repair that will be limited to windshield, wiper,

and headlight replacement work in compliance with County Zoning Code section 1500-07-030 B.3.m., and a proposed condition of approval by the County would restrict potential hazardous material use.

The Development Services Environmental Health Division is the Certified Unified Program Agency (CUPA) for Sutter County, with responsibility for monitoring all uses involving the storage and handling of hazardous materials. The CUPA would require that any business that uses, generates, processes, produces, treats, stores, emits, or discharges a hazardous material in quantities at or exceeding 55 gallons, 500 pounds, or 200 cubic feet (compressed gas) at any one time during a year to submit a Hazardous Materials Business Plan. The primary purpose of the plan is to provide readily available information regarding the location, type, and health risks of hazardous materials to emergency response personnel, authorized government officials, and the public. The project is not expected to use or store hazardous materials in an amount that would require submittal of a Hazardous Materials Business Plan.

All activities and uses must comply with State and County laws and regulations pertaining to the handling and disposal of all hazardous or acutely hazardous materials. The discharge of fuels, oils, other petroleum products, detergents, cleaners, chemicals, or compost materials to the surface of the ground or to drainage ways on or adjacent to the site is prohibited. The State of California has adopted U.S. Department of Transportation regulations for the movement of hazardous materials originating within the state and passing through the state; State regulations are contained in CCR Title 26. Compliance with these regulations is anticipated to lead to a less-than-significant impact.

c) **No impact.** This project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. There are no existing or proposed schools within one-quarter mile of the project site. The closest existing school is Robbins Elementary School, located approximately 0.30 miles northeast of the project site. As noted in a) above, the project is not expected to store large quantities of hazardous materials. Therefore, no impact is anticipated.

d) **No impact.** This project is not located on a site which is included on a list of hazardous materials sites compiled pursuant to California Government Code §65962.5. A review of State hazardous material site databases found no records for the project site or immediate vicinity. As a result, the project would not create a hazard to the public or the environment; therefore, no impact is anticipated.

e) **No impact**. This project is not located within 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; therefore, this project would not result in a safety hazard or excessive noise for people residing or working in the project area. The nearest public airport is Sacramento International Airport, which is located more than 13 miles southeast of the project site. Due to the project's distance from this facility, no impact is anticipated.

f) **Less than significant impact.** This project would not impact the implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan because the project site has adequate frontage on State Highway 113, which is of sufficient size to not impede any necessary emergency responses or evacuations. This proposed project does not pose a unique or unusual use or activity that would impair the

effective and efficient implementation of an adopted emergency response or evacuation plan. A less-than-significant impact is anticipated.

g) **Less than significant impact.** This project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. The General Plan indicates the Sutter Buttes and the "river bottoms," or those areas along the Sacramento, Feather, and Bear Rivers within the levee system, are susceptible to wildfires, since much of the areas inside the levees are left in a natural state, thereby allowing combustible fuels to accumulate over long periods of time. The project site is not located in the Sutter Buttes or "river bottom" areas. The project vicinity has existing fire protection services. Therefore, a significant risk of loss, injury, or death associated with wildland fires as a result of the proposed project is not anticipated, and impacts are considered less than significant.

(County of Sutter, General Plan Technical Background Report. 2008)

(California Department of Toxic Substances Control, Hazardous Waste and Substances Site List - Site Cleanup (Cortese List). 2022)

X. HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			✓	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			✓	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) Result in substantial erosion or siltation on- or off-site;		✓		
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;		✓		
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or		✓		
iv) Impede or redirect flood flows?			✓	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			✓	

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				✓

Responses:

a) **Less than significant impact.** This project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. This project proposes the construction and operational use of a 6.7-acre truck parking yard. Since the total land area of the project would exceed one acre, the applicant is required to obtain coverage under the State Construction General Permit, under the NPDES program (Mitigation Measure No. 3). This program requires implementation of erosion control measures designed to avoid significant erosion. The NPDES construction permit requires implementation of a SWPPP that includes storm water best management practices to control runoff, erosion, and sedimentation from the site. This would minimize potential construction impacts on water quality.

This project is not expected to violate water quality standards or waste discharge requirements. Compliance with applicable requirements would minimize the project's impact to water quality. No additional mitigation is necessary, and a less-than-significant impact is anticipated.

b) **Less than significant impact.** This project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. The project is a truck parking yard, and as such is not expected to use any water. The project does propose portable restrooms, but they would be self-contained and would not be connected to any water wells or other water facilities at the project site.

Landscaping would be irrigated with the use of an existing well. As described in the Project Description, the landscaping would use low-water plants and irrigation systems considered water-efficient. Under the Commercial and Employment Design Checklist, landscaping shall comply with the current Model Water Efficient Landscaping Ordinance prepared by the California Department of Water Resources, as required by the California Water Conservation in Landscaping Act (Government Code Section 65591 *et seq.*). The landscaping is not expected to use a substantial amount of groundwater. A less-than-significant impact is anticipated.

c-i, -ii, -iii) **Less than significant with mitigation incorporated**. The project proposes a truck yard that would add impervious surfaces in an area that is occupied mostly by grasses and weeds. As such, existing drainage patterns would be altered, and additional runoff would be generated. However, the project proposes on-site drainage, incorporated as part of the landscaping, that would collect the additional runoff.

The County has indicated that a drainage plan must be submitted. Based on County comments on similar truck yard projects, the following mitigation measures are recommended:

> **Mitigation Measure No. 4 (Hydrology and Water Quality):** DRAINAGE STUDY. Prior to issuance of a grading permit or encroachment permit, the applicant shall obtain approval from the Director of a drainage study that reflects final design conditions for the proposed project per County Standards. The Drainage Study

shall be completed and stamped by a Professional Engineer and determined by the County to be comprehensive, accurate, and adequate (SCIS Section 9).

Mitigation Measure No. 5 (Hydrology and Water Quality): PRIVATE DRAINAGE IMPROVEMENTS. The applicant shall construct private onsite drainage ditches/basins that provide storm water retention/detention per a County-approved drainage study for this project. Owner shall limit maximum discharge rates, where applicable, to pre-project "existing" conditions for peak 10- and 100-year storms per an approved on-site drainage study for the project. The drainage ditches/basins shall not be connected to the roadside swales. The applicant must obtain a grading permit from the County prior to any grading for storm water retention/detention ditches or basins. The applicant shall provide an as-built drawing of the drainage improvements that is stamped and signed by a licensed Engineer verifying that what was constructed complies with the approved plan for the site.

Mitigation Measure No. 6 (Hydrology and Water Quality): PRIVATE DRAINAGE FACILITIES MAINTENANCE AGREEMENT. The property owner shall enter into an agreement with Sutter County committing the property owners and all successors-in-interest to maintain the private drainage facilities (including on-site peak flow attenuation basins) in perpetuity in a manner to preserve storage capacity, drainage patterns, ultimate discharge points and quantities, and water quality treatment controls for stormwater discharges as identified in the drainage study and approved by Sutter County.

Mitigation Measure No. 7 (Hydrology and Water Quality): GRADING AND CONSTRUCTION. All impacts to the site must be mitigated in the project area or lands acquired for mitigation by the project. Any Grading or Site Improvements shall be done per an approved plan and in accordance with Sutter County Development Standards. Plans shall be reviewed and approved for construction by the Director of Development Services prior to the start of construction.

In addition, as noted, the applicant would be required to prepare a SWPPP as a component of the General Construction Permit for storm water discharges (Mitigation Measure No. 3). This plan would be implemented during the construction phase of the project and would reduce erosion and stormwater pollution.

c-iv) **Less than significant impact.** The project site is not located within a flood zone, according to Flood Insurance Rate Map No. 0603940250E, dated December 2, 2008, issued by the Federal Emergency Management Agency (FEMA). However, the site is located within a Local Flood Hazard Area as designated by the County. The applicant shall comply with all provisions of the Sutter County Floodplain Management Ordinance and FEMA regulations, which will be included as a project condition. A less-than-significant impact related to flood flows is anticipated.

d) **Less than significant impact.** This project would not risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones. As noted in Section IX, Hazards and Hazardous Materials, no hazardous materials of significant quantities would be stored on the project site. It is possible that trucks on the site may release motor vehicle fuels and fluids if a flood occurs. However, such releases would be minimal and are not expected to cause a significant impact to water quality. There is no anticipated impact to

this project site resulting from tsunamis and seiches because the land is not located adjacent to or near any water bodies of sufficient size to create such situations. A less-than-significant impact is anticipated.

e) **No Impact.** This project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. There are no currently adopted water quality control plans covering the project site. The County, along with other agencies, has prepared the Sutter Subbasin Groundwater Sustainability Plan that covers most of Sutter County, including the project site. The public comment period on the plan ended in April 2022. The project is not expected to interfere with implementation of the Groundwater Sustainability Plan, particularly since the project would not generate water demand. No impact is anticipated.

(County of Sutter, General Plan Technical Background Report. 2008)

(Federal Emergency Management Agency, Flood Insurance Rate Map. 2008)

(Sutter Subbasin Groundwater Management Coordination Committee, Groundwater Sustainability Plan for the Sutter Subbasin, 2022)

XI. LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?				✓
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?			✓	

Responses:

a) **No impact.** This project would not physically divide an established community because the project is located outside the Live Oak and Yuba City Spheres of Influence and would not create a physical barrier within the established Robbins rural community. This project would not result in a physical barrier that would divide a community, so no impact is anticipated.

b) **Less than significant impact.** This project would not conflict with an applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, because the General Plan does not consider the site to be within a hazardous or biologically sensitive area. The County has not adopted any land use plan, policy, or regulation for the purpose of avoiding or mitigating a specific environmental effect that affects this project. Where necessary, mitigation has been incorporated into the project and no additional mitigation measures are necessary. A less-than-significant impact is anticipated.

(County of Sutter, General Plan 2030. 2011)

(County of Sutter, General Plan Technical Background Report. 2008)

(County of Sutter, Zoning Code. 2022)

XII. MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				✓
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?				✓

Responses:

a-b) **No impact.** This project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state or the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. Neither the General Plan nor the State of California Division of Mines and Geology Special Publication 132 lists the project site as having any substantial mineral deposits of a significant or substantial nature. The project site is not located in the vicinity of any existing surface mines. No impact is anticipated.

(California Department of Conservation, Division of Mines and Geology, Special Report 132: Mineral Land Classification: Portland Cement Concrete-Grade Aggregate in the Yuba City-Marysville Production-Consumption Region. 1988)

(County of Sutter, General Plan Technical Background Report. 2008)

XIII. NOISE

Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 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?				✓

Responses:

a) **Less than significant with mitigation incorporated.** The project site is surrounded mainly by rural agricultural lands and industrial uses. Existing residential homes are also located approximately 600 feet to the east. Traffic on State Highway 113, adjacent to the project site, is the main source of noise in the area. Vehicular noise varies with the volume, speed, and type of traffic. Trucks typically generate more noise than cars, and the project will result in an increase of truck traffic trips to the site.

To determine noise impacts from the proposed project, ECORP Consulting, Inc. prepared an environmental noise assessment. A copy of this assessment is included in Appendix B of this initial study. The noise assessment describes characteristics of noise, the existing noise setting, and the regulatory context, and it presents an analysis of potential noise impacts from project construction and operation activities.

Project Construction Noise

Construction noise associated with the project would be temporary and would vary depending on the nature of the activities being performed. Noise generated would primarily be associated with the operation of off-road equipment for onsite construction activities, as well as construction vehicle traffic on area roadways. During construction, exterior noise levels could negatively affect sensitive land uses in the vicinity of the construction site. Nearby noise-sensitive land uses consist of residential properties to the east, with the closest being approximately 600 feet distant.

To estimate the worst-case onsite construction noise levels that may occur at the nearest noise-sensitive receptor in the project vicinity in order to evaluate the potential health-related effects from construction noise, ECORP calculated the noise levels generated by construction equipment most likely to be used in project construction, using the Roadway Noise Construction Model, and compared them against the construction-related noise level threshold established in the *Criteria for a Recommended Standard: Occupational Noise Exposure* prepared in 1998 by the National Institute for Occupational Safety and Health. For the purposes of the analysis, the lowest, most conservative threshold of 85 dBA Leq established by the *Criteria* is used as an acceptable threshold for construction noise at the nearby sensitive receptors. Leq is the equivalent, or average, sound level, which corresponds to a steady-state, A-weighted decibel (dBA) sound level containing the same total energy as a time varying signal over a given time period. The results of the analysis indicated that noise from construction equipment likely to be used by the project would not exceed the 85-dBA threshold at the nearby residential properties.

Per Policy N 1.6 of the County's General Plan, all project-related noise-generating construction activities within 1,000 feet of noise-sensitive uses are limited to daytime hours between 7:00 a.m. and 6:00 p.m. on weekdays, 8:00 a.m. and 5:00 p.m. on Saturdays, and prohibited on Sundays and holidays unless permission for the latter has been applied for and granted by the County. Noise-sensitive uses include residential areas, daycares, schools, convalescent homes, and medical care facilities. To ensure compliance with General Plan Policy N 1.6, the following mitigation measure is proposed. Compliance with this mitigation measure would make construction noise impacts less than significant.

> **Mitigation Measure No. 8 (Noise):** During construction, the applicant shall ensure that all project related noise-generating construction activities are limited to daytime hours between 7:00 a.m. and 6:00 p.m. on weekdays, 8:00 a.m. and 5:00

p.m. on Saturdays, and are prohibited on Sundays and holidays unless permission for the latter has been applied for and granted by the County.

Project Operational Noise

Operations of the proposed project would increase ambient noise levels in the immediate vicinity, primarily through off-site traffic noise and on-site parking of trucks and trailers. The noise assessment, prepared by ECORP Consulting and dated July 2022, analyzed noise impacts of off-site project traffic on nearby residences, based on trip generation rates in the Traffic Operational Assessment conducted by KD Anderson & Associates, Inc. (see Section XVII, Transportation and Appendix C). According to the Caltrans *Technical Noise Supplement to the Traffic Noise Analysis Protocol* (2013), doubling of traffic on a roadway would result in an increase of 3 dB - a barely perceptible increase. Per Caltrans traffic counts, the segment of State Highway 113 traversing the project site - between Del Monte Avenue and Knights Road - accommodates an average daily traffic count of 7,000 vehicles. The Traffic Operational Assessment estimated that the project would generate approximately 166 daily vehicle trips. Based on this, the project would not result in a doubling of traffic volume; thus, its contribution to existing traffic noise would not be perceptible. It should be noted that the Traffic Operational Assessment conducted its analysis based on 87 truck parking spaces, as opposed to the 81 truck parking spaces of the proposed project. Therefore, the noise assessment is considered to provide a conservative estimate of traffic noise impacts.

The main stationary operational noise associated with the project would be activities including internal heavy duty truck circulation/parking lot activity (i.e., people talking, car door opening and closing and stereo music), engine and ventilators from refrigerated trucks, and backup beepers from heavy duty trucks. On-site project operations were calculated using the SoundPLAN 3D noise model. The results indicated that noise levels from on-site activities would range from 41.5 to 49.2 dBA Leq at noise-sensitive locations. The Sutter County Noise Level Standards from Stationary Sources is 55 dBA Leq during daytime activities (7:00 a.m.-10:00 p.m.) and 45 dBA Leq for nighttime activities (10:00 p.m.-7:00 a.m.). The noise study concluded that the noise level at the nearest sensitive receptor, east of the project site off Acacia Street, would not exceed the County's daytime and nighttime noise standards. Noise from project operations would be less than significant.

b) **Less than significant impact.** Increases in groundborne vibration levels attributable to the project would be associated with short-term construction-related activities involving equipment. Construction on the project site would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved. General Plan Policy N 1.7 requires new development to minimize impacts of continuous vibration on adjacent uses during construction, based on criteria established by the County.

Due to the temporary nature of construction activities, the County thresholds for Land Use Category 2, residences and buildings where people normally sleep, of 80 vibration decibels (VdB) for infrequent events was used in the ECORP analysis. Consistent with Federal Transit Administration recommendations for calculating vibration generated from construction equipment, construction vibration was measured from the center of the Project Site. The nearest structure of concern to the construction site is a residence located east of the project site, approximately 600 feet east of the project site. The highest

vibration decibel at 25 feet generated from construction equipment is 87 VdB. As ground vibration diminishes in magnitude with increases in distance, the ECORP analysis concluded that the residence would not be negatively affected by construction equipment vibrations. In any case, vibration from construction equipment would cease after the anticipated 30-day construction period ends.

The ECORP analysis concluded that project operations would not include the use of any stationary equipment that would result in excessive vibration levels. Therefore, the project would not result in groundborne vibration impacts during operations. Overall, vibration impacts would be less than significant.

c) **No impact.** This project is not located within the vicinity of a private airstrip, public airport, or public use airport; therefore, it would not result in excessive noise levels for people residing or working in the project area. As noted in Section IX, Hazards and Hazardous Materials, the nearest public airport is Sacramento International Airport, more than 13 miles southeast of the project site.

A private airstrip is located along Reclamation Road approximately one mile northwest of the project site. However, as the proposed project would have no permanent onsite employees, noise from airstrip operations would have no effects. No impact related to airport or airstrip noise is anticipated.

(County of Sutter, General Plan 2030. 2011)

(County of Sutter, General Plan Technical Background Report. 2008)

(ECORP Consulting, Inc., Noise Impact Assessment, 17812 Highway 113 Truck Yard Project, Sutter County, California. 2022)

(KD Anderson & Associates, Inc., 17812 Highway 113 Truck Parking Facility, Sutter Co., CA: Traffic Operational Assessment. 2022)

XIV. POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			✓	
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				✓

Responses:

a) **Less than significant impact.** This project would not induce substantial unplanned population growth in an area, directly or indirectly. No residential use is proposed with this project, so there would be no direct population impacts. The project applicant indicated that no employees would work at the project site. Therefore, the project would not induce

substantial indirect population growth. The amount of population growth in the area would be negligible, and a less-than-significant impact is anticipated.

b) **No impact.** This project would not displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere, as there are no existing residents or housing on the project site. The proposed project would not expand beyond the property boundaries; therefore, it would not displace any housing or people outside these boundaries. No impact is anticipated.

(County of Sutter, General Plan Technical Background Report. 2008)

XV. PUBLIC SERVICES

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
i) Fire protection?			✓	
ii) Police protection?			✓	
iii) Schools?				✓
iv) Parks?				✓
v) Other public facilities?				✓

Responses:

a-i) **Less than significant impact.** Fire protection services for the project vicinity are provided by the Sutter Basin Fire Protection District, with its fire station in Robbins at 17510 Pepper Street, approximately one-quarter mile northeast of the project site. A comment letter from the Fire District expressed transportation safety concerns, which are discussed in Section XVII, Transportation. However, the Fire District had no comment on provision of service to the project site or the need for additional fire protection facilities. Response time would not be affected by the proposed project. Existing County roads would provide adequate transportation routes to reach the project site in the event of a fire. The project is a truck yard that would provide parking spaces only; no new buildings are proposed. Because of this, the construction of new fire facilities would not be required to provide adequate service to this project. A less-than-significant impact is anticipated.

a-ii) **Less than significant impact.** Law enforcement services for unincorporated portions of Sutter County are provided by the Sutter County Sheriff's Department, and traffic investigation services are provided by the California Highway Patrol. Response time would not be affected by the proposed project. Existing State Highways would provide adequate transportation routes to reach the project site in the event of an emergency. Because of this, the construction of new facilities would not be required to provide adequate law enforcement service to this project. A less-than-significant impact is anticipated. Traffic impacts are discussed in the Transportation section of this Initial Study.

a-iii) **No impact.** This project would not have a significant impact on schools because this project would not generate additional demand for school services. No new buildings or residences are proposed with this project, so no new students would be generated. No impact is anticipated.

a-iv) **No impact.** This project would not have a significant impact upon parks because it would not generate a need for additional park land or create an additional impact upon existing parks in the region. This project would not result in any new residences which require park services; therefore, this project would not have a significant impact on parks countywide. No impact is anticipated.

a-v) **No impact.** This project is not anticipated to impact other public facilities because the project would not result in the need for additional or new public facilities. No new buildings or residences are proposed with this project that would generate a demand for other public services. No impact is anticipated.

(County of Sutter, Zoning Code. 2022)

(County of Sutter, General Plan Technical Background Report. 2008)

XVI. RECREATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				✓
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				✓

Responses:

a-b) **No impact.** This project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. The project would not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. This project would not result in residential development, which would generate demand for recreational facilities such that new or expanded facilities would be required. There are no existing neighborhood or regional parks in the project vicinity that would be potentially affected. No impact is anticipated.

(County of Sutter, General Plan Technical Background Report. 2008)

XVII. TRANSPORTATION

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?		✓		
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?			✓	
c) Substantially increase hazards to a geometric design feature (e g., sharp curves or dangerous intersections) or incompatible uses (e g, farm equipment)?		✓		
d) Result in inadequate emergency access?			✓	

Responses:

a) **Less than significant with mitigation incorporated.** This project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. This property is in a rural area approximately six miles south of the southernmost incorporated limits of Yuba City and its sphere of influence. The project area is not served by mass transit or bicycle paths, and no sidewalks have been installed. Given the rural nature of the area, personal vehicles would be the most likely form of transportation.

The Sutter County General Plan establishes the County's Level of Service (LOS) policy for County roads. LOS is a qualitative measure of traffic flow ranging from A to F, with A representing best conditions. Policy M 2.5 is to develop and manage the County roadway segments and intersections to maintain LOS D or better during peak hours, and LOS C or better at all other times. The County LOS standards apply to all County roadway segments and intersections, unless otherwise addressed in an adopted specific plan or community plan.

A Traffic Operational Assessment for the project was prepared by KD Anderson & Associates, Inc., on July 5, 2022. A copy of this assessment is included in Appendix C of this Initial Study, and the assessment is being reviewed by Caltrans. The Traffic Operational Assessment documents the existing traffic setting, applicable regulations, project travel characteristics, project operational analysis under proposed project and cumulative conditions, and project impacts under CEQA.

For this project, the Traffic Operational Assessment estimated a total of 66 daily truck trips and 100 daily automobile trips that would be generated by the project, for a total of 166 daily trips. This estimate was based on trip generation rates developed from 24-hour traffic counts at a large truck traffic parking area in Yuba City. The assessment did not indicate that any changes to LOS would occur that would cause nearby roads or intersections to operate below County LOS standards. As noted in Section XIII, Noise, the Traffic Operational Assessment was prepared under the assumption that there would be more truck parking spaces than what is now proposed by the project. Therefore, the assessment is considered to provide a conservative analysis of traffic impacts.

Since the project anticipates use by STAA trucks, it is expected that Caltrans would require the project applicant to coordinate with Sutter County to process a STAA Terminal Designation application if the applicant proposes access to a county road for STAA trucks. Because of this, the following mitigation measure is recommended:

> **Mitigation Measure No. 9 (Transportation):** Prior to use of this facility by Surface Transportation Assistance Act (STAA) trucks, the California Vehicle Code requires that the access route and facility be established and meet Terminal Access (TA) classification requirements. The applicant can initiate the TA application process by obtaining an application package from the Sutter County Development Services Department and submitting a completed application along with the required fees. Sutter County Development Services, along with the Caltrans District Truck Coordinator, will evaluate the proposed route for use by STAA Trucks and develop a list of improvements that will need to be made before the STAA Route can be approved. All expenses for TA evaluation, engineering, and improvements required to make the access route and facility meet TA classification requirements shall be borne by the applicant.

b) **Less than significant impact.** This project would not conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b). This section of CEQA states that vehicle miles traveled (VMT) is the most appropriate measure of transportation impacts. VMT refers to the amount and distance of automobile travel attributable to a project. The Governor's Office of Planning and Research's (OPR's) Technical Advisory for VMT assessment clarifies that “the term ‘automobile’ refers to on-road passenger vehicles, specifically cars and light trucks.” It does not include heavy-duty trucks, although VMT for these vehicles could be included for modeling convenience and ease of calculation.

This section also states VMT exceeding an applicable threshold of significance may indicate a significant impact. The County has not adopted a threshold of significance for VMT. Sutter County has not yet adopted guidelines or policies for dealing with VMT. Therefore, the VMT impact assessment in this IS/MND uses the guidance in OPR's Technical Advisory.

Screening criteria can be used to quickly identify whether sufficient evidence exists to presume a project would have a less-than-significant VMT impact without conducting a detailed study. Projects meeting at least one of the criteria below can be presumed to have a less-than-significant VMT impact, absent substantial evidence that the project would lead to a significant impact. Of these screening criteria, "small projects" applies to the proposed project.

- Small projects
- Projects near transit stations
- Affordable residential development
- Local-serving retail
- Projects in low VMT-generating area

A “small project”, as defined in the Technical Advisory, is a project that generates 110 automobile trips daily or less. As noted in a), the project is estimated to generate 100 automobile trips daily. Therefore, the project would be considered a small project and can be presumed to have a less-than-significant impact on VMT.

c) **Less than significant with mitigation incorporated.** The project proposes access from State Highway 113, with secondary access to the site from Reclamation Road for automobiles only The impacts of a project to safety on Caltrans facilities remains an issue of significance. Under current practice, safety impacts on state facilities are typically considered within the context of queuing on off-ramps and in turn lanes at intersections, truck turning requirements, and the need for alternative traffic control devices. Queuing that spills over from a turn lane or extends along an off-ramp to the mainline freeway could represent significant safety issues. Intersections where truck paths leave the pavement or encroach into opposing lanes are a safety issue. Operation of an intersection with inappropriate traffic control devices would also represent a potential safety issue. The Traffic Operational Assessment analyzed three issues related to safety: sight distances, turn lanes, and truck turning requirements. In addition, alternatives to access from State Highway 113 were considered.

Sight Distances

For this project, the minimum sight distance for a design speed of 60 mph is 580 feet. Similarly, for a 60-mph design speed, an entering heavy truck turning left onto eastbound State Highway 113 would require 1,015 feet of corner sight distance looking right, and 925 feet looking left. The alignment of State Highway 113 in this area is level and straight. As a result, the view measured 15 feet from the edge of the travel way across the Caltrans right of way would satisfy corner sight distance requirements in both directions.

To the north, the view based on corner sight distance requirements would extend to the Del Monte Avenue intersection and cross the area of that intersection's southbound left turn lane. Vehicles stopped in that lane could affect sight distance, however, the traffic counts indicated that the number of left turns at that location is low, and it is unlikely that queuing vehicle would have an appreciable effect on the availability of adequate sight distance. South of and just beyond the project site, there is a tree within the Caltrans right-of-way that would need to be maintained to perpetuate a clear view from the eye of a driver in the cab of a heavy truck. Maintenance of this tree is a Caltrans responsibility.

As with many locations in the Sacramento Valley, the project area is susceptible to winter fog that limits sight distance. Motorists typically respond by reducing driving speeds when visibility is reduced and by selecting alternative routes that minimize potential vehicle conflicts. However, specific design policies relating to the effects of winter fog are not included in the Highway Design Manual used by Caltrans. Fog has been identified as a potential issue related to turn lanes in the Traffic Operational Assessment, as discussed below.

In a comment letter, the Sutter Basin Fire Protection District also expressed concern about the increased likelihood of accidents on State Highway 113, particularly during periods of low visibility. The Fire District recommended that a turn lane be constructed and flashing warning lights be installed to alert drivers during times of poor visibility. A comment letter from Caltrans expressed similar concerns about vehicle safety associated with trucks entering and leaving the project site.

Based on the findings of the Traffic Operational Assessment and on comments from the Sutter Basin Fire Protection District and from Caltrans, Mitigation Measure No. 10 has been identified:

Mitigation Measure No. 10 (Transportation): The applicant shall construct improvements to the entrance to the site that connects to State Highway 113 (SH113) with the use of STAA Truck Turning Templates. Improvements shall be constructed to allow for:

- The turning of STAA trucks into and out of the site without crossing into oncoming traffic.
- The entrance shall allow for two trucks to pass on site without causing a backup onto SH113.
- The entrance shall be paved to meet Caltrans Specifications and Sutter County Improvement Standards for an Industrial / Commercial Standard.
- Improvements to SH113 to provide for acceleration/deceleration for northbound trucks should be made per the recommendations of the traffic study prepared for this project.
- Prohibit left turns into the site from SH113 per the recommendations of the traffic study prepared for this project.
- Limit outbound trucks to right turns only when visibility is limited (i.e., fog and visibility less than one-half mile) per the recommendations of the traffic study prepared for this project.

The applicant must obtain an Encroachment Permit from Caltrans prior to any work in the State Highway 113 right-of-way.

Turn Lanes

Left Turns

There are no left turns lanes at private access on State Highway 113 south of the Robbins Canal, but there are left-turn lanes north of the canal. Caltrans determines the need for left-turn lanes at private access on state highways on a case-by-case basis, based on Chapter 4 of the Highway Design Manual, as well as guidance in the publication *A Policy on Geometric Design of Highways and Streets* by the American Association of State Highway and Transportation Officials.

The trip generation forecast suggests that 29 trucks would enter the site over the course of a weekday. The number could vary through the week depending on when trucks begin or end their haul. However, it is unlikely that the number of trucks turning left into the site would ever exceed 5 trucks per hour, and the typical count would likely be lower.

Left-turning trucks would slow in the southbound State Highway 113 travel lane as they approach the driveway, and Highway Design Manual Table 405.2B suggests that 530 feet of deceleration space is needed for a 60-mph design speed. Trucks could begin to move into the median area and out of the through travel lane about 200 feet from the driveway, which would allow a loaded truck to come to a stop from 45 mph. However, as the median is only about seven feet wide at the project driveway, a portion of the truck would remain in the through travel lane. Other drivers may not expect to be following heavy trucks that are decelerating on southbound State Highway 113 coming out of the Del Monte Avenue intersection, which could lead to rear-end collisions. State Highway 113 could be widened to provide a full left-turn lane or a two-way left turn lane, although the cost of this work is unknown. While inbound automobiles are not likely to be a problem, unless State Highway

113 is reconstructed to provide a wider left-turn area capable of accommodating trucks, limiting inbound trucks to northbound right turns only is recommended.

The Traffic Operational Assessment noted that the project would create outbound traffic onto State Highway 113 by automobiles and trucks. As noted above, the access provides adequate sight distance for drivers making left turns, and such turning maneuvers occurred in the past. At the trip generation levels anticipated with current background traffic volumes, the average delays for exiting traffic would not be excessive. However, large trucks travel a considerable distance as they accelerate after making a turn, and while other southbound traffic would be able to see these vehicles and react accordingly, some delay may occur. As noted, reduced sight distance would occur due to winter fog, which may create the need to limit outbound trucks to right turns only when visibility is reduced.

Right Turns

The issues associated with right turns by heavy trucks are similar to those associated with left turns, but other drivers are more likely to expect right turns into businesses along State Highway 113. As a minimum, implementation of access improvements that are consistent with Figure 205.1 improvements provides an area for trucks to enter the site. However, trucks would still slow to about 20 mph as they enter the taper area. It would be desirable to increase the area available for truck deceleration outside of the through travel lanes.

Because the 160-foot area along the project frontage has been paved, it is possible that trucks could use this area for deceleration. However, the status of the pavement section in this area is unknown, and the extent of reconstruction needed to support truck loadings would need to be evaluated. A full right-turn lane or 12-foot-wide shoulder could be constructed, and both would be subject to Caltrans approval. Work to further lengthen deceleration opportunities outside of the through travel lane and achieve the 530-foot deceleration distance would involve property beyond the limits of the project. The extent of right-of-way and drainage issues in this area is unknown.

Improvements to the area along northbound State Highway 113 to provide space for deceleration outside of the flow of northbound traffic is recommended. Caltrans has made recommendations regarding these improvements, and these recommendations have been incorporated within Mitigation Measure No. 10.

Truck Turning

Large trucks (53-foot trailers) are allowed on mainline State Highway 113 under the Surface Transportation Authorization Act (STAA), but such vehicles are not permitted on intersecting Sutter County roads unless specifically designated for their use by Caltrans and the County through evaluation of truck turning requirements. Private access anticipating trucks of this classification, as is typically the case for long haul operations, must also have access that can accommodate those vehicles.

While some of the trucks at the site may be classified as California Legal, and do not require additional approvals, trucks permitted under the STAA are also expected by the project proponents. The path of STAA trucks at the proposed site access was plotted in the Traffic Operational Assessment. The results indicate that the paths of heavy trucks with the planned driveway would require use of the full driveway width when entering and

exiting in either direction, which would preclude travel through the driveway in the opposite direction.

The identified paths would travel over the paved area along the project frontage outside of the existing four-foot shoulder, and the status of the pavement in that area is uncertain. The assessment concluded that it would be reasonable to expect that this area would need to be reconstructed to accommodate heavy truckloads within the limits of the truck paths in a manner that is consistent with the intent of the requirements of Highway Design Manual Figure 205.1 in terms of return radius offset and transition, and that concept should be adapted to address the actual turning path shown in the assessment.

Based on the findings of the Traffic Operational Assessment, Mitigation Measure No. 10 has been identified, taking into consideration comments from Caltrans and the Sutter Basin Fire Protection District. The mitigation measure addresses concerns related to truck turns.

Alternatives to State Highway 113 Access

Because the site abuts Reclamation Road and a 20-foot-wide driveway already exists, the feasibility to access the site via that road instead of State Highway 113 was considered. In a comment letter, Caltrans recommended that Del Monte Avenue and Reclamation Road be the preferred truck route. Caltrans stated that this would provide trucks traveling southbound on State Highway 113 access to the proposed development due to potentially restricting left-turn ingress.

However, there appear to be limitations associated with using Reclamation Road. Foremost is that pedestrian and automobile traffic destined for the east side of the Main Canal uses Del Monte Avenue across the Reclamation Road intersection. It is possible that the community may object to a truck access that would use the route that provides access to Robbins Elementary School, and it would be desirable to avoid using this route during the periods when children are traveling to and from the school.

In addition, neither Del Monte Avenue nor Reclamation Road are designated STAA routes, and access from Reclamation Road currently would be limited to automobiles and non-STAA trucks. Both streets, as well as the driveway, would likely require improvements to accommodate STAA trucks and to gain an STAA designation. The extent to which Reclamation District 1500, which manages facilities on which Reclamation Road is located, may approve those improvements is unknown.

The County has considered the recommendation made by Caltrans in its comment letter regarding Reclamation Road access and has rejected the recommendation. Mitigation Measure No. 11 would expressly prohibit the use of Reclamation Road by trucks for access to the project site.

> **Mitigation Measure No. 11 (Transportation):** No trucks shall be allowed to enter or exit from the entrance on Reclamation Road. Signage shall be posted at this access point exiting the site, stating, “NO TRUCKS ALLOWED”. Any work being done to improve the access onto Reclamation Road shall be done under an encroachment permit obtained from Sutter County prior to the start of work.

d) **Less than significant impact.** The project would not result in inadequate emergency access. The project site would have two access points at the main and secondary

driveways. This would provide adequate access for emergency vehicles. A less-than-significant impact is anticipated.

(County of Sutter, General Plan Technical Background Report. 2008)

(County of Sutter, General Plan 2030. 2011)

(Governor's Office of Planning and Research, Technical Advisory on Evaluating Transportation Impacts in CEQA. 2018)

(KD Anderson & Associates, Inc., 17812 Highway 113 Truck Parking Facility, Sutter Co., CA: Traffic Operational Assessment. 2022)

XVIII. TRIBAL CULTURAL RESOURCES

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or		✓		
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		✓		

Responses:

a) **Less than significant with mitigation incorporated.** In September of 2014, the California Legislature passed Assembly Bill (AB) 52, which added provisions to the Public Resources Code regarding the evaluation of impacts on tribal cultural resources under CEQA, and consultation requirements with California Native American tribes. Pursuant to the requirements of AB 52, County staff must provide any tribe on a notification list with notice of a proposed project and an invitation to consult within 14 days either of a project application being deemed complete. The tribe has 30 days from receipt of the notification letter to respond in writing, including the designation of a lead contact person. If the tribe requests consultation, then the lead agency has up to 30 days after receiving the tribe's request to initiate formal consultation. To date, the County has sent out a consultation referral and has not received any consultation requests from tribes on this project.

As noted in the Cultural Resources section, the project site has been extensively disturbed due to past development. The project site is not located within the vicinity of the Bear River, Sacramento River, or Feather River. There is no evidence on the project site indicating that tribal cultural resources exist. Mitigation Measure No. 2 is proposed in the Cultural Resources section to protect possible disturbance of human remains should they be encountered. With this mitigation measure in place, potential impacts on any Native American burials that could be encountered would be addressed, and a less-than-significant impact to tribal cultural resources is anticipated.

XIX. UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			✓	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?			✓	
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project, that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				✓
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			✓	
e) Comply with federal, state and local management and reduction statutes and regulations related to solid waste?			✓	

Responses:

a) **Less than significant impact.** This project would not require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. This project would require no new water service, wastewater treatment service, natural gas, or telecommunications facilities. Electric power needs would be satisfied by tying into existing utilities provided at the site.

Private drainage improvements are proposed for the site, as discussed previously in the Hydrology and Water Quality section. The environmental impacts of the construction of these on-site drainage improvements are addressed in this environmental document, along with mitigation measures. The applicant is required to obtain coverage under the State Construction General Permit, which requires implementation of a SWPPP that includes best management practices to control runoff, erosion, and sedimentation from the site. No additional mitigation is needed, and a less-than-significant impact is anticipated.

b) **Less than significant impact.** This project would not place a significant demand on water supplies. As stated in the Hydrology and Water Quality section, this project is not anticipated to generate any water demand other than for landscaping. No new wells or other water facilities would be installed. A less-than-significant impact is anticipated.

c) **No impact.** This project would not result in a determination by a wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. This project is not located in an area that is served by a wastewater treatment provider. As noted in the Project Description, the project proposes to use four portable, self-contained restrooms, in accordance with County Environmental Health requirements. These restrooms would be pumped by a septic pumper registered with Sutter County. Therefore, a demand would not be placed on a local sanitary sewer system, and no impact is anticipated.

d-e) **Less than significant impact.** Solid waste from this project would be disposed of through the local waste disposal company in a sanitary landfill in Yuba County which has sufficient capacity to serve this project. Disposal of project solid waste into that facility would comply with all federal, state, and local statutes and regulations related to solid waste. As a result, a less-than-significant impact is anticipated.

(County of Sutter, General Plan Technical Background Report. 2008)

XX. WILDFIRE

If located in or near state responsibility areas or lands classified as Very High Fire Hazard Severity Zones, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				✓
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?				✓
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				✓
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				✓

Responses:

a-d) **No impact.** There are no state responsibility areas in Sutter County. A California Department of Forestry and Fire Protection map indicates no fire hazard severity zones have been designated on the project site or in the vicinity. The project would not be subject to any wildfire hazards. No impacts are anticipated.

(California Department of Forestry and Fire Protection, Sutter County Draft Fire Hazard Severity Zones in LRA, 2007)

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		✓		
b) Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			✓	
c) Does the project have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly?			✓	

Responses:

a) **Less than significant with mitigation incorporated.** No environmental effects were identified in the Initial Study that indicate this project would have the ability to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory. Mitigation Measure No. 2, proposed in the Cultural Resources section, would protect possible disturbance of human remains should they be encountered.

b) **Less than significant impact.** The presence of truck yards has been an issue of concern in Sutter County. A study analyzing the potential cumulative impacts of truck yard development, primarily along the State Highway 99 corridor south of Yuba City, was conducted for the County by ESA. The study focused on truck yards well to the north of the project site. No other truck yards, existing or proposed, are known to be in the vicinity of the proposed project. As such, the cumulative effects identified in the County truck yard study has limited applicability to the project.

The potential cumulative impacts of development of the site were accounted for in the Sutter County General Plan EIR. The potential environmental effects identified in this IS/MND have been considered in conjunction with each other as to their potential to generate other potentially significant effects. As described in this IS/MND, the potential environmental effects of the project would either be less than significant or would have no impact at all. Where the project involves potentially significant effects, these effects would

be avoided or reduced to a level that is less than significant with proposed mitigation measures and/or compliance with applicable regulations and conditions of required permits. The various potential environmental effects of the project would not combine to generate any potentially significant cumulative effects.

Based on the analysis conducted in this IS/MND, and with the mitigation measures proposed for this project, this project's contribution to cumulative impacts is anticipated to be less than significant.

c) **Less than significant impact**. No environmental effects which would cause substantial adverse effects on human beings either directly or indirectly were identified in the initial study.

(County of Sutter, General Plan 2030. 2011)

(ESA, Sutter County Truck Yard Study Technical Report. 2021)

BIBLIOGRAPHY

California Department of Conservation. 2018. *Farmland Mapping and Monitoring Program*

California Department of Conservation, Division of Mines and Geology. 1988. *Special Report 132: Mineral Land Classification: Portland Cement Concrete-Grade Aggregate in the Yuba City-Marysville Production-Consumption Region*

California Department of Forestry and Fire Protection. 2007. *Sutter County Draft Fire Hazard Severity Zones in LRA* (map)

California Department of Toxic Substances Control, 2022. *Hazardous Waste and Substances Site List - Site Cleanup (Cortese List)*

County of Sutter. 2008. *General Plan Technical Background Report*

County of Sutter. 2008. *General Plan Draft Environmental Impact Report*

County of Sutter. 2011. *General Plan 2030*

County of Sutter. 2011. *General Plan 2030 Climate Action Plan*

County of Sutter. 2016. *Greenhouse Gas Pre-Screening Measures for Sutter County*

County of Sutter. 2022. *Zoning Code*

ECORP Consulting, Inc. 2022. *Noise Impact Assessment, 17812 Highway 113 Truck Yard Project, Sutter County, California*

Environmental Permitting Specialists. 2022. *Draft Analysis of Impacts to Air Quality and Greenhouse Gas from Proposed Truck Yard, Knights Landing, California*

ESA. 2021. *Sutter County Truck Yard Study Technical Report*

Feather River Air Quality Management District (FRAQMD), 2010. *Indirect Source Review Guidelines*

Federal Emergency Management Agency. 2008. *Flood Insurance Rate Map No. 0603940250E*

Governor's Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*

KD Anderson & Associates, Inc. 2022. *17812 Highway 113 Truck Parking Facility, Sutter Co., CA: Traffic Operational Assessment*

National Park Service. 2021. *National Register of Historic Places*

Sutter Subbasin Groundwater Management Coordination Committee. 2022. *Groundwater Sustainability Plan for the Sutter Subbasin*

U.S. Department of Agriculture, Natural Resources Conservation Service. 2022. *Custom Soil Survey, Sutter County - 17812 Highway 113*

U.S. Department of Agriculture, Soil Conservation Service. 1988. *Sutter County Soil Survey*

U.S. Fish and Wildlife Service. 2022. *Critical Habitat Mapper*

U.S. Fish and Wildlife Service. 2022. *National Wetlands Inventory*

Mitigation Monitoring Program

Mitigation Measure	Timing	Monitoring Agency
Mitigation Measure No. 1 (Air Quality): IMPLEMENT FEATHER RIVER AIR QUALITY MANAGEMENT DISTRICT (FRAQMD) STANDARD MITIGATION MEASURES. The project applicant shall implement the following FRAQMD-recommended Standard Mitigation Measures for projects that do not exceed construction or operational thresholds of significance. ● Implement the Fugitive Dust Control Plan prior to any on-site grading, landscaping, or construction activities. The applicant shall submit the fugitive dust control plan to the FRAQMD for review and approval. A copy of the approved plan shall be submitted to the Development Services Department. During the construction phase, the project shall be responsible for adhering to District Rule 3.16 which states that the developer or contractor are required to control dust emissions from earth moving activities, handling, or storage activity from leaving the project site. ● Construction equipment exhaust emissions shall not exceed FRAQMD Regulation III, Rule 3.0, Visible Emissions limitations (40 percent opacity or Ringlemann 2.0). ● The contractor shall be responsible to ensure that all construction equipment is properly tuned and maintained prior to and for the duration of onsite operation. ● Limit idling time to 5 minutes – saves fuel and reduces emissions in accordance with 13 California Code of Regulations (CCR) Chapter 10 Section 2485 and 13 CCR Chapter 9 Article 4.8 Section 2449. ● Utilize existing power sources or clean fuel generators rather than temporary power generators. ● Develop traffic plans to minimize traffic flow interference from construction activities. The plan may include advance public notice of routing, use of public transportation, and	Prior to construction activities/Ongoing	FRAQMD/ Development Services

Mitigation Measure	Timing	Monitoring Agency
satellite parking areas with a shuttle service. Schedule operations affecting traffic for off-peak hours. Minimize obstruction of through-traffic lanes. Provide a flag person to guide traffic properly and ensure safety at construction sites. ● Portable engines and portable engine-driven equipment units used at the project work site, with the exception of on-road and off-road motor vehicles, may require CARB Portable Equipment Registration with the State or a local district permit. The owner/operator shall be responsible for arranging appropriate consultation with CARB or FRAQMD to determine registration and permitting requirements prior to equipment operation at the site.		
Mitigation Measure No. 2 (Cultural Resources): California Health and Safety Code §7050.5 states that when human remains are discovered, no further site disturbance can occur until the County Coroner has made the necessary findings as to the origin of the remains and their disposition pursuant to Public Resources Code §5097.98. If the remains are recognized to be those of a Native American, the County Coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC shall initiate the process of contacting the most likely descendant and the disposition of the remains pursuant to Public Resources Code §5097.98.	During construction activities	Construction personnel/County Coroner
Mitigation Measure No. 3 (Geology and Soils): STORM WATER QUALITY PROTECTION – DURING CONSTRUCTION. SWPPP - Prior to the start of construction, the applicant shall prepare and submit a Storm Water Pollution Prevention Plan (SWPPP) to be executed through all phases of grading and project construction. The SWPPP shall incorporate Best Management Practices (BMPs) to ensure that potential water quality impacts during construction phases are minimized. These measures shall be consistent with the County's Improvement Standards and Land Grading and Erosion Control Ordinance and the requirements of the National Pollution Discharge Elimination System	Prior to the start of construction and during construction	RWQCB/ Development Services Engineering Division

Mitigation Measure	Timing	Monitoring Agency
(NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities. The SWPPP shall be submitted to the County for review and to the Central Valley Regional Water Quality Control Board (RWQCB) as required by the NPDES General Permit in effect during construction. During construction, the applicant shall implement actions and procedures established to reduce the pollutant loadings in storm drain systems. The project applicant shall implement BMPs in accordance with the SWPPP and the County's Improvement Standards. The project applicant(s) shall submit a state storm water permit Waste Discharger Identification number for each construction project. NPDES GENERAL CONSTRUCTION PERMIT – Since the project size is more than one acre, prior to construction the applicant shall file a Notice of Intent with the Central RWQCB to obtain coverage under the California State Water Resources - General Construction Activity Storm Water Permit. Permits are issued by the State Water Resources Control Board, which can provide all information necessary to complete and file the necessary documents. Applicant shall comply with the terms of the General Construction Permit, the County's ordinances, and the NPDES Waste Discharge Requirements for the Sutter County Phase II NPDES Permit.		
Mitigation Measure No. 4 (Hydrology and Water Quality): DRAINAGE STUDY. Prior to issuance of a grading permit or encroachment permit, the applicant shall obtain approval from the Director of a drainage study that reflects final design conditions for the proposed project per County Standards. The Drainage Study shall be completed and stamped by a Professional Engineer and determined by the County to be comprehensive, accurate, and adequate (SCIS Section 9).	Prior to issuance of a grading permit	Development Services Engineering Division
Mitigation Measure No. 5 (Hydrology and Water Quality): PRIVATE DRAINAGE IMPROVEMENTS. The applicant shall construct private onsite drainage ditches/basins that provide storm water retention/detention per a County-approved drainage study for this project. Owner shall limit maximum discharge rates, where applicable, to pre-project "existing" conditions for peak 10- and 100-year storms	Prior to commercial use of the site	Development Services Engineering Division

Mitigation Measure	Timing	Monitoring Agency
per an approved on-site drainage study for the project. The drainage ditches/basins shall not be connected to the roadside swales. The applicant must obtain a grading permit from the County prior to any grading for storm water retention/detention ditches or basins. The applicant shall provide an as-built drawing of the drainage improvements that is stamped and signed by a licensed Engineer verifying that what was constructed complies with the approved plan for the site.		
Mitigation Measure No. 6 (Hydrology and Water Quality): PRIVATE DRAINAGE FACILITIES MAINTENANCE AGREEMENT. The property owner shall enter into an agreement with Sutter County committing the property owners and all successors-in-interest to maintain the private drainage facilities (including on-site peak flow attenuation basins) in perpetuity in a manner to preserve storage capacity, drainage patterns, ultimate discharge points and quantities, and water quality treatment controls for stormwater discharges as identified in the drainage study and approved by Sutter County.	Prior to commercial use of the site	Development Services Engineering Division
Mitigation Measure No. 7 (Hydrology and Water Quality): GRADING AND CONSTRUCTION. All impacts to the site must be mitigated in the project area or lands acquired for mitigation by the project. Any Grading or Site Improvements shall be done per an approved plan and in accordance with Sutter County Development Standards. Plans shall be reviewed and approved for construction by the Director of Development Services prior to the start of construction.	Prior to start of construction and during construction	Development Services Engineering Division
Mitigation Measure No. 8 (Noise): During construction, the applicant shall ensure that all project related noise-generating construction activities are limited to daytime hours between 7:00 a.m. and 6:00 p.m. on weekdays, 8:00 a.m. and 5:00 p.m. on Saturdays, and are prohibited on Sundays and holidays unless permission for the latter has been applied for and granted by the County.	Upon start of construction activities	Development Services
Mitigation Measure No. 9 (Transportation): Prior to use of this facility by Surface Transportation Assistance Act (STAA) trucks, the California Vehicle Code requires that the access route and facility be	Prior to commercial use and prior to use	Development Services/Caltrans

Mitigation Measure	Timing	Monitoring Agency
established and meet Terminal Access (TA) classification requirements. The applicant can initiate the TA application process by obtaining an application package from the Sutter County Development Services Department and submitting a completed application along with the required fees. Sutter County Development Services, along with the Caltrans District Truck Coordinator, will evaluate the proposed route for use by STAA Trucks and develop a list of improvements that will need to be made before the STAA Route can be approved. All expenses for TA evaluation, engineering, and improvements required to make the access route and facility meet TA classification requirements shall be borne by the applicant.	of the site by STAA trucks	
Mitigation Measure No. 10 (Transportation): The applicant shall construct improvements to the entrance to the site that connects to State Highway 113 (SH113) with the use of STAA Truck Turning Templates. Improvements shall be constructed to allow for: ● The turning of STAA trucks into and out of the site without crossing into oncoming traffic. ● The entrance shall allow for two trucks to pass on site without causing a backup onto SH113. ● The entrance shall be paved to meet Caltrans Specifications and Sutter County Improvement Standards for an Industrial / Commercial Standard. ● Improvements to SH113 to provide for acceleration/deceleration for northbound trucks should be made per the recommendations of the traffic study prepared for this project. ● Prohibit left turns into the site from SH113 per the recommendations of the traffic study prepared for this project. ● Limit outbound trucks to right turns only when visibility is limited (i.e., fog and visibility less than one-half mile) per the recommendations of the traffic study prepared for this project. The applicant must obtain an Encroachment Permit from Caltrans prior to any work in the State Highway113 right-of-way.	Site access improvements prior to use of the site by STAA trucks.	Development Services/Caltrans

Mitigation Measure	Timing	Monitoring Agency
Mitigation Measure No. 11 (Transportation): No trucks shall be allowed to enter or exit from the entrance on Reclamation Road. Signage shall be posted at this access point exiting the site, stating, "NO TRUCKS ALLOWED". Any work being done to improve the access onto Reclamation Road shall be done under an encroachment permit obtained from Sutter County prior to the start of work.	Prior to start of project operations.	Development Services/Caltrans

APPENDIX A
AIR QUALITY AND GREENHOUSE GAS ANALYSIS

Draft Analysis of Impacts to Air Quality and Greenhouse Gas from Proposed Truck Yard

Knights Landing, California

July 20, 2022

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APPENDIX

1. CalEEMod Emissions Model Calculations for the Construction Phases
2. Vehicle Trip Generation Analysis

SECTION 1: INTRODUCTION

Environmental Permitting Specialists (EPS) has been retained by Milestone Associates to evaluate impacts to air quality, greenhouse gas (GHG) and public health risks associated with the proposed rezoning of a small truck yard in Sutter County. The proposed truck yard, referred to as a General Truck Yard by Sutter County, is located at 17812 State Route 113, Knights Landing. This analysis has been prepared in support of an environmental review being conducted by the Planning Department at Sutter County.

The project, is located South of the intersection of SR 113 and Reclamation Road in Knight's Landing. It is approximately 6.7 acres and has been assigned an Assessor's Parcel Number 29-080-007 (Figure 1). The site is currently vacant with no structures at the site (Figure 2). The parking yard will occupy 82 tractor-trailer combinations and be a self-serve type with no employees or attendants. In addition, there would be 55 spaces for cars. The yard would operate 24 hours per day, 7 days per week. Trucks would travel to and from the yard from SR 113.

Construction at the site would involve minimal grading and site work followed by paving. No demolition is planned. Construction is expected to begin sometime in 2022 and would be completed in 30 days. The following impacts are evaluated:

Project Phase	Air Quality	Public Health	Greenhouse Gas
Construction	x		x
Operational (Occupancy)	x	x	x

The overall approach used in this analysis is to quantify the emission rates of regulated air pollutants for the construction and occupancy phases and then compare the emission rates with thresholds of significance established by the Feather River Air Quality Management District (FRAQMD). The project is considered to have potentially significant environmental impact if any of the emission rates exceed the thresholds of significance established by the FRAQMD. The thresholds of significance are discussed in Section 3.

This report is divided into 3 main sections. Immediately following this Introduction, the project emissions are discussed in Section 2. The Project impacts and their significance are discussed in Section 3. Technical details and calculations are provided in the Appendix.

Figure 1-1
Vicinity Map

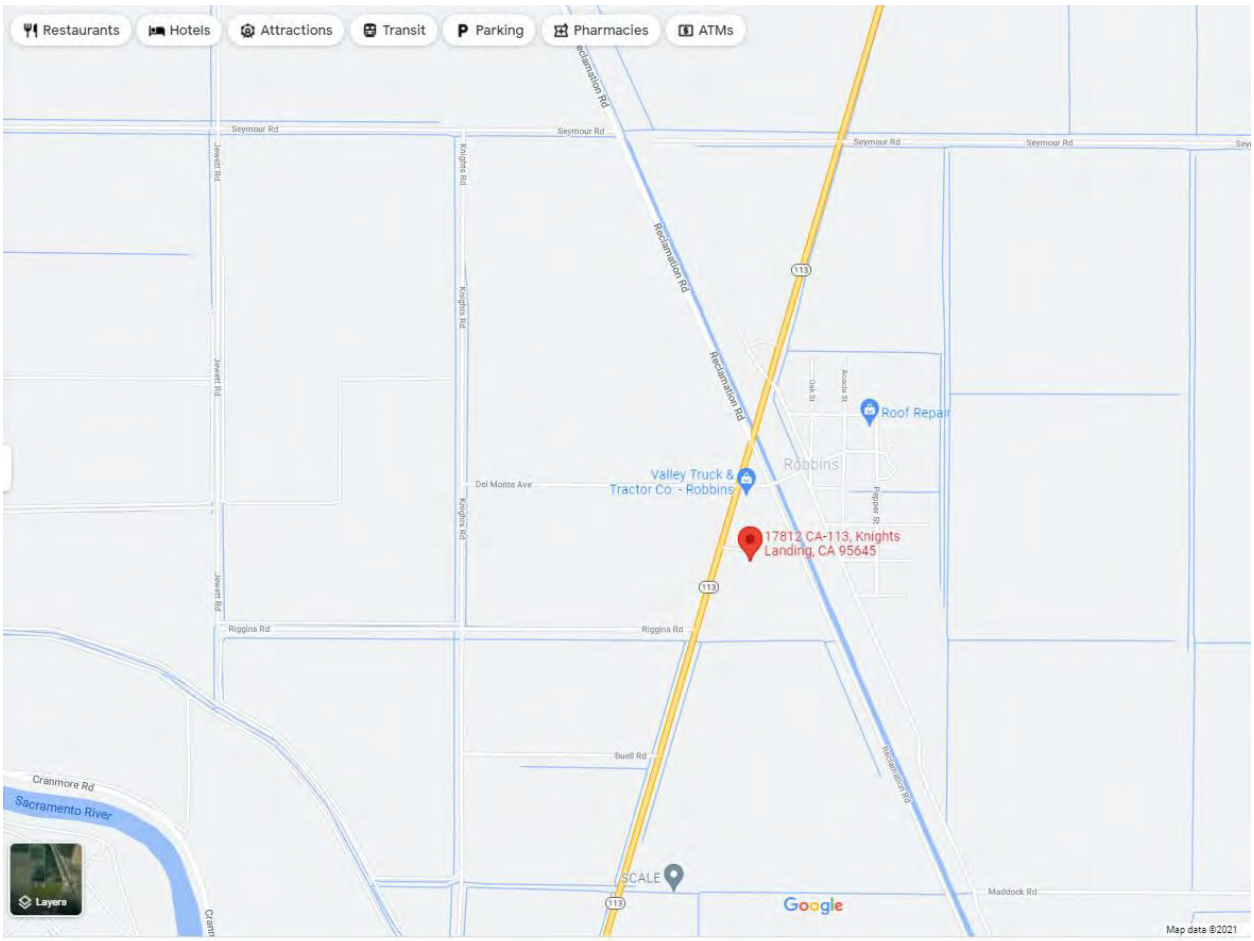
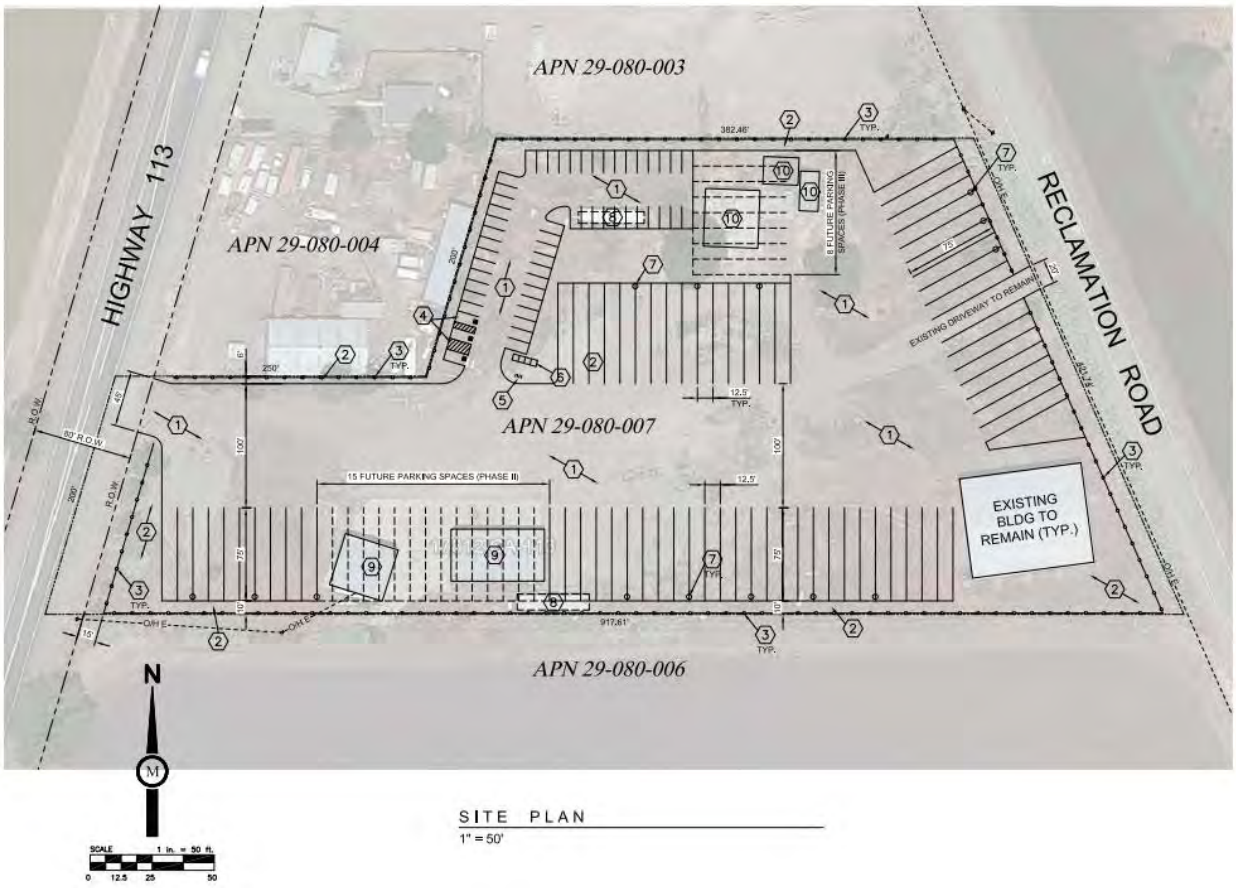


Figure 1-2
Site Map
Source: Millstone Engineering



SECTION 2: PROJECT EMISSIONS

The construction and operation of the truck parking yard would release a variety of emissions. These can be divided into three categories:

A. Criteria air emissions
   - Oxides of nitrogen (NOx)
   - Carbon monoxide (CO)
   - Volatile organic compounds (VOCs)
   - Oxides of sulfur (SOx)
   - Fine particulate matter (PM-10)
   - Ultra-fine particulate matter (PM-2.5)

B. Emissions of toxic air contaminants (TACs)
   - Primarily diesel particulate matter (DPM, same as exhaust PM-10))

C. Emissions of greenhouse gases
   - Carbon dioxide (CO_2)
   - Methane (CH_4)
   - Nitrous Oxide (N_2O_2)

2.1 Construction Emissions

As noted in the Introduction, construction would consist of site work, some minimal grading and paving. These activities would release fugitive dust from grading and site-work, exhaust emissions from construction equipment and VOC emissions from the asphaltic concrete.

The emission rates were calculated using the California Emissions Estimator Model (CalEEMod) developed by the California Air Pollution Control Officers Association. Version 2020.4.0 of this model was used to calculate the emissions. The results are summarized in Figures 2-1 and 2-2.

Figure 2-1
Maximum Daily Emissions – Construction Phase

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Year	lb/day									
2022	9.0754	7.0360	3.7141	7.9600e-003	6.6048	0.2925	6.8973	2.0496	0.2691	2.3187
Maximum	**9.0754**	**7.0360**	**3.7141**	**7.9600e-003**	**6.6048**	**0.2925**	**6.8973**	**2.0496**	**0.2691**	**2.3187**

Figure 2-2
Maximum Daily GHG Emissions – Construction Phase

Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day					
0.0000	772.3013	772.3013	0.2386	1.0300e-003	778.5708
0.0000	**772.3013**	**772.3013**	**0.2386**	**1.0300e-003**	**778.5708**

A copy of the CalEEMod emissions reports are provided in Appendix 1.

2.2 Operational Emissions

Operating emissions consist of truck and light duty vehicle exhaust emissions and any fugitive road dust from vehicle travel on paved roads. Vehicle exhaust emissions were calculated using the Emissions Factor (EMFAC) model developed by the California Air Resources Board to assess mobile source emissions for each air basin, county or the whole state. EMFAC 2021 was used for vehicle emissions for calendar year 2022 and is based on an aggregate of all model years currently operating statewide. The EMFAC 2021 model provides emissions in terms of grams per mile for each vehicle category as well as emissions during truck idling in terms of grams per 8 hour day. An excerpt of the EMFAC 2021 model is shown in Figure 2-3.

Figure 2-3
Excerpt of EMFAC Model Output for Sutter County

Source: EMFAC2021 (v1.0.1) Emission Rates
Region Type: Statewide
Region: California
Calendar Year: 2022
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN. PHE

Region	CY	Veh Category	Model Year	Speed	Fuel	NOx_RUNEX	NOx_IDLEX	PM2.5_RUNEX	PM2.5_IDLEX	PM10_RUNEX	PM10_IDLEX
Statewide	2022	LDA	Aggregate	Aggregate	Gasoline	0.05398061	0	0.00138461	0	0.001505864	0
Statewide	2022	T6 Instate Tractor Class 6	Aggregate	Aggregate	Diesel	1.67187442	15.70238928	0.028147738	0.080828335	0.029420454	0.084483033

Daily emissions were calculated as follows:

Daily Emissions in pounds = $\frac{\text{Emission Factor (grams/mile) x Miles Travelled per Day.}}{\text{454 grams/pound}}$

Emissions of fugitive road dust were estimated using data published by ARB "Entrained Road Travel, Paved Road Dust" (ARB 2018). Data are provided for each County It is based on annual vehicle miles travelled and the amount of road dust that is entrained into the atmosphere. For 2018, ARB reported 798 million miles were travelled (VMT) resulting in emissions of 55.74 tons of PM-10 from major roads. This equates to 0.00014 pounds of PM-10 emissions per VMT.

For daily vehicle trips, EPS relied on the July 5th, 2022 traffic study completed by K. D. Anderson, Inc. indicated the following daily traffic volumes. A copy of the traffic study is attached.

Figure 2-3
Estimate of Daily Vehicle Trips

	HD Trucks	Light Duty Cars and Trucks
Daily Volume	66	100

A trip length for each truck was assumed to equal 20 miles. This is the maximum distance a truck would travel before leaving the County lines. For automobiles, a trip length of 10 miles was assumed. This represents the distance the truck drivers would travel from their homes to the truck yard. An estimate of daily emissions based on these trips is provided in Tables 2-1 and 2-2 for light duty vehicles and trucks respectively. An estimate of GHG emissions is included in these tables.

Table 2-1

Emissions from Automobiles and Light Duty Trucks

Pollutant	EF (g/mile)	Emissions (lbs/day)	Emissions (lbs/yr)	Emissions (tons/yr)
NOx	0.0540	0.12	43.4	0.022
PM-2.5				
Exhaust	0.0014	0.00	1.1	0.0006
Road Dust	2.10E-05	4.62E-05	1.68E-02	8.42E-06
Total	0.0014	0.0031	1.1300	0.0006
PM-10				
Exhaust	0.0015	0.0033	1.211	0.0006
Road Dust	1.40E-04	3.08E-04	1.12E-01	5.62E-05
Total	0.0016	0.0036	1.3230	0.0007
ROG	0.0128	0.03	10.3	0.005
SOx	0.0029	0.01	2.4	0.001
CO	0.8922	1.97	717.3	0.359
CO2(e)	298.3421	657.14	239,857	119.928

Notes		
No. of Vehicles:	100	vehicles/day
Trip Length:	10	miles
Operating Days/yr:	365	days/yr
Ratio PM-2.5/PM-10:	0.15	Ref: ARB Road Dust Speciation Profile #471

Table 2-2

Emissions from Heavy Duty Trucks

Pollutant	EF (g/mile)	Emissions (lbs/day)	(lbs/yr)	(tons/yr)
NOx	1.6719	4.86	1774.2	0.887
PM-2.5				
Exhaust	0.0281	0.08	29.9	0.0149
Road Dust	2.10E-05	6.09E-05	2.22E-02	1.11E-05
Total	0.0282	0.0819	29.8936	0.0149
PM-10				
Exhaust	0.0294	0.0855	31.222	0.0156
Road Dust	0.0001	0.0004	0.148	0.0001
Total	0.0296	0.0859	31.3702	0.0157
ROG	0.0598	0.17	63.5	0.032
SOx	0.0105	0.03	11.2	0.006
CO	0.1847	0.54	196.0	0.098
CO2(e)	1168.0	3395.9	1,239,503	619.8

Notes		
No. of Vehicles:	66	vehicles/day
Trip Length:	20	miles
Operating Days/yr:	365	days/yr
Ratio PM-2.5/PM-10:	0.15	Ref: ARB Road Dust Speciation Profile #471

SECTION 3: SIGNIFICANCE OF PROJECT IMPACTS

The emissions presented in Section 2 for criteria air pollutants are compared with mass emission thresholds established by the FRAQMD and Sutter County. The current project is classified as a General Truck Yard by Sutter County.

3.1 Significance Criteria

The significance criteria are summarized below.

FRAQMD MASS EMISSIONS THRESHOLDS OF SIGNIFICANCE

	NO_x	ROG	PM_{10}
Construction	25ppd, not to exceed 4.5tpy[a]	25ppd, not to exceed 4.5tpy[a]	80ppd
Operation	25ppd	25ppd	80ppd

NOTES:

a NO_x and ROG construction emissions may be averaged over the life of the project, but may not exceed 4.5 tpy. tpy=tons per year; ppd=pounds per day

SOURCE: Feather River Air Quality Management District (FRAQMD), 2010. *Indirect Source Review Guidelines; Chapter 3: Thresholds of Significance*. June 7, 2020. Available at https://www.fraqmd.org/files/658e76309/Chapter+3.pdf. Accessed September 2, 2020.

For GHG emissions, Sutter County had adopted significance criteria on June 28, 2016. These criteria specified a threshold of 3,000 metric tonnes of carbon dioxide equivalents [MT CO_2(e)]. Projects with annual GHG emissions below 3,000 MT CO_2(e) are considered to have negligible impacts individually and cumulatively.

Under these criteria, GHG emissions are below pre-screening levels that are considered significant, therefore GHG impacts for the truck yard are considered less than significant.

For toxic air, the significance criteria are follows:

Cancer Risk:	Maximum 10 cancers/million
Non-Cancer Hazard Index:	Maximum 1.0

3.2 Project Impacts

3.2.1 Criteria Pollutant Emissions

The project's short-term (construction related) operating emissions and a comparison with the significance thresholds are summarized in Table 3-1.

For the construction phase, daily emissions of NOx, PM-10 and ROG were summarized in Section 2.1 and were well below the County thresholds of significance

Table 3-1
Comparison of Daily Construction Emissions in Pounds per Day with Thresholds of Significance

Pollutant	Emissions	Threshold of Significance	Impact Significant?
NOx	**7.04**	**25**	**No**
ROG	**9.08**	**25**	**No**
PM-10	**6.90**	**80**	**No**

For the operational phase, the project's overall long-term emissions and a comparison with the significance thresholds are summarized in Table 3-2.

Table 3-2
Comparison of Long-Term Emissions of Criteria Air Pollutants With Thresholds of Significance

Pollutant	Emissions (lbs/day)			Threshold of Significance	Impact Significant ?
	Autos	Trucks	Total		
NOx	0.131	5.377	5.51	25	No
PM-2.5	0.00	0.0906	0.09	No Threshold	N/A
PM-10	0.00	0.0951	0.10	80	No
ROG	0.03	0.0311	0.06	25	No
SOx	0.01	0.0339	0.04	No Threshold	N/A
CO	2.16	0.594	2.76	No Threshold	N/A
CO2e (tons/yr)	131.9	685.5	817.4	Exempt	No

3.2.2 GHG Emissions

The annual GHG emissions for the current project are approximately 739.7 MT CO_2(e) per year [119.9 from autos + 619.8 from trucks]. These annual emissions are well below the 3,000 MT CO_2(e) threshold established by the County and therefore GHG impacts are considered less than significant.

3.2.3 Emissions of Toxic Air Contaminants

For toxic air pollutants, the main TAC is diesel exhaust particulate matter (DPM). DPM is regulated as a carcinogen by the FRAQMD and the California Air Resources Board. The emission rates of exhaust PM-10 are considered a surrogate for DPM. For the current project, annual on-site emission rates of exhaust PM-10 were estimated. These emissions occur during truck idling. As shown in Figure 2-3, Truck idle emissions are only 0.084 grams per 8 hour day or 0.0106 grams per hour. For the current analysis, each truck was assumed to idle 15 minutes. For all 66 trucks, this equates to 990 minutes (16.5 hours) of idle time per day or 6,022.5 hours per year based on 365 days per year operation.

Annual emissions of DPM are estimated as follows:

$$\text{Annual Emissions} = \frac{6{,}022.5 \text{ hrs/yr} \times 0.0106 \text{ grams/hr}}{454 \text{ grams/lb}} = 0.141 \text{ lbs/yr}$$

Given this very low level of DPM emissions, a detailed health risk assessment is not warranted. Instead, a screening level risk analysis was completed. A screening level risk analysis provides a conservative estimate of potential health risks. A "cancer risk score" is calculated for various distances from the project site. If the cancer risk score is above 10 at the nearest home, then the risk is considered significant and then a more detailed health risks analysis is prepared.

The results of the screening level risk analysis are shown in Table 3-3. The cancer risk score is given for various distances (in meters). For example, the score is 3.21 E-01 (0.321) for distances between 0 to 100 meters (0 to 328 feet). For distances greater than 100 meters, the risk score is 8.12E-02 (0.0812) or lower. These results are well below the cancer score threshold of 10 and therefore indicate that exposure to DPM would not result in a significant impact to public health.

Table 3-3

Results of Screening Level Risk Analysis

	Prioritization Calculator			
Applicability	Use to provide a Prioritization score based on the emission potency method. Entries required i areas.			
Author or updater	Ray Kapahi		*Last Update*	July 6, 2022
Facility:	Knights Landing Truck Yard			
ID#:	Based on 0.1406 lbs/yr of On-Site DPM Emissions			
Project #:				
Unit and Process#				
Operating Hours hr/yr	8,760.00			
Receptor Proximity and Proximity Factors	**Cancer Score**	**Chronic Score**	**Acute Score**	**Max Score**
0< R<100 1.000	3.25E-01	4.82E-04	0.00E+00	3.25E-01
100≤R<250 0.250	8.12E-02	1.20E-04	0.00E+00	8.12E-02
250≤R<500 0.040	1.30E-02	1.93E-05	0.00E+00	1.30E-02
500≤R<1000 0.011	3.57E-03	5.30E-06	0.00E+00	3.57E-03
1000≤R<1500 0.003	9.74E-04	1.44E-06	0.00E+00	9.74E-04
1500≤R<2000 0.002	6.50E-04	9.63E-07	0.00E+00	6.50E-04
2000<R 0.001	3.25E-04	4.82E-07	0.00E+00	3.25E-04
	Enter the unit's CAS# of the substances emitted and their amounts.			
0				
Substance	**CAS#**	**Annual Emissions (lbs/yr)**	**Maximum Hourly (lbs/hr)**	**Average Hourly (lbs/hr)**
Diesel engine exhaust, particulate matter (Diesel PM)	9901	1.41E-01		1.61E-05
				0.00E+00
				0.00E+00

3.3 Summary of Project Impacts

The result of the current analysis demonstrates that the construction and operation of the proposed truck parking yard would not any significant impact to air quality, greenhouse gas or public health. For all categories of impacts, the emissions are well below significance criteria set forth by the FRAQMD and Sutter County. No further analysis is needed.

SECTION 6: REFERENCES

CalEEMod (2020): California Emissions Estimator Model. Information available at: http://www.caleemod.com/

CAPCOA (2008). CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to CEQA. January 2008.

CARB (2018): "Miscellaneous Process Methodology 7.9 – Entrained Road Travel, Paved Road Dust", March 2018. Available at: https://ww3.arb.ca.gov/ei/areasrc/fullpdf/full7-9_2018.pdf

FAQMD (2010): "Thresholds of Significance", Chapter 3, Indirect Source Review Guidelines", June 7, 2010. Available at: https://www.fraqmd.org/ceqa-planning

Sutter County (2016): "Greenhouse Gas Pre-Screening Measures for Sutter County", Adopted by the Board of Supervisors June 28, 2016.

APPENDIX 1

Calculation of Emissions from Construction and Operational Phases

Knights Landing - Sutter County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Knights Landing

Sutter County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	1.00	Acre	6.70	43,560.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	61
Climate Zone	2			**Operational Year**	2022
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot size 6.7 acres

Construction Phase - No Demolition
Minimal Grading, No Trenchong, No Demolition No Building Construction

Off-road Equipment - Minimal Grading

Grading - Max 1 acre to be graded

Off-road Equipment - Minimal site prepartion required.

Off-road Equipment - Minimal grading required.

Off-road Equipment - Per site area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	2.00
tblConstructionPhase	NumDays	20.00	2.00
tblConstructionPhase	NumDays	10.00	2.00
tblConstructionPhase	PhaseEndDate	6/9/2022	4/6/2022
tblConstructionPhase	PhaseEndDate	5/25/2023	4/18/2022
tblConstructionPhase	PhaseEndDate	5/12/2022	4/4/2022
tblConstructionPhase	PhaseStartDate	5/13/2022	4/5/2022
tblConstructionPhase	PhaseStartDate	4/28/2023	4/15/2022
tblConstructionPhase	PhaseStartDate	4/29/2022	4/1/2022
tblGrading	AcresOfGrading	1.00	6.70
tblGrading	AcresOfGrading	0.50	6.70
tblLandUse	LotAcreage	1.00	6.70
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	9.0754	7.0360	3.7141	7.9600e-003	6.6048	0.2925	6.8973	2.0496	0.2691	2.3187	0.0000	772.3013	772.3013	0.2386	1.0300e-003	778.5708
Maximum	**9.0754**	**7.0360**	**3.7141**	**7.9600e-003**	**6.6048**	**0.2925**	**6.8973**	**2.0496**	**0.2691**	**2.3187**	**0.0000**	**772.3013**	**772.3013**	**0.2386**	**1.0300e-003**	**778.5708**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	9.0754	7.0360	3.7141	7.9600e-003	6.6048	0.2925	6.8973	2.0496	0.2691	2.3187	0.0000	772.3013	772.3013	0.2386	1.0300e-003	778.5708
Maximum	**9.0754**	**7.0360**	**3.7141**	**7.9600e-003**	**6.6048**	**0.2925**	**6.8973**	**2.0496**	**0.2691**	**2.3187**	**0.0000**	**772.3013**	**772.3013**	**0.2386**	**1.0300e-003**	**778.5708**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0237	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0237**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0237	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0237**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/1/2022	4/4/2022	5	2	
2	Grading	Grading	4/5/2022	4/6/2022	5	2	
3	Paving	Paving	4/15/2022	4/18/2022	5	2	

Acres of Grading (Site Preparation Phase): 6.7

Acres of Grading (Grading Phase): 6.7

Acres of Paving: 6.7

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Grading	Graders	1	4.00	187	0.41
Grading	Rubber Tired Dozers	1	4.00	247	0.40
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	6.00	80	0.38
Site Preparation	Rubber Tired Dozers	1	4.00	247	0.40

Trips and VMT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5637	0.0000	6.5637	2.0387	0.0000	2.0387			0.0000			0.0000
Off-Road	0.5009	5.2347	2.9100	5.8200e-003		0.2537	0.2537		0.2334	0.2334		564.1372	564.1372	0.1825		568.6985
Total	**0.5009**	**5.2347**	**2.9100**	**5.8200e-003**	**6.5637**	**0.2537**	**6.8175**	**2.0387**	**0.2334**	**2.2722**		**564.1372**	**564.1372**	**0.1825**		**568.6985**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0185	0.0104	0.1559	3.8000e-004	0.0411	2.0000e-004	0.0413	0.0109	1.9000e-004	0.0111		38.1442	38.1442	1.1100e-003	1.0300e-003	38.4776
Total	**0.0185**	**0.0104**	**0.1559**	**3.8000e-004**	**0.0411**	**2.0000e-004**	**0.0413**	**0.0109**	**1.9000e-004**	**0.0111**		**38.1442**	**38.1442**	**1.1100e-003**	**1.0300e-003**	**38.4776**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5637	0.0000	6.5637	2.0387	0.0000	2.0387			0.0000			0.0000
Off-Road	0.5009	5.2347	2.9100	5.8200e-003		0.2537	0.2537		0.2334	0.2334	0.0000	564.1372	564.1372	0.1825		568.6985
Total	**0.5009**	**5.2347**	**2.9100**	**5.8200e-003**	**6.5637**	**0.2537**	**6.8175**	**2.0387**	**0.2334**	**2.2722**	**0.0000**	**564.1372**	**564.1372**	**0.1825**		**568.6985**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0185	0.0104	0.1559	3.8000e-004	0.0411	2.0000e-004	0.0413	0.0109	1.9000e-004	0.0111		38.1442	38.1442	1.1100e-003	1.0300e-003	38.4776
Total	**0.0185**	**0.0104**	**0.1559**	**3.8000e-004**	**0.0411**	**2.0000e-004**	**0.0413**	**0.0109**	**1.9000e-004**	**0.0111**		**38.1442**	**38.1442**	**1.1100e-003**	**1.0300e-003**	**38.4776**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5637	0.0000	6.5637	2.0387	0.0000	2.0387			0.0000			0.0000
Off-Road	0.6261	7.0256	2.6519	7.5800e-003		0.2923	0.2923		0.2689	0.2689		734.1572	734.1572	0.2374		740.0932
Total	**0.6261**	**7.0256**	**2.6519**	**7.5800e-003**	**6.5637**	**0.2923**	**6.8560**	**2.0387**	**0.2689**	**2.3076**		**734.1572**	**734.1572**	**0.2374**		**740.0932**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0185	0.0104	0.1559	3.8000e-004	0.0411	2.0000e-004	0.0413	0.0109	1.9000e-004	0.0111		38.1442	38.1442	1.1100e-003	1.0300e-003	38.4776
Total	**0.0185**	**0.0104**	**0.1559**	**3.8000e-004**	**0.0411**	**2.0000e-004**	**0.0413**	**0.0109**	**1.9000e-004**	**0.0111**		**38.1442**	**38.1442**	**1.1100e-003**	**1.0300e-003**	**38.4776**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5637	0.0000	6.5637	2.0387	0.0000	2.0387			0.0000			0.0000
Off-Road	0.6261	7.0256	2.6519	7.5800e-003		0.2923	0.2923		0.2689	0.2689	0.0000	734.1572	734.1572	0.2374		740.0932
Total	**0.6261**	**7.0256**	**2.6519**	**7.5800e-003**	**6.5637**	**0.2923**	**6.8560**	**2.0387**	**0.2689**	**2.3076**	**0.0000**	**734.1572**	**734.1572**	**0.2374**		**740.0932**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0185	0.0104	0.1559	3.8000e-004	0.0411	2.0000e-004	0.0413	0.0109	1.9000e-004	0.0111		38.1442	38.1442	1.1100e-003	1.0300e-003	38.4776
Total	**0.0185**	**0.0104**	**0.1559**	**3.8000e-004**	**0.0411**	**2.0000e-004**	**0.0413**	**0.0109**	**1.9000e-004**	**0.0111**		**38.1442**	**38.1442**	**1.1100e-003**	**1.0300e-003**	**38.4776**

3.4 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2799	2.8686	3.5582	5.5000e-003		0.1494	0.1494		0.1374	0.1374		532.0213	532.0213	0.1721		536.3230
Paving	8.7770					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**9.0569**	**2.8686**	**3.5582**	**5.5000e-003**		**0.1494**	**0.1494**		**0.1374**	**0.1374**		**532.0213**	**532.0213**	**0.1721**		**536.3230**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0185	0.0104	0.1559	3.8000e-004	0.0411	2.0000e-004	0.0413	0.0109	1.9000e-004	0.0111		38.1442	38.1442	1.1100e-003	1.0300e-003	38.4776
Total	**0.0185**	**0.0104**	**0.1559**	**3.8000e-004**	**0.0411**	**2.0000e-004**	**0.0413**	**0.0109**	**1.9000e-004**	**0.0111**		**38.1442**	**38.1442**	**1.1100e-003**	**1.0300e-003**	**38.4776**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2799	2.8686	3.5582	5.5000e-003		0.1494	0.1494		0.1374	0.1374	0.0000	532.0213	532.0213	0.1721		536.3230
Paving	8.7770					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**9.0569**	**2.8686**	**3.5582**	**5.5000e-003**		**0.1494**	**0.1494**		**0.1374**	**0.1374**	**0.0000**	**532.0213**	**532.0213**	**0.1721**		**536.3230**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0185	0.0104	0.1559	3.8000e-004	0.0411	2.0000e-004	0.0413	0.0109	1.9000e-004	0.0111		38.1442	38.1442	1.1100e-003	1.0300e-003	38.4776
Total	**0.0185**	**0.0104**	**0.1559**	**3.8000e-004**	**0.0411**	**2.0000e-004**	**0.0413**	**0.0109**	**1.9000e-004**	**0.0111**		**38.1442**	**38.1442**	**1.1100e-003**	**1.0300e-003**	**38.4776**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.491726	0.046816	0.174288	0.165875	0.042775	0.009340	0.015448	0.021765	0.000361	0.000000	0.026038	0.001433	0.004134

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0237	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	0.0237	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	8.3000e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0154					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**0.0237**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	8.3000e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0154					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**0.0237**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX 2

Trip Generation Report

Source: K. D. Anderson & Associates, Inc. (July 05, 2022)

July 5, 2022

Mr. Julio Tinajero
Milestone Associates Imagineering, Inc.
1000 Lincoln Road, Suite H202
Yuba City, CA 95991

RE: 17812 HIGHWAY 113 TRUCK PARKING FACILITY, SUTTER CO, CA: TRAFFIC OPERATIONAL ASSESSMENT

Dear Mr. Tinajero:

Thank you for contacting our firm regarding the Truck Parking Facility proposed at 17812 Highway 113 (SR 113) near the Sutter County community of Robbins, CA. As we understand the proposed project will occupy 6.7 acres at the east side of SR 113 about 750 feet south of the SR 113 / Del Monte Avenue intersection. The project would provide space for 87 tractor-trailer combinations. Primary access is proposed at a new ungated 45 foot wide driveway on SR 113 which would replace an existing driveway at the same location that served the previous agricultural-industrial use. The project site also abuts Reclamation Road on the eastern boundary and a gated driveway exists there today.

Sutter County has reviewed the project, and while a full transportation impact analysis is not required, normal questions have been raised to be resolved in a focused Traffic Analysis Report (TAR). These questions include:

1. What types of trucks will be using the site, and if STAA trucks are anticipated, is the route to and from SR 113 legally adequate for these vehicles?
2. At what time and in what number will trucks be leaving and arriving at the proposed facility daily?
3. What effects on mainline SR 113 traffic are created by project truck traffic, and are improvements to the site access that would address Caltrans concerns available and feasible?

BACKGROUND INFORMATION

Existing Facilities / Traffic Operating Conditions

SR 99 / Del Monte Avenue Traffic Volumes. Caltrans reports that State Route 113 (SR 113) carried an Annual Average Daily Traffic (AADT) volume of 7,150 (2019) / 7,000 (2020) vehicles per day in the area of the proposed project south of Del Monte Avenue. Of that total, trucks comprise 7% of the daily volumes, based on Caltrans data for the portion of SR 113 north of SR 45 in Yolo County.

The SR 113 / Del Monte Avenue intersection was observed on Tuesday January 4, 2022 during the morning (i.e., 7:00 to 9:00 a.m.) and evening (i.e., 4:00 to 6:00 p.m.) peak commute traffic hours. The number of trucks and automobiles are noted in the attached counts. Those counts indicated that Del Monte Avenue east of SR 113 limited traffic (i.e., a total of 100 vehicles in the two-hour morning observation and 80 in the two evening hours). Of these totals there were 3 "heavy trucks" (i.e., larger than SU trucks) in the morning and none in the evening. It is recognized that traffic on Sutter County roads varies seasonally, and that the local school was not in session. Thus, more automobiles and possibly trucks could use Del Monte Avenue at other times during the year. During our counts there were 636 morning and 718 evening vehicles on SR 113 south of the intersection, and of these 40 and 38 were heavy trucks during the a.m. and evening periods, respectively. Heavy trucks represented 6% and 5% of the total traffic during those two periods. These percentages are similar to the daily average reported by Caltrans.

SR 113 / Del Monte Avenue Intersection Layout. The SR 113 / Del Monte Avenue intersection is controlled by stop signs on the eastbound and westbound Del Monte Avenue approaches. SR 113 has two 12-foot travel lanes with 4-foot paved shoulders. There are four other existing driveways on SR 113 in 600-foot long area north of the proposed project to Del Monte Avenue, and additional areas beyond the shoulder have been paved at various times to provide access to those properties adjoining properties.

Left turn lanes are provided on SR 113 at the Del Monte Avenue intersection. The northbound left turn lane is 320 feet long and is preceded by a 180-foot long bay taper and 320 foot long transition. A painted median area is created by that transition, and that median striping is broken to allow left turns in and out from the project site's existing driveway and from another driveway about 130 feet to the north. The posted speed limit on SR 113 is 55 mph in this area.

Del Monte Avenue. Del Monte Avenue is a local Sutter County road that provides access to the small community of Robbins and to Robbins Elementary School.

Reclamation Road. Reclamation Road is a local two-lane road within right of way owned by Reclamation District 1500. The road runs along the Main Canal in the area of the project. Reclamation Road crosses Del Monte Avenue about 350 feet from SR 113. From that point Del Monte Avenue continues across the canal to the school, and Reclamation Road continues south.

Regulations - State of California

SB 743. With the adoption and 2020 implementation of SB 743, CEQA analysis of transportation impacts has moved from analysis of motorist delay based on Level of Service to consideration of a project's contribution to global climate change as expressed in terms of Vehicle Miles Traveled (VMT). While capacity analysis and Level of Service can still be considered by local agencies in addressing General Plan consistency, Level of Service is no longer a CEQA topic.

State of California Department of Transportation (Caltrans). Caltrans has jurisdiction over state highways. Caltrans' policy documents and analysis guidelines provide direction for transportation impact analysis.

Highway Design Manual, 7th Edition (HDM). The HDM establishes uniform policies and procedures to carry out the state highway design functions of the California Department of Transportation. The HDM establishes uniform policies and procedures to carry out the State highway design functions of the Department. It is neither intended as, nor does it establish, a legal standard for these functions. The standards, procedures, and requirements established and discussed herein are for the information and guidance of the officers and employees of the Department. Many of the instructions given herein are subject to amendment as conditions and experience warrant. Special situations may call for deviation from policies and procedures, subject to Division of Design approval, or such other approval as may be specifically provided for in the text of the HDM.

Encroachment Permits Manual. As a state highway, access to SR 113 is controlled by Caltrans. The Encroachment Permits Manual describes Caltrans' policy, revisions and legislative actions that affect the encroachment permit process. It also provides information on the intergovernmental review process, procedures of the permitting process, storm water management, as-built plan requirements, utility encasement requirements, and other related programs and policies. ***Appendix J Road Connections and Driveways*** includes *Design Guidelines for Typical Rural Driveways on State Highways*. (Attached)

We are not aware of the status of any existing Caltrans permit for current site access on SR 113. In many cases old access points without permits have been perpetuated as improvements are made to state highways. Officially, an encroachment permit is linked to a specific location, a specific use and a specific property owner, and any change to any of these conditions requires an amendment to an existing permit. Any driveway improvements made in the Caltrans right of way will require a new or amended encroachment permit.

Truck Turning Requirements. Large trucks (53-foot trailers) are allowed on mainline SR 113 under the Surface Transportation Authorization Act (STAA), but such vehicles are not permitted on intersecting Sutter County roads unless specifically designated for their use by Caltrans and the local agency (i.e., Sutter County) through evaluation of truck turning requirements. Private access anticipating trucks of this classification, as is typically the case for long haul truck operations, must also have access that can accommodate those vehicles.

Need for Left Turn Lanes. There are no left turn lanes at private access on SR 113 in the area of the Del Monte Avenue intersection, but north of the canal the existing north side industrial area has left turn lanes. Caltrans determines the need for left turn lanes at private access on state highways on a case-by-case basis. The volume of automobile and truck traffic associated with an intersection is a consideration, as well as sight distance and available right of way. Caltrans make use of Chapter 4 of the HDM, as well as guidance in the American Association of State Highway and Transportation Officials (AASHTO) publication *A Policy on Geometric Design of Highways and Streets*. AASHTO guidelines take two forms. These guidelines are presented the 11th Edition

KDA

(2011) in their Exhibit 9-29 and Table 1 and base the need for a left turn lane on the volume of approaching and opposing traffic on the mainline road and the relative percentage of that traffic that turns. These criteria are applicable to intersections where the major street traffic proceeds freely, and side street traffic is controlled by stop signs.

The AASHTO publication was updated in December 2018 and different guidelines are now available. The new guidelines suggest that a left turn lane could be beneficial based on the volume of traffic turning and the total volume per lane on the street. This guidance is presented in their Figure 9-36 Table 2 which follows. These guidelines also suggest volume thresholds for creation of a "bypass" lane that, absent a full turn lane, would allow through traffic to proceed around a vehicle stopped to turn left at a "tee" intersection. The information supporting the 2018 guidelines note, however, that *The volume based guidelines or warrants presented below indicate situations where a left turn lane may be desirable, not necessarily situations where a left-turn lane is definitely needed.*

TABLE 1
ASSESSMENT OF JUSTIFICATION FOR LEFT TURN LANES
UNDER 2011 AASHTO

Opposing Volume (veh/hr)	**Advancing Volume (veh/hr)**			
	5% Left Turns	**10% Left Turns**	**20% Left Turns**	**30% Left Turns**
40-mph operating speed				
800	330	240	180	160
600	410	305	225	200
400	510	380	275	245
200	640	470	350	305
100	720	515	390	340

Source: *A Policy on Geometric Design of Highway and Streets, AASHTO, 2011.*

TABLE 2 ASSESSMENT OF JUSTIFICATION FOR LEFT TURN LANES UNDER 2018 AASHTO		
Left Turn Lane Volume (VPH)	**Major Road Two-Lane Highway Peak-Hour Volume (VPH/Lane)**	
	Three-Leg Intersection	**Four-Leg Intersection**
	Warrants a Left Turn Lane	**Warrants a Left Turn Lane**
5	200	150
10	100	50
15	100	50
20	50	<50
25	50	< 50
30	50	< 50
35	50	< 50
40	50	< 50
45	50	< 50
50 or more	50	< 50
Source: *A Policy on Geometric Design of Highway and Streets, AASHTO, 2018.*		

Sight Distance. The HDM presents two standards for sight distance:

- Minimum stopping sight distance: HDM Table 201.1
- Corner Sight Distance HDM Table 4.05.A

Table 405.1B notes the application of these two measures for public and private roads.

In this case the minimum sight distance for a design speed of 60 mph is 580 feet. For private roads the minimum requirement is the Minimum Stopping Sight distance.

Similarly, for a 60 mph design speed, an entering heavy truck turning left onto southbound SR 113 would require 1,015 feet of corner sight distance looking right, and a truck turning right requires 925 feet looking left.

PROPOSED PROJECT

Project Travel Characteristics

Type of Operation. The operational characteristics of the project have been identified in terms of the amount of truck and automobile activity and the time periods of that travel. Typically, trucking operations fall into two categories: "Long haul" or "Local Distribution or Agricultural Harvesting / Processing Support". For long haul trucks the typical routine sends drivers away from the site

for extended periods of time. On a typical weeklong haul along the West Coast, most trucks return to the site on Friday and leave early Sunday or Monday, and most drivers try to operate outside peak traffic hours. Trips to the east coast can take longer. During the week some trucks may come and go for inspection or maintenance or if the drivers have to come home during the week. Alternatively, local based trucking typically leaves the site each weekday and returns that afternoon /evening. In both cases, a driver would travel by automobile to and from the site before beginning or ending his trips. Some of the truck drivers would park their personal auto at the site and others would be dropped off.

Trip Generation. This project's trip generation was estimated based on available resources and our understanding of the characteristics of these uses. You have indicated that this site will be used by long haul truckers focused on the West Coast.

Long haul truck trip generation rates were developed from 24-hr truck traffic counts at a large (440 spaces) truck parking area in Yuba City. That site generated 334 total truck trips (143 in and 191 out) on a Thursday, or 7.6 daily truck trips per 10 spaces. It was assumed that drivers would also cause automobile trips at the same time that trucks entered and exited and that ½ of the drivers would be dropped off / picked up.

Alternatively, for local trucks it would have been assumed that all would move to and from the site each day, or 20 daily truck trips per 10 spaces. Typically, much local truck activity begins in the morning before the typical commute hour, and trucks return outside of the p.m. peak hour.

The project results in the daily and peak hour trip generation forecasts presented in Table 1. As shown, 12 trips are projected in the a.m. and p.m. peak hours, while the project is projected to generate 166 daily trips. Of the total, 66 trips would be long haul trucks.

Previous Use. The extent of site trip generation with previous uses is unknown. Based on the layout of the area it is likely that trucks have accessed the site in the past, but the number and circumstances is unknown.

TABLE 1
PROJECT TRIP GENERATION

Unit	Unit	Quantity	Trucks			Automobiles			Total		
			In	Out	Total	In	Out	Total	In	Out	Total
A.M. Peak Hour											
Long Haul	10 spaces	1	8%	92%	0.55	64%	36%	0.82	42%	58%	1.36
Proposed	**87 spaces**	**8.7**	**0**	**5**	**5**	**5**	**2**	**7**	**5**	**7**	**12**
P.M. Peak Hour											
Long Haul	10 spaces	1	71%	29%	0.55	43%	57%	0.82	54%	46%	1.36
Proposed	**87 spaces**	**8.7**	**4**	**1**	**5**	**3**	**4**	**7**	**7**	**5**	**12**
Daily											
Long Haul	10	1	43%	57%	7.64	43%	57%	11.45	43%	57%	19.10
Proposed	**87**	**8.7**	**29**	**37**	**66**	**43**	**57**	**100**	**72**	**94**	**166**

KDA

Proposed SR 113 Access. The proposed access to SR 113 is 45 feet wide at the location of an existing driveway at an opening in the fence along the state right of way 50 feet from the centerline of SR 113. The access would not be gated. The area beyond the paved shoulder was also paved at some point in the past, and no improvements within the Caltrans right of way are proposed under the available plan. As noted earlier, left turns are already permitted this location by existing striping.

Project Effects

Because the volume of new traffic associated with this use is low, its effects on the state highway would primary relate to:

- The availability of adequate sight distance for exiting vehicles for other motorists who are approaching the access when a truck is accessing the driveway.
- the ability of large trucks to enter and exit the site without interfering with the flow of background traffic on SR 113 or creating a safety problem.
- the need for a left turn on eastbound SR 113.

Sight Distance. The alignment of SR 113 in this area is level and straight. As a result, the view measured 15 feet from the edge of the travel way across the Caltrans right of way would satisfy corner sight distance requirements in both directions. Looking north the view based on corner sight distance requirements would extend to the Del Monte Avenue intersection and cross the area of that intersection's southbound left turn lane. Vehicles stopped in that lane could affect sight distance, however, the traffic counts indicated that the number of left turns at that location is low, and it is unlikely that queuing vehicle would have an appreciable effect on the availability of adequate sight distance. Looking south, the view is clear, although there is a tree within the Caltrans right of way just beyond the project limits that would need to be maintained to perpetuate a clear view from the eye of a driver in the cab of a heavy truck.

As with many locations in the Sacramento Valley, the project area is susceptible to winter fog that limits sight distance. Motorists typically respond by reducing driving speeds when visibility is limited and by selecting alternative routes that minimize potential vehicle conflicts. However, specific design policies relating to the effects of winter fog are not included in the HDM.

STAA Trucks. While some of the trucks at the site may be classified as California Legal and do not require additional approvals, trucks permitted under the Surface Transportation Authorization Act (STAA) are also expected by the project proponents. The path of STAA trucks at the site access has been plotted, and the results are attached.

As shown, due to the distance from the highway to fence along the right of way, the paths of heavy trucks within the planned 45 foot opening would generally remain within the expected area for inbound and outbound traffic. Turning trucks do not have to use of the full driveway width when entering and exiting in either direction.

The identified paths would travel over the "paved" area along the project frontage outside of the existing 4-foot shoulder, and the status of the pavement in that area is uncertain. It would be reasonable to expect that this area would need to be reconstructed to accommodate heavy truck

loads within the limits of the truck paths in a manner that is consistent with the intent of the requirements of HDM Figure 205.1 in terms of return radius offset and transition, and that concept should be adapted to address the actual turning path that has been shown in our exhibits.

Safety for Outbound Left Turns. The project would create outbound traffic onto SR 113 by automobiles and trucks. As noted earlier, the access provides adequate sight distance for drivers making left turns, and such turning maneuvers have likely occurred in the past with the previous use. At the trip generation levels anticipated with current background traffic volumes the average delays for exiting traffic would not be excessive. However large trucks travel a considerable distance as they accelerate after making a turn, and while other southbound traffic will be able to see these vehicles and react accordingly, some delay to through traffic may occur. As noted earlier, reduced sight distance due to winter fog may create the need to limit outbound trucks to right turns only when visibility is limited.

Need for Left Turn Lane. The trip generation forecast suggests that 29 trucks would enter the site over the course of a weekday. The number could vary through the week depending on when trucks begin or end their haul. Based on the project's location relative to Interstate 5, Interstate 80 and regional distribution centers in Woodland and Sacramento it is likely that the greater share of inbound truck traffic will be arriving from the south. It is unlikely that the number of trucks turning left into the site would ever exceed 5 trucks per hour, and the typical count would likely be lower.

Left turning trucks would slow in the southbound SR 113 travel lane as they approach the driveway, and HDM Table 405.2B suggests that 530 feet of deceleration space is needed for a 60 mph design speed. Trucks could begin to move into the median area and out of the through travel lane when they are about 200 feet from the driveway, and based on NCHRP Report 505 *Review of Truck Characteristics as Factor in Roadway Design* Table 25, that distance would allow a loaded truck to come to a stop from 45 mph. However, as the median is only about 7 feet wide at the project driveway a portion of the truck will remain in the through travel lane.

Other drivers on SR 113 may not expect to be following heaving trucks that are decelerating on southbound SR 113 coming out of the Del Monte Avenue intersection, which could lead to an increase in rear end collisions. SR 113 could be widened to provide a full left turn lane at the access or Two-Way Left Turn (TWLT) lane, although the cost of this work is unknown. While inbound automobiles are not likely to create a safety problem, unless SR 113 is reconstructed to provide a wider left turn area capable of accommodating trucks outside of the flow of southbound traffic, limiting inbound trucks at the driveway to northbound "right turns only" is recommended.

Need for Right Turn Lane. The issues associated with right turns by heavy trucks are similar to those associated with left turns, but other drivers are more likely to expect right turns into businesses along SR 113. At a minimum, implementation of access improvements that are consistent with HDM Figure 205.1 improvements provides an area for trucks to enter the site. However, trucks would still slow to about 20 mph as they enter the taper area. It would be desirable to increase the area available for truck deceleration outside of the through travel lanes. Because the 160 foot area along the project frontage has been paved, it is possible that trucks could use this area for deceleration. However, the status of the pavement section in this area is unknown, and the extent of reconstruction needed to support truck loadings would need to be evaluated. A full

right turn lane or twelve foot wide shoulder could be constructed, and both would be subject to Caltrans approval.

Work to further lengthen deceleration opportunities outside of the through travel lane and achieve the HDM's 530 foot deceleration distance would involve property beyond the limits of the project. The extent of right of way and drainage issues in this area is unknown.

Improvements to the area along northbound SR 113 to provide space for deceleration outside of the flow of northbound traffic is recommended. Because this area is controlled by Caltrans, the extent of improvements would need to be determined in consultation with District 3, and any work required by Sutter County would need to be implemented under an encroachment permit from Caltrans.

Alternatives to SR 113 Access. Because the site abuts Reclamation Road and a 20 foot driveway already exists, the feasible to access the site via that road instead of SR 113 was considered.

There appear to be limitations associated with using Reclamation Road. Foremost is that pedestrian and automobile traffic destined for the east side of the Main Canal uses Del Monte Avenue across the Reclamation Road intersection. It is possible that the community may object to a truck access in the area of the route to the elementary school, and it would be desirable to avoid using this route during the periods when children are traveling to and from the school. In addition, neither Del Monte Avenue or Reclamation Road are designated STAA routes, and both streets, as well as the driveway could require improvements to accommodate trucks and to gain an STAA designation. The extent to which the reclamation district may approve those improvements is unknown. Thus access to Reclamation Road would likely need to be for automobiles and for non-STAA trucks.

Conclusions

With improvements to SR 113 to provide space for deceleration for northbound trucks, prohibiting left turns by trucks into the site, making secondary access to Reclamation Road available and applying normal access management during inclement weather the proposed project with 87 truck / trailer spaces can be developed without significant safety impacts to SR 113 in this area.

Please feel free to call me if you have any questions.

Sincerely Yours,

KD Anderson & Associates, Inc.



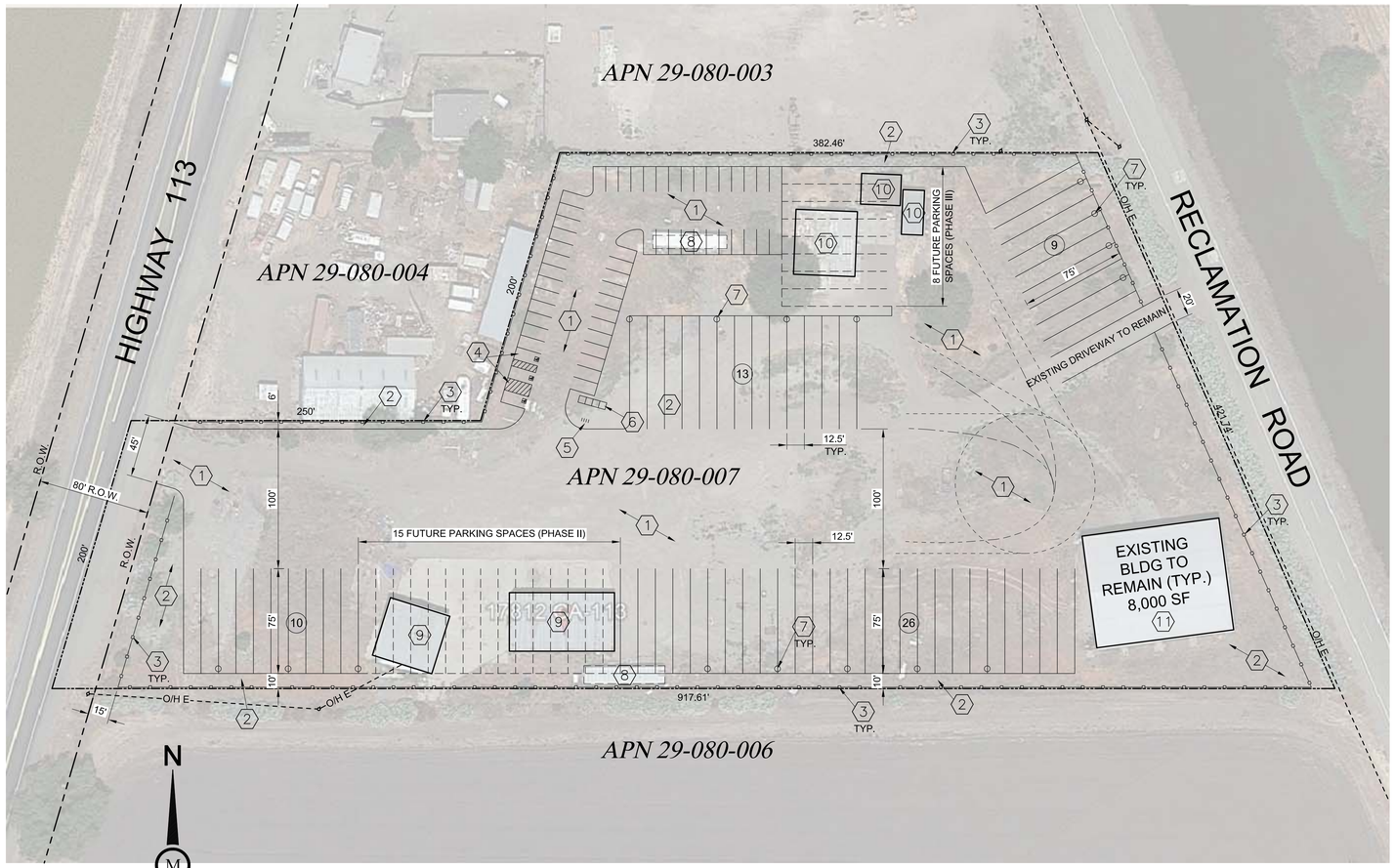
Kenneth D. Anderson, P.E.
President

Attachments: site plan, traffic count, truck turn plots, references

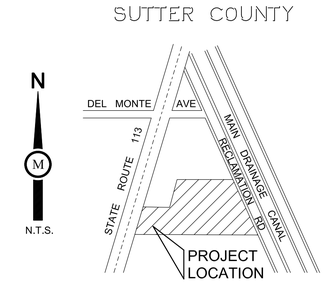
KDA

PROPOSED TRUCK YARD

17812 HIGHWAY 113
KNIGHTS LANDING, CA
A.P.N. 29-080-007



SITE PLAN
1" = 50'



VICINITY MAP
NOT TO SCALE

CONSTRUCTION NOTES

1. NEW ASPHALT CONCRETE PAVEMENT
2. NEW LANDSCAPE / DRAINAGE AREA. LANDSCAPING WILL BE WITHIN PLANTERS SEPARATED FROM PARKING AND DRIVEWAYS WITH SIX-INCH CONCRETE CURBING.
3. NEW 6' HIGH CHAIN-LINK FENCE WITH PRIVACY SLATS ALONG PERIMETER OF SITE. PRIVACY SLATS MUST HAVE A MINIMUM PRIVACY RATING OF 90 PERCENT OR GREATER.
4. NEW ACCESSIBLE PARKING SPACES (1 VAN ACCESSIBLE)
5. NEW BICYCLE RACK (4 SPACES PROVIDED)
6. NEW PORTABLE TRAILER MOUNTED RESTROOM FACILITIES (4 RESTROOMS PROVIDED)
7. NEW 55-GALLON TRASH RECEPTACLE (16 PROVIDED)
8. EXISTING BUILDING TO BE REMOVED
9. EXISTING BUILDING TO BE REMOVED AS PART OF PHASE II, PROVIDING 15 ADDITIONAL PARKING SPACES
10. EXISTING BUILDING TO BE REMOVED AS PART OF PHASE III, PROVIDING 8 ADDITIONAL PARKING SPACES
11. EXISTING 8,000 S.F. STRUCTURE WILL BE LIMITED TO WINDSHIELD, WIPER, AND HEADLIGHT REPLACEMENT WORK AS OUTLINED UNDER ZONING CODE SECTION 1500-07-030 B. 3. M.
    NO MATERIALS SUCH TRUCK PARTS, TIRES, AND RELATED ITEMS SHALL BE STORED ON THE PROPERTY.

LOT DATA:

A.P.N.:	29-080-007
TOTAL ACREAGE:	291,852 SF (6.7 AC)
EXISTING PARCELS:	1
PROPOSED PARCELS:	1
EXISTING ZONE:	M-1 LIGHT INDUSTRIAL
PROPOSED ZONE:	M-1 LIGHT INDUSTRIAL
EXISTING USE:	INDUSTRIAL
PROPOSED USE:	TRUCK YARD / INDUSTRIAL USES
TRUCK PARKING SPACE:	12.5' x 75'
TRUCK PARKING SPACES:	81 SPACES

ACCESS TO PARKING LOT IS TO BE FROM HIGHWAY 113 AND RECLAMATION ROAD

PARKING DATA:

TRUCK PARKING SPACE:	81 SPACES
AUTO PARKING (1 PER 1.5 TRUCKS):	54 SPACES
REQUIRED:	135 SPACES
TRUCK PARKING SPACE (12.5'x75') (INCLUDES 23 FUTURE SPACES)	81 SPACES
AUTO PARKING SPACE (9'x18')	51 SPACES
ACCESSIBLE PARKING SPACE (9'x18')	3 SPACES
PROVIDED:	135 SPACES

PROPERTY DESCRIPTION

REAL PROPERTY IN THE COUNTY OF SUTTER, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

ALL THAT PORTION OF LOT 48 AS SHOWN ON THAT CERTAIN MAP ENTITLED "MAP OF SUTTER BASIN SUBDIVISION NO 4" FILED IN THE OFFICE OF THE COUNTY RECORDER OF SUTTER COUNTY, CALIFORNIA, ON MAY 06, 1921 IN BOOK 3 OF SURVEYS , PAGE 88

SITE UTILITIES

SEWAGE DISPOSAL:	PRIVATE ONSITE
WATER SUPPLY:	PRIVATE ONSITE
DRAINAGE:	SUTTER COUNTY

APPLICANT

SARBJIT THIARA
CAPITAL FARM & MANAGEMENT COMPANY
(530) 682-2484

SHEET INDEX

1	SITE PLAN / PROJECT DATA
2	LANDSCAPE CONCEPT PLAN
3	PHOTOMETRIC PLAN

Milestone Associates Imagineering, Inc.
1000 Lincoln Road, Suite H202, Yuba City, CA 95991
(530) 755-4700

PROPOSED TRUCK YARD
17812 HWY 113, KNIGHTS LANDING, CA

SITE PLAN / PROJECT DATA 1

03-6-23

Prepared by National Data & Surveying Services

SR 113 & Del Monte Ave

Peak Hour Turning Movement Count

ID: 22-070009-002
City: Robbins

Day: Tuesday
Date: 1/4/2022

PEAK HOURS	COUNT PERIODS
07:00 AM - 08:00 AM	7:00 AM - 09:00 AM
NONE	NONE
04:00 PM - 05:00 PM	4:00 PM - 06:00 PM

SOUTHBOUND (SR 113)

AM	0	236	11	0	114	AM
NOON	0	0	0	0	0	NOON
PM	0	110	4	0	454	PM

EASTBOUND (Del Monte Ave)

AM	NOON	PM	
0	0	3	
0	0	0	0
0	0	0	0
0	0	2	0
0	0	1	0
AM	NOON	PM	

WESTBOUND (Del Monte Ave)

PM	NOON	AM	
7	0	8	0
2	0	0	0
16	0	15	0
0	0	0	0
25	0	26	
PM	NOON	AM	

NORTHBOUND (SR 113)

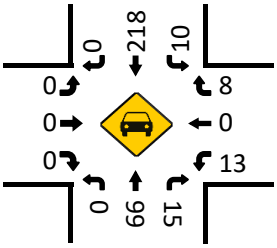
PM	127	0	1	447	19	PM
NOON	0	0	0	0	0	NOON
AM	251	0	0	106	15	AM

CONTROL

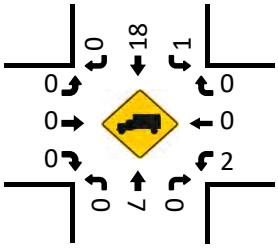
2-Way Stop(EB/WB)

TEV	391 AM	0 NOON	609 PM
PHF	0.96		0.89

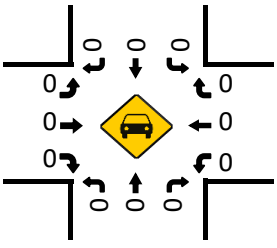
Cars (AM)



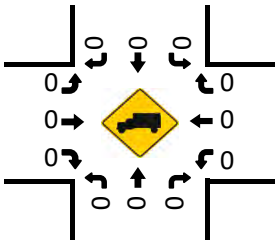
HT (AM)



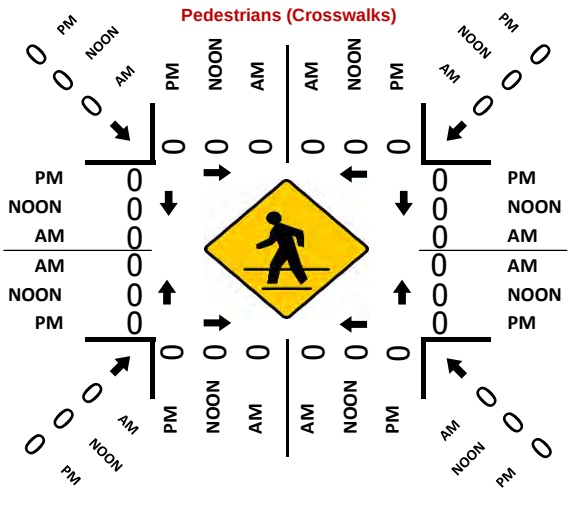
Cars (NOON)



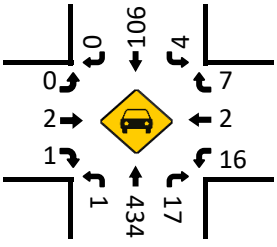
HT (NOON)



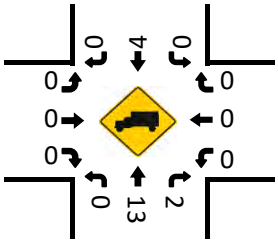
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



National Data & Surveying Services Intersection Turning Movement Count

Location: SR 113 & Del Monte Ave
City: Robbins
Control: 2-Way Stop(EB/WB)

Project ID: 22-070009-002
Date: 1/4/2022

Data - Total

NS/EW Streets:	SR 113				SR 113				Del Monte Ave				Del Monte Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	23	3	0	3	64	0	0	0	0	0	0	5	0	4	0	102
7:15 AM	0	27	2	0	1	57	0	0	0	0	0	0	1	0	3	0	91
7:30 AM	0	29	2	0	5	61	0	0	0	0	0	0	4	0	1	0	102
7:45 AM	0	27	8	0	2	54	0	0	0	0	0	0	5	0	0	0	96
8:00 AM	0	25	5	0	4	28	0	0	0	0	0	0	5	1	2	0	70
8:15 AM	1	28	4	0	1	40	1	0	0	0	0	0	8	0	1	0	84
8:30 AM	0	17	2	0	2	41	1	0	0	0	0	0	5	0	1	0	69
8:45 AM	0	14	2	0	2	35	0	0	0	0	0	0	4	1	1	0	59
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	190	28	0	20	380	2	0	0	0	0	0	37	2	13	0	673
APPROACH %'s :	0.46%	86.76%	12.79%	0.00%	4.98%	94.53%	0.50%	0.00%					71.15%	3.85%	25.00%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	106	15	0	11	236	0	0	0	0	0	0	15	0	8	0	391
PEAK HR FACTOR :	0.000	0.914	0.469	0.000	0.550	0.922	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.500	0.000	0.958
		0.864				0.922								0.639			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	133	5	0	1	27	0	0	0	0	0	0	4	0	2	0	172
4:15 PM	0	119	2	0	1	24	0	0	0	0	0	0	3	1	2	0	152
4:30 PM	1	80	5	0	0	32	0	0	0	0	0	0	7	1	1	0	127
4:45 PM	0	115	7	0	2	27	0	0	0	2	1	0	2	0	2	0	158
5:00 PM	0	75	3	0	1	26	0	0	0	0	0	0	2	0	2	0	109
5:15 PM	0	86	3	0	1	31	0	0	0	1	0	0	1	1	0	0	124
5:30 PM	0	64	4	0	3	28	0	0	1	0	0	0	2	0	2	0	104
5:45 PM	0	45	3	0	0	20	0	0	0	0	0	0	1	0	0	0	69
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	717	32	0	9	215	0	0	1	3	1	0	22	3	11	0	1015
APPROACH %'s :	0.13%	95.60%	4.27%	0.00%	4.02%	95.98%	0.00%	0.00%	20.00%	60.00%	20.00%	0.00%	61.11%	8.33%	30.56%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	1	447	19	0	4	110	0	0	0	2	1	0	16	2	7	0	609
PEAK HR FACTOR :	0.250	0.840	0.679	0.000	0.500	0.859	0.000	0.000	0.000	0.250	0.250	0.000	0.571	0.500	0.875	0.000	0.885
		0.846				0.891				0.250				0.694			

National Data & Surveying Services Intersection Turning Movement Count

Location: SR 113 & Del Monte Ave
City: Robbins
Control: 2-Way Stop(EB/WB)

Project ID: 22-070009-002
Date: 1/4/2022

Data - Cars

NS/EW Streets:	SR 113				SR 113				Del Monte Ave				Del Monte Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	22	3	0	2	59	0	0	0	0	0	0	5	0	4	0	95
7:15 AM	0	25	2	0	1	51	0	0	0	0	0	0	1	0	3	0	83
7:30 AM	0	27	2	0	5	56	0	0	0	0	0	0	4	0	1	0	95
7:45 AM	0	25	8	0	2	52	0	0	0	0	0	0	3	0	0	0	90
8:00 AM	0	24	5	0	4	24	0	0	0	0	0	0	5	1	2	0	65
8:15 AM	1	24	4	0	1	35	1	0	0	0	0	0	8	0	1	0	75
8:30 AM	0	10	2	0	2	34	1	0	0	0	0	0	5	0	1	0	55
8:45 AM	0	13	2	0	2	32	0	0	0	0	0	0	4	1	1	0	55
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	170	28	0	19	343	2	0	0	0	0	0	35	2	13	0	613
APPROACH %'s :	0.50%	85.43%	14.07%	0.00%	5.22%	94.23%	0.55%	0.00%					70.00%	4.00%	26.00%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	99	15	0	10	218	0	0	0	0	0	0	13	0	8	0	363
PEAK HR FACTOR :	0.000	0.917	0.469	0.000	0.500	0.924	0.000	0.000	0.000	0.000	0.000	0.000	0.650	0.000	0.500	0.000	0.955
		0.864				0.934								0.583			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	129	5	0	1	26	0	0	0	0	0	0	4	0	2	0	167
4:15 PM	0	114	2	0	1	24	0	0	0	0	0	0	3	1	2	0	147
4:30 PM	1	79	5	0	0	32	0	0	0	0	0	0	7	1	1	0	126
4:45 PM	0	112	5	0	2	24	0	0	0	2	1	0	2	0	2	0	150
5:00 PM	0	72	3	0	1	24	0	0	0	0	0	0	2	0	2	0	104
5:15 PM	0	77	3	0	1	31	0	0	0	1	0	0	1	1	0	0	115
5:30 PM	0	61	4	0	3	28	0	0	1	0	0	0	2	0	2	0	101
5:45 PM	0	44	3	0	0	19	0	0	0	0	0	0	1	0	0	0	67
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	688	30	0	9	208	0	0	1	3	1	0	22	3	11	0	977
APPROACH %'s :	0.14%	95.69%	4.17%	0.00%	4.15%	95.85%	0.00%	0.00%	20.00%	60.00%	20.00%	0.00%	61.11%	8.33%	30.56%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	1	434	17	0	4	106	0	0	0	2	1	0	16	2	7	0	590
PEAK HR FACTOR :	0.250	0.841	0.850	0.000	0.500	0.828	0.000	0.000	0.000	0.250	0.250	0.000	0.571	0.500	0.875	0.000	0.883
		0.843				0.859				0.250				0.694			

National Data & Surveying Services Intersection Turning Movement Count

Location: SR 113 & Del Monte Ave
City: Robbins
Control: 2-Way Stop(EB/WB)

Project ID: 22-070009-002
Date: 1/4/2022

Data - HT

NS/EW Streets:	SR 113				SR 113				Del Monte Ave				Del Monte Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	1	0	0	1	5	0	0	0	0	0	0	0	0	0	0	7
7:15 AM	0	2	0	0	0	6	0	0	0	0	0	0	0	0	0	0	8
7:30 AM	0	2	0	0	0	5	0	0	0	0	0	0	0	0	0	0	7
7:45 AM	0	2	0	0	0	2	0	0	0	0	0	0	2	0	0	0	6
8:00 AM	0	1	0	0	0	4	0	0	0	0	0	0	0	0	0	0	5
8:15 AM	0	4	0	0	0	5	0	0	0	0	0	0	0	0	0	0	9
8:30 AM	0	7	0	0	0	7	0	0	0	0	0	0	0	0	0	0	14
8:45 AM	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	4
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	20	0	0	1	37	0	0	0	0	0	0	2	0	0	0	60
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	2.63%	97.37%	0.00%	0.00%					100.00%	0.00%	0.00%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	7	0	0	1	18	0	0	0	0	0	0	2	0	0	0	28
PEAK HR FACTOR :	0.000	0.875	0.000	0.000	0.250	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.875
	0.875				0.792								0.250				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	4	0	0	0	1	0	0	0	0	0	0	0	0	0	0	5
4:15 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	3	2	0	0	3	0	0	0	0	0	0	0	0	0	0	8
5:00 PM	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	0	5
5:15 PM	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
5:30 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	29	2	0	0	7	0	0	0	0	0	0	0	0	0	0	38
APPROACH %'s :	0.00%	93.55%	6.45%	0.00%	0.00%	100.00%	0.00%	0.00%									
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	13	2	0	0	4	0	0	0	0	0	0	0	0	0	0	19
PEAK HR FACTOR :	0.000	0.650	0.250	0.000	0.000	0.333	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.594
	0.750				0.333												

National Data & Surveying Services Intersection Turning Movement Count

Location: SR 113 & Del Monte Ave
City: Robbins
Control: 2-Way Stop(EB/WB)

Project ID: 22-070009-002
Date: 1/4/2022

Data - Bikes

NS/EW Streets:	SR 113				SR 113				Del Monte Ave				Del Monte Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :																	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :																	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

National Data & Surveying Services Intersection Turning Movement Count

Location: SR 113 & Del Monte Ave
City: Robbins
Project ID: 22-070009-002
Date: 1/4/2022

Data - Pedestrians (Crosswalks)

NS/EW Streets:	SR 113		SR 113		Del Monte Ave		Del Monte Ave		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0
APPROACH %'s :									
PEAK HR :	07:00 AM - 08:00 AM								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0
APPROACH %'s :									
PEAK HR :	04:00 PM - 05:00 PM								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									


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Tractor Width : 8.50
Trailer Width : 8.50
Tractor Track : 8.50
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Lock to Lock Time : 6.0
Steering Angle : 26.1
Articulating Angle : 70.0
Legend
17812 CA-113
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17812 CA-113
STAA INBOUND
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17812 CA-113
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75 '
16 '
17812 CA-113
STAA OUTBOUND
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Google Earth
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Appendix J – Road Connections and Driveways

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Design Guidelines for Typical Rural Driveways in State Right of Way. 1

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Design Guidelines for Typical Rural Driveways in State Right of Way

REFERENCES:

Please always refer to the latest Highway Design Manual (HDM) for most up to date guidelines. The HDM indexes referenced in the guidelines below can be accessed online from the following link:

https://dot.ca.gov/programs/design/manual-highway-design-manual-hdm

Initial Driveway Design Considerations:

1. **Location of the driveway shall be designed to maximize corner sight distance.** For corner sight distance, see HDM Index 405.1 (2)(c). Driveway proposals that do not meet sight distance requirements will not be permitted. The minimum corner sight distance shall be equal to the stopping sight distance as given in HDM Table 201.1. HDM Table 101.2 shows appropriate ranges of design speeds that shall be used for the various types of facilities, place types, and conditions listed (see HDM Table 101.2 Vehicular Design Speed; Table 201.1 Sight Distance Standards; Index 205.4 Driveways on Frontage roads and in Rural Areas; Index 405.1 (2) Corner Sight Distance).

2. **Driveways connecting to State highways shall be paved a minimum of 20 feet from the edge of shoulder** or to the edge of State right of way, whichever is less to minimize or eliminate gravel from being scattered on the highway and to provide a paved surface for vehicles and bicycles to accelerate and merge. Where larger design vehicles are using the driveway (e.g., dump trucks, flatbed trucks, moving vans, etc.), extend paving so the drive wheels will be on a paved surface when accelerating onto the roadway (see HDM Index 205.4 Driveways on Frontage roads and in Rural Areas).

Driveway Design Details: Once considerations 1 and 2 above are met, driveway shall be designed per the following requirements:

3. Where County or City Regulations differ from the State's, it may be desirable to follow their regulations (See HDM Index 205.4 Driveways on Frontage roads and in Rural Areas).

OR

4. Design details are shown on HDM Figure 205.1. This detail, without the recess, may be used on conventional highways (see HDM Figure 205.1 Access Openings on Expressways, Note 2).

5. Approach and departure tapers should be 50 feet longitudinal and 8 feet from edge of traveled way at the end of the taper. Approach and departure tapers are not required where the existing paved shoulder is at least 8 feet wide (see HDM Figure 205.1 Access Openings on Expressways).

Structural Section Design Details: Driveways structural section has to meet the following requirements:

6. Approach and departure tapers should have structural sections matching the existing State highway shoulders. An alternate shoulder design is allowed. See HDM Figure 613.5B for details. For asphalt driveway the structural section should be equal to or greater than edge of shoulder or approach and

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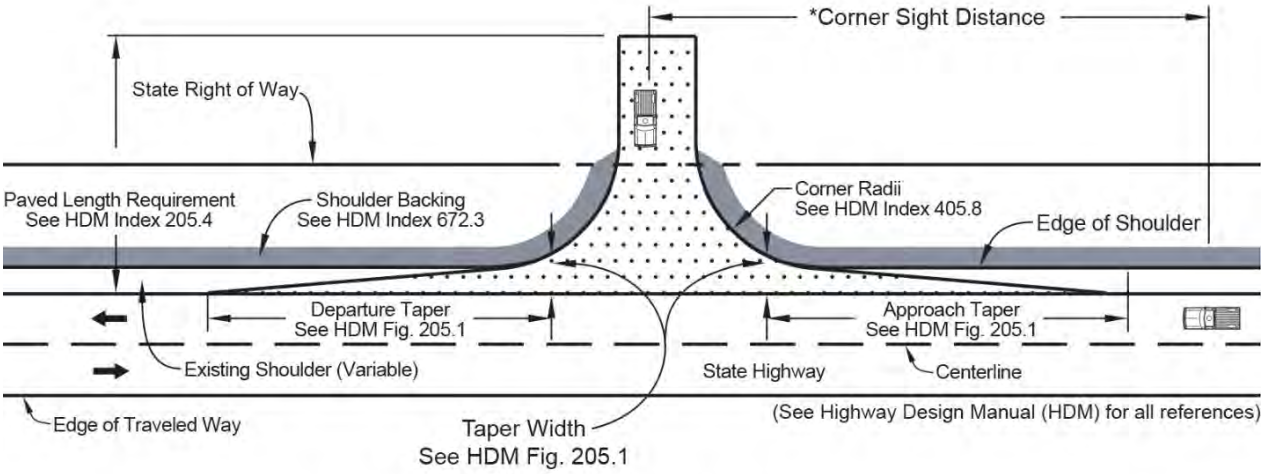
departure tapers. Minimum thickness of surface course is 0.35 foot. Aggregate base depth should match State highway shoulders. Details (cross section, etc.) for concrete driveways are shown on Standard Plan A87A. Minimum thickness at driveway shall be 4 inches for residential and 6 inches for commercial. (See HDM 613.5 (2) Shoulders; Standard Plan A87A Curb and Driveways; Standard Plans are available at:

https://dot.ca.gov/programs/design/ccs-standard-plans-and-standard-specifications

7. Place shoulder backing from the edge of pavement (EP) to the hinge point (HP). Shoulder backing should be placed on a width of at least 2 feet from EP. For placement of shoulder backing thickness greater than 0.5 foot for slope repair; shoulder backing behind dikes; and where longitudinal drainage are present; see HDM for details (see HDM Index 672 Shoulder Backing and HDM Figures 672.3 A through E).

The Figure below is provided to assist driveway design for rural areas and to clarify terminologies used in the above guidance. This figure is provided for general illustration purposes and is not be used for design details. It should not to be used as a drawing in the encroachment permit application for the driveway.

Driveway Design Requirements for Rural Areas with Unimproved Frontage on Conventional State Highways



*Corner Sight Distance shall be calculated from all directions of approach. See HDM Index 405.1(2) & Figure 405.7 for set back and sight distance calculations.

Purpose: The above excerpts from the Department's HDM are shown for reference. The design standards used for any project should equal or exceed the minimum given in the manual to the maximum extent feasible. They do not replace engineering knowledge, experience, and judgment in the design of driveways.

Special situations may call for variation from policies and procedures, subject to the appropriate approval. This is not intended to, nor does it establish a legal standard or any other standard of conduct or duty toward the public.

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APPENDIX B
ENVIRONMENTAL NOISE ANALYSIS

Noise Impact Assessment

17812 Highway 113 Truck Yard Project

Sutter County, California

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July 2022

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LIST OF ACRONYMS AND ABBREVIATIONS

Term	Description
CNEL	Community Noise Equivalent Level
County	Sutter County
dB	Decibel
dBA	Decibel is A-weighted
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
ITE	Institute of Transportation Engineers
L_{eq}	Measure of ambient noise
OPR	Office of Planning and Research
OSHA	Federal Occupational Safety and Health Administration
PPV	Peak particle velocity
Project	17812 Highway 113 Truck Yard Project
RMS	Root mean square
SR	State Route
WEAL	Western Electro-Acoustic Laboratory, Inc.

1.0 INTRODUCTION

This report documents the results of a Noise Impact Assessment completed for the 17812 Highway 113 Truck Yard (Project), which proposes the development of a truck yard with ninety-six parking spaces in Sutter County, California. This assessment was prepared as a comparison of predicted Project noise levels to noise standards promulgated by the Sutter County General Plan and Municipal Code. The purpose of this report is to estimate Project-generated noise levels and to determine the level of impact the Project would have on the environment.

1.1 Project Location and Description

The Project Site is located in Sutter County (County) on a 6.7-acre site. The irregular shaped site is generally bound by agricultural land and industrial uses to the north, residential land uses to the east, agricultural land to the south and State Route (SR) 113 to the west, with agricultural land beyond. The Project Site is relatively flat and currently accommodates a repair shop with multiple metal offices/ buildings which are proposed for demolition. Additionally, the Project Site would be repaved to accommodate ninety-six truck parking spaces.

The Project Site is zoned to Light Industrial (M-1) which is intended to provide for a full range of lower intensity manufacturing, assembly, processing, fabrication, bulk handling of products, storage, warehousing, and other similar uses conducted in a fashion that minimizes visual and operational impacts on adjoining uses. M-1 uses are to be compatible when operating in relatively close proximity to residential and commercial uses (Sutter County 2021).

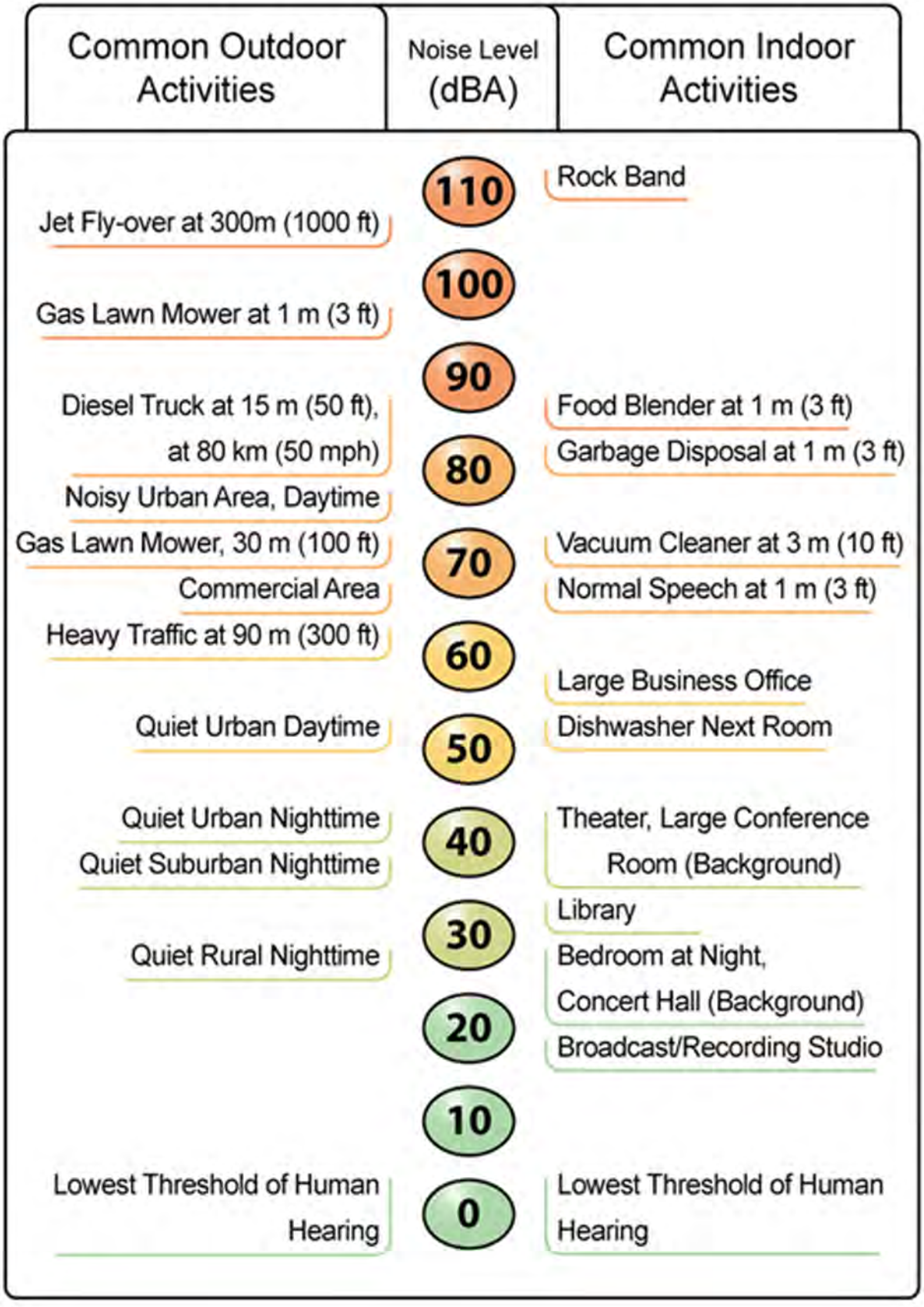
2.0 ENVIRONMENTAL NOISE AND GROUNDBORNE VIBRATION ANALYSIS

2.1 Fundamentals of Noise and Environmental Sound

2.1.1 Addition of Decibels

The decibel (dB) scale is logarithmic, not linear, and therefore sound levels cannot be added or subtracted through ordinary arithmetic. Two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted (dBA), an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound and twice as loud as a 60-dBA sound. When two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be three dB higher than one source under the same conditions (Federal Transit Administration [FTA] 2018). For example, a 65-dB source of sound, such as a truck, when joined by another 65 dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by three dB). Under the decibel scale, three sources of equal loudness together would produce an increase of five dB.

Typical noise levels associated with common noise sources are depicted in Figure 2-1.



Source: California Department of Transportation (Caltrans) 2020a

Figure 2-1. Common Noise Levels

2.1.2 Sound Propagation and Attenuation

Noise can be generated by a number of sources, including mobile sources such as automobiles, trucks and airplanes, and stationary sources such as construction sites, machinery, and industrial operations. Sound spreads (propagates) uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately six dB for each doubling of distance from a stationary or point source. Sound from a line source, such as a highway, propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately three dB for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics (Federal Highway Administration [FHWA] 2011). No excess attenuation is assumed for hard surfaces like a parking lot or a body of water. Soft surfaces, such as soft dirt or grass, can absorb sound, so an excess ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. For line sources, an overall attenuation rate of three dB per doubling of distance is assumed (FHWA 2011).

Noise levels may also be reduced by intervening structures; generally, a single row of detached buildings between the receptor and the noise source reduces the noise level by about five dBA (FHWA 2006), while a solid wall or berm generally reduces noise levels by 10 to 20 dBA (FHWA 2011). However, noise barriers or enclosures specifically designed to reduce site-specific construction noise can provide a sound reduction 35 dBA or greater (Western Electro-Acoustic Laboratory, Inc. [WEAL] 2000). To achieve the most potent noise-reducing effect, a noise enclosure/barrier must physically fit in the available space, must completely break the “line of sight” between the noise source and the receptors, must be free of degrading holes or gaps, and must not be flanked by nearby reflective surfaces. Noise barriers must be sizable enough to cover the entire noise source and extend lengthwise and vertically as far as feasibly possible to be most effective. The limiting factor for a noise barrier is not the component of noise transmitted through the material, but rather the amount of noise flanking around and over the barrier. In general, barriers contribute to decreasing noise levels only when the structure breaks the "line of sight" between the source and the receiver.

The manner in which older homes in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows (Caltrans 2002). The exterior-to-interior reduction of newer residential units is generally 30 dBA or more (Harris Miller, Miller & Hanson Inc. [HMMH] 2006). Generally, in exterior noise environments ranging from 60 dBA Community Noise Equivalent Level (CNEL) to 65 dBA CNEL, interior noise levels can typically be maintained below 45 dBA, a typically residential interior noise standard, with the incorporation of an adequate forced air mechanical ventilation system in each residential building, and standard thermal-pane residential windows/doors with a minimum rating of Sound Transmission Class (STC) 28. (STC is an integer rating of how well a building partition attenuates airborne sound. In the U.S., it is widely used to rate interior partitions, ceilings, floors, doors, windows, and exterior wall configurations.) In exterior noise environments of 65 dBA CNEL or greater, a combination of forced-air mechanical ventilation and sound-rated construction methods is often required to meet the interior noise level limit. Attaining the necessary noise reduction from exterior to interior spaces is readily achievable in noise environments less than 75 dBA CNEL with proper wall construction techniques following California Building Code methods, the selections of proper windows and doors, and the incorporation of forced-air mechanical ventilation systems.

2.1.3 Noise Descriptors

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise, as well as the time of day when the noise occurs. The L_{eq} is a measure of ambient noise, while the L_{dn} and CNEL (Community Noise Equivalent Level) are measures of community noise. Each is applicable to this analysis and defined in Table 2-1.

Table 2-1. Common Acoustical Descriptors

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

The A weighted decibel sound level scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a

method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about ±1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends on the distance between the receptor and the noise source. Close to the noise source, the models are accurate to within about ±1 to 2 dBA.

2.1.4 Human Response to Noise

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

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

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

2.1.5 Effects of Noise on People

2.1.5.1 Hearing Loss

While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise.

The Occupational Safety and Health Administration (OSHA) has a noise exposure standard that is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over eight hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

2.1.5.2 Annoyance

Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The L_{dn} as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources.

2.2 Fundamentals of Environmental Groundborne Vibration

2.2.1 Vibration Sources and Characteristics

Sources of earthborne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or manmade causes (explosions, machinery, traffic, trains, construction equipment, etc.). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions).

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One is the peak particle velocity (PPV); another is the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. The PPV and RMS vibration velocity amplitudes are used to evaluate human response to vibration.

PPV is generally accepted as the most appropriate descriptor for evaluating the potential for building damage. For human response, however, an average vibration amplitude is more appropriate because it takes time for the human body to respond to the excitation (the human body responds to an average vibration amplitude, not a peak amplitude). Because the average particle velocity over time is zero, the RMS amplitude is typically used to assess human response. The RMS value is the average of the amplitude squared over time, typically a 1- sec. period (FTA 2018).

Table 2-2 displays the reactions of people and the effects on buildings produced by continuous vibration levels. The annoyance levels shown in the table should be interpreted with care since vibration may be found to be annoying at much lower levels than those listed, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. In high-noise environments, which are more prevalent where groundborne vibration approaches perceptible levels, this rattling phenomenon may also be produced by loud airborne environmental noise causing induced vibration in exterior doors and windows.

Ground vibration can be a concern in instances where buildings shake, and substantial rumblings occur. However, it is unusual for vibration from typical urban sources such as buses and heavy trucks to be perceptible. For instance, heavy-duty trucks generally generate groundborne vibration velocity levels of 0.006 PPV at 50 feet under typical circumstances, which as identified in Table 2-2 is considered very unlikely to cause damage to buildings of any type. Common sources for groundborne vibration are planes, trains, and construction activities such as earth-moving which requires the use of heavy-duty earth moving equipment.

Table 2-2. Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibration Levels

Peak Particle Velocity (inches/second)	Approximate Vibration Velocity Level (VdB)	Human Reaction	Effect on Buildings
0.006–0.019	64–74	Range of threshold of perception	Vibrations unlikely to cause damage of any type
0.08	87	Vibrations readily perceptible	Recommended upper level to which ruins and ancient monuments should be subjected
0.1	92	Level at which continuous vibrations may begin to annoy people, particularly those involved in vibration sensitive activities	Virtually no risk of architectural damage to normal buildings
0.2	94	Vibrations may begin to annoy people in buildings	Threshold at which there is a risk of architectural damage to normal dwellings
0.4–0.6	98–104	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Architectural damage and possibly minor structural damage

Source: Caltrans 2020b

3.0 EXISTING ENVIRONMENTAL NOISE SETTING

3.1 Noise Sensitive Land Uses

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as hospitals, historic sites, cemeteries, and certain recreation areas are considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses.

The nearest existing noise-sensitive land uses to the Project Site are residential properties to the east on Acacia Street and Sacramento Valley Boulevard with the closest being approximately 450 feet distant.

3.2 Existing Ambient Noise Environment

Sutter County contains extensive agricultural land uses along with a range of residential, industrial, commercial, recreational, and open space areas. Key noise sources in the County include motor vehicle traffic, agricultural activities, airplane traffic, railroads, and stationary sources such as food processing plants. The Project Site is surrounded mainly by rural agricultural lands and industrial uses. SR 113 traverses and provides access to the Project Site and is also the main source of noise in the Project Area. The Transportation and Circulation Element of the County's General Plan Environmental Impact Report classifies SR 113 as an expressway within the County. Expressways serve both inter-regional and intraregional circulation needs and have the highest carrying capacity with the maximum speed limits allowed by law.

Per the California Department of Transportation (Caltrans) traffic counts, the segment of SR 113 traversing the Project Area (the segment of SR 113 between Del Monte Avenue and Knights Road) accommodates an average daily traffic count of 7,000 vehicles (Caltrans 2021). According to the FHWA Highway Traffic Noise Prediction Model (FHWA-RD-77-108), which calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions; the Project Area, as a result of roadway traffic on SR 113, has an ambient noise level of 63.7 dBA CNEL at 100 feet from the centerline. Vehicular noise varies with the volume, speed, and type of traffic. Slower traffic produces less noise than fast-moving traffic. Trucks typically generate more noise than cars. Infrequent or intermittent noise also is associated with vehicles including sirens, vehicle alarms, slamming of doors, garbage and construction vehicle activity, and honking of horns. These noises add to urban noise and are regulated by a variety of agencies.

3.2.1 Existing Ambient Noise Measurements

The Project Site currently accommodates multiple metal structures which are proposed for demolition and is surrounded mainly by agricultural and industrial land uses. In order to quantify existing ambient noise levels in the Project Area, ECORP Consulting, Inc. conducted three short-term noise measurements on March 4, 2022. These short-term noise measurements are representative of typical existing noise exposure

within and immediately adjacent to the Project Site during the daytime (see Attachment A). The 15-minute measurements were taken between 11:04 a.m. and 12:04 p.m. The average noise levels and sources of noise measured at each location are listed in Table 3-1.

Table 3-1. Existing (Baseline) Noise Measurements

Location Number	Location	L_{eq} dBA	L_{min} dBA	L_{max} dBA	Time
1	On Del monte Avenue Approximately 1,600 feet from Highway 113 (Adjacent to House)	**46.4**	26.5	71.2	11:04 a.m. – 11:19 a.m.
2	On Del Monte Avenue Between Sacramento Valley Boulevard and Reclamation Road (Adjacent to Bridge)	**59.6**	37.7	79.2	11:22 a.m. – 11:37 a.m.
3	On Santa Cruz Avenue Between Sacramento Valley Boulevard and Acacia Street	**47.4**	28.2	68.1	11:49 a.m. – 12:04 p.m.

Source: Measurements were taken by ECORP with a Larson Davis SoundExpert LxT precision sound level meter, which satisfies the American National Standards Institute for general environmental noise measurement instrumentation. Prior to the measurements, the SoundExpert LxT sound level meter was calibrated according to manufacturer specifications with a Larson Davis CAL200 Class I Calibrator. See Attachment A for noise measurement outputs.

Notes: L_{eq} is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. L_{min} is the minimum noise level during the measurement period and L_{max} is the maximum noise level during the measurement period.

As shown in Table 3-1, the ambient recorded daytime noise levels range from 46.4 to 59.6 dBA L_{eq} over the course of the three short-term noise measurements taken in the Project vicinity. The most common noise in the Project vicinity is produced by automotive vehicles (e.g., cars, trucks, buses, motorcycles) on SR 113.

4.0 REGULATORY FRAMEWORK

4.1 Federal

4.1.1 Occupational Safety and Health Act of 1970

OSHA regulates onsite noise levels and protects workers from occupational noise exposure. To protect hearing, worker noise exposure is limited to 90 decibels with A-weighting (dBA) over an eight-hour work shift (29 Code of Regulations 1910.95). Employers are required to develop a hearing conservation program when employees are exposed to noise levels exceeding 85 dBA. These programs include provision of hearing protection devices and testing employees for hearing loss on a periodic basis.

4.1.2 U.S. Environmental Protection Agency Office of Noise Abatement and Control

The U.S. Environmental Protection Agency (EPA) Office of Noise Abatement and Control was originally established to coordinate Federal noise control activities. In 1981, USEPA administrators determined that subjective issues such as noise would be better addressed at more local levels of government. Consequently, in 1982 responsibilities for regulating noise control policies were transferred to State and local governments. However, documents and research completed by the EPA Office of Noise Abatement and Control continue to provide value in the analysis of noise effects.

4.1.3 National Institute of Occupational Safety and Health

A division of the US Department of Health and Human Services, the National Institute for Occupational Safety and Health (NIOSH) has established a construction-related noise level threshold as identified in the Criteria for a Recommended Standard: Occupational Noise Exposure prepared in 1998. NIOSH identifies a noise level threshold based on the duration of exposure to the source. The NIOSH construction-related noise level threshold starts at 85 dBA for more than 8 hours per day; for every 3-dBA increase, the exposure time is cut in half. This reduction results in noise level thresholds of 88 dBA for more than 4 hours per day, 92 dBA for more than 1 hour per day, 96 dBA for more than 30 minutes per day, and up to 100 dBA for more than 15 minutes per day. The intention of these thresholds is to protect people from hearing losses resulting from occupational noise exposure.

4.2 State

4.2.1 State of California General Plan Guidelines

The State of California regulates vehicular and freeway noise affecting classrooms, sets standards for sound transmission and occupational noise control, and identifies noise insulation standards and airport noise/land-use compatibility criteria. The State of California General Plan Guidelines, published by the Governor's Office of Planning and Research (OPR), also provides guidance for the acceptability of projects within specific CNEL/L_{dn} contours. The guidelines also present adjustment factors that may be used in order to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

4.2.2 State Office of Planning and Research Noise Element Guidelines

The State OPR Noise Element Guidelines include recommended exterior and interior noise level standards for local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. The Noise Element Guidelines contain a land use compatibility table that describes the compatibility of various land uses with a range of environmental noise levels in terms of the CNEL.

4.2.3 California Department of Transportation

In 2020, Caltrans published the Transportation and Construction Vibration Manual (Caltrans 2020b). The manual provides general guidance on vibration issues associated with the construction and operation of projects concerning human perception and structural damage. Table 2-2 presents recommendations for levels of vibration that could result in damage to structures exposed to continuous vibration.

4.3 Local

4.3.1 Sutter County General Plan

The Noise Element of the General Plan provides policy direction for minimizing noise impacts on the community and for coordinating with surrounding jurisdictions and other entities regarding noise control. By identifying noise-sensitive land uses and establishing compatibility guidelines for land use and noises, noise considerations will influence the general distribution, location, and intensity of future land uses. The result is that effective land use planning and mitigation can alleviate the majority of noise problems.

The Noise Element contains goals, policies and implementation programs that are intended to achieve the vision of the Noise Element and guide the County's efforts to minimize noise-land use incompatibilities and support the health and serenity of its citizens. The General Plan goals and policies applicable to the Proposed Project are listed below.

Goal N 1: Protect the health and safety of County residents from the harmful effect of exposure to excessive noise and vibration.

Policy N 1.2: *Exterior Incremental Environmental Noise Standards*. Require new development to mitigate noise impacts on noise sensitive uses where the projected increases in exterior noise levels exceed those shown in Table 4-1 (Exterior Incremental Environmental Noise Impact Standards for Noise-Sensitive Uses [dBA]).

Table 4-1. Exterior Incremental Environmental Noise Impact Standards for Noise-Sensitive Uses (dBA)			
Residences and Buildings Where People Normally Sleep[1]		**Institutional Land Uses with Primarily Daytime and Evening Uses[2]**	
Existing L_{dn}	**Allowable Noise Increment**	**Existing Peak Hour L_{eq}**	**Allowable Noise Increment**
45	8	45	12
50	5	50	9
55	3	55	6
60	2	60	5
65	1	65	3
70	1	70	3
75	0	75	1
80	0	80	0

Source: Sutter County 2011

Notes:

Noise levels are measured at the property line of the noise-sensitive use.

1. This category includes homes, hospitals, and hotels where a nighttime sensitivity to noise is assumed to be of utmost importance.
2. This category includes schools, libraries, theaters, and churches where it is important to avoid interference with such activities as speech, meditation, and concentration on reading material.

Policy N 1.3: *Interior Noise Standards*. Require new development to mitigate noise impacts to ensure acceptable interior noise levels appropriate to the land use type as shown in Table 4-2 (Maximum Allowable Environmental Noise Standards).

Table 4-2. Maximum Allowable Environmental Noise Standards			
Land Use	**Exterior Noise Level Standard for Outdoor Activity Areas[1]**	**Interior Noise Level Standard**	
	L_{dn}/CNEL, dB	**L_{dn}/CNEL, dB**	**L_{eq}, dB[2]**
Residential (Low Density Residential, Duplex, Mobile Homes)	60[3]	45	N/A
Residential (Multi Family)	65[4]	45	N/A
Transient Lodging (Motels/Hotels)	65[4]	45	N/A
Schools, Libraries, Churches, Hospitals, Nursing Homes, Museums	70	45	N/A
Theaters, Auditoriums	70	N/A	35
Playgrounds, Neighborhood Parks	70	N/A	N/A
Golf Courses, Riding Stables, Water Recreation, Cemeteries	75	N/A	N/A
Office Buildings, Business Commercial and Professional	70	N/A	45
Industrial, Manufacturing, Utilities, and Agriculture	75	N/A	45

Source: Sutter County 2011

Notes: Where a proposed use is not specifically listed on this table, the use shall comply with the noise exposure standards for the nearest similar use as determined by the Community Services Department.

1. Outdoor activity areas for residential developments are considered to be the back yard patios or decks of single-family residential units, and the patios or common areas where people generally congregate for multi-family development.
   Outdoor activity areas for nonresidential developments are considered to be those common areas where people generally congregate, including outdoor seating areas.
   Where the location of outdoor activity areas is unknown, the exterior noise standard shall be applied to the property line of the receiving land use.
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, L_{dn}/CNEL or less using a practical application of the best-available noise reduction measures, an exterior level of up to 65 dB, L_{dn}/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.
4. Where it is not possible to reduce noise in outdoor activity areas to 65 dB, L_{dn}/CNEL or less using a practical application of the best-available noise reduction measures, an exterior level of up to 70 dB, L_{dn}/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.

Policy N 1.4: *New Stationary Noise Sources.* Require new stationary noise sources to mitigate noise impacts on noise-sensitive uses wherever the noise from that source alone exceeds the exterior levels specified in Table 4-3 (Noise Level Standards from Stationary Sources).

Table 4-3. Noise Level Standards from Stationary Sources		
Noise Level Descriptor	**Daytime (7:00 a.m. to 10:00 p.m.)**	**Nighttime (10:00 p.m. to 7:00 a.m.)**
Hourly L_{eq}, dB	55	45
Maximum level, dB	70	65

Source: Sutter County 2011
Notes: Noise levels are measured at the property line of the noise-sensitive use.

Policy N 1.6: *Construction Noise.* Require discretionary projects to limit noise-generating construction activities within 1,000 feet of noise-sensitive uses (i.e., residential uses, daycares, schools, convalescent homes, and medical care facilities) to daytime hours between 7:00 a.m. and 6:00 p.m. on weekdays, 8:00 a.m. and 5:00 p.m. on Saturdays, and prohibit construction on Sundays and holidays unless permission for the latter has been applied for and granted by the County.

Policy N 1.7: *Vibration Standards.* Require construction projects and new development anticipated to generate a significant amount of vibration to ensure acceptable interior vibration levels at nearby noise-sensitive uses based on Federal Transit Administration criteria as shown in Table 4-4 (Groundborne Vibration Impact Criteria for General Assessment).

Table 4-4. Groundborne Vibration Impact Criteria for General Assessment			
Land Use Category	**Impact Levels (VdB)**		
	Frequent Events[1]	**Occasional Events[2]**	**Infrequent Events[3]**
Category 1: Buildings where vibration would interfere with interior operations	65[4]	65[4]	65[4]
Category 2: Residences and buildings where people normally sleep	72	75	80
Category 3: Institutional land uses with primarily daytime uses	75	78	83

Source: Sutter County 2011
Notes: Vibration levels are measured in or near the vibration-sensitive use.
1. "Frequent Events" is defined as more than 70 vibration events of the same source per day.
2. "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.
3. "Infrequent Events" is defined as fewer than 30 vibration events of the same source per day.
4. This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research will require detailed evaluation to define the acceptable vibration levels.

4.3.2 Sutter County Municipal Code

The County regulations with respect to noise are also included in Article 21.5, *Noise Control*, of the County's Municipal Code. The regulations presented in this Municipal Code are the same as those listed above.

5.0 IMPACT ASSESSMENT

5.1 Thresholds of Significance

The impact analysis provided below is based on the following California Environmental Quality Act Guidelines Appendix G thresholds of significance. The Project would result in a significant noise-related impact if it would produce:

1) 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 applicable standards of other agencies.

2) Generation of excessive groundborne vibration or groundborne noise levels.

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

For purposes of this analysis, the County noise standards were used for evaluation of Project-related noise impacts.

5.2 Methodology

This analysis of the existing and future noise environments is based on noise-prediction modeling and empirical observations. In order to estimate the worst-case construction noise levels that may occur at the nearest noise-sensitive receptors in the Project vicinity, predicted construction noise levels were calculated utilizing the FHWA's Roadway Construction Noise Model (2006). Groundborne vibration levels associated with construction-related activities for the Project were evaluated utilizing typical groundborne vibration levels associated with construction equipment. Potential groundborne vibration impacts related to structural damage and human annoyance were evaluated, taking into account the distance from construction activities to nearby structures.

An assessment of the Project's impact on the existing noise environment was completed by conducting existing ambient baseline noise measurements around the Project Site with the use of a Larson Davis SoundExpert LxT precision sound level meter, which satisfies the American National Standards Institute standard for general environmental noise measurement instrumentation. Prior to the measurements, the SoundExpert LxT sound level meter was calibrated according to manufacturer specifications with a Larson Davis CAL200 Class I Calibrator. Additionally, onsite stationary source noise levels have been calculated with the SoundPLAN 3D noise model, which predicts noise propagation from a noise source based on the location, noise level, and frequency spectra of the noise sources as well as the geometry and reflective properties of the local terrain, buildings and barriers. In the analysis below the size, location and noise producing level of each source is discussed in detail. The Project's contribution to roadway noise levels is discussed qualitatively with operational daily trips counts provided by KD Anderson & Associates, Inc. (2022).

5.3 Impact Analysis

5.3.1 Would the Project Result in Short-Term Construction-Generated Noise in Excess of Standards?

Onsite Construction Noise

Construction noise associated with the Proposed Project would be temporary and would vary depending on the nature of the activities being performed. Noise generated would primarily be associated with the operation of off-road equipment for onsite construction activities as well as construction vehicle traffic on area roadways. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., land clearing, grading, excavation, building construction, paving). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). During construction, exterior noise levels could negatively affect sensitive land uses in the vicinity of the construction site.

Nearby noise-sensitive land uses consist of residential properties to the east with the closest being approximately 450 feet distant. As previously described, the County limits all construction within 1,000 feet of a noise-sensitive uses to the daytime hours between 7:00 a.m. and 6:00 p.m. on weekdays, 8:00 a.m. and 5:00 p.m. on Saturdays, and prohibits construction on Sundays and holidays unless permission has been applied for and granted by the County. It is typical to regulate construction noise with time limits as opposed to numeric noise thresholds since construction noise is temporary, short term, intermittent in nature, and would cease on completion of the Project. Furthermore, construction would occur through the Project Site and would not be concentrated at one point.

To estimate the worst-case onsite construction noise levels that may occur at the nearest noise-sensitive receptor in the Project vicinity in order to evaluate the potential health-related effects (physical damage to the ear) from construction noise, the construction equipment noise levels were calculated using the Roadway Noise Construction Model and compared against the construction-related noise level threshold established in the *Criteria for a Recommended Standard: Occupational Noise Exposure* prepared in 1998 by National Institute for Occupational Safety and Health (NIOSH). A division of the US Department of Health and Human Services, NIOSH identifies a noise level threshold based on the duration of exposure to the source. The NIOSH construction-related noise level threshold starts at 85 dBA for more than 8 hours per day; for every 3-dBA increase, the exposure time is cut in half. This reduction results in noise level thresholds of 88 dBA for more than 4 hours per day, 92 dBA for more than 1 hour per day, 96 dBA for more than 30 minutes per day, and up to 100 dBA for more than 15 minutes per day. For the purposes of this analysis, the lowest, more conservative threshold of 85 dBA L_{eq} is used as an acceptable threshold for construction noise at the nearby sensitive receptors.

The anticipated short-term construction noise levels generated for the necessary equipment were calculated using the Roadway Noise Construction Model for the demolition, site preparation, grading, paving and painting anticipated for the Proposed Project. The anticipated short-term construction noise levels generated for the necessary equipment is presented in Table 5-1.

Table 5-1. Construction Average (dBA) Noise Levels at Nearest Receptor- Project Site			
Equipment	**Estimated Exterior Construction Noise Level at Nearest Residences**	**Construction Noise Standards (dBA L_{eq})**	**Exceeds Standards?**
Demolition			
Concrete/Industrial Saws (1)	63.5	*85*	**No**
Excavators (3)	57.6 (each)	*85*	**No**
Rubber Tired Dozers (1)	58.6	*85*	**No**
Combined Demolition Equipment	**66.7**	*85*	**No**
Site Preparation			
Rubber Tired Dozers (3)	58.6 (each)	*85*	**No**
Tractors/Loaders/Backhoes (4)	60.9 (each)	*85*	**No**
Combined Site Preparation Equipment	**68.5**	*85*	**No**
Grading			
Graders (1)	61.9	*85*	**No**
Excavators (1)	57.6	*85*	**No**
Rubber Tired Dozers (1)	58.6	*85*	**No**
Tractors/Loaders/Backhoes (3)	60.9 (each)	*85*	**No**
Combined Grading Equipment	**68.4**	*85*	**No**
Paving			
Pavers (2)	55.1 (each)	*85*	**No**
Paving Equipment (2)	55.1 (each)	*85*	**No**
Rollers (2)	53.9 (each)	*85*	**No**
Combined Paving Equipment	**62.5**	*85*	**No**
Painting			
Air Compressors (1)	54.6	*85*	**No**
Combined Paining Equipment	**54.6**	*85*	**No**

Source: Construction noise levels were calculated by ECORP Consulting using the FHWA Roadway Noise Construction Model (FHWA 2006). Refer to Attachment B for Model Data Outputs.

Notes: Construction equipment used during construction derived from the California Emission Estimator Model (CalEEMod) 2020.4.0. CalEEMod contains default construction equipment and usage parameters for typical construction projects based on several construction surveys conducted in order to identify such parameters. Consistent with FTA recommendations for calculating construction noise, construction noise was measured from the center of the Project Site (FTA 2018), which is 100 feet from the nearest residence.

L_{eq} = The equivalent energy noise level, is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.

As shown in Table 5-1, during construction activities no individual piece of construction equipment would exceed the NIOSHA threshold of 85 dBA L_{eq} at the nearest residences located east of the Project Site.

Offsite Construction Worker Traffic Noise

Project construction would result in additional traffic on adjacent roadways over the period that construction occurs. According to the California Emission Estimator Model, which is used to predict the number of on-road Project construction-related trips, Project construction would not instigate more than 494 trips in a single day (30 construction worker trips and 464 haul truck trips). According to the Caltrans *Technical Noise Supplement to the Traffic Noise Analysis Protocol* (2013), doubling of traffic on a roadway is required to result in an increase of 3 dB (outside of the laboratory, a 3-dBA change is considered a just-perceivable difference). The Project Site is accessible from SR 113.

Per Caltrans, the segment of SR 113 traversing the Project Area (the segment of SR 113 between Del Monte Avenue and Knights Road) accommodates an average daily traffic count of 7,000 vehicles (Caltrans 2021). Thus, the Project construction would not result in a doubling of traffic, and therefore its contribution to existing traffic noise would not be perceptible. Additionally, it is noted that construction is temporary, and these trips would cease upon completion of the Project.

5.3.2 Would the Project Result in a Substantial Permanent Increase in Ambient Noise Levels in Excess of City Standards During Operations?

As previously described, noise-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, and some passive recreation areas would each be considered noise-sensitive and may warrant unique measures for protection from intruding noise. The nearest existing noise-sensitive land uses to the Project Site are residential properties to the east on Arcata Street and Sacramento Valley Boulevard with the closest being approximately 450 feet distant.

Operational noise sources associated with the Proposed Project include mobile and stationary (i.e., backup beepers, internal circulation/ parking lot activity, traffic) sources.

Operational Offsite Traffic Noise

Project operation would also result in additional traffic on adjacent roadways, thereby increasing vehicular noise in the Project vicinity. According to the 17812 Highway 113 Truck Yard Trip Generation Analysis prepared by KD Anderson (2022), Project operations are projected to generate 166 daily trips. The Project Site would be accessible from SR 113. As previously described, SR 113 is classified as an expressway within the County and has a high carrying capacity for inter-regional and intraregional circulation needs. According to the Caltrans *Technical Noise Supplement to the Traffic Noise Analysis Protocol* (2013), doubling of traffic on a roadway is required to result in an increase of 3 dB (a barely perceptible increase). Per Caltrans, the segment of SR 113 traversing the Project Area (the segment of SR 113 between Del Monte Avenue and Knights Road) accommodates an average daily traffic count of 7,000 vehicles (Caltrans

2021). The Project would not result in a doubling of traffic, thus its contribution to existing traffic noise would not be perceptible.

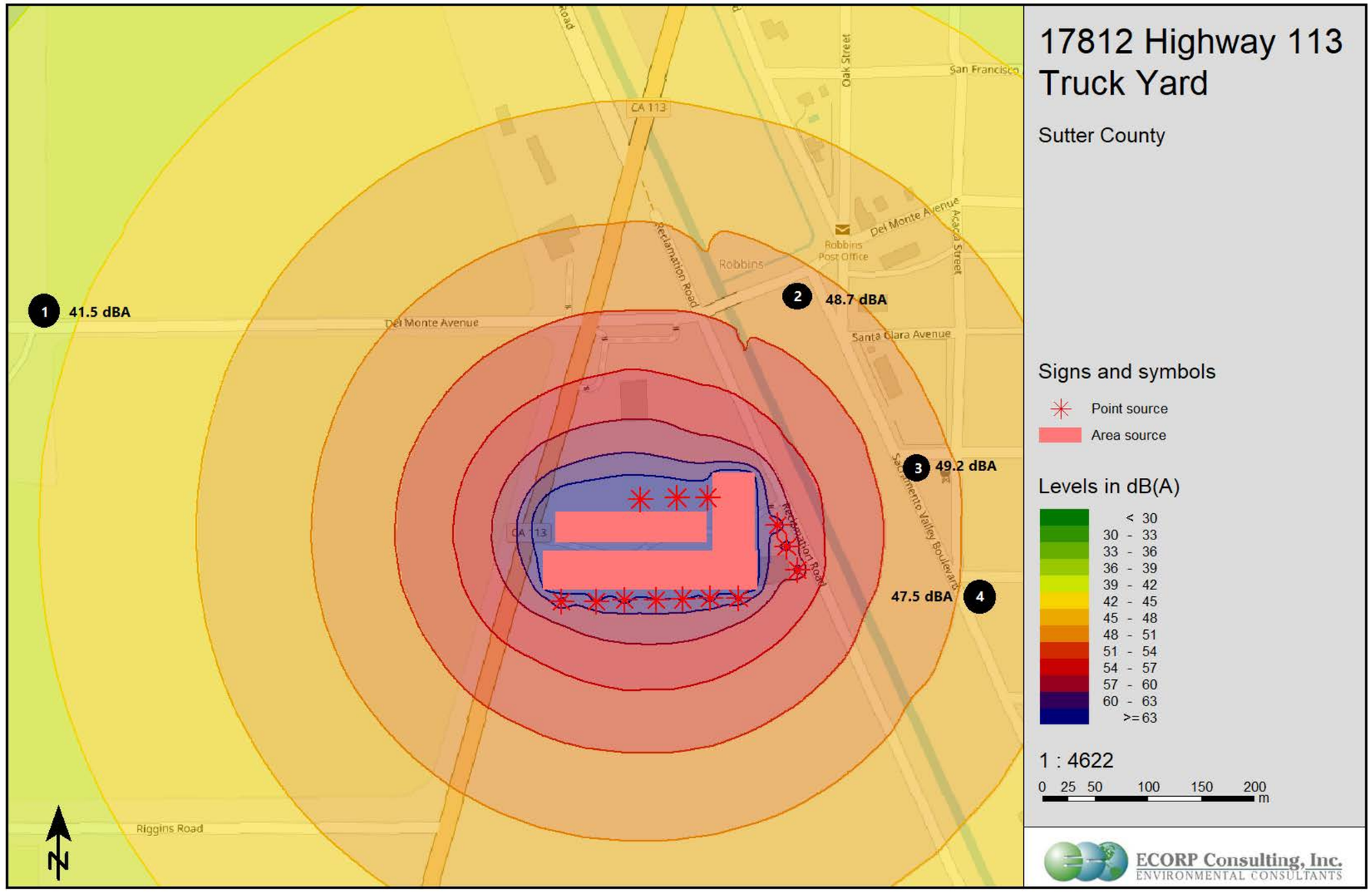
Operational Onsite Stationary Noise

The main stationary operational noise associated with the Project would be activities occurring on the Project Site. Such activity would include internal heavy duty truck circulation/ parking lot activity (i.e., people talking, car door opening and closing and stereo music), the engine and ventilator from refrigerated trucks and backup beepers from heavy duty trucks. On-site Project operations have been calculated using the SoundPLAN 3D noise model. The results of this model can be found in Attachment C. Table 5-2 shows the predicted Project noise levels at four locations in the Project vicinity, as predicted by SoundPLAN. Three of these locations (Site Locations 1 - 3) correspond with the locations where existing baseline noise measurements were taken (see Table 3-1), while the additional location is adjacent to a nearby noise sensitive receptor which will be affected by Project operations. Additionally, a noise contour graphic (see Figure 5-1) has been prepared to provide a visual depiction of the predicted noise levels in the Project vicinity from Project operations.

Table 5-2. Modeled Operational Noise Levels

Site Location	Location	Modeled Operational Noise Attributed to Project (L_{eq} dBA)	County Noise Standard Day/Night (L_{eq} dBA)
1	On Del monte Avenue Approximately 1,600 feet from Highway 113 (Adjacent to House)	41.5	*55/45*
2	On Del Monte Avenue Between Sacramento Valley Boulevard and Reclamation Road (Adjacent to Bridge)	48.7	*55/45*
3	On Santa Cruz Avenue Between Sacramento Valley Boulevard and Acacia Street	49.2	*55/45*
4	At the intersection of Santa Rosa Avenue and Sacramento Valley Boulevard	47.5	*55/45*

Source: Stationary source noise levels were modeled by ECORP Consulting using SoundPLAN 3D noise model. Refer to Attachment C for noise modeling assumptions and results.



Map Date: 6/1/2022
Photo (or Base) Source: *SoundPLAN*

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Figure 5-1. Modeled Operational Noise Levels

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As shown in Table 5-2, predicted Project noise levels would range from 41.5 to 49.2 dBA L_{eq} during Project operations. The loudest noise levels at the nearest noise sensitive receptor, Site Location 3, has the potential to be as high as 49.2 dBA L_{eq} during some Project activities.

The Sutter County Noise Level Standards from Stationary Sources is 55 dBA L_{eq} during daytime activities (7:00 a.m.-10:00 p.m.) and 45 dBA L_{eq} for nighttime activities (10:00 p.m.-7:00 a.m.). The Project is proposing to operate 24-hours a day, seven days a week. As shown, the noise level at the nearest noise sensitive receptor, located east of the Project Site off Acacia Street, would be below the daytime and nighttime noise standards. Additionally, as shown in Table 3-1, the existing noise levels already experienced in the Project Area exceed noise levels that would be produced by the Project. Furthermore, it is noted that the modeled noise levels identified are a worst-case scenario. Not all events taking place on the Project Site would generate as much noise as predicted.

5.3.3 Would the Project Expose Structures to Substantial Groundborne Vibration During Construction?

Excessive groundborne vibration impacts result from continuously occurring vibration levels. Increases in groundborne vibration levels attributable to the Project would be primarily associated with short-term construction-related activities. Construction on the Project Site would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance.

Construction-related ground vibration is normally associated with impact equipment such as pile drivers, jackhammers, and the operation of some heavy-duty construction equipment, such as dozers and trucks. It is noted that pile drivers would not be necessary during Project construction. Vibration decreases rapidly with distance and it is acknowledged that construction activities would occur throughout the Project Site and would not be concentrated at the point closest to sensitive receptors. Groundborne vibration levels associated with construction equipment at 25 feet distant are summarized in Table 5-3.

Table 5-3. Representative Vibration Source Levels for Construction Equipment	
Equipment Type	**Approximate Vibration Decibels (VdB) at 25 Feet**
Large Bulldozer	87
Caisson Drilling	87
Loaded Trucks	86
Hoe Ram	87
Jackhammer	79
Small Bulldozer/Tractor	58

Source: FTA 2018; Caltrans 2020b

The County's construction vibration threshold requires construction projects and new development anticipated to generate a significant amount of vibration to ensure acceptable interior vibration levels at nearby noise-sensitive uses using the standards presented in Table 4-4 of this document. These standards are based on criteria from the Federal Transit Administration. The nearest existing noise-sensitive land use to the Project Site are residential properties to the east on Arcata Street and Sacramento Valley Boulevard with the closest being approximately 450 feet distant. Thus, due to the temporary nature of construction activities, the thresholds for Land Use Category 2, residences and buildings where people normally sleep, of 80 VdB for infrequent events will be used in this analysis.

As shown in Table 5-3, the highest vibration decibel at 25 feet generated from construction equipment is 87 VdB. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. Therefore, the structure located at 450 feet from the Project Site would not be negatively affected. Project vibration levels at the nearest structure would not exceed the County criteria.

5.3.4 Would the Project Expose Structures to Substantial Groundborne Vibration During Operations?

Project operations would not include the use of any stationary equipment that would result in excessive vibration levels. Therefore, the Project would not result in groundborne vibration impacts during operations.

5.3.5 Would the Project Expose People Residing or Working in the Project area to Excessive Airport Noise?

The Project Site is located approximately 13 miles southeast of the Sacramento International Airport (2022). According to the Sacramento International Airport Land Use Compatibility Planning Noise Contours, the Project Site is located outside of the protective 60 CNEL Noise Contour. Thus, the Proposed Project would not expose people working on the Project Site to excess airport noise levels and would not hinder aircraft activity.

6.0 REFERENCES

Caltrans. 2021. Traffic Census Program. https://dot.ca.gov/programs/traffic-operations/census

_____. 2020a. IS/EA Annotated Outline. http://www.dot.ca.gov/ser/vol1/sec4/ch31ea/chap31ea.htm.

_____. 2020b. Transportation and Construction Vibration Guidance Manual.

_____.2020c. Traffic Census Program.

_____. 2013. Technical Noise Supplement to the Traffic Noise Analysis Protocol.

_____. 2002. California Airport Land Use Planning Handbook.

FHWA. 2011. *Effective Noise Control During Nighttime Construction*. Available online at: http://ops.fhwa.dot.gov/wz/workshops/accessible/schexnayder_paper.htm.

_____. 2006. Roadway Construction Noise Model.

FTA. 2018. *Transit Noise and Vibration Impact Assessment*.

HMMH. 2006. Transit Noise and Vibration Impact Assessment, Final Report.

KD Anderson & Associates, Inc. 2022. 17812 Highway 113 Truck Yard Trip Generation Analysis.

OPR. 2003. *State of California General Plan Guidelines*.

Sacramento, County of. 2022, Sacramento International Airport Land Use Compatibility Noise Contours. https://sacramento.aero/scas/environment/noise/sacramento_international_airport_smf/noise_contours

Sutter, County of. 2011. Sutter County 2030 General Plan

_____.2021. Sutter County Municipal Code.

WEAL. 2000. *Sound Transmission Sound Test Laboratory Report No. TL 96-186*.

LIST OF ATTACHMENTS

Attachment A - Baseline (Existing) Noise Measurements – Project Site and Vicinity

Attachment B – Federal Highway Administration Roadway Construction Noise Model Outputs – Project Construction

Attachment C- SoundPLAN Outputs – Onsite Project Noise

ATTACHMENT A

Baseline (Existing) Noise Measurements – Project Site and Vicinity



3/10/2022

Baseline Noise Measurement Locations

17812 Highway 113 Truck Yard Project Site

1:9,028

0 0.05 0.1 0.2 mi

0 0.07 0.15 0.3 km

Esri Community Maps Contributors, Yolo County, California State Parks, ©

Map Date: *3/10/2022*
Photo (or Base) Source: *ArcGIS Online 2022*

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Baseline Noise Measurement Locations

2022-049 17812 Highway 113 Truck Yard

Site Number: 1			
Recorded By: Rosey Worden			
Job Number: 2022-049			
Date: 3/4/2022			
Time: 11:04 a.m. – 11:19 a.m.			
Location: On Del monte Avenue approximately 1,600 feet from Highway 133 (adjacent to house)			
Source of Peak Noise: Vehicles on Highway 113			
Noise Data			
Leq (dB)	**Lmin (dB)**	**Lmax (dB)**	**Peak (dB)**
46.4	26.5	71.2	98.1

Equipment						
Category	**Type**	**Vendor**	**Model**	**Serial No.**	**Cert. Date**	**Note**
Sound	Sound Level Meter	**Larson Davis**	**LxT SE**	**0005120**	**11/29/2021**	
	Microphone	**Larson Davis**	**377B02**	**334361**	**11/30/2021**	
	Preamp	**Larson Davis**	**PRMLxT1L**	**042852**	**11/30/2021**	
	Calibrator	**Larson Davis**	**CAL200**	**14105**	**11/10/2021**	

Weather Data			
Est.	**Duration:** 15		**Sky:** Clear
	Note: dBA Offset = -0.01		**Sensor Height (ft):** 4.5
	Wind Ave Speed (mph)	**Temperature (degrees Fahrenheit)**	**Barometer Pressure (hPa)**
	9	64	

Photo of Measurement Location



Measurement Report

Report Summary

Meter's File Name	LxT_Data.413	Computer's File Name	SLM_0005120_LxT_Data_413.00.ldbin
Meter	LxT SE		
Firmware	2.404		
User		Location	
Description			
Note			
Start Time	2022-03-04 11:04:24	Duration	0:15:00.0
End Time	2022-03-04 11:19:24	Run Time	0:15:00.0
		Pause Time	0:00:00.0

Results

Overall Metrics

LA_{eq}	46.4 dB		
LAE	75.9 dB	SEA	--- dB
EA	4.4 µPa²h		
LZ_{peak}	98.1 dB	2022-03-04 11:19:11	
LAS_{max}	71.3 dB	2022-03-04 11:18:23	
LAS_{min}	26.5 dB	2022-03-04 11:12:18	
LA_{eq}	46.4 dB		
LC_{eq}	57.4 dB	LC_{eq} - LA_{eq}	11.0 dB
LAI_{eq}	49.9 dB	LAI_{eq} - LA_{eq}	3.5 dB

Exceedances

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

Community Noise

LDN	LDay	LNight
46.4 dB	46.4 dB	0.0 dB

LDEN	LDay	LEve	LNight
46.4 dB	46.4 dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	46.4 dB		57.4 dB		--- dB	
$Ls_{(max)}$	71.3 dB	2022-03-04 11:18:23	--- dB		--- dB	
$LS_{(min)}$	26.5 dB	2022-03-04 11:12:18	--- dB		--- dB	
$L_{Peak(max)}$	--- dB		--- dB		98.1 dB	2022-03-04 11:19:11

Overloads

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

Statistics

LAS 5.0	45.7 dB
LAS 10.0	40.2 dB
LAS 33.3	34.3 dB
LAS 50.0	32.9 dB
LAS 66.6	31.7 dB
LAS 90.0	29.6 dB

Site Number: 2			
Recorded By: Rosey Worden			
Job Number: 2022-049			
Date: 3/4/2022			
Time: 11:22 a.m. – 11:37 a.m.			
Location: On Del Monte Avenue between Sacramento Valley Boulevard and Reclamation Road (adjacent to bridge)			
Source of Peak Noise: Vehicles on adjacent roadways			
Noise Data			
Lea (dB)	**Lmin (dB)**	**Lmax (dB)**	**Peak (dB)**
59.6	37.7	79.2	104.8

Equipment						
Category	**Type**	**Vendor**	**Model**	**Serial No.**	**Cert. Date**	**Note**
Sound	Sound Level Meter	**Larson Davis**	**LxT SE**	**0005120**	**11/29/2021**	
	Microphone	**Larson Davis**	**377B02**	**334361**	**11/30/2021**	
	Preamp	**Larson Davis**	**PRMLxT1L**	**042852**	**11/30/2021**	
	Calibrator	**Larson Davis**	**CAL200**	**14105**	**11/10/2021**	

Weather Data			
Est.	**Duration:** 15		**Sky:** Clear
	Note: dBA Offset = -0.01		**Sensor Height (ft):** 4.5
	Wind Ave Speed (mph)	**Temperature (degrees Fahrenheit)**	**Barometer Pressure (hPa)**
	9	64	

Photo of Measurement Location



Measurement Report

Report Summary

Meter's File Name	LxT_Data.414	Computer's File Name	SLM_0005120_LxT_Data_414.00.ldbin
Meter	LxT SE		
Firmware	2.404		
User		Location	
Description			
Note			
Start Time	2022-03-04 11:22:56	Duration	0:15:00.0
End Time	2022-03-04 11:37:56	Run Time	0:15:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	59.6 dB		
LAE	89.1 dB	SEA	--- dB
EA	91.2 µPa²h		
LZ_{peak}	104.8 dB	2022-03-04 11:29:15	
LAS_{max}	79.2 dB	2022-03-04 11:35:36	
LAS_{min}	37.7 dB	2022-03-04 11:26:02	
LA_{eq}	59.6 dB		
LC_{eq}	67.9 dB	LC_{eq} - LA_{eq}	8.3 dB
LAI_{eq}	61.4 dB	LAI_{eq} - LA_{eq}	1.8 dB

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

Community Noise	LDN	LDay	LNight
	59.6 dB	59.6 dB	0.0 dB

	LDEN	LDay	LEve	LNight
	59.6 dB	59.6 dB	--- dB	--- dB

Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	59.6 dB		67.9 dB		--- dB	
$Ls_{(max)}$	79.2 dB	2022-03-04 11:35:36	--- dB		--- dB	
$LS_{(min)}$	37.7 dB	2022-03-04 11:26:02	--- dB		--- dB	
$L_{Peak(max)}$	--- dB		--- dB		104.8 dB	2022-03-04 11:29:15

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

Statistics

LAS 5.0	65.2 dB
LAS 10.0	59.2 dB
LAS 33.3	51.4 dB
LAS 50.0	49.0 dB
LAS 66.6	46.1 dB
LAS 90.0	42.3 dB

Site Number: 3			
Recorded By: Rosey Worden			
Job Number: 2022-049			
Date: 3/4/2022			
Time: 11:49 a.m. – 12:04 p.m.			
Location: On Santa Cruz Avenue between Sacramento Valley Boulevard and Acacia Street			
Source of Peak Noise: Vehicles on adjacent roadways			
Noise Data			
Leq (dB)	**Lmin (dB)**	**Lmax (dB)**	**Peak (dB)**
47.4	28.2	68.01	100.5

Equipment						
Category	**Type**	**Vendor**	**Model**	**Serial No.**	**Cert. Date**	**Note**
Sound	Sound Level Meter	**Larson Davis**	**LxT SE**	**0005120**	**11/29/2021**	
	Microphone	**Larson Davis**	**377B02**	**334361**	**11/30/2021**	
	Preamp	**Larson Davis**	**PRMLxT1L**	**042852**	**11/30/2021**	
	Calibrator	**Larson Davis**	**CAL200**	**14105**	**11/10/2021**	

Weather Data			
Est.	**Duration:** 15	**Sky:** Clear	
	Note: dBA Offset = -0.01	**Sensor Height (ft):** 4.5	
	Wind Ave Speed (mph)	**Temperature (degrees Fahrenheit)**	**Barometer Pressure (hPa)**
	9	64	

Photo of Measurement Location



Measurement Report

Report Summary

Meter's File Name	LxT_Data.415	Computer's File Name	SLM_0005120_LxT_Data_415.00.ldbin
Meter	LxT SE		
Firmware	2.404		
User		Location	
Description			
Note			
Start Time	2022-03-04 11:49:32	Duration	0:15:00.0
End Time	2022-03-04 12:04:32	Run Time	0:15:00.0
		Pause Time	0:00:00.0

Results

Overall Metrics

LA_{eq}	47.4 dB		
LAE	76.9 dB	SEA	--- dB
EA	5.5 µPa²h		
LZ_{peak}	100.5 dB	2022-03-04 12:01:20	
LAS_{max}	68.1 dB	2022-03-04 11:51:41	
LAS_{min}	28.2 dB	2022-03-04 11:57:53	
LA_{eq}	47.4 dB		
LC_{eq}	57.7 dB	LC_{eq} - LA_{eq}	10.4 dB
LAI_{eq}	53.3 dB	LAI_{eq} - LA_{eq}	6.0 dB

Exceedances

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

Community Noise

LDN	LDay	LNight
47.4 dB	47.4 dB	0.0 dB

LDEN	LDay	LEve	LNight
47.4 dB	47.4 dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	47.4 dB		57.7 dB		--- dB	
$Ls_{(max)}$	68.1 dB	2022-03-04 11:51:41	--- dB		--- dB	
$LS_{(min)}$	28.2 dB	2022-03-04 11:57:53	--- dB		--- dB	
$L_{Peak(max)}$	--- dB		--- dB		100.5 dB	2022-03-04 12:01:20

Overloads

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

Statistics

LAS 5.0	50.5 dB
LAS 10.0	46.6 dB
LAS 33.3	39.2 dB
LAS 50.0	37.8 dB
LAS 66.6	36.7 dB
LAS 90.0	34.3 dB

ATTACHMENT B

Federal Highway Administration Roadway Construction Noise Model Outputs – Project Construction

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 3/11/2022
Case Description: Demolition

Description	**Affected Land Use**
Demolition	Residential

Description	**Impact Device**	**Usage(%)**	**Equipment Spec Lmax (dBA)**	**Actual Lmax (dBA)**	**Receptor Distance (feet)**
Concrete Saw	No	20		89.6	450
Excavator	No	40		80.7	450
Excavator	No	40		80.7	450
Excavator	No	40		80.7	450
Rubber Tired Dozers	No	40		81.7	450

Calculated (dBA)

Equipment	***Lmax**	**Leq**
Concrete Saw	70.5	63.5
Excavator	61.6	57.6
Excavator	61.6	57.6
Excavator	61.6	57.6
Rubber Tired Dozers	62.6	58.6
Total	**70.5**	**66.7**

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 3/11/2022
Case Description: Site Preparation

Description	**Affected Land Use**
Site Preparation	Residential

Description	**Impact Device**	**Usage(%)**	**Equipment Spec Lmax (dBA)**	**Actual Lmax (dBA)**	**Receptor Distance (feet)**
Rubber Tired Dozers	No	40		81.7	450
Rubber Tired Dozers	No	40		81.7	450
Rubber Tired Dozers	No	40		81.7	450
Tractors/Loaders/Backhoes	No	40	84		450
Tractors/Loaders/Backhoes	No	40	84		450
Tractors/Loaders/Backhoes	No	40	84		450
Tractors/Loaders/Backhoes	No	40	84		450

Calculated (dBA)

Equipment	***Lmax**	**Leq**
Rubber Tired Dozers	62.6	58.6
Rubber Tired Dozers	62.6	58.6
Rubber Tired Dozers	62.6	58.6
Tractors/Loaders/Backhoes	64.9	60.9
Tractors/Loaders/Backhoes	64.9	60.9
Tractors/Loaders/Backhoes	64.9	60.9
Tractors/Loaders/Backhoes	64.9	60.9
Total	**64.9**	**68.5**

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 3/11/2022
Case Description: Grading

Description	Affected Land Use
Grading	Residential

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)
Grader	No	40	85		450
Excavator	No	40		80.7	450
Rubber Tired Dozers	No	40		81.7	450
Tractors/Loaders/Backhoes	No	40	84		450
Tractors/Loaders/Backhoes	No	40	84		450
Tractors/Loaders/Backhoes	No	40	84		405

Calculated (dBA)

Equipment	*Lmax	Leq
Grader	65.9	61.9
Excavator	61.6	57.6
Rubber Tired Dozers	62.6	58.6
Tractors/Loaders/Backhoes	64.9	60.9
Tractors/Loaders/Backhoes	64.9	60.9
Tractors/Loaders/Backhoes	65.8	60.9
Total	**65.9**	**68.4**

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 3/11/2022
Case Description: Paving

Description	**Affected Land Use**
Paving	Residential

Description	**Impact Device**	**Usage(%)**	**Equipment Spec Lmax (dBA)**	**Actual Lmax (dBA)**	**Receptor Distance (feet)**
Paver	No	50		77.2	450
Paver	No	50		77.2	450
Paving Equipment	No	50		77.2	450
Paving Equipment	No	50		77.2	450
Roller	No	20		80	450
Roller	No	20		80	450

Calculated (dBA)

Equipment	***Lmax**	**Leq**
Paver	58.1	55.1
Paver	58.1	55.1
Paving Equipment	58.1	55.1
Paving Equipment	58.1	55.1
Roller	60.9	53.9
Roller	60.9	53.9
Total	**60.9**	**62.5**

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 3/11/2022
Case Description: Painting

Description	**Affected Land Use**
Painting	Residential

Description	**Impact Device**	**Usage(%)**	Equipment **Spec Lmax (dBA)**	**Actual Lmax (dBA)**	**Receptor Distance (feet)**
Compressor (air)	No	40		77.7	450

Calculated (dBA)

Equipment		***Lmax**	**Leq**
Compressor (air)		58.6	54.6
	Total	**58.6**	**54.6**

*Calculated Lmax is the Loudest value.

ATTACHMENT C

SoundPLAN Outputs – Onsite Project Noise

SoundPLAN
Output Source Information

Number	Reciever Name	Location	Level at Ground Floor
1	Residential	On Del monte Avenue approximately 1,600 feet from Highway 133 (adjacent to house)	41.5 dBA
2	Industrial/Commercial	On Del Monte Avenue between Sacramento Valley Boulevard and Reclamation Road (adjacent to bridge)	48.7 dBA
3	Residential	On Santa Cruz Avenue between Sacramento Valley Boulevard and Acacia Street	49.2 dBA
4	Residential	At the intersection of Santa Rosa Avenue and Sacramento Valley Boulevard	47.5 dBA

Number	Noise Source Information	Citation	Level at Source
1	internal circulation/ parking lot activity	ECORP Consultinjg, Inc. Refrence Noise Measurment (Parking Lot Noise)	61.8 dBA
2	Refrigerated Trucks	New York State Department of Transportation Feasibility of installing Noise Reduction Technologies on Commercial Vehicles to Support Off-Hour Deliveries (2013)	74.0 dBA
3	Truck Loading Dock	City of San Jose 2014 Midpoint at 237 Loading Dock Noise Study	79.0 dBA

APPENDIX C
TRANSPORTATION IMPACT ANALYSIS

July 5, 2022

Mr. Julio Tinajero
Milestone Associates Imagineering, Inc.
1000 Lincoln Road, Suite H202
Yuba City, CA 95991

RE: 17812 HIGHWAY 113 TRUCK PARKING FACILITY, SUTTER CO, CA: TRAFFIC OPERATIONAL ASSESSMENT

Dear Mr. Tinajero:

Thank you for contacting our firm regarding the Truck Parking Facility proposed at 17812 Highway 113 (SR 113) near the Sutter County community of Robbins, CA. As we understand the proposed project will occupy 6.7 acres at the east side of SR 113 about 750 feet south of the SR 113 / Del Monte Avenue intersection. The project would provide space for 87 tractor-trailer combinations. Primary access is proposed at a new ungated 45 foot wide driveway on SR 113 which would replace an existing driveway at the same location that served the previous agricultural-industrial use. The project site also abuts Reclamation Road on the eastern boundary and a gated driveway exists there today.

Sutter County has reviewed the project, and while a full transportation impact analysis is not required, normal questions have been raised to be resolved in a focused Traffic Analysis Report (TAR). These questions include:

1. What types of trucks will be using the site, and if STAA trucks are anticipated, is the route to and from SR 113 legally adequate for these vehicles?
2. At what time and in what number will trucks be leaving and arriving at the proposed facility daily?
3. What effects on mainline SR 113 traffic are created by project truck traffic, and are improvements to the site access that would address Caltrans concerns available and feasible?

BACKGROUND INFORMATION

Existing Facilities / Traffic Operating Conditions

SR 99 / Del Monte Avenue Traffic Volumes. Caltrans reports that State Route 113 (SR 113) carried an Annual Average Daily Traffic (AADT) volume of 7,150 (2019) / 7,000 (2020) vehicles per day in the area of the proposed project south of Del Monte Avenue. Of that total, trucks comprise 7% of the daily volumes, based on Caltrans data for the portion of SR 113 north of SR 45 in Yolo County.

The SR 113 / Del Monte Avenue intersection was observed on Tuesday January 4, 2022 during the morning (i.e., 7:00 to 9:00 a.m.) and evening (i.e., 4:00 to 6:00 p.m.) peak commute traffic hours. The number of trucks and automobiles are noted in the attached counts. Those counts indicated that Del Monte Avenue east of SR 113 limited traffic (i.e., a total of 100 vehicles in the two-hour morning observation and 80 in the two evening hours). Of these totals there were 3 "heavy trucks" (i.e., larger than SU trucks) in the morning and none in the evening. It is recognized that traffic on Sutter County roads varies seasonally, and that the local school was not in session. Thus, more automobiles and possibly trucks could use Del Monte Avenue at other times during the year. During our counts there were 636 morning and 718 evening vehicles on SR 113 south of the intersection, and of these 40 and 38 were heavy trucks during the a.m. and evening periods, respectively. Heavy trucks represented 6% and 5% of the total traffic during those two periods. These percentages are similar to the daily average reported by Caltrans.

SR 113 / Del Monte Avenue Intersection Layout. The SR 113 / Del Monte Avenue intersection is controlled by stop signs on the eastbound and westbound Del Monte Avenue approaches. SR 113 has two 12-foot travel lanes with 4-foot paved shoulders. There are four other existing driveways on SR 113 in 600-foot long area north of the proposed project to Del Monte Avenue, and additional areas beyond the shoulder have been paved at various times to provide access to those properties adjoining properties.

Left turn lanes are provided on SR 113 at the Del Monte Avenue intersection. The northbound left turn lane is 320 feet long and is preceded by a 180-foot long bay taper and 320 foot long transition. A painted median area is created by that transition, and that median striping is broken to allow left turns in and out from the project site's existing driveway and from another driveway about 130 feet to the north. The posted speed limit on SR 113 is 55 mph in this area.

Del Monte Avenue. Del Monte Avenue is a local Sutter County road that provides access to the small community of Robbins and to Robbins Elementary School.

Reclamation Road. Reclamation Road is a local two-lane road within right of way owned by Reclamation District 1500. The road runs along the Main Canal in the area of the project. Reclamation Road crosses Del Monte Avenue about 350 feet from SR 113. From that point Del Monte Avenue continues across the canal to the school, and Reclamation Road continues south.

Regulations - State of California

SB 743. With the adoption and 2020 implementation of SB 743, CEQA analysis of transportation impacts has moved from analysis of motorist delay based on Level of Service to consideration of a project's contribution to global climate change as expressed in terms of Vehicle Miles Traveled (VMT). While capacity analysis and Level of Service can still be considered by local agencies in addressing General Plan consistency, Level of Service is no longer a CEQA topic.

State of California Department of Transportation (Caltrans). Caltrans has jurisdiction over state highways. Caltrans' policy documents and analysis guidelines provide direction for transportation impact analysis.

Highway Design Manual, 7th Edition (HDM). The HDM establishes uniform policies and procedures to carry out the state highway design functions of the California Department of Transportation. The HDM establishes uniform policies and procedures to carry out the State highway design functions of the Department. It is neither intended as, nor does it establish, a legal standard for these functions. The standards, procedures, and requirements established and discussed herein are for the information and guidance of the officers and employees of the Department. Many of the instructions given herein are subject to amendment as conditions and experience warrant. Special situations may call for deviation from policies and procedures, subject to Division of Design approval, or such other approval as may be specifically provided for in the text of the HDM.

Encroachment Permits Manual. As a state highway, access to SR 113 is controlled by Caltrans. The Encroachment Permits Manual describes Caltrans' policy, revisions and legislative actions that affect the encroachment permit process. It also provides information on the intergovernmental review process, procedures of the permitting process, storm water management, as-built plan requirements, utility encasement requirements, and other related programs and policies. ***Appendix J Road Connections and Driveways*** includes *Design Guidelines for Typical Rural Driveways on State Highways*. (Attached)

We are not aware of the status of any existing Caltrans permit for current site access on SR 113. In many cases old access points without permits have been perpetuated as improvements are made to state highways. Officially, an encroachment permit is linked to a specific location, a specific use and a specific property owner, and any change to any of these conditions requires an amendment to an existing permit. Any driveway improvements made in the Caltrans right of way will require a new or amended encroachment permit.

Truck Turning Requirements. Large trucks (53-foot trailers) are allowed on mainline SR 113 under the Surface Transportation Authorization Act (STAA), but such vehicles are not permitted on intersecting Sutter County roads unless specifically designated for their use by Caltrans and the local agency (i.e., Sutter County) through evaluation of truck turning requirements. Private access anticipating trucks of this classification, as is typically the case for long haul truck operations, must also have access that can accommodate those vehicles.

Need for Left Turn Lanes. There are no left turn lanes at private access on SR 113 in the area of the Del Monte Avenue intersection, but north of the canal the existing north side industrial area has left turn lanes. Caltrans determines the need for left turn lanes at private access on state highways on a case-by-case basis. The volume of automobile and truck traffic associated with an intersection is a consideration, as well as sight distance and available right of way. Caltrans make use of Chapter 4 of the HDM, as well as guidance in the American Association of State Highway and Transportation Officials (AASHTO) publication *A Policy on Geometric Design of Highways and Streets*. AASHTO guidelines take two forms. These guidelines are presented the 11th Edition

KDA

(2011) in their Exhibit 9-29 and Table 1 and base the need for a left turn lane on the volume of approaching and opposing traffic on the mainline road and the relative percentage of that traffic that turns. These criteria are applicable to intersections where the major street traffic proceeds freely, and side street traffic is controlled by stop signs.

The AASHTO publication was updated in December 2018 and different guidelines are now available. The new guidelines suggest that a left turn lane could be beneficial based on the volume of traffic turning and the total volume per lane on the street. This guidance is presented in their Figure 9-36 Table 2 which follows. These guidelines also suggest volume thresholds for creation of a "bypass" lane that, absent a full turn lane, would allow through traffic to proceed around a vehicle stopped to turn left at a "tee" intersection. The information supporting the 2018 guidelines note, however, that *The volume based guidelines or warrants presented below indicate situations where a left turn lane may be desirable, not necessarily situations where a left-turn lane is definitely needed.*

TABLE 1
ASSESSMENT OF JUSTIFICATION FOR LEFT TURN LANES
UNDER 2011 AASHTO

Opposing Volume (veh/hr)	**Advancing Volume (veh/hr)**			
	5% Left Turns	**10% Left Turns**	**20% Left Turns**	**30% Left Turns**
40-mph operating speed				
800	330	240	180	160
600	410	305	225	200
400	510	380	275	245
200	640	470	350	305
100	720	515	390	340

Source: *A Policy on Geometric Design of Highway and Streets, AASHTO, 2011.*

TABLE 2 ASSESSMENT OF JUSTIFICATION FOR LEFT TURN LANES UNDER 2018 AASHTO		
Left Turn Lane Volume (VPH)	**Major Road Two-Lane Highway Peak-Hour Volume (VPH/Lane)**	
	Three-Leg Intersection	**Four-Leg Intersection**
	Warrants a Left Turn Lane	**Warrants a Left Turn Lane**
5	200	150
10	100	50
15	100	50
20	50	<50
25	50	< 50
30	50	< 50
35	50	< 50
40	50	< 50
45	50	< 50
50 or more	50	< 50
Source: *A Policy on Geometric Design of Highway and Streets, AASHTO, 2018.*		

Sight Distance. The HDM presents two standards for sight distance:

- Minimum stopping sight distance: HDM Table 201.1
- Corner Sight Distance HDM Table 4.05.A

Table 405.1B notes the application of these two measures for public and private roads.

In this case the minimum sight distance for a design speed of 60 mph is 580 feet. For private roads the minimum requirement is the Minimum Stopping Sight distance.

Similarly, for a 60 mph design speed, an entering heavy truck turning left onto southbound SR 113 would require 1,015 feet of corner sight distance looking right, and a truck turning right requires 925 feet looking left.

PROPOSED PROJECT

Project Travel Characteristics

Type of Operation. The operational characteristics of the project have been identified in terms of the amount of truck and automobile activity and the time periods of that travel. Typically, trucking operations fall into two categories: "Long haul" or "Local Distribution or Agricultural Harvesting / Processing Support". For long haul trucks the typical routine sends drivers away from the site

for extended periods of time. On a typical weeklong haul along the West Coast, most trucks return to the site on Friday and leave early Sunday or Monday, and most drivers try to operate outside peak traffic hours. Trips to the east coast can take longer. During the week some trucks may come and go for inspection or maintenance or if the drivers have to come home during the week. Alternatively, local based trucking typically leaves the site each weekday and returns that afternoon /evening. In both cases, a driver would travel by automobile to and from the site before beginning or ending his trips. Some of the truck drivers would park their personal auto at the site and others would be dropped off.

Trip Generation. This project's trip generation was estimated based on available resources and our understanding of the characteristics of these uses. You have indicated that this site will be used by long haul truckers focused on the West Coast.

Long haul truck trip generation rates were developed from 24-hr truck traffic counts at a large (440 spaces) truck parking area in Yuba City. That site generated 334 total truck trips (143 in and 191 out) on a Thursday, or 7.6 daily truck trips per 10 spaces. It was assumed that drivers would also cause automobile trips at the same time that trucks entered and exited and that ½ of the drivers would be dropped off / picked up.

Alternatively, for local trucks it would have been assumed that all would move to and from the site each day, or 20 daily truck trips per 10 spaces. Typically, much local truck activity begins in the morning before the typical commute hour, and trucks return outside of the p.m. peak hour.

The project results in the daily and peak hour trip generation forecasts presented in Table 1. As shown, 12 trips are projected in the a.m. and p.m. peak hours, while the project is projected to generate 166 daily trips. Of the total, 66 trips would be long haul trucks.

Previous Use. The extent of site trip generation with previous uses is unknown. Based on the layout of the area it is likely that trucks have accessed the site in the past, but the number and circumstances is unknown.

TABLE 1
PROJECT TRIP GENERATION

Unit	Unit	Quantity	Trucks			Automobiles			Total		
			In	Out	Total	In	Out	Total	In	Out	Total
A.M. Peak Hour											
Long Haul	10 spaces	1	8%	92%	0.55	64%	36%	0.82	42%	58%	1.36
Proposed	**87 spaces**	**8.7**	**0**	**5**	**5**	**5**	**2**	**7**	**5**	**7**	**12**
P.M. Peak Hour											
Long Haul	10 spaces	1	71%	29%	0.55	43%	57%	0.82	54%	46%	1.36
Proposed	**87 spaces**	**8.7**	**4**	**1**	**5**	**3**	**4**	**7**	**7**	**5**	**12**
Daily											
Long Haul	10	1	43%	57%	7.64	43%	57%	11.45	43%	57%	19.10
Proposed	**87**	**8.7**	**29**	**37**	**66**	**43**	**57**	**100**	**72**	**94**	**166**

KDA

Proposed SR 113 Access. The proposed access to SR 113 is 45 feet wide at the location of an existing driveway at an opening in the fence along the state right of way 50 feet from the centerline of SR 113. The access would not be gated. The area beyond the paved shoulder was also paved at some point in the past, and no improvements within the Caltrans right of way are proposed under the available plan. As noted earlier, left turns are already permitted this location by existing striping.

Project Effects

Because the volume of new traffic associated with this use is low, its effects on the state highway would primary relate to:

- The availability of adequate sight distance for exiting vehicles for other motorists who are approaching the access when a truck is accessing the driveway.
- the ability of large trucks to enter and exit the site without interfering with the flow of background traffic on SR 113 or creating a safety problem.
- the need for a left turn on eastbound SR 113.

Sight Distance. The alignment of SR 113 in this area is level and straight. As a result, the view measured 15 feet from the edge of the travel way across the Caltrans right of way would satisfy corner sight distance requirements in both directions. Looking north the view based on corner sight distance requirements would extend to the Del Monte Avenue intersection and cross the area of that intersection's southbound left turn lane. Vehicles stopped in that lane could affect sight distance, however, the traffic counts indicated that the number of left turns at that location is low, and it is unlikely that queuing vehicle would have an appreciable effect on the availability of adequate sight distance. Looking south, the view is clear, although there is a tree within the Caltrans right of way just beyond the project limits that would need to be maintained to perpetuate a clear view from the eye of a driver in the cab of a heavy truck.

As with many locations in the Sacramento Valley, the project area is susceptible to winter fog that limits sight distance. Motorists typically respond by reducing driving speeds when visibility is limited and by selecting alternative routes that minimize potential vehicle conflicts. However, specific design policies relating to the effects of winter fog are not included in the HDM.

STAA Trucks. While some of the trucks at the site may be classified as California Legal and do not require additional approvals, trucks permitted under the Surface Transportation Authorization Act (STAA) are also expected by the project proponents. The path of STAA trucks at the site access has been plotted, and the results are attached.

As shown, due to the distance from the highway to fence along the right of way, the paths of heavy trucks within the planned 45 foot opening would generally remain within the expected area for inbound and outbound traffic. Turning trucks do not have to use of the full driveway width when entering and exiting in either direction.

The identified paths would travel over the "paved" area along the project frontage outside of the existing 4-foot shoulder, and the status of the pavement in that area is uncertain. It would be reasonable to expect that this area would need to be reconstructed to accommodate heavy truck

loads within the limits of the truck paths in a manner that is consistent with the intent of the requirements of HDM Figure 205.1 in terms of return radius offset and transition, and that concept should be adapted to address the actual turning path that has been shown in our exhibits.

Safety for Outbound Left Turns. The project would create outbound traffic onto SR 113 by automobiles and trucks. As noted earlier, the access provides adequate sight distance for drivers making left turns, and such turning maneuvers have likely occurred in the past with the previous use. At the trip generation levels anticipated with current background traffic volumes the average delays for exiting traffic would not be excessive. However large trucks travel a considerable distance as they accelerate after making a turn, and while other southbound traffic will be able to see these vehicles and react accordingly, some delay to through traffic may occur. As noted earlier, reduced sight distance due to winter fog may create the need to limit outbound trucks to right turns only when visibility is limited.

Need for Left Turn Lane. The trip generation forecast suggests that 29 trucks would enter the site over the course of a weekday. The number could vary through the week depending on when trucks begin or end their haul. Based on the project's location relative to Interstate 5, Interstate 80 and regional distribution centers in Woodland and Sacramento it is likely that the greater share of inbound truck traffic will be arriving from the south. It is unlikely that the number of trucks turning left into the site would ever exceed 5 trucks per hour, and the typical count would likely be lower.

Left turning trucks would slow in the southbound SR 113 travel lane as they approach the driveway, and HDM Table 405.2B suggests that 530 feet of deceleration space is needed for a 60 mph design speed. Trucks could begin to move into the median area and out of the through travel lane when they are about 200 feet from the driveway, and based on NCHRP Report 505 *Review of Truck Characteristics as Factor in Roadway Design* Table 25, that distance would allow a loaded truck to come to a stop from 45 mph. However, as the median is only about 7 feet wide at the project driveway a portion of the truck will remain in the through travel lane.

Other drivers on SR 113 may not expect to be following heaving trucks that are decelerating on southbound SR 113 coming out of the Del Monte Avenue intersection, which could lead to an increase in rear end collisions. SR 113 could be widened to provide a full left turn lane at the access or Two-Way Left Turn (TWLT) lane, although the cost of this work is unknown. While inbound automobiles are not likely to create a safety problem, unless SR 113 is reconstructed to provide a wider left turn area capable of accommodating trucks outside of the flow of southbound traffic, limiting inbound trucks at the driveway to northbound "right turns only" is recommended.

Need for Right Turn Lane. The issues associated with right turns by heavy trucks are similar to those associated with left turns, but other drivers are more likely to expect right turns into businesses along SR 113. At a minimum, implementation of access improvements that are consistent with HDM Figure 205.1 improvements provides an area for trucks to enter the site. However, trucks would still slow to about 20 mph as they enter the taper area. It would be desirable to increase the area available for truck deceleration outside of the through travel lanes. Because the 160 foot area along the project frontage has been paved, it is possible that trucks could use this area for deceleration. However, the status of the pavement section in this area is unknown, and the extent of reconstruction needed to support truck loadings would need to be evaluated. A full

right turn lane or twelve foot wide shoulder could be constructed, and both would be subject to Caltrans approval.

Work to further lengthen deceleration opportunities outside of the through travel lane and achieve the HDM's 530 foot deceleration distance would involve property beyond the limits of the project. The extent of right of way and drainage issues in this area is unknown.

Improvements to the area along northbound SR 113 to provide space for deceleration outside of the flow of northbound traffic is recommended. Because this area is controlled by Caltrans, the extent of improvements would need to be determined in consultation with District 3, and any work required by Sutter County would need to be implemented under an encroachment permit from Caltrans.

Alternatives to SR 113 Access. Because the site abuts Reclamation Road and a 20 foot driveway already exists, the feasible to access the site via that road instead of SR 113 was considered.

There appear to be limitations associated with using Reclamation Road. Foremost is that pedestrian and automobile traffic destined for the east side of the Main Canal uses Del Monte Avenue across the Reclamation Road intersection. It is possible that the community may object to a truck access in the area of the route to the elementary school, and it would be desirable to avoid using this route during the periods when children are traveling to and from the school. In addition, neither Del Monte Avenue or Reclamation Road are designated STAA routes, and both streets, as well as the driveway could require improvements to accommodate trucks and to gain an STAA designation. The extent to which the reclamation district may approve those improvements is unknown. Thus access to Reclamation Road would likely need to be for automobiles and for non-STAA trucks.

Conclusions

With improvements to SR 113 to provide space for deceleration for northbound trucks, prohibiting left turns by trucks into the site, making secondary access to Reclamation Road available and applying normal access management during inclement weather the proposed project with 87 truck / trailer spaces can be developed without significant safety impacts to SR 113 in this area.

Please feel free to call me if you have any questions.

Sincerely Yours,

KD Anderson & Associates, Inc.



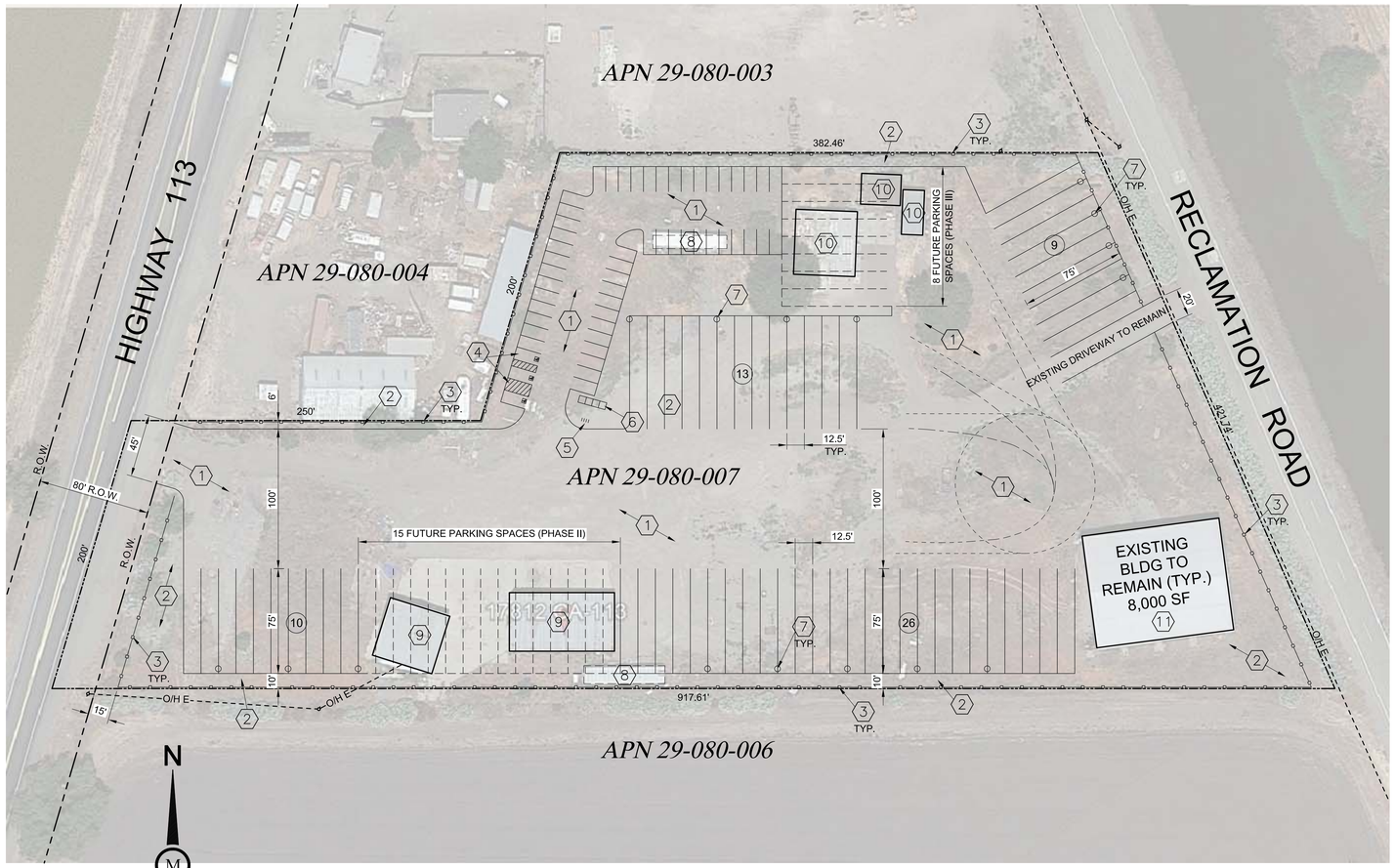
Kenneth D. Anderson, P.E.
President

Attachments: site plan, traffic count, truck turn plots, references

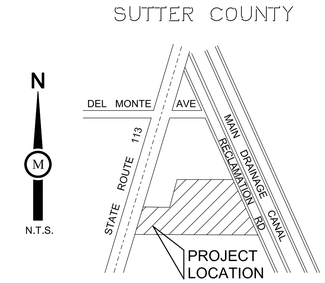
KDA

PROPOSED TRUCK YARD

17812 HIGHWAY 113
KNIGHTS LANDING, CA
A.P.N. 29-080-007



SITE PLAN
1" = 50'



VICINITY MAP
NOT TO SCALE

CONSTRUCTION NOTES

1. NEW ASPHALT CONCRETE PAVEMENT
2. NEW LANDSCAPE / DRAINAGE AREA. LANDSCAPING WILL BE WITHIN PLANTERS SEPARATED FROM PARKING AND DRIVEWAYS WITH SIX-INCH CONCRETE CURBING.
3. NEW 6' HIGH CHAIN-LINK FENCE WITH PRIVACY SLATS ALONG PERIMETER OF SITE. PRIVACY SLATS MUST HAVE A MINIMUM PRIVACY RATING OF 90 PERCENT OR GREATER.
4. NEW ACCESSIBLE PARKING SPACES (1 VAN ACCESSIBLE)
5. NEW BICYCLE RACK (4 SPACES PROVIDED)
6. NEW PORTABLE TRAILER MOUNTED RESTROOM FACILITIES (4 RESTROOMS PROVIDED)
7. NEW 55-GALLON TRASH RECEPTACLE (16 PROVIDED)
8. EXISTING BUILDING TO BE REMOVED
9. EXISTING BUILDING TO BE REMOVED AS PART OF PHASE II, PROVIDING 15 ADDITIONAL PARKING SPACES
10. EXISTING BUILDING TO BE REMOVED AS PART OF PHASE III, PROVIDING 8 ADDITIONAL PARKING SPACES
11. EXISTING 8,000 S.F. STRUCTURE WILL BE LIMITED TO WINDSHIELD, WIPER, AND HEADLIGHT REPLACEMENT WORK AS OUTLINED UNDER ZONING CODE SECTION 1500-07-030 B. 3. M.
    NO MATERIALS SUCH TRUCK PARTS, TIRES, AND RELATED ITEMS SHALL BE STORED ON THE PROPERTY.

LOT DATA:

A.P.N.:	29-080-007
TOTAL ACREAGE:	291,852 SF (6.7 AC)
EXISTING PARCELS:	1
PROPOSED PARCELS:	1
EXISTING ZONE:	M-1 LIGHT INDUSTRIAL
PROPOSED ZONE:	M-1 LIGHT INDUSTRIAL
EXISTING USE:	INDUSTRIAL
PROPOSED USE:	TRUCK YARD / INDUSTRIAL USES
TRUCK PARKING SPACE:	12.5' x 75'
TRUCK PARKING SPACES:	81 SPACES

ACCESS TO PARKING LOT IS TO BE FROM HIGHWAY 113 AND RECLAMATION ROAD

PARKING DATA:

TRUCK PARKING SPACE:	81 SPACES
AUTO PARKING (1 PER 1.5 TRUCKS):	54 SPACES
REQUIRED:	135 SPACES
TRUCK PARKING SPACE (12.5'x75') (INCLUDES 23 FUTURE SPACES)	81 SPACES
AUTO PARKING SPACE (9'x18')	51 SPACES
ACCESSIBLE PARKING SPACE (9'x18')	3 SPACES
PROVIDED:	135 SPACES

PROPERTY DESCRIPTION

REAL PROPERTY IN THE COUNTY OF SUTTER, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

ALL THAT PORTION OF LOT 48 AS SHOWN ON THAT CERTAIN MAP ENTITLED "MAP OF SUTTER BASIN SUBDIVISION NO 4" FILED IN THE OFFICE OF THE COUNTY RECORDER OF SUTTER COUNTY, CALIFORNIA, ON MAY 06, 1921 IN BOOK 3 OF SURVEYS , PAGE 88

SITE UTILITIES

SEWAGE DISPOSAL:	PRIVATE ONSITE
WATER SUPPLY:	PRIVATE ONSITE
DRAINAGE:	SUTTER COUNTY

APPLICANT

SARBJIT THIARA
CAPITAL FARM & MANAGEMENT COMPANY
(530) 682-2484

SHEET INDEX

1	SITE PLAN / PROJECT DATA
2	LANDSCAPE CONCEPT PLAN
3	PHOTOMETRIC PLAN

Milestone Associates Imagineering, Inc.
1000 Lincoln Road, Suite H202, Yuba City, CA 95991
(530) 755-4700

PROPOSED TRUCK YARD
17812 HWY 113, KNIGHTS LANDING, CA

SITE PLAN / PROJECT DATA 1

03-6-23

Prepared by National Data & Surveying Services

SR 113 & Del Monte Ave

Peak Hour Turning Movement Count

ID: 22-070009-002
City: Robbins

Day: Tuesday
Date: 1/4/2022

PEAK HOURS	COUNT PERIODS
07:00 AM - 08:00 AM	7:00 AM - 09:00 AM
NONE	NONE
04:00 PM - 05:00 PM	4:00 PM - 06:00 PM

SOUTHBOUND (SR 113)

AM	0	236	11	0	114	AM
NOON	0	0	0	0	0	NOON
PM	0	110	4	0	454	PM

EASTBOUND (Del Monte Ave)

AM	NOON	PM	
0	0	3	
0	0	0	0
0	0	0	0
0	0	2	0
0	0	1	0
AM	NOON	PM	

WESTBOUND (Del Monte Ave)

PM	NOON	AM	
7	0	8	0
2	0	0	0
16	0	15	0
0	0	0	0
25	0	26	
PM	NOON	AM	

NORTHBOUND (SR 113)

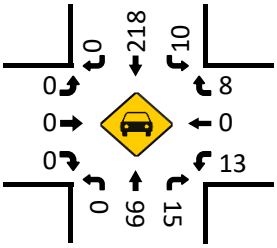
PM	127	0	1	447	19	PM
NOON	0	0	0	0	0	NOON
AM	251	0	0	106	15	AM

CONTROL

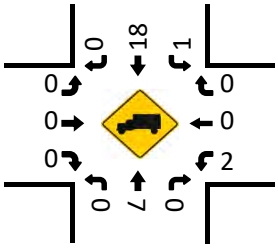
2-Way Stop(EB/WB)

TEV	391 AM	0 NOON	609 PM
PHF	0.96		0.89

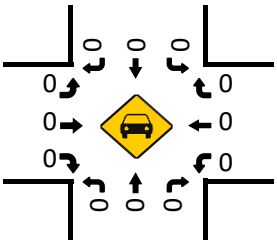
Cars (AM)



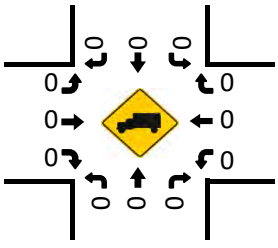
HT (AM)



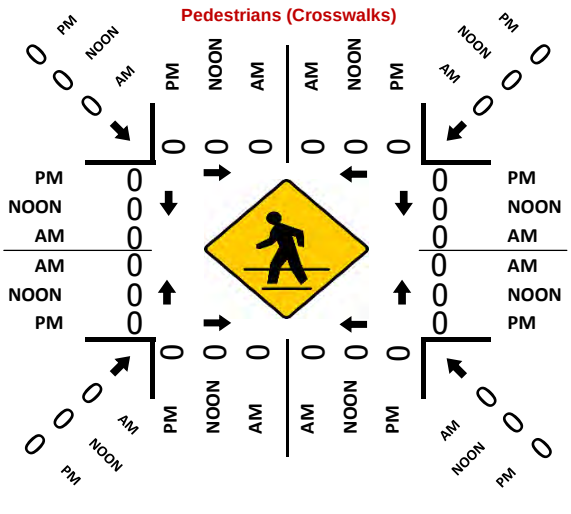
Cars (NOON)



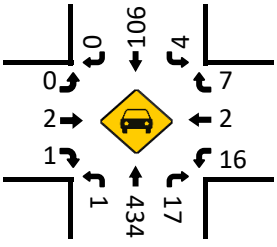
HT (NOON)



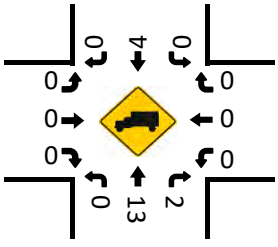
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



National Data & Surveying Services Intersection Turning Movement Count

Location: SR 113 & Del Monte Ave
City: Robbins
Control: 2-Way Stop(EB/WB)

Project ID: 22-070009-002
Date: 1/4/2022

Data - Total

NS/EW Streets:	SR 113				SR 113				Del Monte Ave				Del Monte Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	23	3	0	3	64	0	0	0	0	0	0	5	0	4	0	102
7:15 AM	0	27	2	0	1	57	0	0	0	0	0	0	1	0	3	0	91
7:30 AM	0	29	2	0	5	61	0	0	0	0	0	0	4	0	1	0	102
7:45 AM	0	27	8	0	2	54	0	0	0	0	0	0	5	0	0	0	96
8:00 AM	0	25	5	0	4	28	0	0	0	0	0	0	5	1	2	0	70
8:15 AM	1	28	4	0	1	40	1	0	0	0	0	0	8	0	1	0	84
8:30 AM	0	17	2	0	2	41	1	0	0	0	0	0	5	0	1	0	69
8:45 AM	0	14	2	0	2	35	0	0	0	0	0	0	4	1	1	0	59
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	190	28	0	20	380	2	0	0	0	0	0	37	2	13	0	673
APPROACH %'s :	0.46%	86.76%	12.79%	0.00%	4.98%	94.53%	0.50%	0.00%					71.15%	3.85%	25.00%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	106	15	0	11	236	0	0	0	0	0	0	15	0	8	0	391
PEAK HR FACTOR :	0.000	0.914	0.469	0.000	0.550	0.922	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.500	0.000	0.958
		0.864				0.922								0.639			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	133	5	0	1	27	0	0	0	0	0	0	4	0	2	0	172
4:15 PM	0	119	2	0	1	24	0	0	0	0	0	0	3	1	2	0	152
4:30 PM	1	80	5	0	0	32	0	0	0	0	0	0	7	1	1	0	127
4:45 PM	0	115	7	0	2	27	0	0	0	2	1	0	2	0	2	0	158
5:00 PM	0	75	3	0	1	26	0	0	0	0	0	0	2	0	2	0	109
5:15 PM	0	86	3	0	1	31	0	0	0	1	0	0	1	1	0	0	124
5:30 PM	0	64	4	0	3	28	0	0	1	0	0	0	2	0	2	0	104
5:45 PM	0	45	3	0	0	20	0	0	0	0	0	0	1	0	0	0	69
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	717	32	0	9	215	0	0	1	3	1	0	22	3	11	0	1015
APPROACH %'s :	0.13%	95.60%	4.27%	0.00%	4.02%	95.98%	0.00%	0.00%	20.00%	60.00%	20.00%	0.00%	61.11%	8.33%	30.56%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	1	447	19	0	4	110	0	0	0	2	1	0	16	2	7	0	609
PEAK HR FACTOR :	0.250	0.840	0.679	0.000	0.500	0.859	0.000	0.000	0.000	0.250	0.250	0.000	0.571	0.500	0.875	0.000	0.885
		0.846				0.891				0.250				0.694			

National Data & Surveying Services Intersection Turning Movement Count

Location: SR 113 & Del Monte Ave
City: Robbins
Control: 2-Way Stop(EB/WB)

Project ID: 22-070009-002
Date: 1/4/2022

Data - Cars

NS/EW Streets:	SR 113				SR 113				Del Monte Ave				Del Monte Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	22	3	0	2	59	0	0	0	0	0	0	5	0	4	0	95
7:15 AM	0	25	2	0	1	51	0	0	0	0	0	0	1	0	3	0	83
7:30 AM	0	27	2	0	5	56	0	0	0	0	0	0	4	0	1	0	95
7:45 AM	0	25	8	0	2	52	0	0	0	0	0	0	3	0	0	0	90
8:00 AM	0	24	5	0	4	24	0	0	0	0	0	0	5	1	2	0	65
8:15 AM	1	24	4	0	1	35	1	0	0	0	0	0	8	0	1	0	75
8:30 AM	0	10	2	0	2	34	1	0	0	0	0	0	5	0	1	0	55
8:45 AM	0	13	2	0	2	32	0	0	0	0	0	0	4	1	1	0	55
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	170	28	0	19	343	2	0	0	0	0	0	35	2	13	0	613
APPROACH %'s :	0.50%	85.43%	14.07%	0.00%	5.22%	94.23%	0.55%	0.00%					70.00%	4.00%	26.00%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	99	15	0	10	218	0	0	0	0	0	0	13	0	8	0	363
PEAK HR FACTOR :	0.000	0.917	0.469	0.000	0.500	0.924	0.000	0.000	0.000	0.000	0.000	0.000	0.650	0.000	0.500	0.000	0.955
		0.864				0.934								0.583			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	129	5	0	1	26	0	0	0	0	0	0	4	0	2	0	167
4:15 PM	0	114	2	0	1	24	0	0	0	0	0	0	3	1	2	0	147
4:30 PM	1	79	5	0	0	32	0	0	0	0	0	0	7	1	1	0	126
4:45 PM	0	112	5	0	2	24	0	0	0	2	1	0	2	0	2	0	150
5:00 PM	0	72	3	0	1	24	0	0	0	0	0	0	2	0	2	0	104
5:15 PM	0	77	3	0	1	31	0	0	0	1	0	0	1	1	0	0	115
5:30 PM	0	61	4	0	3	28	0	0	1	0	0	0	2	0	2	0	101
5:45 PM	0	44	3	0	0	19	0	0	0	0	0	0	1	0	0	0	67
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	688	30	0	9	208	0	0	1	3	1	0	22	3	11	0	977
APPROACH %'s :	0.14%	95.69%	4.17%	0.00%	4.15%	95.85%	0.00%	0.00%	20.00%	60.00%	20.00%	0.00%	61.11%	8.33%	30.56%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	1	434	17	0	4	106	0	0	0	2	1	0	16	2	7	0	590
PEAK HR FACTOR :	0.250	0.841	0.850	0.000	0.500	0.828	0.000	0.000	0.000	0.250	0.250	0.000	0.571	0.500	0.875	0.000	0.883
		0.843				0.859				0.250				0.694			

National Data & Surveying Services Intersection Turning Movement Count

Location: SR 113 & Del Monte Ave
City: Robbins
Control: 2-Way Stop(EB/WB)

Project ID: 22-070009-002
Date: 1/4/2022

Data - HT

NS/EW Streets:	SR 113				SR 113				Del Monte Ave				Del Monte Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	1	0	0	1	5	0	0	0	0	0	0	0	0	0	0	7
7:15 AM	0	2	0	0	0	6	0	0	0	0	0	0	0	0	0	0	8
7:30 AM	0	2	0	0	0	5	0	0	0	0	0	0	0	0	0	0	7
7:45 AM	0	2	0	0	0	2	0	0	0	0	0	0	2	0	0	0	6
8:00 AM	0	1	0	0	0	4	0	0	0	0	0	0	0	0	0	0	5
8:15 AM	0	4	0	0	0	5	0	0	0	0	0	0	0	0	0	0	9
8:30 AM	0	7	0	0	0	7	0	0	0	0	0	0	0	0	0	0	14
8:45 AM	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	4
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	20	0	0	1	37	0	0	0	0	0	0	2	0	0	0	60
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	2.63%	97.37%	0.00%	0.00%					100.00%	0.00%	0.00%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	7	0	0	1	18	0	0	0	0	0	0	2	0	0	0	28
PEAK HR FACTOR :	0.000	0.875	0.000	0.000	0.250	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.875
	0.875				0.792								0.250				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	4	0	0	0	1	0	0	0	0	0	0	0	0	0	0	5
4:15 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	3	2	0	0	3	0	0	0	0	0	0	0	0	0	0	8
5:00 PM	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	0	5
5:15 PM	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
5:30 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	29	2	0	0	7	0	0	0	0	0	0	0	0	0	0	38
APPROACH %'s :	0.00%	93.55%	6.45%	0.00%	0.00%	100.00%	0.00%	0.00%									
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	13	2	0	0	4	0	0	0	0	0	0	0	0	0	0	19
PEAK HR FACTOR :	0.000	0.650	0.250	0.000	0.000	0.333	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.594
	0.750				0.333												

National Data & Surveying Services Intersection Turning Movement Count

Location: SR 113 & Del Monte Ave
City: Robbins
Control: 2-Way Stop(EB/WB)

Project ID: 22-070009-002
Date: 1/4/2022

Data - Bikes

NS/EW Streets:	SR 113				SR 113				Del Monte Ave				Del Monte Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :																	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :																	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

National Data & Surveying Services Intersection Turning Movement Count

Location: SR 113 & Del Monte Ave
City: Robbins
Project ID: 22-070009-002
Date: 1/4/2022

Data - Pedestrians (Crosswalks)

NS/EW Streets:	SR 113		SR 113		Del Monte Ave		Del Monte Ave		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0
APPROACH %'s :									
PEAK HR :	07:00 AM - 08:00 AM								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0
APPROACH %'s :									
PEAK HR :	04:00 PM - 05:00 PM								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									


Untitled Map
Write a description for your map.
N
FEET
0
100
200
19.00
48.00
3.00
41.00
0.00
4.00
23.00
STAA Design Vehicle (56 FT RADIUS)
feet
Tractor Width : 8.50
Trailer Width : 8.50
Tractor Track : 8.50
Trailer Track : 8.50
Lock to Lock Time : 6.0
Steering Angle : 26.1
Articulating Angle : 70.0
Legend
17812 CA-113
100 '
75 '
45 '
75 '
16 '
17812 CA-113
STAA INBOUND
N
Google Earth
300 ft


Untitled Map
Write a description for your map.
N
FEET
0
100
200
19.00
48.00
3.00
41.00
0.00
4.00
23.00
STAA Design Vehicle (56 FT RADIUS)
feet
Tractor Width : 8.50
Trailer Width : 8.50
Tractor Track : 8.50
Trailer Track : 8.50
Lock to Lock Time : 6.0
Steering Angle : 26.1
Articulating Angle : 70.0
Legend
17812 CA-113
100 '
75 '
45 '
100 '
75 '
16 '
17812 CA-113
STAA OUTBOUND
N
Google Earth
300 ft

Appendix J – Road Connections and Driveways

Table of Contents

Design Guidelines for Typical Rural Driveways in State Right of Way. 1

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Design Guidelines for Typical Rural Driveways in State Right of Way

REFERENCES:

Please always refer to the latest Highway Design Manual (HDM) for most up to date guidelines. The HDM indexes referenced in the guidelines below can be accessed online from the following link:

https://dot.ca.gov/programs/design/manual-highway-design-manual-hdm

Initial Driveway Design Considerations:

1. **Location of the driveway shall be designed to maximize corner sight distance.** For corner sight distance, see HDM Index 405.1 (2)(c). Driveway proposals that do not meet sight distance requirements will not be permitted. The minimum corner sight distance shall be equal to the stopping sight distance as given in HDM Table 201.1. HDM Table 101.2 shows appropriate ranges of design speeds that shall be used for the various types of facilities, place types, and conditions listed (see HDM Table 101.2 Vehicular Design Speed; Table 201.1 Sight Distance Standards; Index 205.4 Driveways on Frontage roads and in Rural Areas; Index 405.1 (2) Corner Sight Distance).

2. **Driveways connecting to State highways shall be paved a minimum of 20 feet from the edge of shoulder** or to the edge of State right of way, whichever is less to minimize or eliminate gravel from being scattered on the highway and to provide a paved surface for vehicles and bicycles to accelerate and merge. Where larger design vehicles are using the driveway (e.g., dump trucks, flatbed trucks, moving vans, etc.), extend paving so the drive wheels will be on a paved surface when accelerating onto the roadway (see HDM Index 205.4 Driveways on Frontage roads and in Rural Areas).

Driveway Design Details: Once considerations 1 and 2 above are met, driveway shall be designed per the following requirements:

3. Where County or City Regulations differ from the State's, it may be desirable to follow their regulations (See HDM Index 205.4 Driveways on Frontage roads and in Rural Areas).

OR

4. Design details are shown on HDM Figure 205.1. This detail, without the recess, may be used on conventional highways (see HDM Figure 205.1 Access Openings on Expressways, Note 2).

5. Approach and departure tapers should be 50 feet longitudinal and 8 feet from edge of traveled way at the end of the taper. Approach and departure tapers are not required where the existing paved shoulder is at least 8 feet wide (see HDM Figure 205.1 Access Openings on Expressways).

Structural Section Design Details: Driveways structural section has to meet the following requirements:

6. Approach and departure tapers should have structural sections matching the existing State highway shoulders. An alternate shoulder design is allowed. See HDM Figure 613.5B for details. For asphalt driveway the structural section should be equal to or greater than edge of shoulder or approach and

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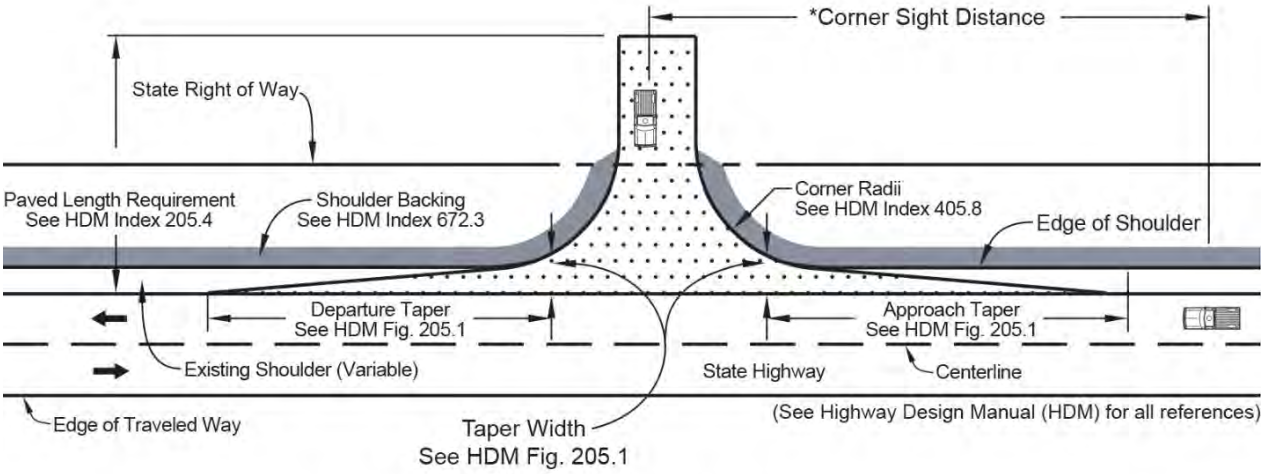
departure tapers. Minimum thickness of surface course is 0.35 foot. Aggregate base depth should match State highway shoulders. Details (cross section, etc.) for concrete driveways are shown on Standard Plan A87A. Minimum thickness at driveway shall be 4 inches for residential and 6 inches for commercial. (See HDM 613.5 (2) Shoulders; Standard Plan A87A Curb and Driveways; Standard Plans are available at:

https://dot.ca.gov/programs/design/ccs-standard-plans-and-standard-specifications

7. Place shoulder backing from the edge of pavement (EP) to the hinge point (HP). Shoulder backing should be placed on a width of at least 2 feet from EP. For placement of shoulder backing thickness greater than 0.5 foot for slope repair; shoulder backing behind dikes; and where longitudinal drainage are present; see HDM for details (see HDM Index 672 Shoulder Backing and HDM Figures 672.3 A through E).

The Figure below is provided to assist driveway design for rural areas and to clarify terminologies used in the above guidance. This figure is provided for general illustration purposes and is not be used for design details. It should not to be used as a drawing in the encroachment permit application for the driveway.

Driveway Design Requirements for Rural Areas with Unimproved Frontage on Conventional State Highways



*Corner Sight Distance shall be calculated from all directions of approach. See HDM Index 405.1(2) & Figure 405.7 for set back and sight distance calculations.

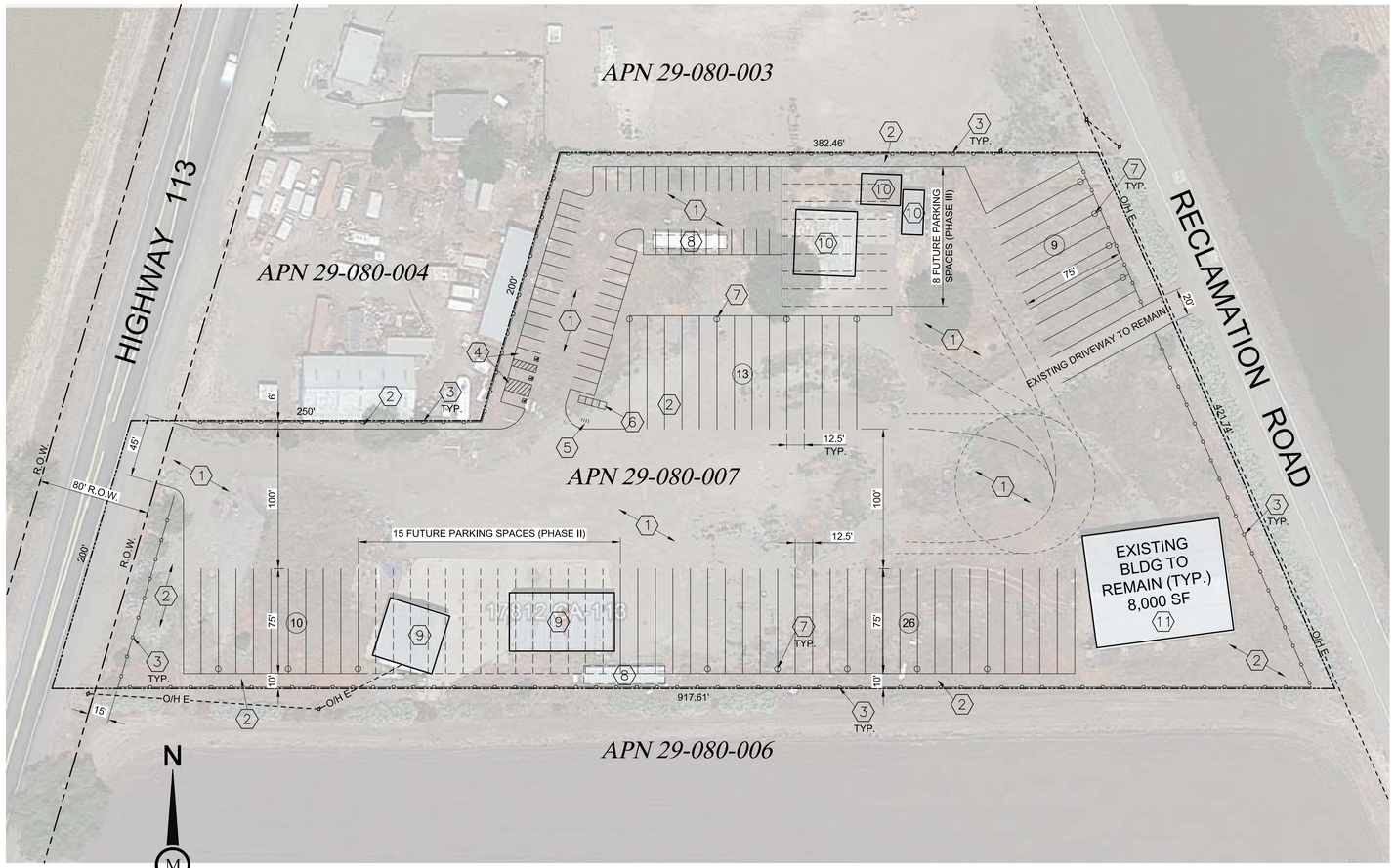
Purpose: The above excerpts from the Department's HDM are shown for reference. The design standards used for any project should equal or exceed the minimum given in the manual to the maximum extent feasible. They do not replace engineering knowledge, experience, and judgment in the design of driveways.

Special situations may call for variation from policies and procedures, subject to the appropriate approval. This is not intended to, nor does it establish a legal standard or any other standard of conduct or duty toward the public.

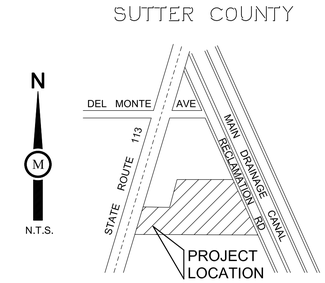
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PROPOSED TRUCK YARD

17812 HIGHWAY 113
KNIGHTS LANDING, CA
A.P.N. 29-080-007



SITE PLAN
1" = 50'



VICINITY MAP
NOT TO SCALE

CONSTRUCTION NOTES

1. NEW ASPHALT CONCRETE PAVEMENT
2. NEW LANDSCAPE / DRAINAGE AREA. LANDSCAPING WILL BE WITHIN PLANTERS SEPARATED FROM PARKING AND DRIVEWAYS WITH SIX-INCH CONCRETE CURBING.
3. NEW 6' HIGH CHAIN-LINK FENCE WITH PRIVACY SLATS ALONG PERIMETER OF SITE. PRIVACY SLATS MUST HAVE A MINIMUM PRIVACY RATING OF 90 PERCENT OR GREATER.
4. NEW ACCESSIBLE PARKING SPACES (1 VAN ACCESSIBLE)
5. NEW BICYCLE RACK (4 SPACES PROVIDED)
6. NEW PORTABLE TRAILER MOUNTED RESTROOM FACILITIES (4 RESTROOMS PROVIDED)
7. NEW 55-GALLON TRASH RECEPTACLE (16 PROVIDED)
8. EXISTING BUILDING TO BE REMOVED
9. EXISTING BUILDING TO BE REMOVED AS PART OF PHASE II, PROVIDING 15 ADDITIONAL PARKING SPACES
10. EXISTING BUILDING TO BE REMOVED AS PART OF PHASE III, PROVIDING 8 ADDITIONAL PARKING SPACES
11. EXISTING 8,000 S.F. STRUCTURE WILL BE LIMITED TO WINDSHIELD, WIPER, AND HEADLIGHT REPLACEMENT WORK AS OUTLINED UNDER ZONING CODE SECTION 1500-07-030 B. 3. M.
    NO MATERIALS SUCH TRUCK PARTS, TIRES, AND RELATED ITEMS SHALL BE STORED ON THE PROPERTY.

LOT DATA:

A.P.N.:	29-080-007
TOTAL ACREAGE:	291,852 SF (6.7 AC)
EXISTING PARCELS:	1
PROPOSED PARCELS:	1
EXISTING ZONE:	M-1 LIGHT INDUSTRIAL
PROPOSED ZONE:	M-1 LIGHT INDUSTRIAL
EXISTING USE:	INDUSTRIAL
PROPOSED USE:	TRUCK YARD / INDUSTRIAL USES
TRUCK PARKING SPACE:	12.5' x 75'
TRUCK PARKING SPACES:	81 SPACES

ACCESS TO PARKING LOT IS TO BE FROM HIGHWAY 113 AND RECLAMATION ROAD

PARKING DATA:

TRUCK PARKING SPACE:	81 SPACES
AUTO PARKING (1 PER 1.5 TRUCKS):	54 SPACES
REQUIRED:	135 SPACES
TRUCK PARKING SPACE (12.5'x75') (INCLUDES 23 FUTURE SPACES)	81 SPACES
AUTO PARKING SPACE (9'x18')	51 SPACES
ACCESSIBLE PARKING SPACE (9'x18')	3 SPACES
PROVIDED:	135 SPACES

PROPERTY DESCRIPTION

REAL PROPERTY IN THE COUNTY OF SUTTER, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

ALL THAT PORTION OF LOT 48 AS SHOWN ON THAT CERTAIN MAP ENTITLED "MAP OF SUTTER BASIN SUBDIVISION NO 4" FILED IN THE OFFICE OF THE COUNTY RECORDER OF SUTTER COUNTY, CALIFORNIA, ON MAY 06, 1921 IN BOOK 3 OF SURVEYS , PAGE 88

SITE UTILITIES

SEWAGE DISPOSAL:	PRIVATE ONSITE
WATER SUPPLY:	PRIVATE ONSITE
DRAINAGE:	SUTTER COUNTY

APPLICANT

SARBJIT THIARA
CAPITAL FARM & MANAGEMENT COMPANY
(530) 682-2484

SHEET INDEX

1	SITE PLAN / PROJECT DATA
2	LANDSCAPE CONCEPT PLAN
3	PHOTOMETRIC PLAN

Milestone Associates Imagineering, Inc.
1000 Lincoln Road, Suite H202, Yuba City, CA 95991
(530) 755-4700

PROPOSED TRUCK YARD
17812 HWY 113, KNIGHTS LANDING, CA

SITE PLAN / PROJECT DATA 1

03-6-23

PRELIMINARY PLANT SCHEDULE

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE
PARKING LOT TREES				
	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	24" BOX	MODERATE
	PISTACIA CHINENSIS 'KEITH DAVEY'	KEITH DAVEY CHINESE PISTACHE	24" BOX	LOW
	ULMUS PARVIFOLIA	CHINESE ELM	24" BOX	MODERATE
PERIMETER SCREEN TREES				
	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	15 GAL	MODERATE
	PINUS CANARIENSIS	CANARY ISLAND PINE	15 GAL	LOW
	ZELKOVA SERRATA 'GREEN VASE'	GREEN VASE ZELKOVA	24" BOX	MODERATE
ACCENT TREES				
	AESCULUS CALIFORNICA	CALIFORNIA BUCKEYE	24" BOX	LOW
	LAGERSTROEMIA INDICA	CRAPE MYRTLE	24" BOX	LOW
	MAGNOLIA GRANDIFLORA X 'LITTLE GEM'	LITTLE GEM MAGNOLIA	24" BOX	LOW
GRASSES AND GRASS-LIKE PLANTS				
	ACHILLEA MILLEFOLIUM 'SALMON BEAUTY'	SALMON BEAUTY COMMON YARROW	1 GAL	LOW
	DIETES BICOLOR	FORTNIGHT LILY	5 GAL	LOW
GROUNDCOVERS				
	ARCTOSTAPHYLOS 'EMERALD CARPET'	EMERALD CARPET MANZANITA	1 GAL	LOW
	CEANOTHUS 'JOYCE COULTER'	JOYCE COULTER MOUNTAIN LILAC	1 GAL	LOW
	JUNIPERUS HORIZONTALIS 'WILTONII'	BLUE RUG JUNIPER	1 GAL	LOW
MEDIUM HEIGHT SHRUBS				
	ARCTOSTAPHYLOS DENSIFLORA 'HOWARD MCMINN'	HOWARD MCMINN VINE HILL MANZANITA	5 GAL	LOW
	GREVILLEA NOELLI	GREVILLEA	5 GAL	LOW
	MYRTUS COMMUNIS 'COMPACTA'	COMPACT MYRTLE	5 GAL	LOW
SCREEN SHRUBS / HEDGES				
	CEANOTHUS 'JULIA PHELPS'	CALIFORNIA LILAC	5 GAL	LOW
	RHAMNUS CALIFORNICA	COFFEEBERRY	5 GAL	LOW
	XYLOSMA CONGESTUM 'COMPACTA'	COMPACT XYLOSMA	5 GAL	LOW
MISCELLANEOUS				
	2"-4" DIAMETER RIVER COBBLE			

* THE PLANTS LISTED IN THE PRELIMINARY PLANT SCHEDULE ABOVE REPRESENTS A SAMPLE OF THE TYPES OF TREES, SHRUBS, AND GROUNDCOVERS THAT WE ANTICIPATE BEING APPROPRIATE FOR THIS LOCATION AND REPRESENTS THE OVERALL DESIGN STYLE AND THEME. THE FINAL PLANT SELECTION WILL DRAW FROM THIS LIST; IN ADDITION, NOT ALL PLANS LISTED MAY BE USED AND NEW PLANT SPECIES MAY BE ADDED. HOWEVER, THE PLANTING DESIGN INTENT WILL REMAIN CONSISTENT WITH THIS PLAN AND PLANT SCHEDULE.

PRELIMINARY IRRIGATED LANDSCAPE WATER EFFICIENCY TABLE

WATER BUDGET CALCULATIONS

MAXIMUM APPLIED WATER ALLOWANCE

MAWA=(ETo)(0.62)((0.45xLA)+((1.0-0.45)xSLA))	LOCAL ETo=	LA =	SLA =			MAWA TOTAL=
	46.7	35,672	0			464,781 GAL.

ESTIMATED TOTAL WATER USE

ETWU=(ETo)(0.62)(((PFxHA)/IE)+SLA)	LOCAL ETo=	PF =	LA =	SLA =		ETWU TOTAL=
	46.7	SEE BELOW	35,672	0		459,627 GAL.

HYDROZONE INFORMATION TABLE

HYDROZONE TAG	PLANT FACTOR (PF)	IRRIGATION METHOD	IRRIGATION EFFICIENCY (IE)	ETAF (PF/IE)	LANDSCAPE AREA (SF)	ETAF X AREA	ESTIMATED TOTAL WATER USE (ETWU)
LANDSCAPE AREAS							
(TREE/RWS/MODERATE)	0.50	RWS	0.81	0.62	2,487 SF	1,535	44,450 GAL
(SHRUB/DRIP/LOW)	0.35	BUBBLER	0.81	0.43	33,185 SF	14,339	415,177 GAL
					TOTAL AREA= 35,672 SF	TOTAL= 15,874	TOTAL = 459,627 GAL.
SPECIAL LANDSCAPE AREAS							
				1	0 SF	0	0 GAL
					TOTAL AREA= 0 SF	TOTAL= 0	TOTAL = 0 GAL.

* THIS INFORMATION DERIVED FROM PLANT FACTOR DESIGNATIONS IN THE WUCOLS IV DOCUMENT.

PRELIMINARY HARD/SOFTSCAPE SHADING CALCULATIONS

SHADING AREA BY TREE TYPE:	FULL	3/4	1/2	1/4
PARKING LOT TREES:	0@962=0	5@707=3,535	20@481=9,620	0@240=0
PERIMETER SCREEN TREES:	0@962=0	0@707=0	44@481=21,164	1@240=240

TOTAL AREA SHADED BY TREES: 34,559 SF

TOTAL HARDSCAPE AREA REQUIRING SHADING: 175,216 SF

PERCENT OF HARDSCAPE SHADED: 20.0%

PRELIMINARY PARKING LOT SHADING CALCULATIONS

SHADING AREA BY TREE TYPE:	FULL	3/4	1/2	1/4
PARKING LOT TREES:	0@962=0	1@707=707	7@481=3,376	0@240=0
PERIMETER SCREEN TREES:	0@962=0	0@707=0	9@481=4,329	1@240=240

TOTAL AREA SHADED BY TREES: 8,643 SF

TOTAL PARKING LOT AREA REQUIRING SHADING: 16,594 SF

PERCENT OF SHADE PROVIDED: 52.1%

EXISTING VEGETATION NOTE

ALL EXISTING VEGETATION TO BE REMOVED DUE TO THE EXTENTS OF SITE IMPROVEMENTS.

PROJECT IRRIGATION NOTE

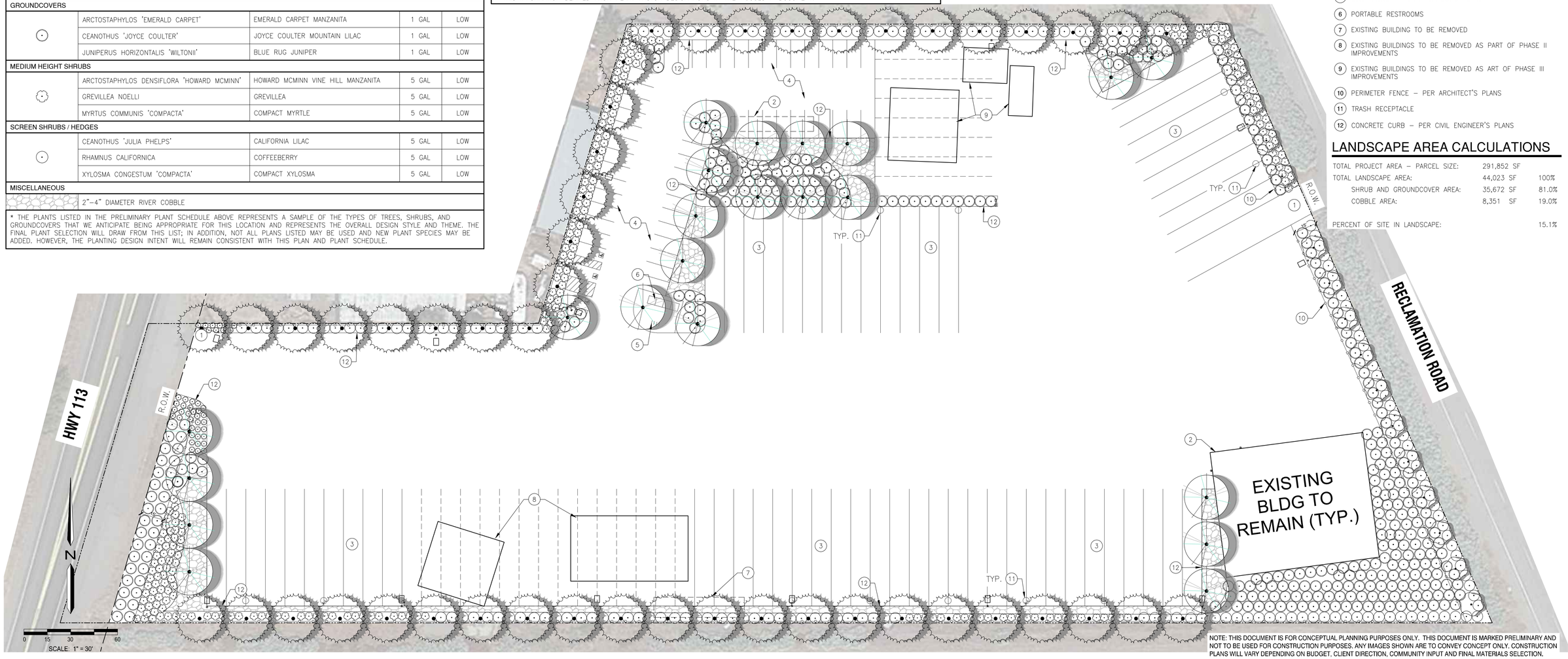
THE PROPOSED PLANTING DESIGN FOR THIS PROJECT IS COMPRISED OF PREDOMINATELY LOW-WATER USE TREES, SHRUBS, AND GROUNDCOVERS WITH NON-IRRIGATED WILDFLOWER HYDROSEED BEING PROPOSED WITHIN THE UNDEVELOPED PORTION OF THE SITE. THE TREES WILL BE IRRIGATED WITH A ROOT WATERING SYSTEM AND A SURFACE SUPPLEMENTAL BUBBLER. THE SHRUBS AND GROUNDCOVERS WILL BE IRRIGATED WITH LOW VOLUME POINT SOURCE DRIP/BUBBLERS TO PROVIDE ADEQUATE WATER TO THE PLANT ROOT ZONE. THE SITE IRRIGATION WILL BE CONTROLLED BY A 'SMART' CONTROLLER USING EVAPOTRANSPIRATION DATA (HUNTER, RAINBIRD, OR EQUAL). THE POINT OF CONNECTION WILL UTILIZE A BACKFLOW PREVENTER, MASTER VALVE, AND FLOW SENSOR TO COMPLY WITH ALL APPLICABLE LOCAL AND STATE WATER EFFICIENT LANDSCAPE ORDINANCE CODES.

LEGEND

1. ENTRY DRIVE – PER CIVIL ENGINEER'S PLANS
2. EXISTING BUILDING TO REMAIN IN PLACE
3. PROPOSED TRUCK/TRAILER STALL (12.5'X75')
4. AUTOMOBILE PARKING LOT – PER CIVIL ENGINEER'S PLANS
5. BIKE RACKS – PER ARCHITECT'S PLANS
6. PORTABLE RESTROOMS
7. EXISTING BUILDING TO BE REMOVED
8. EXISTING BUILDINGS TO BE REMOVED AS PART OF PHASE II IMPROVEMENTS
9. EXISTING BUILDINGS TO BE REMOVED AS ART OF PHASE III IMPROVEMENTS
10. PERIMETER FENCE – PER ARCHITECT'S PLANS
11. TRASH RECEPTACLE
12. CONCRETE CURB – PER CIVIL ENGINEER'S PLANS

LANDSCAPE AREA CALCULATIONS

TOTAL PROJECT AREA – PARCEL SIZE:	291,852 SF	
TOTAL LANDSCAPE AREA:	44,023 SF	100%
SHRUB AND GROUNDCOVER AREA:	35,672 SF	81.0%
COBBLE AREA:	8,351 SF	19.0%
PERCENT OF SITE IN LANDSCAPE:		15.1%



NOTE: THIS DOCUMENT IS FOR CONCEPTUAL PLANNING PURPOSES ONLY. THIS DOCUMENT IS MARKED PRELIMINARY AND NOT TO BE USED FOR CONSTRUCTION PURPOSES. ANY IMAGES SHOWN ARE TO CONVEY CONCEPT ONLY. CONSTRUCTION PLANS WILL VARY DEPENDING ON BUDGET, CLIENT DIRECTION, COMMUNITY INPUT AND FINAL MATERIALS SELECTION.

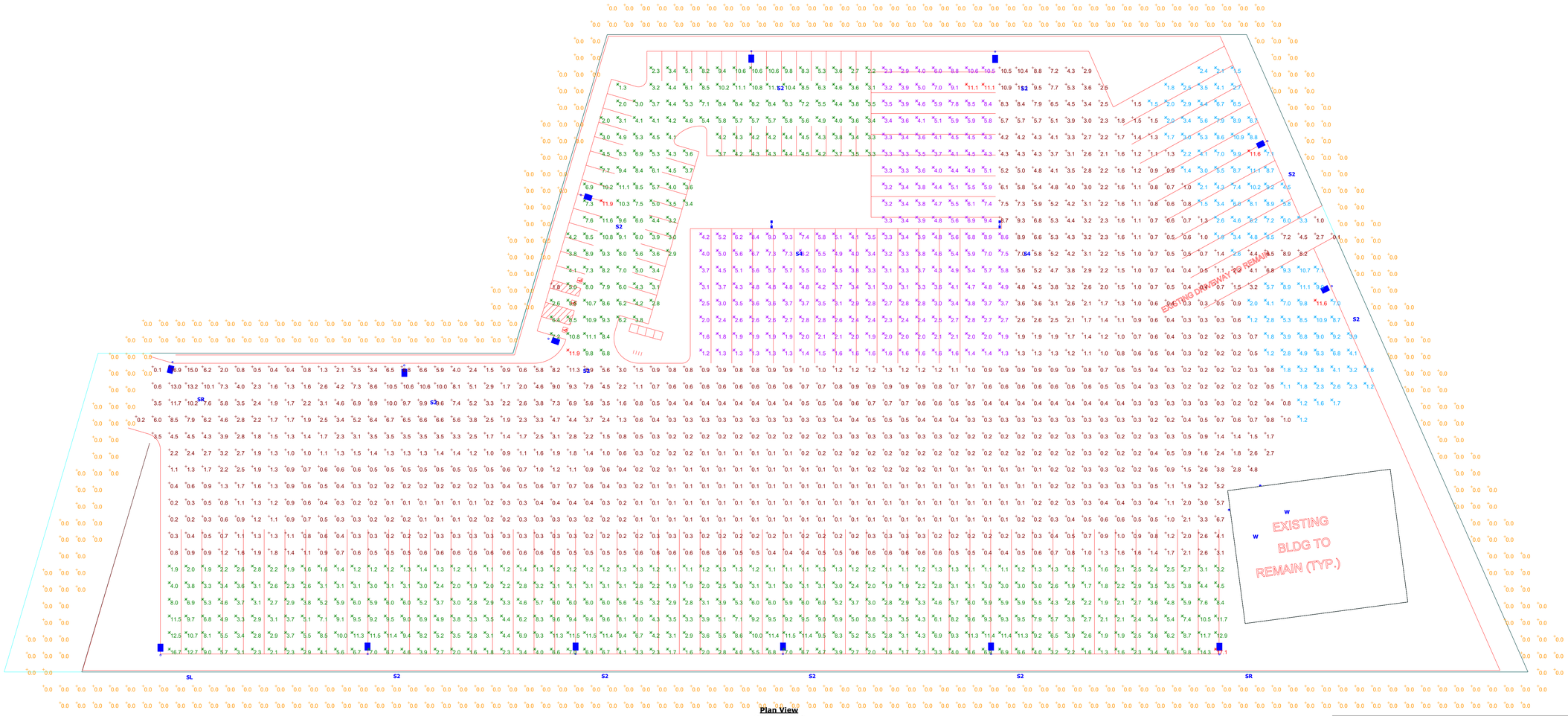
O'DELL ENGINEERING
1165 Scenic Drive, Suite A
Modesto, CA 95350
odellengineering.com

PROPOSED TRUCK YARD
17812 HWY 113, KNIGHTS LANDING, CA

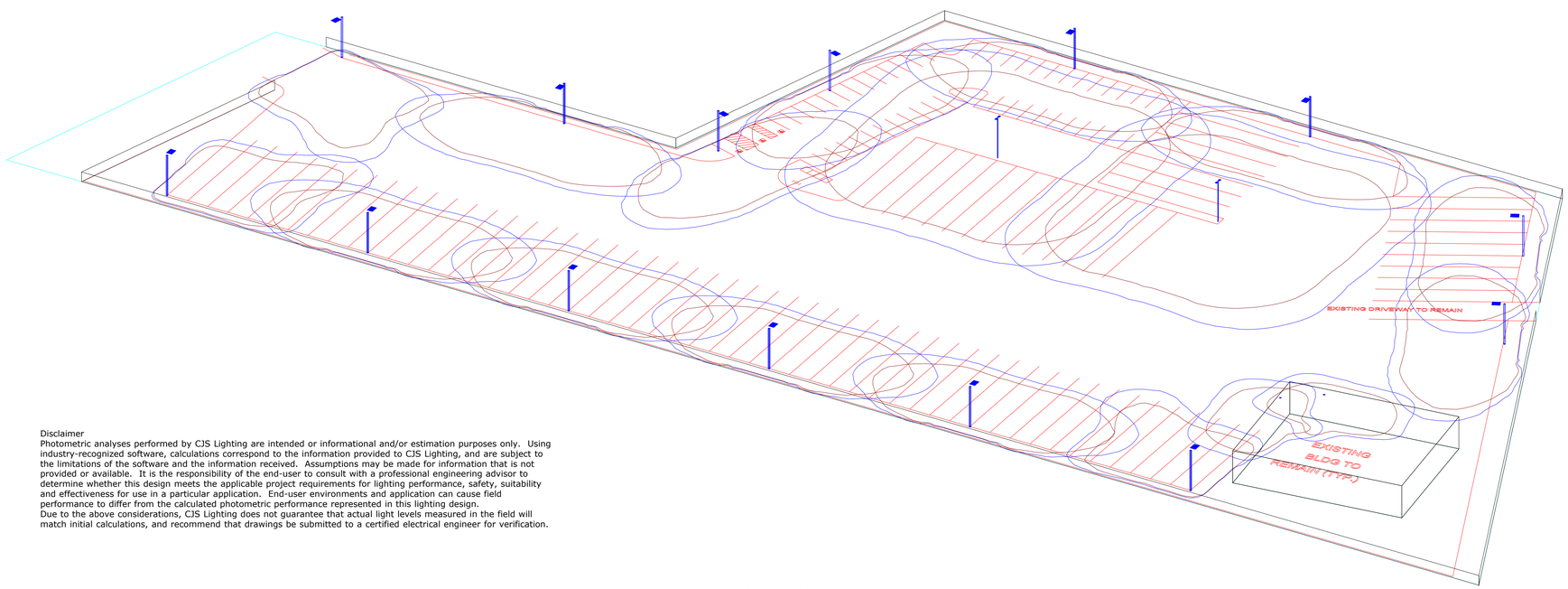
PRELIMINARY LANDSCAPE PLAN 2

40500

03-03-22



Plan View
Scale - 1/32" = 1ft



South East View

Disclaimer
Photometric analyses performed by CJS Lighting are intended or informational and/or estimation purposes only. Using industry-recognized software, calculations correspond to the information provided to CJS Lighting, and are subject to the limitations of the software and the information received. Assumptions may be made for information that is not provided or available. It is the responsibility of the end-user to consult with a professional engineering advisor to determine whether this design meets the applicable project requirements for lighting performance, safety, suitability and effectiveness for use in a particular application. End-user environments and application can cause field performance to differ from the calculated photometric performance represented in this lighting design.
Due to the above considerations, CJS Lighting does not guarantee that actual light levels measured in the field will match initial calculations, and recommend that drawings be submitted to a certified electrical engineer for verification.

Schedule

Symbol	Label	Image	Quantity	Manufacturer	Catalog Number	Description	Number Lamps	Lumens Per Lamp	Light Loss Factor	Wattage
	S2		11	Lithonia Lighting	DSX2 LED P8 40K BLC MVOLT PIR	DSX2 LED P8 40K BLC MVOLT, PIR High/low, motion/ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc	1	40324	0.9	431
	S4		2	Lithonia Lighting	DSX2 LED P8 40K TSW MVOLT PIR	DSX2 LED P8 40K TSW MVOLT, PIR High/low, motion/ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc	1	50729	0.9	862
	SL		1	Lithonia Lighting	DSX2 LED P8 40K LCCO MVOLT PIR	DSX2 LED P8 40K LCCO MVOLT, PIR High/low, motion/ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc	1	30005	0.9	431
	SR		2	Lithonia Lighting	DSX2 LED P8 40K RCCO MVOLT PIR	DSX2 LED P8 40K RCCO MVOLT, PIR High/low, motion/ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc	1	30005	0.9	431
	W		2	Lithonia Lighting	WDGE3 LED P3 70CRI B4 40K PIRH	WDGE3 LED WITH P3 - PERFORMANCE PACKAGE, 4000K, 70CRI, TYPE 4 OPTIC, PIRHBI-level (100/35%) motion sensor for 15-30' mounting heights. Intended for use on switched circuits with external dusk to dawn switching	1	10360	0.9	71.6952

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
DRIVE / PARKING	+	3.1 fc	17.1 fc	0.1 fc	171.0:1	31.0:1
EAST TRUCK PARKING STALLS	+	5.1 fc	11.6 fc	1.1 fc	10.5:1	4.6:1
NORTH AUTO DRIVE / PARKING STALLS	+	6.0 fc	11.9 fc	1.3 fc	9.2:1	4.6:1
NORTH CENTER TRUCK PARKING STALLS	+	4.1 fc	11.1 fc	1.2 fc	9.3:1	3.4:1
SOUTH TRUCK PARKING STALLS	+	4.6 fc	17.1 fc	1.1 fc	15.5:1	4.2:1
25' PERIMETER	+	0.0 fc	0.0 fc	0.0 fc	N/A	N/A

Luminaire Locations

Label	MH
S2	25.00
S4	25.00
SL	25.00
SR	25.00
W	16.00

CJS Lighting

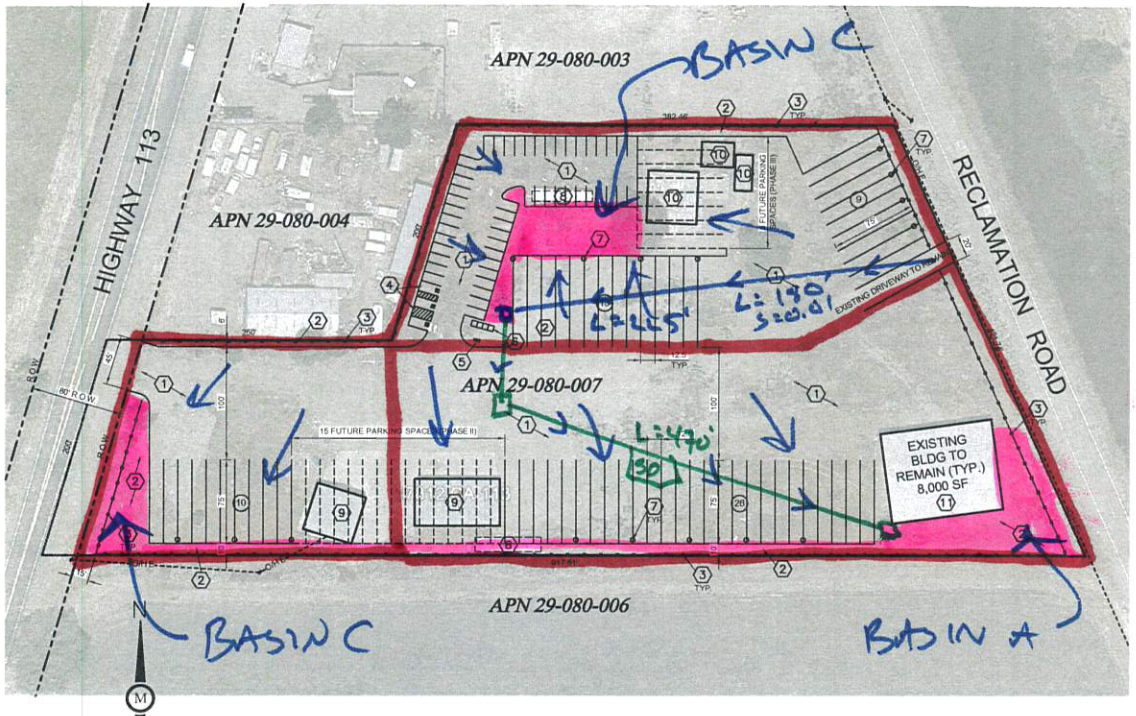
KNIGHTS LANDING TRUCK YARD
SITE rev4

Designer
DEW
Date
02/22/2023 rev4
Scale
Not to Scale
Drawing No.

Summary

PROPOSED TRUCK YARD

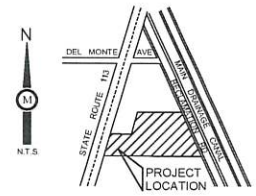
17812 HIGHWAY 113
KNIGHTS LANDING, CA
A.P.N. 29-080-007



SITE PLAN
1" = 50'

SCALE 1 in. = 50 ft.
0 12.5 25 50

SUTTER COUNTY



VICINITY MAP
NOT TO SCALE

CONSTRUCTION NOTES

1. NEW ASPHALT CONCRETE PAVEMENT
2. NEW LANDSCAPE / DRAINAGE AREA. LANDSCAPING WILL BE WITHIN PLANTERS SEPARATED FROM PARKING AND DRIVEWAYS WITH SIX-INCH CONCRETE CURBING.
3. NEW 6' HIGH CHAIN-LINK FENCE WITH PRIVACY SLATS ALONG PERIMETER OF SITE. PRIVACY SLATS MUST HAVE A MINIMUM PRIVACY RATING OF 90 PERCENT OR GREATER.
4. NEW ACCESSIBLE PARKING SPACES (1 VAN ACCESSIBLE)
5. NEW BICYCLE RACK (4 SPACES PROVIDED)
6. NEW PORTABLE TRAILER MOUNTED RESTROOM FACILITIES (4 RESTROOMS PROVIDED)
7. NEW 55-GALLON TRASH RECEPTACLE (16 PROVIDED)
8. EXISTING BUILDING TO BE REMOVED
9. EXISTING BUILDING TO BE REMOVED AS PART OF PHASE II, PROVIDING 15 ADDITIONAL PARKING SPACES
10. EXISTING BUILDING TO BE REMOVED AS PART OF PHASE III, PROVIDING 8 ADDITIONAL PARKING SPACES
11. EXISTING 8,000 S.F. STRUCTURE WILL BE LIMITED TO WINDSHIELD, WIPER, AND HEADLIGHT REPLACEMENT WORK AS OUTLINED UNDER ZONING CODE SECTION 1500-07-030 B. 3. M. NO MATERIALS SUCH TRUCK PARTS, TIRES, AND RELATED ITEMS SHALL BE STORED ON THE PROPERTY.

LOT DATA:

A.P.N.:	29-080-007
TOTAL ACREAGE:	291,852 SF (6.7 AC)
EXISTING PARCELS:	1
PROPOSED PARCELS:	1
EXISTING ZONE:	M-1 LIGHT INDUSTRIAL
PROPOSED ZONE:	M-1 LIGHT INDUSTRIAL
EXISTING USE:	INDUSTRIAL
PROPOSED USE:	TRUCK YARD / INDUSTRIAL USES
TRUCK PARKING SPACE:	12.5' x 75'
TRUCK PARKING SPACES:	81 SPACES

ACCESS TO PARKING LOT IS TO BE FROM HIGHWAY 113 AND RECLAMATION ROAD

PARKING DATA:

TRUCK PARKING SPACE:	81 SPACES
AUTO PARKING (1 PER 1.5 TRUCKS):	54 SPACES
REQUIRED:	135 SPACES
TRUCK PARKING SPACE (12.5'x75') (INCLUDES 23 FUTURE SPACES)	81 SPACES
AUTO PARKING SPACE (9'x18')	51 SPACES
ACCESSIBLE PARKING SPACE (9'x18')	3 SPACES
PROVIDED:	135 SPACES

PROPERTY DESCRIPTION

REAL PROPERTY IN THE COUNTY OF SUTTER, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

ALL THAT PORTION OF LOT 48 AS SHOWN ON THAT CERTAIN MAP ENTITLED "MAP OF SUTTER BASIN SUBDIVISION NO 4" FILED IN THE OFFICE OF THE COUNTY RECORDER OF SUTTER COUNTY, CALIFORNIA, ON MAY 06, 1921 IN BOOK 3 OF SURVEYS , PAGE 88

SITE UTILITIES

SEWAGE DISPOSAL:	PRIVATE ONSITE
WATER SUPPLY:	PRIVATE ONSITE
DRAINAGE:	SUTTER COUNTY

APPLICANT

SARBJIT THIARA
CAPITAL FARM & MANAGEMENT COMPANY
(530) 682-2484

SHEET INDEX

1 SITE PLAN / PROJECT DATA
2 LANDSCAPE CONCEPT PLAN
3 PHOTOMETRIC PLAN

Milestone Associates Imagineering, Inc.
1000 Lincoln Road, Suite H202, Yuba City, CA 95991
(530) 755-4700

PROPOSED TRUCK YARD
17812 HWY 113, KNIGHTS LANDING, CA

SITE PLAN / PROJECT DATA 1

03-10-23

POST - DEVELOPMENT
NOT TO SCALE