CITY OF OAKDALE

Revised and Re-Circulated Public Review DRAFT Initial Study/Mitigated Negative Declaration

Hill Road: Rezone, Tentative Subdivision Map, and Architecture Review No. 2020-22

prepared by
City of Oakdale
Public Services Department
455 S. Fifth Avenue
Oakdale, CA 95361

prepared with the assistance of
J.B. Anderson Land Use Planning
139 S. Stockton Avenue
Ripon, California 95366

J.B. ANDERSON
LAND USE PLANNING

December 2021

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TABLE OF CONTENTS

NEGATIVE DECLARATION

Lead Agency:
City of Oakdale
455 S. Fifth Avenue
Oakdale, CA 95361

PROJECT NAME:

Hill Road: Rezone, Tentative Subdivision Map, and Architecture Review No. 2020-22

PROJECT PROPONENT AND LEAD AGENCY:

Project Proponent: Oakdale Real Estate Development LLC.
14125 Capri Drive, Suite 8A
Los Gatos, CA 95032

Lead Agency: City of Oakdale
455 S. Fifth Avenue
Oakdale, CA 95361

PROJECT LOCATION:

The Proposed Project is located along Old Stockton Road, more specifically at 919 Old Stockton Road and 666 Hill Road. The Assessor's Parcel Numbers that compose the Proposed Project Site are 064-002-027 and 064-002-035. Please refer to Figure 1 for reference.

PROJECT DESCRIPTION:

The Proposed Project consists of a Rezone from R-A Residential Agriculture to R-1, Single Family Residential, Architectural Review, and a Tentative Subdivision Map to subdivide 8.29 acres into thirty-seven (37) single family residential lots and one (1) common lot. There are no existing structures on the site, and the site is fallow.

The Proposed Project will also include associated street, sewer, water, and storm drainage improvements. Street Improvements primarily consist of the construction of 50-feet residential street throughout the Proposed Project with one connection onto Old Stockton Road. The Proposed Project also consists of curb, gutter, and sidewalk improvements to Old Stockton Road along the Proposed Project's frontage.

Domestic water infrastructure is proposed via installation of an eight-inch (8") water line along the internal street system to connect to the existing 8" water line in Old Stockton Road. Sanitary sewer infrastructure is proposed via installation of an 8" sewer line to connect to the City's existing 8" sewer line in Old Stockton Road. Storm drainage is provided via the installation of catch basins and an 18" storm drain line in the internal street system which will connect to the City's 36" storm drainage line in Old Stockton Road.

ENVIRONMENTAL DETERMINATION:

The Lead Agency has prepared an Initial Study, following, which considers the potential environmental effects of the Proposed Project. The Initial Study shows that there is no substantial evidence, in light of the whole record before the Lead Agency, that the Proposed Project may have a potentially significant effect on the environment, provided that the following mitigation measures are included in the Proposed Project.

MITIGATION MEASURES:

Mitigation Measure CUL-1:

In accordance with Section 15064.4€ of the CEQA Guidelines, in the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps shall be taken:

1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:
    a) The coroner of the County in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required; and,
    b) If the coroner determines the remains to be Native American:
        i. The coroner shall contact the Native American Heritage Commission within 24 hours.
        ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
        iii. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains, and any associated grave goods as provided in Public Resources Code Section 5097.98.

Mitigation Measure NOISE-1:

Construction equipment shall be well maintained to be as quiet as possible. The following measures, when applicable, shall be implemented to reduce noise from construction activities:

- All internal combustion engine-driven equipment shall be equipped with mufflers that are in good condition and appropriate for the equipment.
- "Quiet" models of air compressors and other stationary noise sources shall be used, where technology exists.
- Stationary noise-generating equipment shall be located as far as feasible from sensitive receptors (dwellings).
- Unnecessary idling of internal combustion engines shall be prohibited.

- Staging areas and construction material storage areas shall be located as far away as possible from adjacent sensitive land uses (dwellings).
- Construction-related traffic shall be routed along major roadways (Yosemite Avenue) and as far as feasible from sensitive receptors.
- Residences or noise-sensitive land uses adjacent to construction sites shall be notified of the construction schedule in writing. The construction contractor shall designate a "construction liaison" that would be responsible for responding to any local complaints (e.g., starting too early, bad muffler, etc.) and shall institute reasonable measures to correct the problem. The construction contractor shall conspicuously post a telephone number for the liaison at the construction site.
- The construction contractor shall hold a pre-construction meeting with the job inspectors and the general contractor/on-site manager to confirm that noise mitigation and practices (including construction hours, construction schedule, and construction liaison) are completed.

Mitigation Measure BIO-1 – Pre-Construction Surveys for Bats and Avoid Maternity Roosting Sites.

The Project Applicant shall conduct a pre-construction survey by a qualified biologist. If tree removal or ground disturbing activities commence on the project site during the breeding season of native bat species (April 1 to August 31), then a field survey shall be conducted by a qualified bat biologist to determine whether active roosts are present on site or within 50-feet of the project boundaries. Field surveys shall be conducted early in the breeding season before any construction activities begin, when bats are establishing their maternity roosts but before pregnant females give birth (April through early May). If no roosting bats are found, then no further mitigation is required.

Mitigation Measure BIO-2 –Pre-Construction Surveys for California Burrowing Owl and Avoid Loss or Disturbance of Active Nest.

The Project Applicant shall conduct a pre-construction survey for burrowing owls by a qualified biologist within 30-days prior to the start of construction. The Project Applicant shall follow the specific findings, conclusion, and recommendations in the pre-construction survey to ensure any burrowing owls or nests are not disturbed or destroyed.

Mitigation Measure BIO-3 –Pre-Construction Surveys for Nesting Raptors and Other Birds.

For any construction activities that will occur between March 1 and August 31 if any given year, the Project Applicant shall conduct a pre-construction survey by a qualified biologist for suitable nesting habitat within 0.5-mile of the construction area. In addition, all trees slated for removal during the nesting season shall be surveyed by a qualified biologist no more than 48-hours before removal to ensure that no nesting birds are occupying the tree.

The above measure shall be included in the contract specifications that shall be reviewed and approved by the City of Oakdale Public Services Department prior to the start of construction. The above measure would reduce noise generated by the construction of the Project to the extent feasible for the Proposed Project's size.

Mr. Mark Niskanen, City Planner

11/30/21
Date

INITIAL STUDY

1. PROJECT TITLE

Hill Road: Rezone, Tentative Subdivision Map, and Architecture Review No. 2020-22

2. LEAD AGENCY NAME AND ADDRESS

City Oakdale
Public Services Department
455 S. Fifth Ave.
Oakdale, CA 95361

3. CONTACT PERSON AND PHONE NUMBER

Mr. Roman Acosta
Email: roman@jbandersonplanning.com
Phone: 209-599-8377

4. PROJECT LOCATION

The Proposed Project is located within the City of Oakdale city limits. Specifically, the Proposed Project is bounded by single family residences to the north and east, the Serenity Hill Residential Care Facility to the south and Old Stockton Road and River Paradise Mobile Home Park to the west. The Proposed Project Site is further identified as having Assessor's Parcel Numbers (APNs) of 064-002-027 and 064-002-035. The physical address of the properties are 919 Old Stockton Road and 666 Hill Road. Please refer to Figure 1 for reference.

5. PROJECT SPONSOR'S NAME AND ADDRESS

Oakdale Real Estate Development LLC.
14125 Capri Drive, Suite 8A
Los Gatos, CA 95032

6. EXISTING SETTING

As stated above, the Proposed Project site includes two (2) parcels along Old Stockton Road. The parcels are identified as having APNs of 064-002-027 and 064-002-035. Both parcels are vacant fallow land. The topography of the Proposed Project site varies from a high point of 159-feet at the southerly boundary of the site to a low point of 143-feet towards the center line of the Proposed Project site.

Traditionally, the property was used for agricultural and rural residential purposes, and the current zoning is R-A, Residential Agricultural. There are no existing structures on the site.

7. Existing General Plan Designation

The Proposed Project site has a current General Plan Land Use Designation of LDR, Low-Density Residential. The Low-Density Residential Land Use Designation promotes single family homes and various accessory uses.

8. Existing Zoning

The Proposed Project site is located within City of Oakdale city limits. The current zoning for the property is R-A, Residential Agricultural. Please refer to Figure 1 and 2 for reference.

9. Surrounding Land Uses and Setting

The Proposed Project site is surrounded by single family residential to the north, east and south as well as Old Stockton Road and River Paradise Mobile Home Park to the west.

Table 1 Surrounding Land Uses and Setting

	Existing Use	General Plan Land Use Designation	Zoning Classification
North	Single Family Residences	Low Density Residential (LDR)	Single-Family Residential (R-1)
South	Single Family Residences and Serenity Hill Residential Care Facility	Low Density Residential (LDR)	Single-Family Residential (R-1)
East	Single Family Residences	Low Density Residential (LDR)	Single-Family Residential (R-1)
West	River Paradise Mobile Home Park	Low Density Residential (LDR)	Duplex Residential (R-2) and Single Family Residential (R-1)

10. Description of the Project

The Proposed Project consists of a Rezone from R-A, Residential Agriculture, to R-1, Single Family Residential, Architecture Review, and Tentative Subdivision Map to subdivide 8.29 acres into thirty-seven (37) single family residential lots and one (1) common lot. There are no existing structures on the site, and the site is fallow.

The Proposed Project will also include associated street, sewer, water, and storm drainage improvements. Street Improvements primarily consist of the construction of 50-feet residential street throughout the Proposed Project with one connection onto Old Stockton Road. The Proposed Project also consists of improvements to Old Stockton Road along the Proposed Project's frontage.

Domestic water infrastructure is proposed via installation of an eight-inch (8") water line along the internal street system to connect to the existing 8" water line in Old Stockton Road. Sanitary sewer infrastructure is proposed via installation of an 8" sewer line to connect to the City's existing 8" sewer line in Old Stockton Road. Storm drainage is provided via the installation of catch basins and an 18" storm drain line in the internal street system which will connect to the City's 36" storm drainage line in Old Stockton Road.

11. Other Public Agencies Whose Approval is Required

There are no other public agencies whose approval is required for the Proposed Project.

12. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1?

None have requested consultation. However, in accordance with Public Resources Code Section 21080.3.1, consultation requests were submitted to the following Native American Tribes on May 11, 2021:

- Buena Vista Rancheria of Me-Wuk Indians;
- California Valley Miwok Tribe;
- Ione Band of Miwok Indians;
- North Valley Yokuts Tribe;
- The Confederated Villages of Lisian;
- United Auburn Indian Community of the Auburn Rancheria; and,
- Wilton Rancheria.

Figure 1 – Project Location Map

Figure 2 – Existing Zoning Designation Map

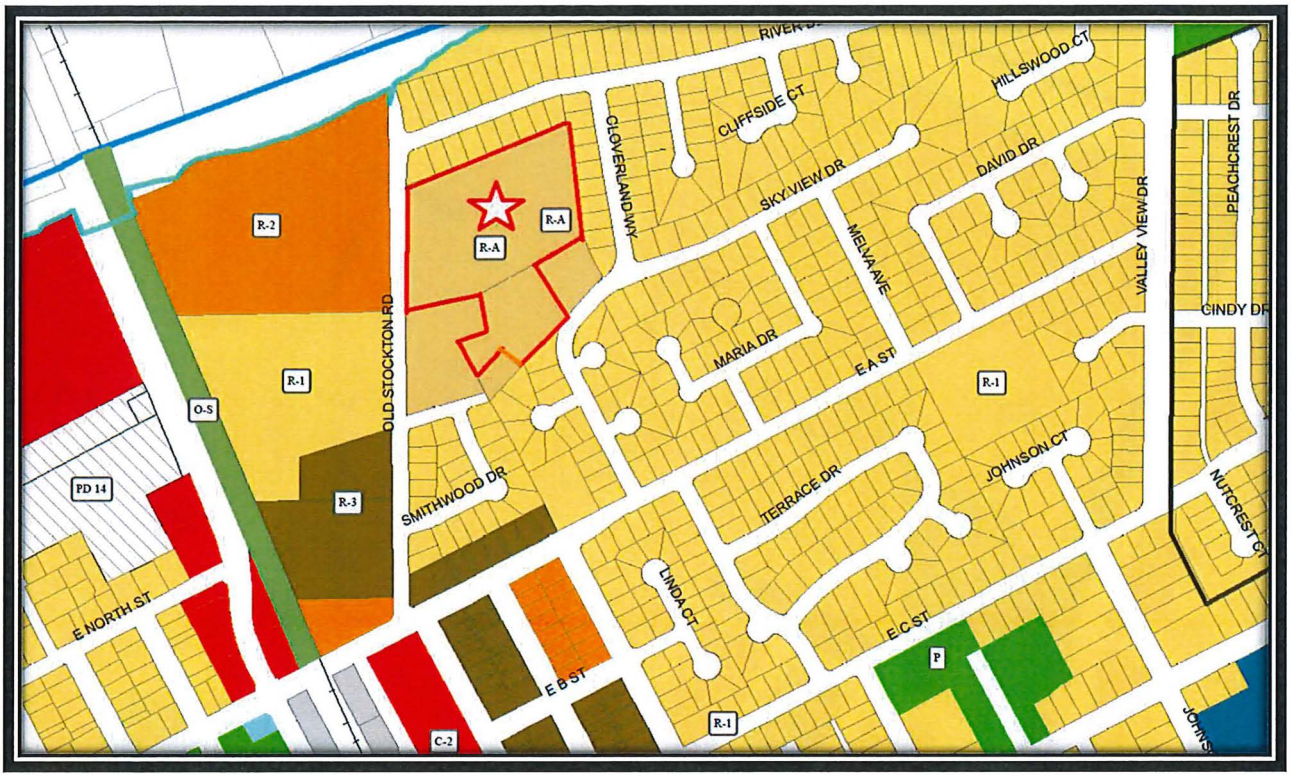


Figure 3 – Proposed Zoning Designation Map

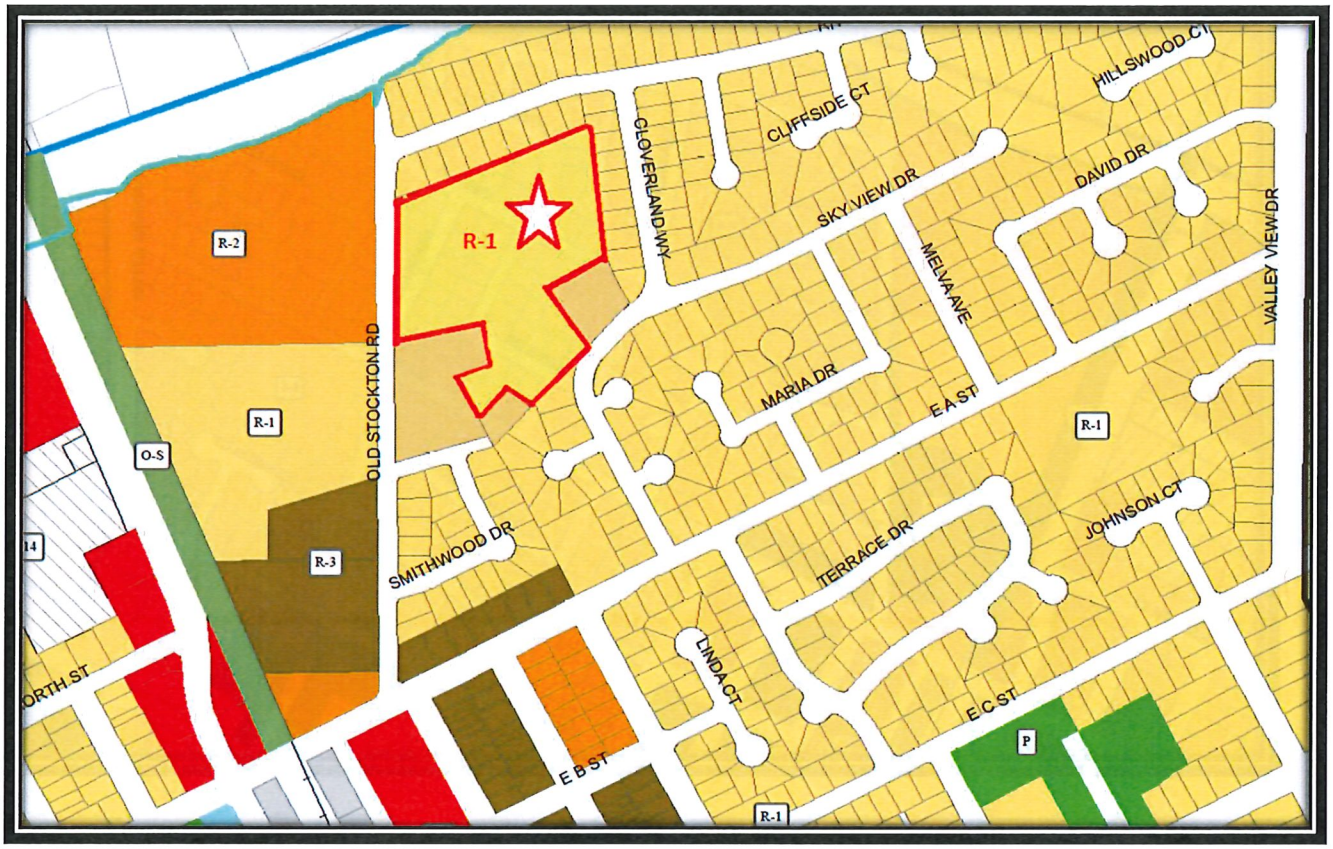
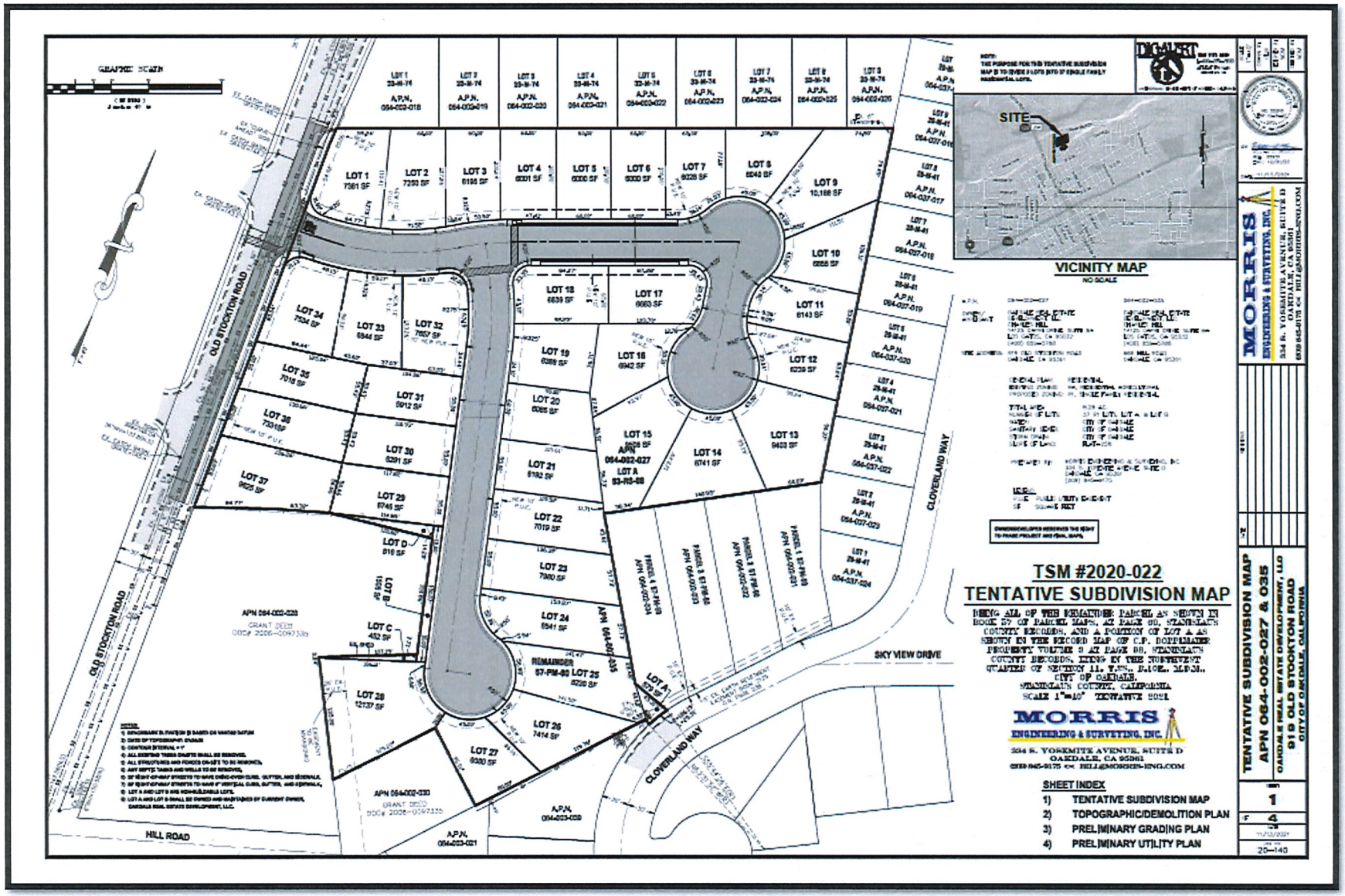


Figure 4 – Tentative Subdivision Map



13. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

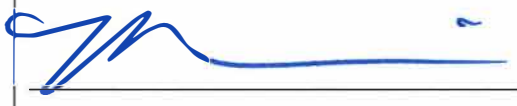
The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

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

14. LEAD AGENCY 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.
X	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.

	11/30/21
Mr. Mark Niskanen, City Planner	**Date**

SECTION 2.0 EVALUATION INSTRUCTIONS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures, which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

   a) The significance criteria or threshold, if any, used to evaluate each question; and

   b) The mitigation measure identified, if any, to reduce the impact to less than significance.

INITIAL STUDY CHECKLIST

This section of the Initial Study incorporates the most current Appendix "G" Environmental Checklist Form, contained in the CEQA Guidelines.

1. AESTHETICS -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?				X
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 points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

IMPACT ANALYSIS

a. Would the project have a substantial adverse effect on a scenic vista?

According to the City's 2030 General Plan Environmental Impact Report (EIR), visual landscapes within the City of Oakdale consist of the historic downtown commercial core, the City's historic residential neighborhoods, the Stanislaus River Corridor, farmland and the City's western agricultural greenbelt, and scenic roadways. The Proposed Project is not located within an area the City's General Plan and EIR consider to be scenic vista. Therefore, the Proposed Project will have a **Less Than Significant Impact**.

b. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a state scenic highway?

According to the City's 2030 General Plan EIR, Interstate 5 in the western portion of Stanislaus County is the only officially designated state scenic highway. The Proposed Project site is located +/-25-miles from Interstate 5. Therefore, the Proposed Project will have **No Impact.**

c. *Would the project, 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 points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?*

The Proposed Project is located within an urbanized area of the City of Oakdale. As noted previously, the existing zoning of the Proposed Project site is R-A, Residential Agriculture. The Proposed Project proposes to rezone the Proposed Project site to R-1, Single Family Residential. All development standards, including those applicable to scenic quality, will be adhered to by the Proposed Project. Therefore, the Proposed Project will have a **Less Than Significant Impact.**

d. *Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

The City's Single-Family Residential Design Expectations ("Expectations") require street lighting to be decorative, and minimal in height when compared to standard cobra head street lighting. Page 17 of the Expectations require intermediate and low-level lighting in new residential subdivisions, which assist in reducing light and glare impacts. Prior to the approval of the Proposed Project's Improvement Plans, the Project Proponent/Developer will be required to submit a Lighting Plan to the City's Public Services Director for review and approval. Said Lighting Plan will ensure the Proposed Project complies with General Plan Policies and City development standards. Therefore, the Proposed Project will have a **Less Than Significant Impact**.

MITIGATION MEASURES:

Mitigation is not required for this topic.

2. AGRICULTURE AND FORESTRY RESOURCES: WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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, as updated) prepared by the California Department 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:				
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?			X	
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?			X	
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))?			X	
d) Result in the loss of forest land or conversion of forest land to non-forest use?			X	
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?			X	

IMPACT ANALYSIS

The following discussion is an analysis for criteria (a) and (e):

a. *Would the project convert Prime Farmland, Unique Farmland, 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. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

c. Would the project 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 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?

e. Would the project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?

The Proposed Project site is surrounded by urban uses and specifically, single family residential uses to the north, east and south, and River Paradise Mobile Home Park to the west. The Proposed Project site is fallow ground and is not actively farmed.

According to Figure 4.1-1 of the 2030 General Plan EIR, the Proposed Project is located on land considered to be "Urban and Built-Up Land." The Proposed Project site also does not contain a current Williamson Act Contract.

The Proposed Project site is zoned for R-A, Residential Agriculture land uses, and the Proposed Project would not result in the conversion of forest land to a non-forest use. Additionally, the Proposed Project will not result in the conversion of Farmland as the Proposed Project site is not considered to be farmland by the City's 2030 General Plan and EIR.

Therefore, the Proposed Project will have a **Less Than Significant Impact**.

MITIGATION MEASURES:

Mitigation is not required for this topic.

3. AIR QUALITY -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
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?			X	
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

REGULATORY SETTING

The Proposed Project is located in Stanislaus County which is a portion of the San Joaquin Valley Air Basin (SJVAB). Air quality management under the Federal and State Clean Air Acts is the responsibility of the San Joaquin Valley Air Pollution Control District (SJVAPCD).

The Federal and State governments have adopted ambient air quality standards (AAQS) for the primary air pollutants of concern, known as "criteria" air pollutants. Air quality is managed by the SJVAPCD to attain these standards. Primary standards are established to protect the public health; secondary standards are established to protect the public welfare. The attainment statuses of the SJVAB for Stanislaus County with respect to the applicable AAQS are shown in the table below.

The SJVAB is considered non-attainment for ozone and particulate matter (PM10 and PM2.5), because the AAQS for the pollutants are sometimes exceeded. The SJVAB is Attainment/Unclassified for carbon monoxide, but select areas, not including the City of Oakdale, are required to abide by adopted carbon monoxide maintenance plans.

The California Air Resources Board (CARB) through the Air Toxics Program is responsible for the identification and control of exposure to air toxics, and notification of people that are subject to significant air toxic exposure. A principal air toxic is diesel particulate matter, which is a component of diesel engine exhaust.

The SJVAPCD has adopted regulations establishing control over air pollutant emissions associated with land development and related activities. These regulations include:

Regulation VIII (Fugitive Dust Rules)
Rule 4101 (Visible Emissions)

SAN JOAQUIN VALLEY FEDERAL AND STATE AAQS ATTAINMENT STATUS

Pollutant	Designation / Classification	
	Federal Standards[a]	State Standards[b]
Ozone, 1-hour	No Federal standard[f]	Nonattainment / Severe
Ozone, 8-hour	Nonattainment / Extreme[e]	Nonattainment
PM10	Attainment[c]	Nonattainment
PM2.5	Nonattainment[d]	Nonattainment
Carbon Monoxide	Attainment / Unclassified	Attainment / Unclassified
Nitrogen Dioxide	Attainment / Unclassified	Attainment
Sulfur Dioxide	Attainment / Unclassified	Attainment
Lead (particulate)	No designation/Classification	Attainment
Hydrogen Sulfide	No Federal standard	Unclassified
Sulfates	No Federal standard	Attainment
Visibility-Reducing Particles	No Federal standard	Unclassified
Vinyl Chloride	No Federal standard	Attainment

[a]See 40 CFR Part 81
[b]See CCR Title 17 Sections 60200-60210
[c]On September 25, 2008, EPA redesignated the San Joaquin Valley to Attainment for the PM10 National AAQS and approved the PM10 Maintenance Plan
[d]The Valley is designated nonattainment for the 1997 PM2.5 NAAQS. EPA designated the Valley as nonattainment for the 2006 PM2.5 on November 13, 2009 (effective December 14, 2009).
[e]Though the Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved reclassification of the Valley to extreme nonattainment in the Federal Register on May 2010 (effective June 4, 2010).
[f]Effective June 15, 2005, the EPA revoked the Federal 1-hour ozone standard, including associated designations and classifications. EPA has previously classified the SJV as extreme nonattainment for this standard. EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan on March 8, 2010 (effective April 7, 2010). Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.

The SJVAPCD has adopted a CEQA impact analysis guideline titled *Guide for Assessing and Mitigating Air Quality Impacts* (GAMAQI). The GAMAQI is utilized in the following air quality impact analysis where applicable. The GAMAQI establishes impact significance thresholds for the non-attainment pollutant PM10 and precursors to the non-attainment pollutant ozone: reactive organic gases (ROG) and oxides of nitrogen (NOx).

Pollutant/Precursor	Construction Emissions	Operational Emissions	
		Permitted Equipment and Activities	Non-Permitted Equipment and Activities
	Emissions (tpy)	*Emissions (tpy)*	*Emissions (tpy)*
CO	100	100	100
NO_x	10	10	10
ROG	10	10	10
SO_x	27	27	27
PM_{10}	15	15	15
$PM_{2.5}$	15	15	15

Projects that do not generate emissions in excess of these thresholds are considered to have less than significant air quality impacts. Furthermore, within the GAMAQI, the SJVAPCD has established and outlined a three-tiered approach to determining significance related to a project's quantified ozone precursor emissions. Each tier or level requires a different degree of complexity of emissions calculation and modeling to determine air quality significance. The three-tiers established to date (from least significant to most significant) are: *Small Project Analysis Level (SPAL), Cursory Analysis Level (CAL), and Full Analysis Level (FAL)*. In each of the tiers, the SJVAPCD has pre-calculated the emissions on a large number and types of projects to identify the level at which they have no possibility of exceeding the emissions thresholds. Table 1 of the GAMAQI, dated November 13, 2020, includes the threshold for single-family residential projects as resulting in less than 155 dwelling units and less than 800 Average Daily One-Way Trips for all fleet types (except Heavy-Heavy Duty Trucks (HHDT)).

In accordance with Table 1 of the GAMAQI, the Proposed Project is considered to a be a SPAL, as it would not cross the SJVAPCD adopted threshold of 155 dwelling units and not exceed 800 daily trips, as indicated in the Traffic Impact Assessment, dated March 5, 2021, prepared by KD Anderson & Associates, Inc (349 daily trips). Because the Proposed Project qualifies as SPAL, GAMAQI notes it is reasonable to conclude that the Proposed Project would not exceed applicable thresholds of significant for criteria pollutants.

IMPACT ANALYSIS

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

The Proposed Project will result in air emissions during its construction phase and during its operational phase. Construction emissions would be generated by construction equipment used during the site preparation and infrastructure/home construction processes. Operational emissions would be generated primarily by resident vehicles and indirectly by use of electricity. As noted above, the City of Oakdale is located within the San Joaquin Valley Air Basin (SJVAB) and air quality management under Federal and State clean air acts is the responsibility of the San Joaquin Valley Air Pollution Control District (SJVAPCD).

The SJVPACD has published comprehensive guidance on evaluating, determining the significance of, and mitigating air quality impacts of projects and plans. As noted in the above discussion, the Air District's

guidance is contained in its *Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI)* and within the California Environmental Quality Act (CEQA) Guidelines. Because the Proposed Project is considered to a be relatively small (thirty-seven (37) single-family residential lots), the analysis of air quality impacts focuses on whether the Proposed Project meets the air district screening criteria for projects having a less than significant impact.

As described in the GAMAQI and in the Small Project Analysis Level, if a project is below a threshold of 155 single-family residential units and less than 800 Average Daily One-Way Trips for all fleet types (except Heavy-Heavy Duty Trucks (HHDT)), the project's operational impacts for criteria pollutants would not be potentially significant and detailed air quality assessment is not needed. The Proposed Project does not exceed the threshold established by the Air District and therefore, will have a **Less Than Significant Impact**.

b. *Would the project 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?*

The SJVAPCD has adopted a CEQA impact analysis guideline titled *Guide for Assessing and Mitigating Air Quality Impact* (GAMAQI). The GAMAQI is utilized in the following air quality impact analysis where applicable. The GAMAQI establishes impact significant thresholds for the non-attainment pollutant PM10 and precursors to the non-attainment pollutant ozone: reactive organic gases (ROG) and oxides of nitrogen (NOx). As noted in the table above, the following are the SJVAPCD thresholds:

CO	100 tons/year
ROG	10 tons/year
NOx	10 tons/year
SOx	27 tons/year
PM10	15 tons/year
PM2.5	15 tons/year

Air quality impacts are evaluated using the California Emissions Estimator Model (CalEEMod) for the proposed construction and operational emissions. CalEEMod is a Statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects.

Construction Emissions

Construction of the Proposed Project would generate temporary criteria pollutant emissions primarily due to the operation of construction equipment and truck trips. Estimated emissions associated with the demolition of the existing single-family residence and accessory structure are included in the demolition phase of the project. Site preparation and grading typically generate the greatest amount of emissions due to the use of grading equipment and soil hauling.

As shown in the table below, the construction emissions will not exceed the SJVAPCD thresholds of 100 tons/year of CO, 10 tons/year of ROG and NOx, 15 tons/year of PM10 and PM2.5 and 27 tons/year of SOx. Complete results from the CalEEMod and assumptions are included in Appendix A.

Table 3-1 Construction Emissions (Unmitigated)

Pollutant/Precursor	Construction Emissions (tpy)	SJVAPCD Significance Threshold (tpy)	Significant Impact?
CO	2.18	100	No
NOx	2.22	10	No
ROG	3.40	10	No
SOx	3.8400e-003	27	No
PM10	0.28	15	No
PM2.5	0.19	15	No
See Appendix A for CalEEMod worksheets. tpy – tons per year			

As shown above, the construction emissions associated with the Proposed Project are projected to be less than the applicable thresholds for all criteria pollutants. Even for projects that would not generate construction emissions exceeding these thresholds, SJVAPCD requires implementation of Mitigation Measures, such as Regulation VIII Control Measures (soil stabilization, watering, dust mitigation, etc.). Therefore, the Proposed Project will have a **Less Than Significant Impact**.

Operational Emissions

As discussed above, the SJVAPCD screening level size regarding operational criteria pollutants for the land use category of "single-family" is 155 units and less than 800 Average Daily One-Way Trips for all fleet types (except Heavy-Heavy Duty Trucks (HHDT)). The Proposed Project is below the SJVAPCD screening size and will have a **Less Than Significant Impact**.

Table 3-2 Operational Emissions (Unmitigated)

Pollutant/Precursor	Operational Emissions (tpy)	SJVAPCD Significance Threshold (tpy)	Significant Impact?
CO	1.52	100	No
NOx	0.98	10	No
ROG	1.87	10	No
SOx	6.2000e-003	27	No
PM10	0.39	15	No
PM2.5	0.11	15	No
See Appendix A for CalEEMod worksheets. tpy – tons per year			

As shown above, the Proposed Project air quality impacts as it relates to operational impacts are below the Air District's Thresholds of Significance. Therefore, the Proposed Project will have a **Less Than Significant Impact**.

Cumulative development projects in the project vicinity could have a cumulatively significant effect on air quality impacts associated with construction activity. However, construction related activities are temporary in nature. In addition, as shown above, the project operational impacts are below the threshold of significance for the Air District. As a result, the Proposed Project will have a **Less Than Significant Impact**.

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

The Proposed Project will result in short-term air quality impacts resulting from construction activities and would not involve long-term operation of any stationary diesel engine or other major on-site stationary source of Toxic Air Contaminants (TACs). Construction activities have the potential to generate emissions related to the number and types of equipment typically associated with construction. Off-road heavy-duty diesel equipment used for site grading, paving, and other construction activities result in the generation of TACs. However, construction is temporary and occurs over a relatively short duration in comparison to the operational lifetime of the Proposed Project. Because health risks associated with exposure to any TACs are correlated with high concentrations over a long period of exposure (e.g., over a 70-year lifetime), the temporary, intermittent construction-related TAC emissions would not be expected to cause any health risks to nearby sensitive receptors. Overall, the Proposed Project would not generate emissions of, or expose any nearby existing sensitive receptors to, TACs. Furthermore, compliance with SJVAPCD Regulation VIII would reduce future development and construction emissions to a **Less Than Significant Level**.

d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Odors are typically associated with industrial projects involving the use of chemicals, solvents, petroleum products, and other strong-smelling elements used in manufacturing processes, as well as sewage treatment facilities and landfills. The Proposed Project involves a Rezone, Tentative Subdivision Map, and Architecture Review to allow for the development of thirty-seven (37) single-family residential lots. Construction may result in emissions that would lead to odors, such as idling diesel trucks and construction equipment. However, construction of the Proposed Project is temporary; and therefore, the Proposed Project will have a **Less Than Significant Impact**.

MITIGATION MEASURES:

Mitigation is not required for this topic.

4. BIOLOGICAL RESOURCES -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*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 Game or U.S. Fish and Wildlife Service?			X	
b) 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 California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			X	
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?		X		
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
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?			X	

IMPACT ANALYSIS

The following discussion is an analysis for criteria (a) through (b):

a. *Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?*

b. *Would the project 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?*

A report prepared by Moore Biological Consultants, dated November 9, 2021, has confirmed the existence of eleven (11) bleu elderberry shrubs based on a field survey conducted on September 2, 2021. Blue elderberry shrubs are hosts to the federally threatened species the Valley Elderberry Longhorn Beetle.

According to the report entitled, "Elderberry Shrub Review: Hill Road Subdivision," (Attachment D) a close inspection of the stems of each shrub did not reveal any bore holes indicative of valley elderberry longhorn beetle occupancy. While occupied habitat is protected under the Federal Endangered Species Act, potential habitat for listed species is not. As such, blue elderberry shrubs are not considered to be protected unless they are occupied by the valley elderberry longhorn beetle. Moore Biological Consultants concluded that it is highly unlikely the shrubs on the Project site are occupied by valley elderberry longhorn beetle due to their location in an upland setting and absence of any exit holes that are typically obvious on occupied shrubs. Therefore, the Proposed Project's impact is **Less Than Significant**.

In addition, Figure NR-1 of the 2030 General Plan defines the habitat type for the Proposed Project as "urban." Based on a review of the 2030 Genera Plan EIR, urban is not typical habitat for species identified as candidate, sensitive, or special status. The 2030 General Plan Draft Environmental Impact Report includes out specific Mitigation Measures to ensure that sensitive species are not disturbed or displaced. Mitigation Measures BIO-1, BIO-2, and BIO-3 have been incorporated into this Initial Study to ensure the Proposed Project does not disturb or displace any sensitive species prior to or during Proposed Project construction. Therefore, the Proposed Project will have a **Less Than Significant Impact with Mitigation Incorporation**.

c. *Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

Based on a review of Section 4.11 of the 2030 General Plan EIR, federally protected wetlands within the City of Oakdale primarily occur along the Stanislaus River corridor, which is located north of the Proposed Project site. The Proposed Project site itself does not contain any identified wetlands that would be considered to be federally protected. As noted previously, the Proposed Project site consists of raw fallow ground surrounded by urban development and uses. Therefore, consistent with the 2030 General Plan EIR, the Proposed Project will have a **Less Than Significant Impact**.

d. *Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native residents or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

Section 4.11 of the 2030 General Plan EIR determined that primary migratory corridors available to wildlife are limited to the Stanislaus River and its associated riparian zone. The Proposed Project is located near the Stanislaus River, but is not located within its associated riparian zone. In addition, the Proposed Project Site is in an area that is surrounded by development. It is unlikely that the Proposed Project would not substantially interfere with the movement of any native resident or migratory fish or wildlife species, or with established native residents or migratory wildlife corridors, or impede the use of native wildlife nursery sites; however Mitigation Measures BIO-1, BIO-2, and BIO-3 have been included into this Initial Study to ensure the Proposed Project does not disturb or displace any sensitive species. Therefore, the Proposed Project will have a **Less Than Significant Impact with Mitigation Incorporation**.

e. *Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

The City of Oakdale has developed and adopted a Tree Preservation Ordinance. Prior to removal of any tree meeting the criteria below, a Tree Removal Permit must be obtained from the City. A Tree Removal Permit is required for the following:

- Any non-oak tree with a trunk diameter of 24 inches or greater measured at three feet above the ground.
- Any oak tree with a trunk diameter of 3 inches or greater measured at the three feet above the ground.

The Proposed Project includes the removal of up to twenty-four (24) Oak trees as identified below in Figure XX-XX.

Figure 5 – Tree Removal Exhibit

In accordance with Section 36-28 (Oak and Significant Tree Preservation) of the City's Zoning Ordinance, for every Oak tree removed as part of the Proposed Project, the Applicant shall replant, at a ratio of 2:1, trees within the Proposed Project. The Proposed Project will be required to plant one (1) tree per lot, which equates to the planting of seventy-four (74) trees. Said trees will be planted as each lot within the Proposed Project is developed. The species of the planted trees will be reviewed and approved by the Public Services Director through the standard review of the Proposed Project's Landscape Improvement Plans. This satisfies the requirements of Section 36-28.

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

There are no Habitat Conservation Plans, Natural Community Conservation Plans, or other local, regional, or State Habitat Conservation Plan within the City of Oakdale. Therefore, the Proposed Project will have **No Impact**.

MITIGATION MEASURES:

The following Mitigation Measures shall be incorporated into the Proposed Project:

Mitigation Measure BIO-1 – Pre-Construction Surveys for Bats and Avoid Maternity Roosting Sites.

The Project Applicant shall conduct a pre-construction survey by a qualified biologist. If tree removal or ground disturbing activities commence on a the project site during the breeding season of native bay species (April 1 to August 31), then a field survey shall be conducted by a qualified bat biologist to determine whether active roosts are present on site or within 50-feet of the project boundaries. Field surveys shall be conducted early in the breeding season before any construction activities begin, when bats are establishing their maternity roosts but before pregnant females give birth (April through early May). If no roosting bats are found, then no further mitigation is required.

Mitigation Measure BIO-2 –Pre-Construction Surveys for California Burrowing Owl and Avoid Loss or Disturbance of Active Nest.

The Project Applicant shall conduct a pre-construction survey for burrowing owls by a qualified biologist within 30-days prior to the start of construction. The Project Applicant shall follow the specific findings, conclusion, and recommendations in the pre-construction survey to ensure any nests or not disturbed or destroyed.

Mitigation Measure BIO-3 –Pre-Construction Surveys for Nesting Raptors and Other Bords.

For any construction activities that will occur between March 1 and August 31 if any given year, the Project Applicant shall conduct a pre-construction survey by a qualified biologist for suitable nesting habitat within 0.5-mile of the construction area. In addition, all trees slated for removal during the nesting season shall be surveyed by a qualified biologist no more than 48-hours before removal to ensure that no nesting birds are occupying the tree.

5. CULTURAL RESOURCES -- Would the project:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?			X	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?			X	
c) Disturb any human remains, including those interred outside of formal cemeteries?		X		

IMPACT ANALYSIS

a. *Would the project cause a substantial cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?*
b. *Would the project cause a substantial adverse chance in the significance of an archaeological resource as defined in §15064.5?*

According to the 2030 General Plan Environmental Impact Report (EIR), the Central California Information Center (CCIC) conducted a detailed search for prehistoric and historic resources within the Oakdale city limits, Sphere of Influence (SOI) and immediate vicinity in 2009. In addition to the CCIC survey, in 1986 the City of Oakdale, with funding provided by the California Office of Historic Preservation, commissioned a survey to identify historic resources in the City. A total of 257 buildings dated from 1870 to 1940 were recorded. Of the 257 resources surveyed, 200 were determined to be eligible for the National Register of Historic Places (NRHP) and 49 were determined as potentially eligible under various conditions. The City's historic commercial core is focused on F Street/Yosemite Avenue intersection with the First National Bank Building, built in 1909 and the only NRHP-listed building in town.

According to the 2030 General Plan EIR, there is no presence of Native American resources in the Oakdale planning area, including the Proposed Project site. However, per 2030 General Plan Implementation Measure NR-IP10, if during construction any subsurface cultural resources, paleontological resources, or human remains are encountered, all work within 100 feet of the discovery be stopped and the area protected from further disturbance until the discovery is evaluated by a qualified professional. Therefore, the Proposed Project will have a **Less Than Significant Impact**.

c. *Would the project disturb any human remains, including those interred outside of dedicated cemeteries?*

It is not anticipated that the Proposed Project will disturb any human remains. However, through development and construction of the Proposed Project, human remains may be identified, particularly during activities requiring ground disturbance (i.e. grading, trench digging, etc.). As such, the Proposed Project shall comply with Section 15064.5(e) of the CEQA Guidelines and Implementation Program NR-IP10 of the City's 2030 General Plan. Therefore, the Proposed Project will have a **Less Than Significant Impact with Mitigation Incorporation**.

MITIGATION MEASURES:

The following mitigation measure shall be incorporated into the Proposed Project:

Mitigation Measure CUL-1:

In accordance with Section 15064.4€ of the CEQA Guidelines, in the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps shall be taken:

1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:
    a) The coroner of the County in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required; and,
    b) If the coroner determines the remains to be Native American:
        i. The coroner shall contact the Native American Heritage Commission within 24 hours.
        ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
        iii. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98.

6. ENERGY -- Would the project:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?			X	

IMPACT ANALYSIS

The following discussion is an analysis for criteria (a) and (b):

a. *Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

b. *Would the project conflict with or obstruct a State or local plan for renewable energy or energy efficiency?*

The Energy Efficiency Standards for Residential and Nonresidential Buildings, as specified in Title 24, Part 6, of the California Code of Regulations (Title 24), was established in 1978 in response to a legislative mandate to reduce California's energy consumption. Title 24 is updated approximately every three (3) years, and the 2019 Title 24 went into effect on January 1, 2020.

The California Green Buildings Standards Code (CALGreen) establishes mandatory green building standards for buildings in California. CALGreen was developed to reduce Greenhouse Gas (GHG) emission from buildings, promote environmentally responsible and healthier places to live and work, reduce energy and water consumption, and respond to environmental directives. The most recent update to CALGreen went into effect January 1, 2020, and covers five (5) categories: planning and design, energy efficiency, water efficiency and conservation, material and resource efficiency, and indoor environmental quality.

The Proposed Project will be required to comply with all California Green Building Code Standards, including Energy Efficient standards for residential buildings.

The anticipated construction schedule assumes that the Proposed Project will be built over a two (2) – three (3) year period. The Proposed Project will require the site preparation, grading, paving, architectural coating, and trenching. The site is vacant and will not require the demolition of any existing structures. Implementation of applicable 2030 General Plan Goals, Policies and Implementation Measures as it relates to Air Quality, Energy, Utilities, etc. would reduce energy waste from construction. In addition, as noted in Section 8 of this Initial Study, the Proposed Project is in compliance with the City's adopted Climate Action Plan. Therefore, the Proposed Project would not

consume energy in a manner that is wasteful, inefficient, or unnecessary. Therefore, the Proposed Project will have a **Less Than Significant Impact**.

MITIGATION MEASURES:

Mitigation is not required for this topic.

7. GEOLOGY AND SOILS -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation*	*Less Than Significant Impact*	*No Impact*
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
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.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?			X	
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?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	

IMPACT ANALYSIS

a.1. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake, 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?

a.2. *Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?*

a.3. *Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?*

a.4. *Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?*

b. *Would the project result in substantial soil erosion or the loss of topsoil?*

c. *Would the project be located on a geologic unit or soil that is unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?*

According to the 2030 General Plan Environmental Impact Report (EIR), the Ortigalita fault in the southernmost corner of Stanislaus County is approximately 45 miles southwest of Oakdale and is the only fault formed in the Central Valley that is sufficiently active to have been mapped and zoned by the California Geological Survey (CGS). Sporadic earthquake activity in the Central Valley near Stanislaus County may be associated with the Tracy-Stockton, Vernalis, or San Joaquin faults, approximately 25 miles northwest, west and southwest of Oakdale, respectfully. According to the 2030 General Plan EIR, there is no evidence to suggest that either of these faults is likely to cause surface displacement in the City.

In addition, the Proposed Project Proponent's prepared a Preliminary Geotechnical Investigation, dated May 25, 2021, Prepared by North American Technical Services (included herein as Appendix B). The Geotechnical Investigation determined that there were no active fault traces within the Proposed Project's vicinity, and the site is not located within an Earthquake Fault Zone. Secondary hazards from earthquakes including rupture, seiche, landslides, liquefaction, and subsidence are low as the groundshaking intensities within the Proposed Project's vicinity are not strong enough to generate these types of failures.

Last, the Proposed Project will have a finished grade from 145 feet to 157 feet. The Project Proponent has submitted a retaining wall plan drafted by a registered engineer to show how soil will be retained on lots with a grade differential. The City Engineer has reviewed the plan and has deemed it sound.

Based on the analysis contained in above and in Appendix B, the Proposed Project will have a **Less Than Significant Impact.**

d. *Would the project be located on expansive soil, as defined in Table 1-B of the Uniform Building Code, creating substantial risks to life or property?*

The Proposed Project site is located on Hanford Fine Sandy Loam and Hanford Sandy Loam. These types of soils are not typically expansive soil as defined in Table 1-B of the Uniform Building Code. In Addition,

the Proposed Project Proponent's conducted a Preliminary Geotechnical Investigation prepared by North American Technical Services, dated May 25, 2021, which concluded that "Based on geologic observation, and the generally granular nature of the site soils, the near-surface materials are generally anticipated to exhibit a low expansion potential". Therefore, the Proposed Project will have a **Less Than Significant Impact.**

e. *Would the project 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?*

The Proposed Project will connect to City services related to sewer. Therefore, the Proposed Project will have **No Impact.**

f. *Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

Based on a review of the 2030 General Plan EIR, the Proposed Project site is not known to contain any unique paleontological or geologic features. Therefore, the Proposed Project will have a **Less Than Significant Impact**.

MITIGATION MEASURES:

Mitigation is not required for this topic.

8. GREENHOUSE GAS EMISSIONS -- WOULD THE PROJECT:

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

REGULATORY SETTING:

California Air Resources Board (CARB) is responsible for the coordination and oversight of state and local air pollution control programs in California. California has numerous regulations aimed at reducing the State's GHG emissions. These initiatives are summarized below:

Assembly Bill 1943

Assembly Bill (AB) 1943 (2002), California's Advanced Clean Cars program (referred to as "Pavley"), requires CARB to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." On June 30, 2009, U.S. EPA granted the waiver of Clean Air Act preemption to California for its greenhouse gas emission standards for motor vehicles beginning with the 2009 model year. Pavley I took effect for model years starting in 2009 to 2016 and Pavley II, which is now referred to as "LEV (Low Emission Vehicle) III GHG" will cover 2017 to 2025. Fleet average emission standards would reach 22 percent reduction from 2009 levels by 2012 and 30 percent by 2016. The Advanced Clean Cars program coordinates the goals of the Low Emission Vehicles (LEV), Zero Emissions Vehicles (ZEV), and Clean Fuels Outlet programs and would provide major reductions in GHG emissions. By 2025, when rules will be fully implemented, new automobiles will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions from their model year 2016 levels.

Executive Order S-3-05

In 2005, the governor issued Executive Order (EO) S-3-05, establishing statewide GHG emissions reduction targets. EO S-3-05 provides that by 2010, emissions shall be reduced to 2000 levels; by 2020, emissions shall be reduced to 1990 levels; and by 2050, emissions shall be reduced to 80 percent below 1990 levels (California Environmental Protection Agency [CalEPA]). In response to EO S-3-05, CalEPA created the Climate Action Team (CAT), which in March 2006 published the Climate Action Team Report (the "2006 CAT Report") (CalEPA 2006). The 2006 CAT Report identified a recommended list of strategies that the state could pursue to reduce GHG emissions. These are strategies that could be implemented by various state agencies to ensure that the emission reduction targets in EO S-3-05 are met and can be met with existing authority of the state agencies. The strategies include the reduction

of passenger and light duty truck emissions, the reduction of idling times for diesel trucks, an overhaul of shipping technology/infrastructure, increased use of alternative fuels, increased recycling, and landfill methane capture, etc. In April 2015 the governor issued EO B-30-15, calling for a new target of 40 percent below 1990 levels by 2030.

Assembly Bill 32

California's major initiative for reducing GHG emissions is outlined in Assembly Bill 32 (AB 32), the "California Global Warming Solutions Act of 2006," signed into law in 2006. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels; the same requirement as under S-3-05), and requires CARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. California is on track to meet or exceed the current target of reducing GHG emission to 1990 levels by 2020, as established by AB 32.

Senate Bill 97

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in California Environmental Quality Act (CEQA) documents. In March 2010, the California Resources Agency (Resources Agency) adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

CARB Resolution 07-54

CARB Resolution 07-54 establishes 25,000 MT of GHG emissions as the threshold for identifying the largest stationary emission sources in California for purposes of requiring the annual reporting of emissions. This threshold is just over 0.005 percent of California's total inventory of GHG emissions for 2004.

Senate Bill 375

Senate Bill (SB) 375, signed into law in September 2008, builds on AB 32 by requiring CARB to develop regional GHG reduction targets to be achieved from the automobile and light truck sectors for 2020 and 2035; these regional targets will help achieve the goals of AB 32 and the Scoping Plan through changed land use patterns and improved transportation systems. The Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG) adopted a Sustainable Community Strategies in July 2013 that meets greenhouse gas reduction targets. The *Plan Bay Area* is the SCS document for the Bay Area, which is an integrated long-range plan that discusses climate protection, housing, healthy and safe communities, open space and agricultural preservation, equitable access, economic vitality, and transportation system effectiveness within the San Francisco Bay Area. The

document is updated every four years and most recently, the update, *Plan Bay Area 2040* was adopted on July 26, 2017.

Executive Order S-13-08

Executive Order S-13-08 indicates that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of tis population and to its natural resources." Pursuant to the requirements in the order, the 2009 California Climate Adaptation Strategy (California Natural Resources Agency 2009) was adopted, which is the "…first statewide, multi-sector, region-specific, and information-based climate change adaption strategy in the United States." Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Senate Bill 2X

In April 2011, the governor signed SB2X requiring California to generate 33 percent of its electricity from renewable energy by 2020.

Senate Bill 32

On September 8, 2016, the governor signed Senate Bill 32 (SB 32) into law, which requires the State to further reduce GHGs to 40 percent below 1990 levels by 2030. SB 32 is an extension of AB 32. The other provisions of AB 32 remain unchanged. CARB adopted the 2017 Climate Change Scoping Plan Update on December 14, 2017 for achieving California's 2030 greenhouse gas target.

City of Oakdale Climate Action Plan

In 2013, per Resolution No. 2013-83, the Oakdale City Council adopted a Climate Action Plan. The City's Climate Action Plan (CAP) serves to outline the strategies, goals, and actions for reducing municipal and community-wide greenhouse gas (GHG) emissions. According to the 2005 Community-Wide Greenhouse Gas Inventory, the City emitted 210,949 metric tons (MT) of carbon dioxide equivalents (CO2e), including residential, commercial, industrial, and municipal operations emissions. Chapter 5 of the CAP provides the GHG reduction goals and strategies. The City's CAP is available for review at the City's Public Services Department located at 455 S. Fifth Avenue, Oakdale, CA 95361 or on the City's website: www.oakdalegov.com

IMPACT ANALYSIS

The following discussion is an analysis for criteria (a) and (b):

a. *Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?*

b. Would the project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

California Code of Regulations (CCR) Title 24, Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. Since then, Title 24 standards were adopted in response to the requirements of AB 32. Specifically, new development projects within California after January 1, 2011, are subject to mandatory planning and design, energy efficiency, water efficiency and conservation, material conservation and resources efficiency, and environmental quality measures of the California Green Building Standards (CAL Green) Code (California Code of Regulations, Title 24, Part 11. As such, it is anticipated that the Proposed Project will not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment or conflict with any plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gasses. As discussed above, the City of Oakdale has an adopted Climate Action Plan (CAP) in which includes Reduction Goals and Strategies to be implemented to reduce GHG emissions and work toward the reduction target.

The Proposed Project is consistent with the applicable goals and strategies of the CAP and these strategies can be quantified in terms of the GHG reduction as defined in the CAP.

Table 8-1 – Summary of Proposed Project GHG Reduction Impacts

Strategy No.	Supporting Strategy	Annual GHG Reduction Potential (MT CO2e)
E.1.2	Comply with State-mandated Building Energy Efficiency Requirements for Residential Development and Expedite Permitting for Developers	1,468
E.2.1	Promote small scale On-site Renewable Energy for Homes	2,942
E.1.7	Establish and Monitor Shade Tree Program	868
TLU.3.2	Plan and Build out Bicycle Network and Provide Bicycle Facilities	126
TLU.3.3	Provide Pedestrian Network Improvements	519
Total Annual Reduction		**5,923**

As depicted above in Table 8-1, the Proposed Project implements select strategies in the City's adopted CAP, which results in an annual reduction in GHG emissions by 5,923 MT CO2e. This is achieved by requiring the Project Proponent to comply with State mandated Building Energy Efficiency requirements, requiring each home to be equipped by solar power, requiring one (1) tree planted per lot, and providing curb, gutter, sidewalk and landscaping improvements along the property's frontage along Old Stockton Road.

Therefore, the Proposed Project is consistent with the City's CAP and as a result, further GHG emissions analysis and mitigation under CEQA Guidelines Section 15064(h) and 15013.5(b)(2) is not required. As such, the Proposed Project will have a **Less Than Significant Impact.**

9. HAZARDS AND HAZARDOUS MATERIALS -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*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?			X	
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?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
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?			X	
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 for people residing or working in the project area?			X	
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?			X	

IMPACT ANALYSIS

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b. Would the project 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?

The Proposed Project consists of the development of thirty-seven (37) single-family residential units and associated site improvements typical of a residential subdivision. These types of projects do not typically result in creating significant hazards to the public or environment through upset and accident conditions involving the release of hazardous materials. Nor do they result in the use, transport, or disposal of hazardous materials.

However, should the release of hazardous materials occur, or if hazardous materials need to be used, transported, or disposed, the Project Proponent shall comply with all applicable Federal, State, and local policies and regulations related to hazardous materials. Therefore, the Proposed Project will have a **Less Than Significant Impact**.

c. *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?*

The nearest school to the Proposed Project site is Cloverland Elementary School, which is located approximately 0.5-mile southeast of the Proposed Project site. However, the development of single-family residential uses does not typically include the emissions or handling of hazardous materials or waste. Any such use would be required to comply with Federal, State, and local policies and regulations related to hazardous materials, including General Plan Policies. Therefore, the Proposed Project will have a **Less Than Significant Impact**.

d. *Would the project be located on a site 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?*

Table 4.8-1 of the City's 2030 General Plan EIR provides a list of sites within the City of Oakdale that are considered to be a hazardous materials sites in accordance with Section 65962.5 of the Government Code. The Proposed Project site is not identified as a site known as a "hazardous materials site." Therefore, the Proposed Project will have a **Less Than Significant Impact**.

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 for people residing or working in the project area?*

The nearest airport to the Proposed Project site is the Oakdale Municipal Airport, located south of Sierra Road, southeast of the Oakdale city limits.

Based on a review of Map OAK-1 Stanislaus County Airport Land Use Compatibility Plan, dated October 2016, the Proposed Project site is not located within the Oakdale Municipal Airport's Airport Influence Area. Therefore, the Proposed Project will have a **Less Than Significant Impact**.

f. *Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

Based on a review of Section 4.8 of the 2030 General Plan, and according to the Stanislaus County Multi-Jurisdictional Hazard Mitigation Plan, State Route 120/108 is identified as an emergency evacuation route in the City and County. The Proposed Project is not located on or near State Route 120/108 and thereby will not physically interfere with implementation of the County's emergency response or evacuation plan. In the case that an emergency evacuation is required, the Proposed Project can access State Route 120/108 via Old Stockton Road and East A Street.

Therefore, the Proposed Project will have a **Less Than Significant Impact**.

g. *Would the project expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?*

The Proposed Project is not located within an area considered to be wildland. As noted previously, the Proposed Project is located within an urban area of the City of Oakdale and is surrounded by urban uses. Therefore, the Proposed Project will have a **Less Than Significant Impact**.

MITIGATION MEASURES:

Mitigation is not required for this topic.

10. HYDROLOGY AND WATER QUALITY -- Would the project:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?			X	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
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:			X	
i) Result in substantial on- or offsite erosion or siltation;			X	
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;			X	
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			X	
iv) Impede or redirect flood flows?			X	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			X	
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

IMPACT ANALYSIS

a. *Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?*

Construction activities associated with the Proposed Project would cause disturbance of soil during excavation work, which could adversely affect water quality. Contaminants from construction vehicles and equipment and sediment from soil erosion could increase the pollutant load in runoff being transported to receiving waters during development. Any construction activities, including grading, that would result in the disturbance of one (1) acre or more would require compliance with the Regional Water Quality Control Board (Regional Water Board) General Permit for Storm Water Discharge Associated with Construction and Land Disturbance Activity (Construction General Permit). The Proposed Project site is 8.29± acres and would be subject to the provision of the Construction General Permit, which require the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) designed to reduce potential adverse impacts on surface water quality through the project construction period.

Upon build-out, the Proposed Project could be a source of various storm water pollutants. Pollutants associated with the proposed residential development may include those associated with vehicle parking and landscaping, including oil and grease; organic compounds such as pesticides; and trash and debris. Such pollutants may also be present in non-storm water discharges, such as runoff from landscape irrigation. Operation of the Proposed Project would be subject to the Regional Water Board's Municipal Regional Permit (MRP), implemented in October 2009 by Order R2-2009-0074. Provision C3 of the MRP addresses new development and redevelopment projects. The entire Proposed Project site, consisting of all new impervious surfaces, must be included in the treatment system design (i.e., storm water treatment systems must be designed and sized to treat storm water from the entire project). A Stormwater Control Plan (SCP) must be prepared and submitted for the Proposed Project site and must detail design elements and implementation measures to meet MRP requirements. The Proposed Project would be required to include Low Impact Development (LID) design measures and a Stormwater Facility Operation and Maintenance Plan must be prepared to ensure that storm water control measures are inspected, maintained, and funded for the life of the project.

The Proposed Project shall comply with the City's 2030 General Plan Policies, including PF-3.3, 3.4 and 3.5. Therefore, any potential impacts as a result of this Proposed Project are mitigated through the General Plan Policies and Regional Water Board requirements and the Proposed Project would have a **Less than Significant Impact**.

b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

The Proposed Project will connect to the City of Oakdale domestic water system via connecting to an existing water line located in Old Stockton Road. The City of Oakdale provides domestic (potable) water service to all residents and businesses within the City through a system of groundwater wells, storage facilities, and a non-potable system that is intended to reduce demands on the City's potable groundwater sources. The City of Oakdale adopted an Urban Water Management Plan (UWMP) in January 2009. Per the UWMP, the City of Oakdale currently owns and operates eight (8) wells with a

total production capacity of 15,200 gpm1 and approximately 500,000 gallons of active storage in one (1) steel storage tank. The active wells each produce between 600 and 1,800 gallons per minute (gpm) for a total of 10,100 gpm per day.2

Should groundwater be encountered in excavations during installation of underground utilities or other construction facilities, groundwater would be managed in accordance with the SWPPP for the Proposed Project, and permits would be required prior to discharge of the dewatered groundwater to the storm or sanitary sewer. Therefore, no impact on groundwater supplies or recharge would be expected and the Proposed Project will have a **Less Than Significant Impact**.

c. *Would the project 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 on- or offsite erosion or siltation;*
   ii. *Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;*
   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?*

The Proposed Project will not alter the course of a stream or river. The Proposed Project site is located south of the Stanislaus River Corridor and is located on a site that is raw and undeveloped. Compliance with construction- and operation-phase storm water requirements would ensure that development of the Proposed Project would not result in substantial erosion or siltation on- or off-site. Therefore, the Proposed Project will have a **Less Than Significant Impact**.

d. *Would the project be located in flood hazard, tsunami, or seiche zones, or risk release of pollutants due to project inundation?*

According to the City's 2030 General Plan Environmental Impact Report (EIR), the Planning Area, including the Proposed Project site, is located within the dam failure of both the New Melones and Tulloch dams. In the event of the New Melones Dam failure, the entire City would be inundated. A large corridor along Stanislaus River (including the Proposed Project site) would be inundated if the Tulloch Dam failed. To minimize the risk of dam failure, the United States Bureau of Reclamation (USBR) ensures safety through required annual inspections for safety deficiencies, and if needed, provides corrective actions based on current engineering practices. The Tulloch Reservoir Dam is under the jurisdiction of the State of California of Safety of Dams (DOSD). As part of DOSD normal routine maintenance program, the DOSD generally inspects all jurisdictional dams at least once per year.

1 City of Oakdale Urban Water Management Plan, 2009.

2 City of Oakdale Water Master Plan, Adopted October 5, 2015.

No enclosed surface water bodies, which might be subject to potential impacts from seiches, are located in the project vicinity. Based on its location, inland from coastal areas, the Proposed Project site would not be subjected to tsunami effects. The Proposed Project site is not located in an area susceptible to mudflows. Therefore, the Proposed Project will have a **Less Than Significant Impact**.

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The Proposed Project site is provided domestic water from the City of Oakdale. The City of Oakdale is located within the Modesto Sub-Basin of the San Joaquin River Hydrologic Region, which is managed by the Stanislaus and Tuolumne Rivers Groundwater Basin Association Groundwater Sustainability Association (STRGPA GSA). The Modesto Sub-Basin is considered a high-priority basin and therefore the STRGPA GSA is required to adopt and begin implementation of a Groundwater Sustainability Plan (GSP) by January 31, 2022. The City of Oakdale will be required to comply with the GSP once adopted.

The City of Oakdale also has an adopted Urban Water Management Plan, of which the Proposed Project will be required to comply with.

Therefore, the Proposed Project will have a **Less Than Significant Impact**.

MITIGATION MEASURES:

Mitigation is not required for this topic.

11. LAND USE AND PLANNING - Would the project:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Physically divide an established community?			X	
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?			X	

IMPACT ANALYSIS

a. Would the project physically divide an established community?

The Proposed Project site is located within the City of Oakdale and is surrounded by urban uses. The Proposed Project will not physically divide the established City of Oakdale as it continues the extension of residential uses from the west to the east. Therefore, the Proposed Project will have a **Less Than Significant Impact**.

b. Would the project 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?

As noted previously, the 2030 General Plan designates the Proposed Project site for Low Density Residential (LDR) land uses, and it is located within the Residential Agriculture (R-A), zone district. The Proposed Project is in conformance with the 2030 General Plan land use designation of Low Density Residential (LDR). The density of the Proposed Project is 4.46 dwelling units per acre which is consistent with the LDR land use designation. The Proposed Project is currently in non-conformance with the Zoning Ordinance. However, the Proposed Project proposes to amend the Zoning Ordinance to allow for the Proposed Project site to be zoned for R-1, Single-Family Residential uses. As proposed, the Proposed Project would comply with the Development Standards set forth in the Zoning Ordinance for R-1 uses. The Impact is **Less Than Significant**.

MITIGATION MEASURES:

Mitigation is not required for this topic.

12. MINERAL RESOURCES -- WOULD THE PROJECT RESULT IN:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*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?			X	
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?			X	

IMPACT ANALYSIS

The following discussion is an analysis for criteria (a) and (b):

a. *Would the project 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. *Would the project 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?*

According to the City's 2030 General Plan EIR, the California Geological survey has defined areas along the Stanislaus River within the City and surrounding area as Mineral Resource Zone 2 (MRZ-2). This designation indicates a high likelihood for occurrence of significant mineral deposits. The Proposed Project site is not located within or near the Stanislaus River corridor. Therefore, the Proposed Project will have a **Less Than Significant Impact**.

MITIGATION MEASURES:

Mitigation is not required for this topic.

13. NOISE -- WOULD THE PROJECT RESULT IN:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*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 other applicable standards of other agencies?		X		
b) Generation of excessive groundborne vibration or groundborne noise levels?			X	
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?				X

IMPACT ANALYSIS

a. *Would the project result in the 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?*

Various types of equipment would be used for construction of the Proposed Project. Noise impacts resulting from construction activities would depend on the noise generated by various pieces of construction equipment, the timing and duration of noise-generating activities, and the distance between construction noise sources and noise-sensitive receptors. Construction noise impacts primarily result when construction activities occur during noise-sensitive time of day (early morning, evening, or nighttime hours), when the construction occurs in areas immediately adjoining noise-sensitive land uses, or when construction lasts over extended periods of time. The loudest expected phase of construction is grading and earthwork, which would likely include the use of dozers, backhoes, and graders. The Proposed Project is bounded by existing residential uses to the north and west. According to the City's 2030 General Plan Environmental Impact Report (EIR), these areas are considered sensitive receptors. However, the City's 2030 General Plan Policy N-1.11 states: "minimize construction-related noise and vibration by limiting construction activities within 500 feet of noise-sensitive uses to 7:00 a.m. to 6:00 p.m. on weekdays, 8:00 a.m. to 5:00 p.m. on Saturdays, and no construction on Sundays and holidays unless permission for the latter has been granted by the City". Use of construction equipment could be a short-term source of impact on these noise-sensitive uses. In order to ensure that Project construction noise levels remain at a level as to not become a nuisance, mitigation measure NOISE-1 will be incorporated. Given the relatively short construction period and limited scope of the Proposed

Project, construction activities, with mitigation incorporated, will result in a **Less Than Significant Impact with Mitigation Incorporation**.

b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

The Proposed Project will result in groundborne vibration and noise levels during Project construction, which will be temporary in nature until build-out. Based on a review of the General Plan EIR, groudborne vibration and noise levels are typically caused by heavy equipment used during construction. Notable 2030 General Plan Policies include Policy N-1.11, which limits construction activities during specific hours, and Policy N-1.12, which requires construction activities to be in compliance with Federal Transit Administration criteria, which is provided below:

Table 13-1 Groundborne Vibration Impact Criteria for General Assessment

	Impact Levels (VdB)		
Land Use	**Frequent Events**	**Occasional Events**	**Infrequent Events**
Category 1: Buildings where vibration would interfere with interior operations	65	65	65
Category 2: Residences and Buildings where people normally sleep	72	75	80
Category 3: Institutional land uses with primarily daytime uses	75	78	83

During Proposed Project construction, which can be considered an "Occasional Event," vibration levels must comply with levels defined as Category 2. This is due to the immediate proximity of existing residential uses to the west of the Proposed Project site. The Project Proponent shall be required to utilize construction equipment that do not exceed the Category vibration level of 75.

In addition, The City's Noise Ordinance (Article XVI of the Municipal Code) mandates that construction activities shall occur between 7:00AM and 6:00PM on weekdays, and 8:00AM and 5:00PM on Saturday. The Proposed Project shall comply with the City's Noise Ordinance.

The Proposed Project will have a **Less Than Significant Impact**.

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?

The nearest airport to the Proposed Project is the Oakdale Municipal Airport, which is located approximately 3.8 miles from the Proposed Project. Therefore, this topic is not applicable as the Oakdale Municipal Airport is located more than three (3) miles from the Proposed Project. Therefore, the Proposed Project will have **No Impact**.

MITIGATION MEASURES:

The following mitigation measure shall be incorporated into the Proposed Project:

Mitigation Measure NOISE-1:

Construction equipment shall be well maintained to be as quiet as possible. The following measures, when applicable, shall be implemented to reduce noise from construction activities:

- All internal combustion engine-driven equipment shall be equipped with mufflers that are in good condition and appropriate for the equipment.
- "Quiet" models of air compressors and other stationary noise sources shall be used, where technology exists.
- Stationary noise-generating equipment shall be located as far as feasible from sensitive receptors (dwellings).
- Unnecessary idling of internal combustion engines shall be prohibited.
- Staging areas and construction material storage areas shall be located as far away as possible from adjacent sensitive land uses (dwellings).
- Construction-related traffic shall be routed along major roadways (Yosemite Avenue) and as far as feasible from sensitive receptors.
- Residences or noise-sensitive land uses adjacent to construction sites shall be notified of the construction schedule in writing. The construction contractor shall designate a "construction liaison" that would be responsible for responding to any local complaints (e.g., starting too early, bad muffler, etc.) and shall institute reasonable measures to correct the problem. The construction contractor shall conspicuously post a telephone number for the liaison at the construction site.
- The construction contractor shall hold a pre-construction meeting with the job inspectors and the general contractor/on-site manager to confirm that noise mitigation and practices (including construction hours, construction schedule, and construction liaison) are completed.

The above measure shall be included in the contract specifications that shall be reviewed and approved by the City of Oakdale Public Services Department prior to the start of construction. The above measure would reduce noise generated by the construction of the Proposed Project to the extent feasible for the Project's size.

14. POPULATION AND HOUSING -- Would the project:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Induce substantial 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)?			X	
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?			X	

IMPACT ANALYSIS

a. *Would the project induce substantial population in one area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*

The Proposed Project consists of subdividing land to develop thirty-seven (37) single-family residential dwelling units. Based on housing statistics from the California Department of Finance (https://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/), the persons per household in the City of Oakdale in 2021 is 2.90. As such, the Proposed Project is anticipated to create an additional 108 residents. In 2021, the population of the City of Oakdale is 23,237 residents. The Proposed Project would create an additional 0.0046 percent to the City's population. This percentage increase does not create or induce substantial population growth. Therefore, the Proposed Project will have a **Less Than Significant Impact**.

b. *Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?*

The Proposed Project is located on a raw undeveloped parcel that does not contain any existing residential structures. Therefore, the Proposed Project does not displace existing people or housing. As such, the Proposed Project will have a **Less Than Significant Impact**.

MITIGATION MEASURES:

Mitigation is not required for this topic.

15. PUBLIC SERVICES

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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:				
a) Fire protection?			X	
b) Police protection?			X	
c) Schools?			X	
d) Parks?			X	
e) Other public facilities?			X	

IMPACT ANALYSIS

a. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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 fire protection?*

b. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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 police protection?*

c. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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 schools?*

d. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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 parks?

e. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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* other public facilities*?*

The City of Oakdale is provided fire protection services by the City of Modesto. The City of Modesto provides personnel to existing fire stations in the City. The City of Oakdale is served by two (2) stations; Station 4 at 450 South Willowood Drive and Station 5 at 325 East G Street. The Proposed Project will likely be served by Station 4, which is located just west of the Proposed Project site. The Proposed Project shall adhere to General Plan Policies CS-2.1 through CS-2.13, including the requirement to pay the City's Fire Capital Facilities Fees to fund the construction of fire protection facilities required to service new growth areas. The Oakdale Police Department (OPD) provides protection services within the City of Oakdale. The City is served by one (1) police station located at 245 North Second Avenue. According to the City's 2030 General Plan Environmental Impact Report (EIR), the department is staffed by twenty-one (21) sworn officers, thirteen (13) professional support staff, seven (7) reserve officers and thirty (30) CAPS volunteers. General Plan Policy CS-1.3 states that the City will "maintain adequate levels of sworn officers, support staff, volunteers, equipment, technology, and training to provide effective and highly visible police protection services within the City." Currently, the calculated ratio of police officers per 1,000 population is 0.94 officers, using the Department of Finance population estimate for the City of 22,348. The Proposed Project will add demand to the OPD operations. However, to offset any impacts to Policy capital infrastructure, the Proposed Project will be required to pay the applicable Capital Facilities Fees. In addition, the Proposed Project will be required to annex into the City's existing Public Safety Community Facilities District (CFD), which participates in alternative financing mechanisms for police and fire services.

With regard to K-12 schools, the Project Applicant is required to pay the standard fees for the Oakdale Joint Unified School District prior to Building Permit issuance. The current School Impact Fee for the Oakdale Joint Unified School District is $3.48 per square foot. The Proposed Project will be required to pay the applicable Capital Facilities Fees (CFF) associated with the services and facilities in addition to School Impact Fees imposed by the Oakdale Unified School District. Therefore, the Proposed Project will have a **Less Than Significant Impact.**

For a discussion of the Proposed Project's impact on park facilities, refer to Section 16.

MITIGATION MEASURES:

Mitigation is not required for this topic.

16. RECREATION

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*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?			X	
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?			X	

IMPACT ANALYSIS

The following discussion is an analysis for criteria (a) and (b):

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 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?

The Proposed Project will result in the addition of 108 residents into the City of Oakdale; and therefore, will lead to an increase in the use of neighborhood parks in the area. However, the Proposed Project will be required to pay the applicable Capital Facilities Fees, which include park facilities. This payment of the CFF fees helps offset the impact of the Proposed Project to the City's capital infrastructure, including parks.

Therefore, the Proposed Project will have a **Less Than Significant Impact**.

MITIGATION MEASURES:

Mitigation is not required for this topic.

17. TRANSPORTATION/TRAFFIC -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*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?			X	
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?			X	
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
d) Result in inadequate emergency access?			X	

IMPACT ANALYSIS

a. *Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?*

b. *Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?*

The Project Proponent has provided a Traffic Impact Assessment, dated March 5, 2021, prepared by KD Anderson & Associates, Inc. This Traffic Impact Assessment is included in this Initial Study as Appendix C, and the results of this assessment are summarized herein.

When evaluating traffic impacts associated with the Proposed Project, a comparison was done between the projected traffic volumes anticipated under the City's 2030 General Plan and EIR and the Proposed Project. As noted previously, the existing General Plan land use designation is Low Density Residential (LDR), and the Project Proponent is not requesting any changes to the Proposed Project's General Plan designation. In addition, the Proposed Project has a zoning designation of Residential – Agriculture (RA) and the Project Proponent is requesting to change the zoning designation to Single Family Residential (R-1). The traffic volumes that will result of this zoning change request are presented in the table below:

SITE TRIP GENERATION COMPARISON				
Land Use	**Current Zoning (RA)**	**General Plan**	**GPEIR Assumptions**	**919 Old Stockton Road**
Residential du's	31 du	66 du	50 du	37
Daily Trips @ 9.44 /du	293	623	472	349
PM Peak Hour Trips @ 0.99 / du	31	65	50	37

As noted above, the amount of daily traffic generated by the Proposed Project is less than what is currently permissible under the City's 2030 General Plan and EIR. The Proposed Project is projected to generate fewer trips than would have been assumed of the site in the City's 2030 General Plan and EIR traffic volume forecasts for A Street and for Yosemite Avenue (SR 120). Thus, the cumulative Levels of Service accompanying the Proposed Project would be similar to or perhaps better than those presented in the City's 2030 General Plan and EIR.

The Traffic Impact Assessment further concluded that the Proposed Project would add a relatively small amount of traffic to Old Stockton Road, A Street, and State Route 120. The Proposed Project could increase the daily volume on Old Stockton Road south of the Proposed Project by roughly 300 to 350 vehicle trips per day (1/2 inbound and 1/2 outbound). This traffic increase would not be significant with regards to the General Plan EIR's identified capacity for two lane roads.

Vehicle Miles Traveled (VMT)

Under current CEQA Statutes and Guidelines, the transportation impacts of a "Project" must be evaluated within the context of alternative transportation modes, safety, and daily Vehicle Miles Traveled, or VMT. VMT is generally the product of the project's estimated daily trips and the distance of those trips. Based on the Traffic Impact Assessment, the Proposed Project is anticipated to generate fewer daily trips than would development under the current 2030 General Plan land use designation. This is confirmed in the table above. In addition, the Proposed Project is located near the center of the City of Oakdale and in proximity to bike lanes and trails that will allow residents to choose that travel mode or to walk/ride a bicycle. The Traffic Impact Assessment concluded that the Proposed Project would not interfere with the City's ability to meet long term VMT reduction goals.

Therefore, the Proposed Project will have a **Less Than Significant Impact**.

c. *Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

The Proposed Project will consist of roadway improvements designed and installed per the City's Standards and Specifications. As such, the Proposed Project will not install improvements that will result in substantially increased hazard. Therefore, the Proposed Project will have a **Less Than Significant Impact**.

d. *Would the project result in inadequate emergency access?*

The Proposed Project includes one (1) point of access to Old Stockton Road. The driveway proposed is planned as full access. The Project Proponent has provided an EV vehicle turning radius exhibit which shows that emergency vehicles can safely maneuver around the site. Emergency vehicles will be able to access each home in the subdivision sufficiently; and therefore, the Proposed Project will not result in inadequate emergency access. The Proposed Project will have a **Less Than Significant Impact**.

MITIGATION MEASURES:

Mitigation is not required for this topic.

18. TRIBAL CULTURAL RESOURCES -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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:				
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)?				X
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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?				X

Effective July 1, 2015, Assembly Bill 52 (AB 52) amended CEQA to mandate consultation with California Native American tribes during the CEQA process to determine whether or not the Proposed Project may have a significant impact on a Tribal Cultural Resource. Section 21073 of the Public Resources Code defines California Native American tribes as "a Native American tribe located in California that is on the contact list maintained by the Native American Heritage Commission for the purposes of Chapter 905 of the Statutes of 2004." This includes both federally and non-federally recognized tribes. Section 21074(a) of the Public Resource Code defines Tribal Cultural Resources for the purpose of CEQA as:

1) Sites, features, places, cultural landscapes (geographically defined in terms of the size and scope), sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

a. included or determined to be eligible for inclusion in the California Register of Historical Resources; and/or
b. included in a local register of historical resources as defined in subdivision (k) of Section 5020.1; and/or

c. 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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

Because criteria A and B also meet the definition of a Historical Resource under CEQA (see Section 5 of this document), a Tribal Cultural Resource may also require additional (and separate) consideration as a Historical Resource. Tribal Cultural Resources may or may not exhibit archaeological, cultural, or physical indicators.

Recognizing that California tribes are experts in their Tribal Cultural Resources and heritage, AB 52 requires that CEQA lead agencies carry out consultation with tribes at the commencement of the CEQA process to identify Tribal Cultural Resources. Furthermore, because a significant effect on a Tribal Cultural Resource is considered a significant impact on the environment under CEQA, consultation is required to develop appropriate avoidance, impact minimization, and mitigation measures. Consultation is concluded when either the lead agency and tribes agree to appropriate mitigation measures to mitigate or avoid a significant effect, if a significant effect exists, or when a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached, whereby the lead agency uses its best judgement in requiring mitigation measures that avoid or minimize impact to the greatest extent feasible.

IMPACT ANALYSIS

a. *Would the project cause a significant 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:*

    1. *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)?*
    2. *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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?*

According to the City's 2030 General Plan Environmental Impact Report (EIR), the historic commercial core is focused on the F Street/Yosemite Avenue intersection and sites surveyed as part of the General Plan EIR do not include the Proposed Project site. In addition, the Proposed Project site is not listed or eligible for listing in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).

According to the City's 2030 General Plan EIR, a request to the Native American Heritage Commission (NAHC) during the General Plan update (2009) to conduct a search of their sacred lands database to determine if any Native American cultural resources are present in or in the vicinity of the Planning Area. The NAHC response letter stated that the sacred lands database did not indicate the presence of Native American resources in the Planning Area. The planning area includes the Proposed Project site. In addition, letters requesting consultation regarding the Proposed Project were sent to six (6) Native American tribes on May 11, 2021. No response was received within the 30-day consultation request timeframe. Therefore, the Proposed Project will have a **Less Than Significant Impact**.

MITIGATION MEASURES:

Mitigation is not required for this topic.

19. UTILITIES AND SERVICE SYSTEMS -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
c) Result in a determination by the wastewater treatment provider that 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?			X	
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?			X	
e) Comply with Federal, State, and local management and reduction statutes and regulations related to solid waste?			X	

IMPACT ANALYSIS

a. *Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?*

The City Wastewater Treatment Plant (WWTP) is located north of the Stanislaus River and serves the businesses and residents within the City. The WWTP is regulated by the Regional Water Quality Control

Board (Regional Board) Order R5-2012-0063, Waste Discharge Requirements (WDRs).3 The WDRs establish discharge prohibitions, flow limitations, effluent limitations, solids disposal requirements, groundwater limitations, discharge specifications, ultraviolet disinfection system operation specifications, solids disposal specifications, and provisions for the WWTP. The City wastewater collection system consists of approximately 70 miles of gravity sewers ranging from 4-inch to 27-inch diameter, with eleven (11) pump stations and eleven (11) low pressure force mains.

The City supplies water to its residents and businesses through a system of water infrastructure that has been constructed over several years. Distribution pipelines are of various size, age, and materials. Due to the elevation changes, the distribution system is divided into two (2) pressure zones, with some sections of the service area requiring pressure reducing valves. The City has two (2) booster pump stations that allow water to be conveyed from the lower zone to the upper zone. The City has one (1) 1.0 MG pre-stressed concrete water storage facility, constructed, and placed into service in 2014. Source water is from local groundwater aquifers. The City owns and operates eight (8) water production wells, with a total production capacity of approximately 15 MGD. Total well production, according to the Water System Master Plan is 10,100 gpm. The Total Net Well Production is 7,500 gpm (assumes the largest producing well is out of service).

The Proposed Project will include underground sewer line connections to the City of Oakdale's existing sanitary sewer line in Old Stockton Road. Based on existing wastewater generation rates per acre (gpd/ac), the Proposed Project is expected to generate 13,783.95 gallons of wastewater per day. According to the City's Wastewater Master Plan, the existing WWTP and system will be sufficient to accommodate the build-out of land within the city limits, including population projections to the year 2040. As a result, the Proposed Project is not expected to exceed the wastewater treatment requirements and is **Less Than Significant.**

b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

According to the City's Water Master Plan, the City will have a total average day demand of 4.7 MD in 2040, based on population projections and conservation goals. To meet this demand, the City will need to have a total production capacity of 6,500 gpm without its largest well/booster in service (considered the Net Well Production). As discussed above, the City's existing system is sufficient to manage this demand. Therefore, the Proposed Project will have a **Less Than Significant Impact**.

c. Would the project result in a determination by the wastewater treatment provider that 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?

Refer to the discussion above, under item 19(a).

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3 City of Oakdale, Wastewater Master Plan, Volume 1, Adopted October 5, 2015

The Proposed Project will connect to the City's domestic wastewater system by connecting to an existing wastewater line in Old Stockton Road. Wastewater in the City of Oakdale ultimately ends up at the City's Wastewater Treatment Plan located north of the Stanislaus River. Based on discussions with the City Engineer, there is sufficient capacity at the City's Wastewater Treatment Plan to accommodate wastewater generated by the Proposed Project. Therefore, the Proposed Project will have a **Less Than Significant Impact**.

The following discussion is an analysis for criteria (d) and (e):

d. *Would the project 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. *Would the project comply with Federal, State, and local management and reduction statutes and regulations related to solid waste?*

Based on a review of Section 4.4 of the 2030 General Plan EIR, the City continues to divert solid waste from local landfills through various conservation, recycling, and composting measures. All of this is done in compliance with AB39. The Proposed Project will participate in the City's AB39 compliance efforts.

The Proposed Project will be provided solid waste services by Gilton Solid Waste. The Proposed Project was referred to Gilton Solid Waste for review and comment. The City did not receive comment or concern from Gilton Solid Waste regarding the Proposed Project

The Proposed Project would comply with Federal, State, and local statutes and regulations related to solid waste and would not cause solid waste providers to be out of compliance with applicable statutes and regulations related to solid waste. Therefore, the Proposed Project will have a **Less Than Significant.**

MITIGATION MEASURES:

Mitigation is not required for this topic.

20. WILDFIRE -- Would the project:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				X
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?				X
c) Require the installation 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?				X
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?				X

IMPACT ANALYSIS

The following discussion is an analysis for criteria (a), (b), (c), and (d):

a. *Would the project* substantially impair an adopted emergency response plan or emergency evacuation plan?
b. *Would the project 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. *Would the project require the installation 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. *Would the project 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?*

Based on a review of Section 4.8 of the 2030 General Plan, and according to the Stanislaus County Multi-Jurisdictional Hazard Mitigation Plan, State Route 120/108 is identified as an emergency evacuation

route in the City and County. The Proposed Project is not located on or near State Route 120/108 and thereby will not physically interfere with implementation of the County's emergency response or evacuation plan. In the case that an emergency evacuation is required, the Proposed Project can access State Route 120/108 via Old Stockton Road to East A Street.

In addition, the Proposed Project is not located in or near lands that are classified as very high fire hazard severity zones. Therefore, the Proposed Project will have a **Less Than Significant Impact**

MITIGATION MEASURES:

Mitigation is not required for this topic.

21. MANDATORY FINDINGS OF SIGNIFICANCE --

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Does the project have the potential 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?			X	
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)?		X		
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X		

IMPACT ANALYSIS

a. *Does the project have the potential to substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, 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?*

Finding (a) is checked as "Less Than Significant Impact" on the basis of the Proposed Project's potential impacts on biological resources, as described in Section 3.0 of this Initial Study. Potential impacts were identified in this area, but they were identified to be **Less Than Significant.**

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 the connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?*

As described in this Initial Study, the potential environmental effects of the Proposed Project will either be less than significant or will have no impact at all. Where the Proposed Project involves potentially significant impacts, these impacts would have a **Less Than Significant Impact with Mitigation Incorporated.**

The potential environmental impacts identified in this Initial Study have been considered in conjunction with each other as to their potential to generate other potentially significant impacts. The various potential environmental impacts of the Proposed Project will not combine to generate any potentially significant cumulative impacts.

The City of Oakdale 2030 General Plan and EIR comprehensively account for ongoing and foreseeable urban development within the City's "Planning Area" and the cumulative environmental impacts of planned development. Future urban development in Oakdale includes the provision of roads, utilities, schools, and recreational facilities needed to serve City residents and visitors as their demands for urban services increase over time.

The Proposed Project will contribute to planned urban development in the City of Oakdale. The potential environmental impacts associated with the Proposed Project represent a portion of the environmental consequences of the planned growth and development permitted by the 2030 General Plan. The Proposed Project will not involve a minor addition to the potential environmental impacts identified in the 2030 General Plan EIR, but the Proposed Project will not result in any substantial contribution to any of the significant cumulative impacts identified in the 2030 General Plan EIR.

c. *Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

This Initial Study has considered the potential environmental impacts of the Proposed Project in the discrete issue areas outlined in the CEQA Environmental Checklist. During the environmental analysis, the potential for the Proposed Project to result in substantial impacts on human beings in these issue areas, as well as the potential for substantial impacts on human beings to occur outside of these issue areas, was considered, and were identified but they were identified to be **Less Than Significant with Mitigation Incorporated**.

REFERENCES

In accordance with Section 15063(a)(3) of the CEQA Guidelines, the following expert opinion, technical studies, and substantial evidence has been referenced and/or cited in the discussion included in the Initial Study Checklist:

1. City of Oakdale 2030 General Plan, dated August 8, 2013
2. City of Oakdale 2015-2023 Housing Element, dated February, 2016
3. City of Oakdale 2030 General Plan Environmental Impact Report (EIR), dated August 8, 2013
4. City of Oakdale Zoning Ordinance
5. City of Oakdale Water System Master Plan, dated October 5, 2015
6. City of Oakdale Urban Water Management Plan, dated January 2009
7. City of Oakdale Wastewater Master Plan, dated October 5, 2015
8. City of Oakdale Climate Action Plan, dated August 8, 2013
9. Stanislaus County Airport Land Use Compatibility Plan, dated October 6, 2016
10. California Department of Transportation Online Database of State Scenic Highways (www.dot.ca.gov/hq/LandArch/scenic/cahisys.htm)
11. Preliminary Geotechnical Investigation prepared by North American Technical Services, dated May 25, 2021.
12. Transportation Impact Assessment for 919 Old Stockton Road prepared by K.D. Anderson and Associates, Inc., dated March 5, 2021.

Appendix A
CalEEDMod Results, dated May 25, 2021

Rezone, TSM, AR 2020-22 - Hill Road

Stanislaus County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	37.00	Dwelling Unit	8.29	361,112.40	106

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	46
Climate Zone	3			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Assumed start date of January 1, 2022. Operational year 2023.

Land Use - Project consists of a Rezone, Architecture Review, and Tentative Subdivision Map to subdivide 8.29 acres into 37 single-family residential lots and 2 common lots (Lots A and B) on a 8.29-acre project site (2 parcels).

Construction Phase - Default construction times assumed. Start date of January 1, 2022. No structures on-site.

Trips and VMT - Default construction trips assumed.

Vehicle Trips - Daily trips changed to 9.44/du per Transportation Impact Assessment, dated March 5, 2021 prepared by KD Anderson & Associates, Inc.

Energy Use -

Mobile Land Use Mitigation -

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseEndDate	3/24/2023	2/24/2023
tblConstructionPhase	PhaseEndDate	1/27/2023	12/30/2022
tblConstructionPhase	PhaseEndDate	3/11/2022	2/11/2022
tblConstructionPhase	PhaseEndDate	2/24/2023	1/27/2023
tblConstructionPhase	PhaseEndDate	2/11/2022	1/14/2022
tblConstructionPhase	PhaseStartDate	2/25/2023	1/28/2023
tblConstructionPhase	PhaseStartDate	3/12/2022	2/12/2022
tblConstructionPhase	PhaseStartDate	2/12/2022	1/15/2022
tblConstructionPhase	PhaseStartDate	1/28/2023	12/31/2022
tblConstructionPhase	PhaseStartDate	1/29/2022	1/1/2022
tblLandUse	LandUseSquareFeet	66,600.00	361,112.40
tblLandUse	LotAcreage	12.01	8.29
tblVehicleTrips	ST_TR	9.91	9.44
tblVehicleTrips	SU_TR	8.62	9.44
tblVehicleTrips	WD_TR	9.52	9.44
tblWoodstoves	NumberCatalytic	8.29	0.00
tblWoodstoves	NumberNoncatalytic	8.29	0.00

2.0 Emissions Summary

2.1 Overall Construction

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	tons/yr										MT/yr					
2022	0.2395	2.2225	2.1872	3.8400e-003	0.1728	0.1107	0.2835	0.0879	0.1038	0.1917	0.0000	333.2405	333.2405	0.0790	0.0000	335.2147
2023	3.4022	0.1153	0.1683	2.7000e-004	1.4400e-003	5.8200e-003	7.2600e-003	3.8000e-004	5.4100e-003	5.7900e-003	0.0000	23.7698	23.7698	6.6600e-003	0.0000	23.9363
Maximum	**3.4022**	**2.2225**	**2.1872**	**3.8400e-003**	**0.1728**	**0.1107**	**0.2835**	**0.0879**	**0.1038**	**0.1917**	**0.0000**	**333.2405**	**333.2405**	**0.0790**	**0.0000**	**335.2147**

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	tons/yr										MT/yr					
2022	0.2395	2.2225	2.1872	3.8400e-003	0.1728	0.1107	0.2835	0.0879	0.1038	0.1917	0.0000	333.2401	333.2401	0.0790	0.0000	335.2143
2023	3.4022	0.1153	0.1683	2.7000e-004	1.4400e-003	5.8200e-003	7.2600e-003	3.8000e-004	5.4100e-003	5.7900e-003	0.0000	23.7698	23.7698	6.6600e-003	0.0000	23.9362
Maximum	**3.4022**	**2.2225**	**2.1872**	**3.8400e-003**	**0.1728**	**0.1107**	**0.2835**	**0.0879**	**0.1038**	**0.1917**	**0.0000**	**333.2401**	**333.2401**	**0.0790**	**0.0000**	**335.2143**

	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**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2022	3-31-2022	0.7168	0.7168
2	4-1-2022	6-30-2022	0.5797	0.5797
3	7-1-2022	9-30-2022	0.5860	0.5860
4	10-1-2022	12-31-2022	0.5843	0.5843
5	1-1-2023	3-31-2023	3.5136	3.5136
		Highest	3.5136	3.5136

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	tons/yr										MT/yr					
Area	1.7592	0.0170	0.2807	1.0000e-004		2.6400e-003	2.6400e-003		2.6400e-003	2.6400e-003	0.0000	16.4774	16.4774	7.4000e-004	2.9000e-004	16.5835
Energy	5.2200e-003	0.0446	0.0190	2.8000e-004		3.6000e-003	3.6000e-003		3.6000e-003	3.6000e-003	0.0000	145.9209	145.9209	5.2500e-003	1.8300e-003	146.5972
Mobile	0.1094	0.9283	1.2232	5.8200e-003	0.3892	3.9100e-003	0.3931	0.1046	3.6600e-003	0.1083	0.0000	539.1329	539.1329	0.0269	0.0000	539.8043
Waste						0.0000	0.0000		0.0000	0.0000	7.7461	0.0000	7.7461	0.4578	0.0000	19.1907
Water						0.0000	0.0000		0.0000	0.0000	0.7648	5.3422	6.1070	0.0788	1.9000e-003	8.6445
Total	**1.8738**	**0.9899**	**1.5229**	**6.2000e-003**	**0.3892**	**0.0102**	**0.3993**	**0.1046**	**9.9000e-003**	**0.1146**	**8.5109**	**706.8735**	**715.3844**	**0.5694**	**4.0200e-003**	**730.8201**

2.2 Overall Operational

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	tons/yr										MT/yr					
Area	1.7592	0.0170	0.2807	1.0000e-004		2.6400e-003	2.6400e-003		2.6400e-003	2.6400e-003	0.0000	16.4774	16.4774	7.4000e-004	2.9000e-004	16.5835
Energy	5.2200e-003	0.0446	0.0190	2.8000e-004		3.6000e-003	3.6000e-003		3.6000e-003	3.6000e-003	0.0000	145.9209	145.9209	5.2500e-003	1.8300e-003	146.5972
Mobile	0.1085	0.9205	1.2042	5.7200e-003	0.3814	3.8400e-003	0.3852	0.1026	3.6000e-003	0.1062	0.0000	529.7288	529.7288	0.0267	0.0000	530.3949
Waste						0.0000	0.0000		0.0000	0.0000	7.7461	0.0000	7.7461	0.4578	0.0000	19.1907
Water						0.0000	0.0000		0.0000	0.0000	0.6118	4.5832	5.1951	0.0631	1.5300e-003	7.2263
Total	**1.8729**	**0.9821**	**1.5038**	**6.1000e-003**	**0.3814**	**0.0101**	**0.3915**	**0.1026**	**9.8400e-003**	**0.1124**	**8.3580**	**696.7104**	**705.0683**	**0.5535**	**3.6500e-003**	**719.9926**

	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	**0.05**	**0.78**	**1.25**	**1.61**	**2.00**	**0.69**	**1.97**	**2.00**	**0.61**	**1.89**	**1.80**	**1.44**	**1.44**	**2.80**	**9.20**	**1.48**

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	1/1/2022	1/14/2022	5	10	
2	Grading	Grading	1/15/2022	2/11/2022	5	20	
3	Building Construction	Building Construction	2/12/2022	12/30/2022	5	230	
4	Paving	Paving	12/31/2022	1/27/2023	5	20	
5	Architectural Coating	Architectural Coating	1/28/2023	2/24/2023	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 731,253; Residential Outdoor: 243,751; 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
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading	Excavators	1	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

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	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	13.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	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	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0159	0.1654	0.0985	1.9000e-004		8.0600e-003	8.0600e-003		7.4200e-003	7.4200e-003	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	**0.0159**	**0.1654**	**0.0985**	**1.9000e-004**	**0.0903**	**8.0600e-003**	**0.0984**	**0.0497**	**7.4200e-003**	**0.0571**	**0.0000**	**16.7197**	**16.7197**	**5.4100e-003**	**0.0000**	**16.8549**

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	tons/yr										MT/yr					
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	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	0.0000
Worker	3.5000e-004	2.2000e-004	2.4100e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6179	0.6179	2.0000e-005	0.0000	0.6184
Total	**3.5000e-004**	**2.2000e-004**	**2.4100e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.6179**	**0.6179**	**2.0000e-005**	**0.0000**	**0.6184**

3.2 Site Preparation - 2022

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	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0159	0.1654	0.0985	1.9000e-004		8.0600e-003	8.0600e-003		7.4200e-003	7.4200e-003	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	**0.0159**	**0.1654**	**0.0985**	**1.9000e-004**	**0.0903**	**8.0600e-003**	**0.0984**	**0.0497**	**7.4200e-003**	**0.0571**	**0.0000**	**16.7197**	**16.7197**	**5.4100e-003**	**0.0000**	**16.8549**

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	tons/yr										MT/yr					
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	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	0.0000
Worker	3.5000e-004	2.2000e-004	2.4100e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6179	0.6179	2.0000e-005	0.0000	0.6184
Total	**3.5000e-004**	**2.2000e-004**	**2.4100e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.6179**	**0.6179**	**2.0000e-005**	**0.0000**	**0.6184**

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	tons/yr										MT/yr					
Fugitive Dust					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0195	0.2086	0.1527	3.0000e-004		9.4100e-003	9.4100e-003		8.6600e-003	8.6600e-003	0.0000	26.0548	26.0548	8.4300e-003	0.0000	26.2654
Total	**0.0195**	**0.2086**	**0.1527**	**3.0000e-004**	**0.0655**	**9.4100e-003**	**0.0749**	**0.0337**	**8.6600e-003**	**0.0423**	**0.0000**	**26.0548**	**26.0548**	**8.4300e-003**	**0.0000**	**26.2654**

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	tons/yr										MT/yr					
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	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	0.0000
Worker	5.8000e-004	3.6000e-004	4.0100e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0299	1.0299	3.0000e-005	0.0000	1.0306
Total	**5.8000e-004**	**3.6000e-004**	**4.0100e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.0299**	**1.0299**	**3.0000e-005**	**0.0000**	**1.0306**

3.3 Grading - 2022

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	tons/yr										MT/yr					
Fugitive Dust					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0195	0.2086	0.1527	3.0000e-004		9.4100e-003	9.4100e-003		8.6600e-003	8.6600e-003	0.0000	26.0547	26.0547	8.4300e-003	0.0000	26.2654
Total	**0.0195**	**0.2086**	**0.1527**	**3.0000e-004**	**0.0655**	**9.4100e-003**	**0.0749**	**0.0337**	**8.6600e-003**	**0.0423**	**0.0000**	**26.0547**	**26.0547**	**8.4300e-003**	**0.0000**	**26.2654**

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	tons/yr										MT/yr					
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	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	0.0000
Worker	5.8000e-004	3.6000e-004	4.0100e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0299	1.0299	3.0000e-005	0.0000	1.0306
Total	**5.8000e-004**	**3.6000e-004**	**4.0100e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.0299**	**1.0299**	**3.0000e-005**	**0.0000**	**1.0306**

3.4 Building Construction - 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	tons/yr										MT/yr					
Off-Road	0.1962	1.7958	1.8818	3.1000e-003		0.0930	0.0930		0.0875	0.0875	0.0000	266.4840	266.4840	0.0638	0.0000	268.0801
Total	**0.1962**	**1.7958**	**1.8818**	**3.1000e-003**		**0.0930**	**0.0930**		**0.0875**	**0.0875**	**0.0000**	**266.4840**	**266.4840**	**0.0638**	**0.0000**	**268.0801**

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	tons/yr										MT/yr					
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	0.0000
Vendor	1.3100e-003	0.0485	7.7700e-003	1.3000e-004	3.0400e-003	1.2000e-004	3.1600e-003	8.8000e-004	1.1000e-004	9.9000e-004	0.0000	12.0696	12.0696	9.7000e-004	0.0000	12.0939
Worker	5.7400e-003	3.6200e-003	0.0400	1.1000e-004	0.0119	9.0000e-005	0.0120	3.1700e-003	8.0000e-005	3.2500e-003	0.0000	10.2645	10.2645	2.8000e-004	0.0000	10.2714
Total	**7.0500e-003**	**0.0522**	**0.0477**	**2.4000e-004**	**0.0150**	**2.1000e-004**	**0.0152**	**4.0500e-003**	**1.9000e-004**	**4.2400e-003**	**0.0000**	**22.3342**	**22.3342**	**1.2500e-003**	**0.0000**	**22.3653**

3.4 Building Construction - 2022

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	tons/yr										MT/yr					
Off-Road	0.1962	1.7958	1.8818	3.1000e-003		0.0930	0.0930		0.0875	0.0875	0.0000	266.4837	266.4837	0.0638	0.0000	268.0798
Total	**0.1962**	**1.7958**	**1.8818**	**3.1000e-003**		**0.0930**	**0.0930**		**0.0875**	**0.0875**	**0.0000**	**266.4837**	**266.4837**	**0.0638**	**0.0000**	**268.0798**

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	tons/yr										MT/yr					
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	0.0000
Vendor	1.3100e-003	0.0485	7.7700e-003	1.3000e-004	3.0400e-003	1.2000e-004	3.1600e-003	8.8000e-004	1.1000e-004	9.9000e-004	0.0000	12.0696	12.0696	9.7000e-004	0.0000	12.0939
Worker	5.7400e-003	3.6200e-003	0.0400	1.1000e-004	0.0119	9.0000e-005	0.0120	3.1700e-003	8.0000e-005	3.2500e-003	0.0000	10.2645	10.2645	2.8000e-004	0.0000	10.2714
Total	**7.0500e-003**	**0.0522**	**0.0477**	**2.4000e-004**	**0.0150**	**2.1000e-004**	**0.0152**	**4.0500e-003**	**1.9000e-004**	**4.2400e-003**	**0.0000**	**22.3342**	**22.3342**	**1.2500e-003**	**0.0000**	**22.3653**

3.5 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	tons/yr										MT/yr					
Off-Road	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
Paving	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**	**0.0000**

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	tons/yr										MT/yr					
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	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	0.0000
Worker	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	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**	**0.0000**	**0.0000**	**0.0000**

3.5 Paving - 2022

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	tons/yr										MT/yr					
Off-Road	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
Paving	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**	**0.0000**

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	tons/yr										MT/yr					
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	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	0.0000
Worker	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	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**	**0.0000**	**0.0000**	**0.0000**

3.5 Paving - 2023

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	tons/yr										MT/yr					
Off-Road	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0269	20.0269	6.4800e-003	0.0000	20.1888
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0103**	**0.1019**	**0.1458**	**2.3000e-004**		**5.1000e-003**	**5.1000e-003**		**4.6900e-003**	**4.6900e-003**	**0.0000**	**20.0269**	**20.0269**	**6.4800e-003**	**0.0000**	**20.1888**

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	tons/yr										MT/yr					
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	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	0.0000
Worker	5.3000e-004	3.3000e-004	3.6600e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9914	0.9914	2.0000e-005	0.0000	0.9920
Total	**5.3000e-004**	**3.3000e-004**	**3.6600e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.9914**	**0.9914**	**2.0000e-005**	**0.0000**	**0.9920**

3.5 Paving - 2023

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	tons/yr										MT/yr					
Off-Road	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0268	20.0268	6.4800e-003	0.0000	20.1888
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0103**	**0.1019**	**0.1458**	**2.3000e-004**		**5.1000e-003**	**5.1000e-003**		**4.6900e-003**	**4.6900e-003**	**0.0000**	**20.0268**	**20.0268**	**6.4800e-003**	**0.0000**	**20.1888**

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	tons/yr										MT/yr					
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	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	0.0000
Worker	5.3000e-004	3.3000e-004	3.6600e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9914	0.9914	2.0000e-005	0.0000	0.9920
Total	**5.3000e-004**	**3.3000e-004**	**3.6600e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.9914**	**0.9914**	**2.0000e-005**	**0.0000**	**0.9920**

3.6 Architectural Coating - 2023

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	tons/yr										MT/yr					
Archit. Coating	3.3894					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	**3.3913**	**0.0130**	**0.0181**	**3.0000e-005**		**7.1000e-004**	**7.1000e-004**		**7.1000e-004**	**7.1000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.5000e-004**	**0.0000**	**2.5571**

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	tons/yr										MT/yr					
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	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	0.0000
Worker	1.1000e-004	7.0000e-005	7.3000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.1983	0.1983	0.0000	0.0000	0.1984
Total	**1.1000e-004**	**7.0000e-005**	**7.3000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.1983**	**0.1983**	**0.0000**	**0.0000**	**0.1984**

3.6 Architectural Coating - 2023

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	tons/yr										MT/yr					
Archit. Coating	3.3894					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	**3.3913**	**0.0130**	**0.0181**	**3.0000e-005**		**7.1000e-004**	**7.1000e-004**		**7.1000e-004**	**7.1000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.5000e-004**	**0.0000**	**2.5571**

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	tons/yr										MT/yr					
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	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	0.0000
Worker	1.1000e-004	7.0000e-005	7.3000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.1983	0.1983	0.0000	0.0000	0.1984
Total	**1.1000e-004**	**7.0000e-005**	**7.3000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.1983**	**0.1983**	**0.0000**	**0.0000**	**0.1984**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

	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	tons/yr										MT/yr					
Mitigated	0.1085	0.9205	1.2042	5.7200e-003	0.3814	3.8400e-003	0.3852	0.1026	3.6000e-003	0.1062	0.0000	529.7288	529.7288	0.0267	0.0000	530.3949
Unmitigated	0.1094	0.9283	1.2232	5.8200e-003	0.3892	3.9100e-003	0.3931	0.1046	3.6600e-003	0.1083	0.0000	539.1329	539.1329	0.0269	0.0000	539.8043

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	349.28	349.28	349.28	1,023,726	1,003,252
Total	349.28	349.28	349.28	1,023,726	1,003,252

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
Single Family Housing	10.80	7.30	7.50	48.40	13.90	37.70	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.523108	0.032399	0.174639	0.117529	0.020918	0.005040	0.027575	0.089674	0.001843	0.001079	0.004521	0.000833	0.000841

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	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	94.2982	94.2982	4.2600e-003	8.8000e-004	94.6677
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	94.2982	94.2982	4.2600e-003	8.8000e-004	94.6677
NaturalGas Mitigated	5.2200e-003	0.0446	0.0190	2.8000e-004		3.6000e-003	3.6000e-003		3.6000e-003	3.6000e-003	0.0000	51.6228	51.6228	9.9000e-004	9.5000e-004	51.9295
NaturalGas Unmitigated	5.2200e-003	0.0446	0.0190	2.8000e-004		3.6000e-003	3.6000e-003		3.6000e-003	3.6000e-003	0.0000	51.6228	51.6228	9.9000e-004	9.5000e-004	51.9295

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	tons/yr										MT/yr					
Single Family Housing	967374	5.2200e-003	0.0446	0.0190	2.8000e-004		3.6000e-003	3.6000e-003		3.6000e-003	3.6000e-003	0.0000	51.6228	51.6228	9.9000e-004	9.5000e-004	51.9295
Total		**5.2200e-003**	**0.0446**	**0.0190**	**2.8000e-004**		**3.6000e-003**	**3.6000e-003**		**3.6000e-003**	**3.6000e-003**	**0.0000**	**51.6228**	**51.6228**	**9.9000e-004**	**9.5000e-004**	**51.9295**

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	tons/yr										MT/yr					
Single Family Housing	967374	5.2200e-003	0.0446	0.0190	2.8000e-004		3.6000e-003	3.6000e-003		3.6000e-003	3.6000e-003	0.0000	51.6228	51.6228	9.9000e-004	9.5000e-004	51.9295
Total		**5.2200e-003**	**0.0446**	**0.0190**	**2.8000e-004**		**3.6000e-003**	**3.6000e-003**		**3.6000e-003**	**3.6000e-003**	**0.0000**	**51.6228**	**51.6228**	**9.9000e-004**	**9.5000e-004**	**51.9295**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	324147	94.2982	4.2600e-003	8.8000e-004	94.6677
Total		**94.2982**	**4.2600e-003**	**8.8000e-004**	**94.6677**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	324147	94.2982	4.2600e-003	8.8000e-004	94.6677
Total		**94.2982**	**4.2600e-003**	**8.8000e-004**	**94.6677**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	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	tons/yr										MT/yr					
Mitigated	1.7592	0.0170	0.2807	1.0000e-004		2.6400e-003	2.6400e-003		2.6400e-003	2.6400e-003	0.0000	16.4774	16.4774	7.4000e-004	2.9000e-004	16.5835
Unmitigated	1.7592	0.0170	0.2807	1.0000e-004		2.6400e-003	2.6400e-003		2.6400e-003	2.6400e-003	0.0000	16.4774	16.4774	7.4000e-004	2.9000e-004	16.5835

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	tons/yr										MT/yr					
Architectural Coating	0.3389					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.4103					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.6200e-003	0.0138	5.8900e-003	9.0000e-005		1.1200e-003	1.1200e-003		1.1200e-003	1.1200e-003	0.0000	16.0287	16.0287	3.1000e-004	2.9000e-004	16.1239
Landscaping	8.2800e-003	3.1700e-003	0.2748	1.0000e-005		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	0.4488	0.4488	4.3000e-004	0.0000	0.4596
Total	**1.7592**	**0.0170**	**0.2807**	**1.0000e-004**		**2.6400e-003**	**2.6400e-003**		**2.6400e-003**	**2.6400e-003**	**0.0000**	**16.4774**	**16.4774**	**7.4000e-004**	**2.9000e-004**	**16.5835**

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	tons/yr										MT/yr					
Architectural Coating	0.3389					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.4103					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.6200e-003	0.0138	5.8900e-003	9.0000e-005		1.1200e-003	1.1200e-003		1.1200e-003	1.1200e-003	0.0000	16.0287	16.0287	3.1000e-004	2.9000e-004	16.1239
Landscaping	8.2800e-003	3.1700e-003	0.2748	1.0000e-005		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	0.4488	0.4488	4.3000e-004	0.0000	0.4596
Total	**1.7592**	**0.0170**	**0.2807**	**1.0000e-004**		**2.6400e-003**	**2.6400e-003**		**2.6400e-003**	**2.6400e-003**	**0.0000**	**16.4774**	**16.4774**	**7.4000e-004**	**2.9000e-004**	**16.5835**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	5.1951	0.0631	1.5300e-003	7.2263
Unmitigated	6.1070	0.0788	1.9000e-003	8.6445

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	2.4107 / 1.51979	6.1070	0.0788	1.9000e-003	8.6445
Total		**6.1070**	**0.0788**	**1.9000e-003**	**8.6445**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	1.92856 / 1.51979	5.1951	0.0631	1.5300e-003	7.2263
Total		**5.1951**	**0.0631**	**1.5300e-003**	**7.2263**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	7.7461	0.4578	0.0000	19.1907
Unmitigated	7.7461	0.4578	0.0000	19.1907

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	38.16	7.7461	0.4578	0.0000	19.1907
Total		**7.7461**	**0.4578**	**0.0000**	**19.1907**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	38.16	7.7461	0.4578	0.0000	19.1907
Total		**7.7461**	**0.4578**	**0.0000**	**19.1907**

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 B
Preliminary Geotechnical Investigation prepared by
North American Technical Services, dated May 25, 2021

NATS

CONSTRUCTION
INSPECTION & MATERIALS
TESTING LABORATORY

North American Technical Services

PRELIMINARY GEOTECHNICAL INVESTIGATION
PROPOSED SUBDIVISION
919 OLD STOCKTON ROAD
OAKDALE, CALIFORNIA

Prepared for:

ATTENTION: MR. CHARLES HILL
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TABLE OF CONTENTS

FIGURES

APPENDICES

1.0 INTRODUCTION AND SCOPE OF SERVICES

1.1 Introduction

North American Technical Services, Inc. (NATS) has completed a geotechnical investigation and report providing conclusions and recommendations for the subdivision proposed at 919 Old Stockton Road, in Oakdale, California (APN#'s: 064-002-027 & 064-002-035). It is understood that the proposed project will include 37 single family residential lots. Preliminary geotechnical recommendations for excavations, fill placement, and foundation design for the proposed improvements are presented herein.

1.2 Scope of Services

The scope of services provided included:

- Review of readily available geologic and geotechnical reports.
- Coordination of utility mark-out and location.
- Excavation of five exploratory borings and soil sampling utilizing a truck-mounted drill rig.
- Laboratory testing of selected soil samples.
- Description of site geology and evaluation of potential geologic hazards.
- Preparation of this preliminary geotechnical investigation report.

2.0 SITE DESCRIPTION

The subject site is a located at 919 Old Stockton Road on the east side of in Oakdale, California (Figure 1). The site is bounded by single family residential homes on all sides and by Old Stockton Road on the west, River Bluff Court on the north, Cloverland Way on the east, and Hill Road and

Cloverland Way on the south. Existing site conditions are illustrated on Figures 1 and 2. The proposed construction is shown on "TSM# 2020-022, Tentative Subdivision Map" by Morris Engineers and Surveying Inc. dated 4/8/21. Based on reconnaissance and review of site topography, the proposed improvement area is relatively level at an elevation of 143 to 145 ft above mean sea level (msl) with exception of lots 23 thru 28 which are an elevation of 156 to 159 ft above msl. Existing old sheds, barns, wells etc are expected to demolish and removed or properly abandoned per Stanislaus County requirements as part of the project.

3.0 FIELD INVESTIGATION AND LABORATORY TESTING

3.1 Field Investigation

NATS conducted the recent field investigation for the subject site on April 26 and 28, 2021 which included geologic reconnaissance and excavation of five exploratory borings. The borings were excavated with a truck-mounted drill rig equipped with six-inch-diameter, solid-stem augers. The borings extended to a maximum depth of approximately 12.5 feet below the existing ground surface (bgs). Relatively undisturbed soil samples were collected by driving a Standard Penetration Test (SPT) sampler using a (350 ft-lb per blow) down-hole hammer.

The soils from the exploratory borings were logged in the field by a NATS geotechnical representative, and were classified in general accordance with the Unified Soil Classification System via visual and tactile methods. The field descriptions have been modified, where appropriate, to

reflect laboratory test results. Boring log information is included in Appendix B. The approximate locations of the explorations are presented on Figure 2.

3.2 Laboratory Testing

Laboratory tests were conducted on selected soil samples for classification purposes, and to evaluate physical properties and engineering characteristics. Laboratory tests were conducted to determine Moisture Content, Density, #200 Wash Analysis, Atterburg Limits and Resistance R-Value. Test descriptions and laboratory test results are included in Appendix C.

4.0 GEOLOGY

4.1 General Setting

The site lies within San Joaquin Valley, which represents the southern portion of the Great Valley Geomorphic Province in Central California. The "Great Valley" is a gently-sloping to essentially-flat alluvial plain situated east of the Coast Ranges and west of the Sierra Nevada. Depositional history within the valley is typified by accumulations of basin and river sediments. Earth materials in the southern portions of the "Great Valley" consist of river deposits, which can vary significantly in grain size and texture based on local relationship with the alluvial source or eroding agent.

4.2 Geologic Conditions

Regional geologic mapping by Wagner, E.J., Bortugno, E.J., and McJunkin, R.D. (1991) indicates the near surface geologic unit underlying the site consists of Quaternary Modesto Formation. Modesto

Formation soil materials were encountered in all the borings from ground surface to the maximum depth of exploration. Descriptions of the geologic units encountered are presented below.

4.2.1 Quaternary Modesto Formation

Quaternary Modesto Formation was encountered from ground surface to the maximum depth of the explorations and generally consisted of medium dense to very dense, locally loose (within upper 3±ft of Borings-1 and -2) silty sand, well graded sand and poorly graded gravel. This unit is anticipated at depth throughout the site.

4.3 Groundwater Conditions

Groundwater was not encountered in the recent borings that were advanced to a maximum explored depth of approximately 12.5 feet bgs. Based on the California Department of Water Resources Sustainable Groundwater Management Act (SGMA) Data Viewer, groundwater depth in the vicinity of the site is indicated to be on the order of 100± feet depth (https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#gwlevels).

While groundwater conditions may vary, especially following periods of sustained precipitation or irrigation, it is generally not anticipated to adversely affect shallow construction activities or the completed improvements, if irrigation is limited and proper site drainage is designed, installed, and maintained per the recommendations of the project civil engineer. However, groundwater could have the potential to perch within the underlying soils, especially above cemented layers or during or following heavy rains or the rainy season. Such occurrences could impact grading, compaction and/or foundation excavation activities.

4.4 Geologic Hazards

Geologic hazards that were considered to have potential impacts to site development were evaluated based on field observations, literature review, and laboratory test results. It appears that geologic hazards at the site are primarily limited to those caused by shaking from earthquake-generated ground motions. The following paragraphs discuss the geologic hazards considered and their potential risk to the site.

4.4.1 Surface Fault Rupture

In accordance with the Alquist-Priolo Earthquake Fault Zoning Act, (ACT), the State of California established Earthquake Fault Zones around known active faults. The purpose of the ACT is to regulate the development of structures intended for human occupancy near active fault traces in order to mitigate hazards associated with surface fault rupture. According to the California Geological Survey (Special Publication 42, Revised 2018), a fault that has had surface displacement within the last 11,700 years is defined as a Holocene-active fault and is either already zoned or pending zonation in accordance with the ACT. There are several other definitions of fault activity that are used to regulate dams, power plants, and other critical facilities, and some agencies designate faults that are documented as older than Holocene (last 11,700 years) and younger than late Quaternary (1.6 million years) as potentially active faults that are subject to local jurisdictional regulations.

Based on the site reconnaissance and review of referenced literature, the site is not located within a local or State-designated Earthquake Fault Zone, no known active fault traces underlie or project toward the site, and no known potentially active fault traces project

toward the site. Therefore, fault surface rupture potential is considered to be low at the subject site.

4.4.2 Local and Regional Faulting

The United States Geological Survey (USGS), with support of State Geological Surveys, and reviewed published work by various researchers, have developed a Quaternary Fault and Fold Database of faults and associated folds that are believed to be sources of earthquakes with magnitudes greater than 6.0 that have occurred during the Quaternary (the past 1.6 million years). The faults and folds within the database have been categorized into four Classes (Class A-D) based on the level of evidence confirming that a Quaternary fault is of tectonic origin and whether the structure is exposed for mapping or inferred from fault related deformational features. Class A faults have been mapped and categorized based on age of documented activity ranging from Historical faults (activity within last 150 years), Latest Quaternary faults (activity within last 15,000 years), Late Quaternary (activity within last 130,000 years), to Middle to late Quaternary (activity within last 1.6 million years). The Class A faults are considered to have the highest potential to generate earthquakes and/or surface rupture, and the earthquake and surface rupture potential generally increases from oldest to youngest. The evidence for Quaternary deformation and/or tectonic activity progressively decreases for Class B and Class C faults. When geologic evidence indicates that a fault is not of tectonic origin it is considered to be a Class D structure. Such evidence includes joints, fractures, landslides, or erosional and fluvial scarps that resemble fault features, but demonstrate a non-tectonic origin.

The nearest known Class A fault is the Vernalis Fault (<1.6 million years), which is approximately 38.0 kilometers west of the site. The attached Figure 3 shows regional faults and seismicity with respect to the subject site.

4.4.3 Liquefaction and Seismic Settlement Evaluation

Liquefaction occurs when saturated fine-grained sands or silts lose their physical strengths during earthquake-induced shaking and behave like a liquid. This is due to loss of point-to-point grain contact and transfer of normal stress to the pore water. Liquefaction potential varies with water level, soil type, material gradation, relative density, and probable intensity and duration of ground shaking. Seismic settlement can occur with or without liquefaction; it results from densification of loose soils.

As indicated, the proposed improvement area is underlain by Modesto Formation soil materials and groundwater is anticipated at depths of greater than 100 feet Based on the noted subsurface conditions, the potential for liquefaction or significant seismic settlement at the site is generally considered to be low.

4.4.5 Landsliding

Landslides are not mapped in the site area and were not encountered during the recent field exploration. Based on the preliminary investigation findings, the area surrounding the site is generally level with exception of the 4:1 (H:V) slope extending to the Stanislaus River located 350 ft north of the project site. Other subdivision homes are present between the project site and the riverbank slope that have apparently historically performed well.

Although, the scope of this report did not include evaluating slope stability of the Stanislaus River banks, landsliding is not considered to be a significant geologic hazard at the project site. If there are concerns related to slope stability along the river, additional study can be performed by this office with an agreed revised scope of work.

4.4.6 Flooding

Based on Federal Emergency Management Agency mapping (FEMA 2012), site improvement areas are located within Zone X (unshaded), which is defined as: "Minimal Flood Hazard Risk Areas Outside the 1% and 0.2% Annual Chance Floodplain". Therefore, subject to the review of the project civil engineer, the potential for flooding at the site is generally considered to be low.

4.4.7 Compressible and Expansive Soils

Based on the potential for non-uniform soil conditions, it is recommended that the surficial soils be overexcavated and properly compacted beneath proposed improvement areas as recommended herein and as determined to be necessary during construction. Based on the field data, site observations, and experience with similar soils in the vicinity of the site, the native soils underlying the site are not considered to be subject to significant compressibility under the anticipated loads after recommended grading has been accomplished.

Based on geologic observation, and the generally granular nature of site soils, the near-surface materials are generally anticipated to exhibit a low expansion potential (Expansion Index of 50 or less).

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 General

NATS concludes that the proposed improvements on the site are feasible from a geotechnical standpoint, provided the preliminary recommendations in this report are incorporated into the design and construction of the project. Recommendations for the proposed earthwork and improvements are included in the following sections and Appendix D. However, recommendations in the text of this report supersede those presented in Appendix D should conflicts exist. These preliminary recommendations should either be confirmed as appropriate or updated following required excavations and observations during site preparation.

5.2 Site Preparation

Prior to grading, areas to receive distress sensitive improvements should be cleared of existing debris, structures, and deleterious materials. Objectionable materials, such as debris and vegetation not suitable for structural backfill should be properly disposed of off-site.

In the areas of proposed structures, unsuitable and disturbed surficial soils should be removed in their entirety. Remedial excavations should be conducted to a minimum depth of one foot below the bottom of proposed foundations, two feet below existing grade, or to the depth of competent native materials, whichever is greatest. If loose or otherwise unsuitable materials are encountered at the base of overexcavations, additional excavation to the depth of suitable material may be

necessary. Remedial excavations should extend laterally at least five feet beyond the limits of the proposed improvements or the distance resulting from a 1:1 (horizontal: vertical) extended down to suitable material, where feasible. If overexcavations encroach upon property lines or adjacent structures the temporary excavation should generally be sloped at a 1:1 (horizontal to vertical) or flatter, to the prescribed overexcavation depth. Depending upon proximity and condition of exposed soils, overexcavation in slot cuts may be recommended by the geotechnical engineer.

Overexcavations for proposed surface improvement areas, should be conducted to a minimum depth of two feet below existing or proposed subgrade or to the depth of suitable material, whichever is deeper.

If encountered, existing below-ground utilities should be redirected around the proposed structure. Utilities at an elevation to extend through the proposed footings should generally be sleeved and caulked to minimize the potential for moisture migration below the building slabs. Abandoned pipes exposed by grading should be securely capped or filled with minimum two-sack cement/sand slurry to help prevent moisture from migrating beneath foundation and slab soils.

A geotechnical representative from NATS should observe the exposed ground surface prior to placement of compacted fill or improvements, to verify the competency of exposed subgrade materials. After approval by this office, the exposed subgrades to receive fill should be scarified a

minimum of eight inches, moisture conditioned to 2-3% above optimum moisture content, and properly compacted prior to fill placement.

5.3 Site Excavation

Based on NAT's observations, shallow excavations at the site should generally be feasible using well-maintained heavy-duty construction equipment run by experienced operators.

5.4 Fill Placement and Compaction

Following the recommended overexcavation and removal of loose or disturbed soils, areas to receive fills should be scarified approximately eight inches; moisture conditioned to 2 to 3 percent above optimum moisture content, and properly compacted. Fill and backfill should be compacted to a minimum relative compaction of 90 percent at a minimum above optimum moisture content (three percent above optimum for all clayey soils), as evaluated by ASTM D 1557. The optimum lift thickness for fill soil depends on the type of compaction equipment used. Generally, backfill should be placed in uniform, horizontal lifts not exceeding eight inches in loose thickness. Fill placement and compaction should be conducted in conformance with local ordinances, and should be observed and tested by a NATS geotechnical representative.

5.5 Fill Materials

Properly moisture conditioned, low expansion potential soils derived from the on-site materials are considered suitable for reuse on the site as compacted fill. If used, these materials should be

screened of organics and materials generally greater than three inches in maximum dimension. Irreducible materials greater than three inches in maximum dimension should not be used in shallow fills (within three feet of proposed grades). In utility trenches, adequate bedding should surround pipes.

Imported fill beneath structures and flatwork should have an Expansion Index of 20 or less (ASTM D 4829). Imported fill soils for use in structural or slope areas should be evaluated by the soils engineer before being imported to the site.

For retaining walls, backfill located within a 45-degree wedge extending up from the bottom of the heel foundation of the wall should consist of soil having an Expansion Index of 20 or less (ASTM D 4829) with less than 30 percent passing the No. 200 sieve. The upper 12 to 18 inches of wall backfill should consist of lower permeability soils, in order to reduce surface water infiltration behind walls. The project structural engineer and/or architect should detail proper wall back-drains, including gravel drain zones, fills, filter fabric, and perforated drain pipes.

5.6 Temporary Construction Slopes

The following recommended slopes should be relatively stable against deep-seated failure, but may experience localized sloughing. On-site soils are considered Type B and Type C soils with recommended slope ratios as set forth in Table 5.6.

TABLE 5.6 RECOMMENDED TEMPORARY SLOPE RATIOS		
SOIL TYPE	SLOPE RATIO (Horizontal: vertical)	MAXIMUM HEIGHT
B (Modesto Formation)	1:1 (OR FLATTER)	10 Feet
C (Undocumented Fill)	1.5:1 (OR FLATTER)	5 Feet

Actual field conditions and soil type designations must be verified by a "competent person" while excavations exist, according to Cal-OSHA regulations. In addition, the above sloping recommendations do not allow for surcharge loading at the top of slopes by vehicular traffic, equipment, or materials. Appropriate surcharge setbacks must be maintained from the top of all unshored slopes.

5.7 Foundation and Slab Recommendations

The following recommendations are for preliminary design purposes only. These foundation recommendations should be re-evaluated after review of the project grading and foundation plans, and after completion of rough grading of the building pad areas. Upon completion of rough pad grading, if clayey materials are present, Expansion Index of near surface soils should be verified, and these recommendations should be updated, if necessary.

5.7.1 Foundations

Foundation recommendations presented herein are based on the anticipated low expansion potential of near surface soils after remedial site grading is performed (Expansion Index of 50 or less).

Following the recommended preparatory grading, continuous and isolated spread footings are anticipated to be suitable for use at this site. Foundation dimensions and reinforcement should be based on allowable bearing values of 2,000 pounds per square foot (psf) for minimum 15-inch-wide footings embedded a minimum of 18 inches below lowest adjacent subgrade elevation. Isolated footings should be at least 24 inches in minimum dimension. The allowable bearing value may be increased by one-third for short-duration loading, which includes the effects of wind or seismic forces. Based on the recommended preparatory grading, it is anticipated that all footings will be founded entirely in properly compacted fill materials. Footings should not span cut to fill interfaces.

Minimum reinforcement for continuous footings should consist of four No. 5 reinforcing bars; two placed near the top and two placed near the bottom, or as per the project structural engineer. The structural engineer should design isolated footing reinforcement. An uncorrected subgrade modulus of 130 pounds per cubic inch is considered suitable for elastic foundation design.

The structural engineer should provide recommendations for reinforcement of any spread footings and footings with pipe penetrations. Footing excavations should generally be maintained at above optimum moisture content until concrete placement.

5.7.2 Foundation Settlement

The maximum total static settlement is expected to be on the order of 1.0 inch and the maximum differential settlement is expected to be on the order of 0.5 inch.

5.7.3 Foundation Setback

Footings for structures should be designed such that the horizontal distance from the face of adjacent slopes to the outer edge of the footing is at least 10 feet. In addition, footings should bear beneath a 1:1 plane extended up from the nearest bottom edge of adjacent trenches and/or excavations. Deepening of affected footings may be a suitable means of attaining the prescribed setbacks.

5.7.4 Interior Concrete Slabs

Lightly loaded interior concrete slabs for non-traffic areas should be a minimum of 5.0 inches thick. Minimum slab reinforcement should consist of #4 reinforcing bars placed on maximum 18-inch centers, each way, at or above mid-slab height, but with proper cover.

More stringent recommendations based on traffic or other concentrated loading per the project structural engineer supersede these recommendations, as applicable.

In moisture-sensitive floor areas, a suitable vapor retarder of at least 15-mil thickness (with

all laps or penetrations sealed or taped) overlying a four-inch layer of consolidated aggregate base or gravel (with SE of 30 or more) should be installed. An optional maximum two-inch layer of similar material may be placed above the vapor retarder to help protect the membrane during steel and concrete placement. This recommended protection is generally considered typical in the industry. If proposed floor areas or coverings are considered especially sensitive to moisture emissions, additional recommendations from a specialty consultant could be obtained. NATS is not an expert at preventing moisture penetration through slabs. A qualified architect or other experienced professional should be contacted if moisture penetration is a more significant concern.

Slabs subjected to heavier loads, racking, or vehicular traffic will require thicker structural slab sections and/or increased reinforcement. A 110-pci subgrade modulus is considered suitable for elastic design of minimally embedded improvements such as slabs-on-grade.

Subgrade materials should be maintained or brought to a minimum of two percent or greater above optimum moisture content until slab underlayment and concrete are placed.

5.8 Seismic Design Criteria

The seismic ground motion values listed in the table below were derived in accordance with the ASCE 7-16 Standard that is incorporated into the 2019 California Building Code. This was accomplished by establishing the Site Class based on the soil properties at the site, and calculating

site coefficients and parameters using the using the SEAOC-OSHPD U.S. Seismic Design Maps application. Seismic ground motion values are based on the approximate site coordinates of 37.777238° latitude and –120.848088° longitude. These values are intended for the design of structures to resist the effects of earthquake ground motions.

TABLE 5.8
SEISMIC GROUND MOTION VALUES
2019 CBC AND ASCE 7-16

PARAMETER	VALUE	2019 CBC/ASCE 7-16 REFERENCE
Site Class	D (Default)	ASCE 16, Chapter 20
Mapped Spectral Response Acceleration Parameter, S_S	0.524	Figure 1613.2.1 (1)
Mapped Spectral Response Acceleration Parameter, S_1	0.229	Figure 1613.2.1 (2)
Seismic Coefficient, F_a	1.381	Table 1613.2.3 (1)
Seismic Coefficient, F_v	-	Table 1613.2.3 (2)
MCE Spectral Response Acceleration Parameter, S_{MS}	0.724	Section 1613.2.3
MCE Spectral Response Acceleration Parameter, S_{M1}	-	Section 1613.2.3
Design Spectral Response Acceleration, Parameter S_{DS}	0.482	Section 1613.2.5(1)
Design Spectral Response Acceleration, Parameter S_{D1}	-	Section 1613.2.5 (2)
Peak Ground Acceleration PGA_M	0.304	ASCE 16, Section 11.8.3

It is anticipated that the project will meet the requirements provided in ASCE 11.4.8, Exception 2, which permits the use of code-based ground motion values if the seismic response coefficient Cs is amplified by 1.5 times for the period range T≥1.5Ts using equations 12.8-3 and 12.8-4. If the proposed improvements have a period in the range exceeding 1.5Ts, then the base shear coefficient must be increased as required by ASCE 7-16

5.9 Lateral Resistance and Earth Pressures

Lateral loads acting against structures may be resisted by friction between the footings and the supporting soil or passive pressure acting against structures. If frictional resistance is used, allowable coefficients of friction of 0.30 (total frictional resistance equals the coefficient of friction multiplied by the dead load) for concrete cast directly against compacted fill or native material is recommended. A design passive resistance value of 250 pounds per square foot per foot of depth (with a maximum value of 2,000 pounds per square foot) may be used. The allowable lateral resistance can be taken as the sum of the frictional resistance and the passive resistance, provided the passive resistance does not exceed two-thirds of the total allowable resistance.

If proposed, retaining walls backfilled using granular soils may be designed using the equivalent fluid unit weights given in Table 5.9 below.

TABLE 5.9
EQUIVALENT FLUID UNIT WEIGHTS (G_h)
(pounds per cubic foot)

WALL TYPE	LEVEL BACKFILL	SLOPE BACKFILL 2:1 (HORIZONTAL: VERTICAL)
CANTILEVER WALL (YIELDING)	45	55
RESTRAINED WALL	55	65

Lateral pressures on cantilever retaining walls (yielding walls) over six feet high due to earthquake motions may be calculated based on work by Seed and Whitman (1970). The total lateral earth pressure against a properly drained and backfilled cantilever retaining wall above the groundwater level can be expressed as:

$P_{AE} = P_A + \Delta P_{AE}$

For non-yielding (or "restrained") walls, the total lateral earth pressure may be similarly calculated based on work by Wood (1973):

$$P_{KE} = P_K + \Delta P_{KE}$$

Where P_A/b = Static Active Earth Pressure = $G_h H^2/2$

P_K/b = Static Restrained Wall Earth Pressure = $G_h H^2/2$

$\Delta P_{AE}/b$ = Dynamic Active Earth Pressure Increment = $(3/8)\ k_h\ \gamma H^2$

$\Delta P_{KE}/b$ = Dynamic Restrained Earth Pressure Increment = $k_h\ \gamma H^2$

b = unit length of wall (usually 1 foot)

$k_h = 1/2^*\ PGA_m$ (PGA_m given previously

G_h = Equivalent Fluid Unit Weight

H = Total Height of the retained soil

γ = Total Unit Weight of Soil ≈ 135 pounds per cubic foot

*It is anticipated that the 1/2 reduction factor will be appropriate for proposed walls that are not substantially sensitive to movement during the design seismic event. Proposed walls that are more sensitive to such movement could utilize a 2/3 reduction factor. If any proposed walls require minimal to no movement during the design seismic event, no reduction factor to the peak ground acceleration should be used. The project structural engineer of record should determine the appropriate reduction factor to use (if any) based on the specific proposed wall characteristics.

The static and increment of dynamic earth pressure in both cases may be applied with a line of action located at H/3 above the bottom of the wall (SEAOC, 2013).

These values assume non-expansive backfill and free-draining conditions. Measures should be taken to prevent moisture buildup behind all retaining walls. Drainage measures should include free-draining backfill materials and sloped, perforated drains. These drains should discharge to an appropriate off-site location. Waterproofing should be as specified by the project architect.

5.10 Exterior Flatwork

Flatwork should be installed with crack-control joints at appropriate spacing as designed by the project architect to reduce the potential for cracking in exterior flatwork caused by minor movement of subgrade soils and concrete shrinkage. Additionally, it is recommended that flatwork be installed with at least number 4 reinforcing bars at 18-inch centers, each way, at or above mid-height of slab, but with proper concrete cover, or with other reinforcement per the applicable project designer. Flatwork that should be installed with crack control joints includes driveways, sidewalks, and architectural features. All subgrades should be prepared according to the earthwork recommendations previously given before placing concrete. Positive drainage should be established and maintained next to all flatwork. Subgrade materials should be maintained at a minimum of two percent above optimum moisture content until the time of concrete placement.

5.11 Drainage

Surface runoff should be collected and directed away from improvements by means of appropriate erosion-reducing devices and positive drainage should be established around the proposed improvements. Positive drainage should be directed away from improvements at a gradient of at

least two percent for a distance of at least five feet. However, the project civil engineers should evaluate the on-site drainage and make necessary provisions to keep surface water from affecting the site.

Generally, NATS recommends against allowing water to infiltrate building pads or adjacent to slopes. Some agencies are encouraging the use of storm-water cleansing devices. Use of such devices tends to increase the possibility of adverse effects associated with high groundwater including slope instability and liquefaction. See Appendix E for further discussion of site infiltration.

5.12 Slopes

Based on anticipated soil strength characteristics slopes, if proposed, should be constructed at ratios of 2:1 (horizontal: vertical) or flatter. These slope inclinations should exhibit factors of safety greater than 1.5.

Although properly constructed slopes on this site should be grossly stable, the soils will be somewhat erodible. Therefore, runoff water should not be permitted to drain over the edges of slopes unless that water is confined to properly designed and constructed drainage facilities. Erosion-resistant vegetation should be maintained on the face of all slopes.

Typically, soils along the top portion of a fill slope face will creep laterally. NATS recommends against building distress-sensitive hardscape improvements within five feet of slope crests.

5.13 Controlled Low Strength Materials (CLSM)

Controlled Low Strength Materials (CLSM) may be used in deepened footing excavation areas, building pads, and/or adjacent to retaining walls or other structures, provided the appropriate following recommendations are also incorporated. Minimum overexcavation depths recommended herein beneath slabs, flatwork, and other areas may be applicable beneath CLSM if/where CLSM is to be used, and excavation bottoms should be observed by NATS prior to placement of CLSM. Prior to CLSM placement, the excavation should be free of debris, loose soil materials, and water. Once specific areas to utilize CLSM have been determined, NATS should review the locations to determine if additional recommendations are appropriate.

CLSM should consist of a minimum three-sack cement/sand slurry with a minimum 28-day compressive strength of 100 psi (or equal to or greater than the maximum allowable short term soil bearing pressure provided herein, whichever is higher) as determined by ASTM D4832. If re-excavation is anticipated, the compressive strength of CLSM should generally be limited to a maximum of 150 psi per ACI 229R-99. Where re-excavation is required, two-sack cement/sand slurry may be used to help limit the compressive strength. The allowable soils bearing pressure and coefficient of friction provided herein should still govern foundation design. CLSM may not be used in lieu of structural concrete where required by the structural engineer.

5.14 Plan Review

NATS should be authorized to review the project grading and foundation plans prior to commencement of earthwork in order to provide additional recommendations, if necessary.

5.15 Construction Observation

The recommendations provided in this report are based on preliminary design information for the proposed construction and the subsurface conditions observed in the soil borings. The interpolated subsurface conditions should be confirmed by NATS during construction with respect to anticipated conditions. Upon completion of precise grading, if necessary, soil samples will be collected to evaluate as-built Expansion Index. Foundation recommendations may be revised upon completion of grading, and as-built laboratory tests results. Additionally, soil samples should be taken in pavement subgrade areas upon rough grading to refine pavement recommendations as necessary.

Recommendations provided in this report are based on the understanding and assumption that NATS will provide the observation and testing services for the project. All earthwork should be observed and tested in accordance with recommendations contained within this report. NATS should evaluate footing excavations before reinforcing steel placement.

6.0 LIMITATIONS OF INVESTIGATION

The field evaluation, laboratory testing and geotechnical analysis presented in this report have been conducted according to current engineering practice and the standard of care exercised by reputable geotechnical consultants performing similar tasks in this area. No other warranty,

expressed or implied, is made regarding the conclusions, recommendations and opinions expressed in this report. Variations may exist and conditions not observed or described in this report may be encountered during construction. This report is prepared for the project as described. It is not prepared for any other property or party.

The recommendations provided herein have been developed in order to reduce the post-construction movement of site improvements related to soil settlement. However, even with the design and construction recommendations presented herein, some post-construction movement and associated distress may occur.

The findings of this report are valid as of the present date. However, changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside NATS's involvement. Therefore, this report is subject to review and should not be relied upon after a period of three years.

NATS's conclusions and recommendations are based on an analysis of the observed conditions. If conditions different from those described in this report are encountered, NATS should be notified and additional recommendations, if required, will be provided subject to NATS remaining as authorized geotechnical consultant of record. This report is for use of the project as described. It should not be utilized for any other project.

NATS appreciates this opportunity to be of service on this project. If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Respectfully submitted,

NORTH AMERICAN TECHNICAL SERVICES, INC.

Sergio Carrera, PE

T Alan Krause
Staff Engineer/Geologist

APPENDIX A

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REFERENCES

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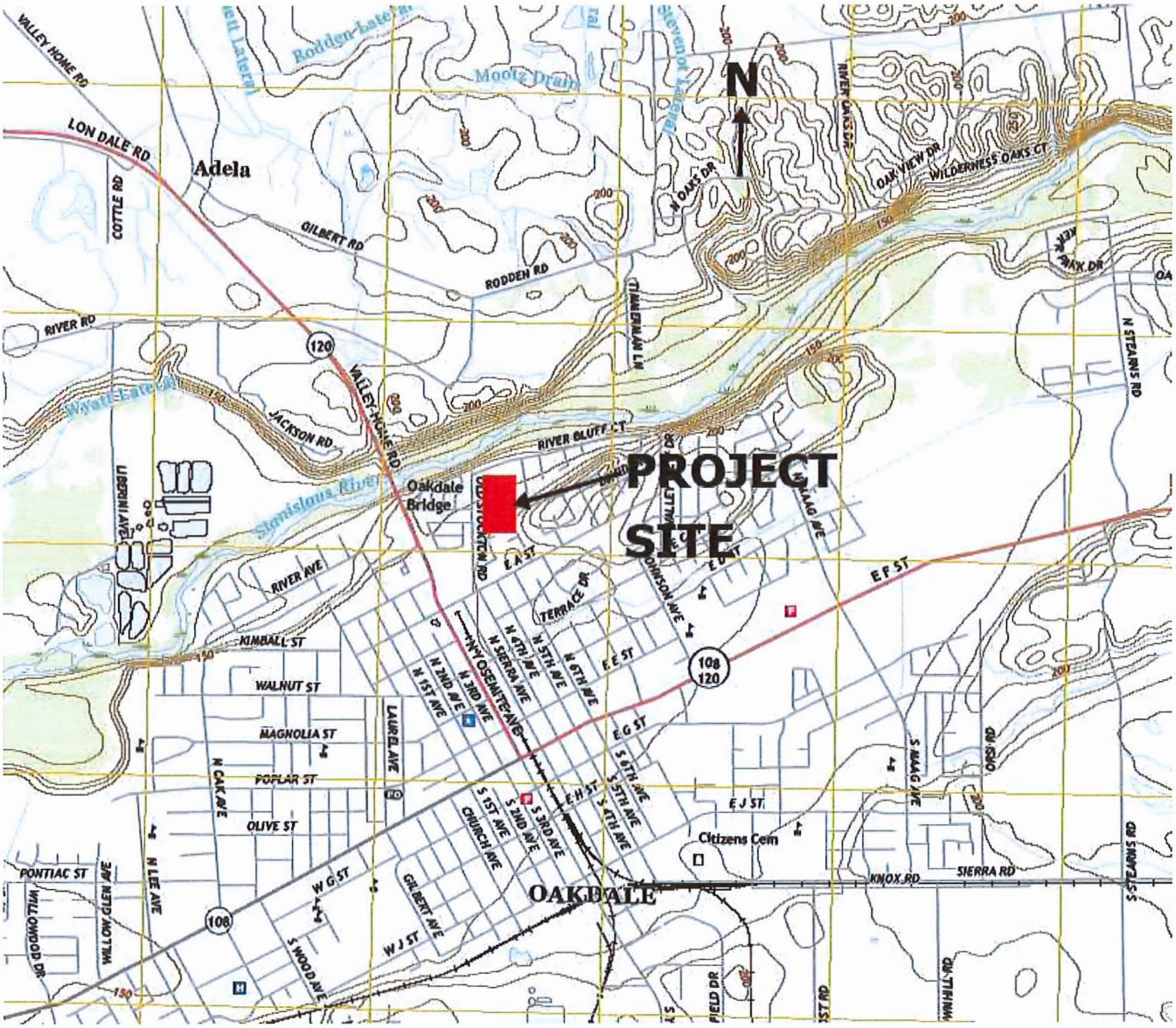
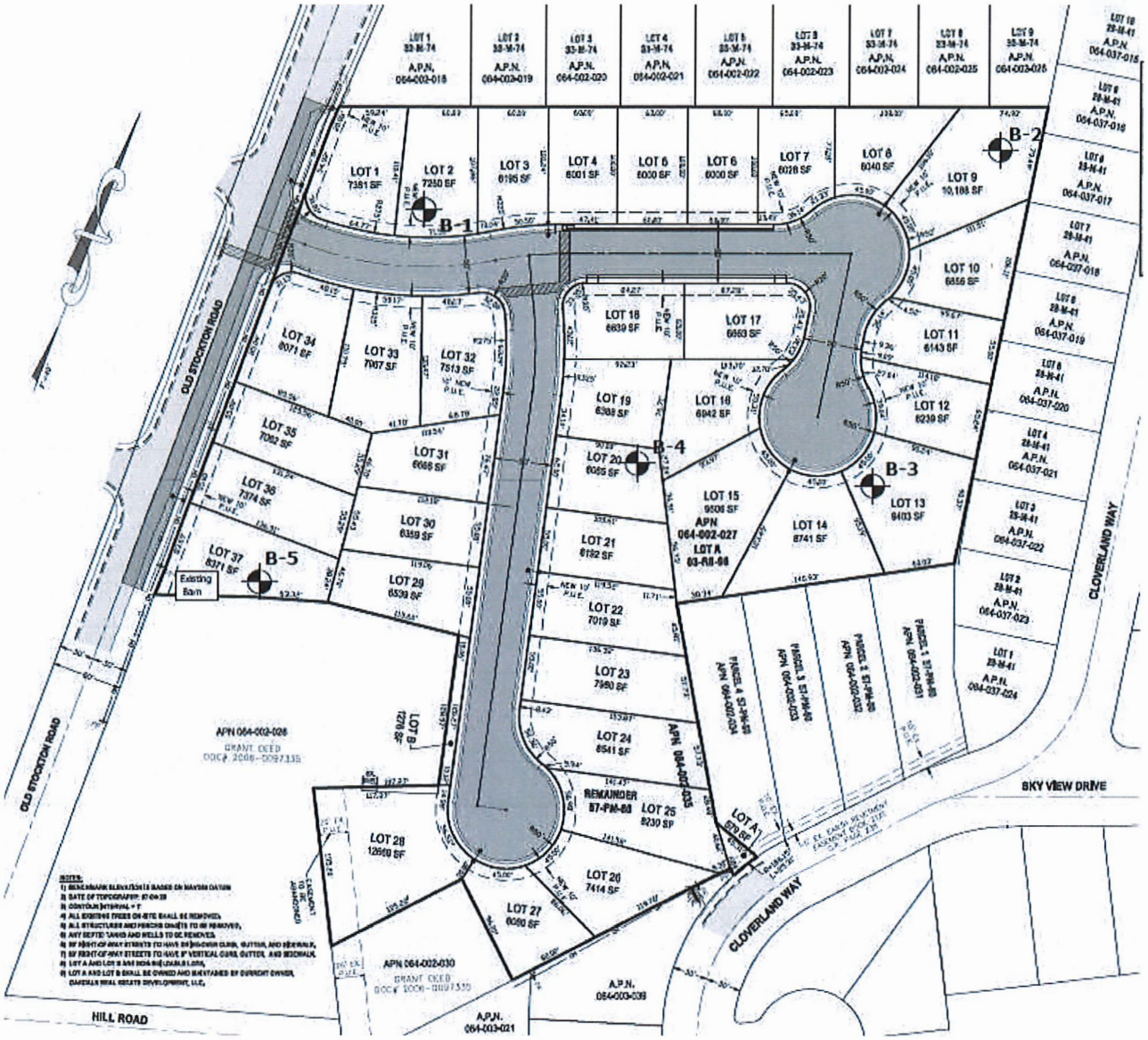
APPENDIX B

BORING LOGS



NATS

SITE INDEX MAP PROPOSED SUBDIVISION 919 Old Stockton Road Oakdale, California	NATS JOB NO. 21-859G	
	SCALE NTS	
	DATE 5/25/21	FIGURE 1



NATS

EXPLORATION MAP PROPOSED SUBDIVISION APN: 064-002-027 919 Old Stockton Road Oakdale, California	NATS JOB NO. 21-859G	
	SCALE NTS	
	DATE 5/25/21	FIGURE 2

NATS

DEFINITION OF TERMS

PRIMARY DIVISIONS			SYMBOLS	SECONDARY DIVISIONS
COARSE GRAINED SOILS MORE THAN HALF OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVELS MORE THAN HALF OF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS < 5% FINES	GW	WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES LITTLE OR NO FINES
			GP	POORLY GRADED GRAVELS OR GRAVEL SAND MIXTURES, LITTLE OF NO FINES
		GRAVELS WITH FINES	GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES, NON-PLASTIC FINES
			GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES, PLASTIC FINES
	SANDS MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS < 5% FINES	SW	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
			SP	POORLY GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		SANDS WITH FINES	SM	SILTY SANDS, SAND-SILT MIXTURES, NON-PLASTIC FINES
			SC	CLAYEY SANDS, SAND-CLAY MIXTURES, PLASTIC FINES
FINE GRAINED SOILS MORE THAN HALF OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS LIQUID LIMIT IS LESS THAN 50		ML	INORGANIC SILTS, VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS, SLIGHTLY PLASTIC CLAYEY SILTS
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY, SANDY, SILTS OR LEAN CLAYS
			OL	ORGANIC SILTS AND ORGANIC CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS LIQUID LIMIT IS GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
			CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTY CLAYS
HIGHLY ORGANIC SOILS			PT	PEAT AND OTHER HIGHLY ORGANIC SOILS

GRAIN SIZES

BOULDERS	COBBLES	GRAVEL		SAND			SILTS AND CLAYS
		COARSE	FINE	COARSE	MEDIUM	FINE	

12" 3" 3/4" 4 10 40 200

CLEAR SQUARE SIEVE OPENING U.S. STANDARD SIEVE SIZE

ADDITIONAL TESTS

(OTHER THAN TEST PIT AND BORING LOG COLUMN HEADINGS)

MAX- Maximum Dry Density
GS- Grain Size Distribution
SE- Sand Equivalent
EI- Expansion Index
CHM- Sulfate and Chloride Content , pH, Resistivity
COR - Corrosivity
SD- Sample Disturbed
PM- Permeability
SG- Specific Gravity
HA- Hydrometer Analysis
AL- Atterberg Limits
RV- R-Value
CN- Consolidation
CP- Collapse Potential
HC- Hydrocollapse
REM- Remolded
PP- Pocket Penetrometer
WA- Wash Analysis
DS- Direct Shear
UC- Unconfined Compression
MD- Moisture/Density
M- Moisture
SC- Swell Compression
OI- Organic Impurities

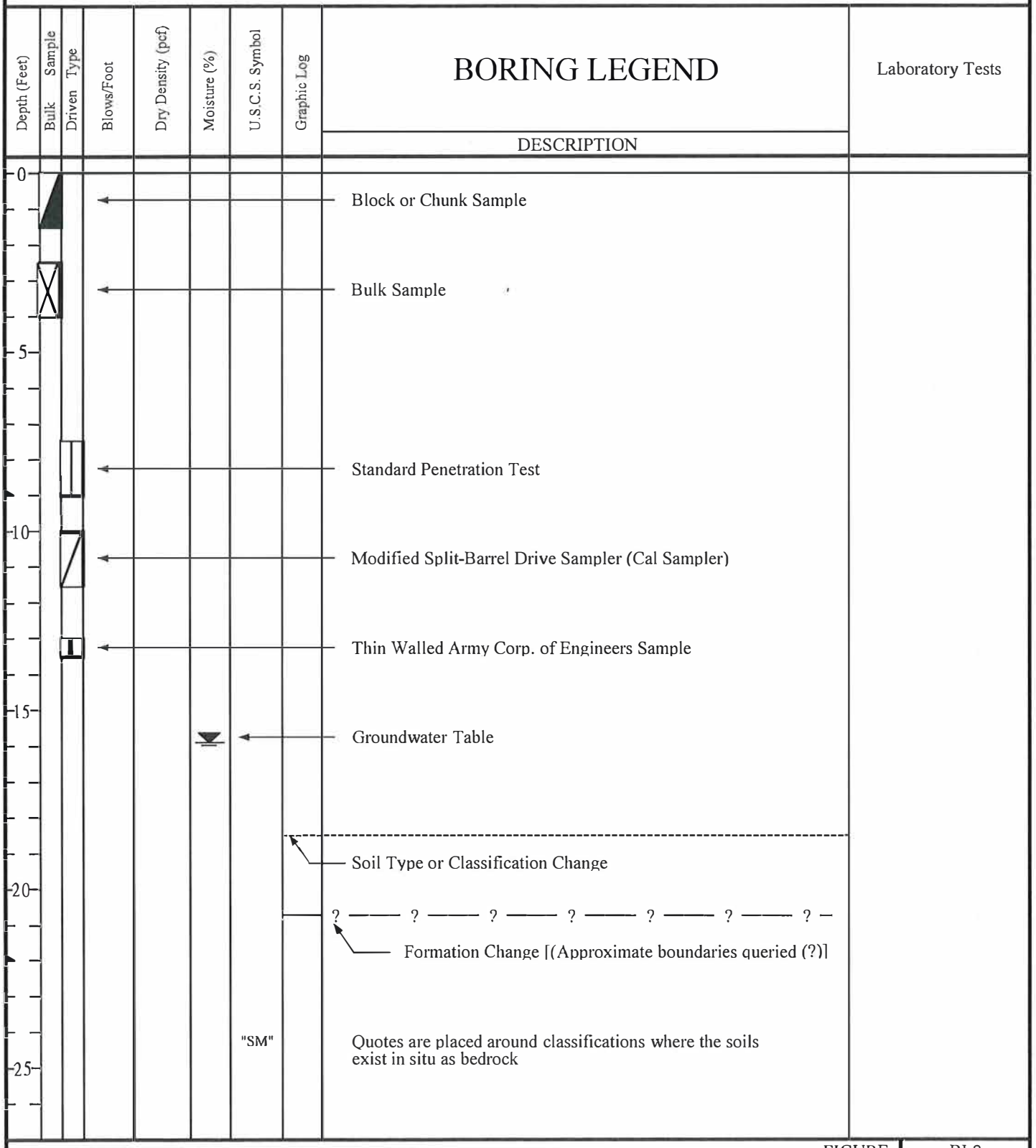
FIGURE: BL1

NATS

PROJECT:
NATS JOB NO:
LOGGED BY:

DRILLER:
DRILL METHOD:
SAMPLE METHOD:

SHEET: of
DRILLING DATE:
ELEVATION:



BORING LEGEND

DESCRIPTION

Laboratory Tests

Block or Chunk Sample

Bulk Sample

Standard Penetration Test

Modified Split-Barrel Drive Sampler (Cal Sampler)

Thin Walled Army Corp. of Engineers Sample

Groundwater Table

Soil Type or Classification Change

? —— ? —— ? —— ? —— ? —— ? —— ? —

Formation Change [(Approximate boundaries queried (?)]

Quotes are placed around classifications where the soils exist in situ as bedrock

FIGURE: BL2

NATS

PROJECT:	919 Old Stockton Rd, Oakdale	DRILLER:	NATS	SHEET:	1 of 1
NATS JOB NO:	21-859G	DRILL METHOD:	6" Auger/B-24 Rig	DRILL DATE:	4/26/2021
LOGGED BY:	A. Krause	SAMPLE METHOD:	SPT	ELEVATION:	EGS

BORING: B-1

Depth (Feet)	Bulk Sample	Driven Type	Blows/6 Inches	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0									
			4 3 6			SM		Loose, brown, dry, silty very fine SAND	
5			8 7 11			SM			
10			17 16 18			ML GP			
								Total depth = 11.5 feet (Auger Refusal) No free ground water encountered Boring Grout Backfilled 4/26/21	
15									
20									
25									

NATS

PROJECT:	919 Old Stockton Rd, Oakdale	DRILLER:	NATS	SHEET:	1 of 1
NATS JOB NO:	21-859G	DRILL METHOD:	6" Auger/B-24 Rig	DRILL DATE:	4/26/2021
LOGGED BY:	A. Krause	SAMPLE METHOD:	SPT	ELEVATION:	EGS

BORING: B-2

Depth (Feet)	Sample Bulk	Sample Driven Type	Blows/6 Inches	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0			4 8 10			SM		Medium dense, brown, dry, silty fine SAND to silty fine to coarse SAND	
5			5 16 24			GP		Dense, light gray, damp, poorly graded GRAVEL with sand	
10								Total depth = 15.5 feet (Auger Refusal) No free ground water encountered Boring Grout Backfilled 4/26/21	
15									
20									
25									

NATS

PROJECT:	919 Old Stockton Rd, Oakdale	DRILLER:	NATS	SHEET:	1 of 1
NATS JOB NO:	21-859G	DRILL METHOD:	6" Auger/B-24 Rig	DRILL DATE:	4/28/2021
LOGGED BY:	A. Krause	SAMPLE METHOD:	SPT	ELEVATION:	EGS

BORING: B-3

Depth (Feet)	Bulk Sample	Driven Type	Blows/6 Inches	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0									
			4 4 7			SM		Medium dense, brown, dry, silty fine SAND	
5			7 14 13			SM		As Above with trace of gravel	
						SW		Medium dense, gray, dry. well graded SAND	
10			4 12 17			GP		Dense, light gray, dry, poorly graded GRAVEL with sand	
15								Total depth = 12.5 feet (Auger Refusal) No free ground water encountered Boring Grout Backfilled 4/28/21	
20									
25									

NATS

PROJECT:	919 Old Stockton Rd, Oakdale	DRILLER:	NATS	SHEET:	1 of 1
NATS JOB NO:	21-859G	DRILL METHOD:	6" Auger/B-24 Rig	DRILL DATE:	4/28/2021
LOGGED BY:	A. Krause	SAMPLE METHOD:	SPT	ELEVATION:	EGS

BORING: B-4

Depth (Feet)	Bulk Sample	Driven Type	Blows/6 Inches	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0									
			6 14 15			SM		Medium dense, brown, dry, silty fine SAND	
5			15 18 15			SM		Dense, brown, dry, silty fine SAND	
						SW		Medium dense, brown, dry. well graded SAND	
10			4 14 21			GP		Dense, light gray, dry, poorly graded GRAVEL with sand	
								Total depth = 11.5 feet (Auger Refusal) No free ground water encountered Boring Grout Backfilled 4/28/21	
15									
20									
25									

NATS

PROJECT:	919 Old Stockton Rd, Oakdale	DRILLER:	NATS	SHEET:	1	of	1
NATS JOB NO:	21-859G	DRILL METHOD:	6" Auger/B-24 Rig	DRILL DATE:	4/28/2021		
LOGGED BY:	A. Krause	SAMPLE METHOD:	SPT	ELEVATION:	EGS		

BORING: B-5

Depth (Feet)	Bulk Sample	Driven Type	Blows/6 Inches	Dry Density (pcf)	Moisture (%)	U.S.C.S. Symbol	Graphic Log	DESCRIPTION	Laboratory Tests
0									
			3 3 2			SM		Loose, dark brown, dry, silty fine SAND with a trace of gravel	
5			10 18 17			SM		Dense, brown, dry, silty fine SAND with trace of gravel	
						SM		As Above	
10			10 30			GP		Dense, light gray, dry, poorly graded GRAVEL with sand	
								Total depth = 11.0 feet (Auger Refusal) No free ground water encountered Boring Grout Backfilled 4/28/21	
15									
20									
25									

APPENDIX C

LABORATORY METHODS AND RESULTS

APPENDIX C
LABORATORY METHODS AND RESULTS

Laboratory Testing Program
Laboratory tests were performed on representative soil samples to detect their relative engineering properties. Tests were performed following test methods of the American Society for Testing Materials or other accepted standards. The following presents a brief description of the various test methods used.

Classification
Soils were classified visually according to the Unified Soil Classification System. Visual classifications were supplemented by laboratory testing of selected samples according to ASTM D2487. The soil classifications are shown on the Exploration Logs in Appendix B.

In-Place Moisture and Density
The in-place moisture content and densities of selected samples were determined using relatively undisturbed soil samples.

#200 Sieve Wash Analysis
The amount of material finer than No. 200 Sieve by washing was performed on selected representative samples according to ASTM D 1140-17.

Atterberg Limits
Atterberg Limits were determined on selected representative samples according to ASTM D 4318.

R-Value
R-Value testing was performed on selected representative samples according to ASTM D 2844.

NATS

LABORATORY TEST RESULTS JOB # 21-859G

MOISTURE & DENSITY

ASTM D 4829

LOCATION	DEPTH (feet)	MOISTURE %	DENSITY PCF
B-3	5.0'	5.1	88.8
B-4	5.0'	4.6	85.5

200 WASH ANALYSIS

LOCATION	DEPTH (feet)	PERCENT PASSING #200 SIEVE	CLASSIFICATION
B-1	1.0'	49.3	SM
B-2	1.0'	32.8	SM

Appendix C
Traffic Impact Assessment prepared by
KD Anderson & Associates, dated March 5, 2021

KD Anderson & Associates, Inc.
Transportation Engineers

March 5, 2021

Mr. Bill Morris
MORRIS ENGINEERING AND SURVEYING, INC
334 S. Yosemite Avenue, Suite D
Oakdale, CA 95361

RE: TRANSPORTATION IMPACT ASSESSMENT FOR 919 OLD STOCKTON ROAD SUBDIVISION TENTATIVE MAP, OAKDALE, CA

Dear Mr. Morris:

Thank you for contacting our firm regarding the **919 Old Stockton Road Subdivision** in Oakdale, CA. As we are aware, this project will create 37 single family residential lots on an 8.3 acre site in northern Oakdale, as shown in Figure 1 (vicinity map) and Figure 2 (tentative map). The project lies on the east side of Old Stockton Road across from the River Paradise mobile home community between River Bluff Drive on the north and East A Street on the south.

City of Oakdale staff has suggested that the transportation impacts of a project this size at this location that is consistent with the assumptions of the City of Oakdale General Plan (GP) and General Plan Update EIR (GPEIR) are unlikely to be significant. However, to confirm that conclusion a limited traffic operational assessment has been requested addressing several key issues.

Key Issues

Our investigation considers these key issues:

- Identification and comparison of site land use and trip generation for the site as proposed and as allowed under the City of Oakdale GP and as assumed in the GPEIR.
- Opinion as to the relative effect of any change to vehicle trip generation caused by the project on the GP EIR's conclusions/recommendations or City traffic impact fee projects.
- Adequacy of project access to Old Stockton Road.
- Relative effects of project traffic on the operation of the local, collector and arterial roadways providing access to the project.

Project Description. The project site is currently zoned Residential Agriculture (RA) at 5 dwelling units per gross acre. The General Plan identifies the project site for Low-Density Residential (LDR) use, and this land use designation permits 4 to 8 dwelling units (du) per gross acre. The General Plan EIR assumed the average density between the high and low ends of the range. As noted in Table 1, the project site could be developed with 31 dwelling's under current zoning, with 66 residences under the GP's maximum density, and 50 dwellings would result at the average density assumed in the GPEIR.

TABLE 1 SITE DEVELOPMENT COMPARISON				
Land Use	**Current Zoning (RA)**	**General Plan**	**GPEIR Assumptions**	**919 Old Stockton Road**
Density (du/acre)	Up to 5 du / net acre	Up to 8 du / gross acre	6 du / gross acre	4.5 gross acre 5.9 net acre
Project Area	6.24 net acres	8.3 gross acres	8.3 gross acres	8.3 gross acres 6.24 net acres
Yield	31	66 du	50	37

Background Traffic Conditions

The project would take its primary access via A Street at the SR 120 (N. Yosemite Ave) / A Street intersection. The City of Oakdale General Plan EIR indicated that in 2009 A Street carried 6,500 vehicles per day (VPD) and operated at LOS C in comparison to the capacity of 11,300 vehicles per day at LOS D for this two-lane collector street. SR 120 carried 23,800 vpd between A Street and F Street (SR 108) and also operated at LOS C. The signalized SR 120 / A Street intersection was reported to operate at LOS C during the a.m. and p.m. peak traffic hours.

Daily traffic counts are not available for Old Stockton Road. Based on the number of homes located along the road the daily traffic volume is estimated to be roughly 1,200 to 1,400 vpd north of Hill Road along the project frontage.

The extent to which traffic conditions have changed since the GP EIR was prepared was determined from review of traffic volume counts published by the California Department of Transportation (Caltrans). Caltrans data indicated that this segment of SR 120 carried an Average Annual Daily Traffic (AADT) volume of 20,700 vpd, with 22,000 AADT north of A Street. In comparison, Caltrans reported 18,000 and 19,800 AADT respectively at these locations in 2013. The difference in the volumes Caltrans reported could indicate that traffic on SR 120 has been growing at 2.4 % annually.

The volume of traffic occurring in this area in the future was also suggested by the GPEIR. The daily traffic volume on SR 120 between A Street and SR 108 was expected to reach 27,200 vpd (GPEIR figure 4.5-16), while the volume on A Street was projected to reach 7,800 to 8,100 vpd, depending on which alignment of the North County Corridor (NCC) was implemented. A Street was expected to continue to operate at LOS C, while SR 120 was expected to operate at LOS D. Conditions on both streets would satisfy the City's minimum LOS D standard, and development of the project site at average LDR density is reflected in these forecasts. The GPEIR indicated that the SR 120 / A Street intersection would operate at LOS D in the future, which would also satisfy minimum City standards.

Facilities for alternative transportation modes exist in the area of the project. Sidewalks exist on Old Stockton Road where development has occurred, and project frontage improvements will include sidewalks. The GPEIR indicates that Old Stockton Road may be a Class III bike route in the future.

Site Access. The project will be developed with a single point of regular access to Old Stockton Road located roughly opposite but about 25 feet offset from the northern entrance to the River Paradise mobile home community. The access is roughly 150 feet north of the mobile home community's southern entrance and 250 feet from the River Bluff Court intersection to the north.

Evaluation

Trip Generation Comparison. Table 2 indicates the number of daily and p.m. peak hour one-way vehicle trips that could be generated by development of the site under current RA zoning, under the assumptions in the GP and GPEIR and for the project as proposed. As indicated, the project as proposed would generate slightly more trips than would development under the RA zoning designation but roughly 26% fewer trips that would have been assumed for the site in the GPEIR at the average LDR density.

TABLE 2
SITE TRIP GENERATION COMPARISON

Land Use	Current Zoning (RA)	General Plan	GPEIR Assumptions	919 Old Stockton Road
Residential du's	31 du	66 du	50 du	37
Daily Trips @ 9.44 /du	293	623	472	349
PM Peak Hour Trips @ 0.99 / du	31	65	50	37

Effect of Project on GPEIR Conclusions. Because the project is projected to generate fewer trips than would have been assumed for the site in the GPEIR, the project would have the effect of reducing the GPEIR's traffic volume forecasts for A Street and for Yosemite Avenue (SR 120). Thus, the cumulative Levels of Service accompanying the project would be similar to or perhaps better than those presented in the GPEIR. Development of the project would not result in any change to mitigation measures identified in the GPEIR nor to improvements included in response to the GPEIR in the existing City of Oakdale traffic impact mitigation fee program.

Adequacy of Project Access. On low volume local streets like Old Stockton Road the adequacy of access is primarily based on the available sight distance. Because Old Stockton Road is generally straight, the view to the south will be unobstructed from the project access and the view to the north will be clear to the next intersection 250 feet away. The minimum sight distance needed at this location is based on the prevailing speed and on the requirements found in the Caltrans Highway Design Manual (HDM) Table 201.1 That source indicates that the minimum sight distance for the posted 25 mph speed limit on Old Stockton Road is 150 feet. The available sight distance in each direction exceeds that requirement, and the sight distance of 250 feet looking north from the access is adequate for a speed of 35 mph. The site access is adequate based on this criterion.

Offset intersection can be an issue under some circumstances, and the adequacy of project access offset from the River Paradise north access was considered. Typically, intersections are to align or be at least 150 feet apart (centerline to centerline) to avoid turning conflicts. In this case a potential conflict could

KDA

theoretically occur between vehicles making northbound left turns into the mobile home community and project residents making southbound left turns into the project. In this instance, because the River Paradise's south access will receive the majority of its northbound traffic and because relatively few project trips are expected will arrive from the north, the current project design with a slight offset is acceptable.

The extent to which other access improvements are needed has been considered. Because relatively few vehicles will be turning left into the site (i.e., < 5 per hour), a separate left turn lane is not required. Because the travel speed on Old Stockton Road is low, acceleration or deceleration lane treatments are not needed. To ensure safe pedestrian access a streetlight is proposed to accompany other frontage improvements at the site access, and no additional improvement to address alternative transportation modes is required.

Effects of Project Trips on Existing Traffic Operations. The project will add a relatively small amount of traffic to Old Stockton Road, A Street and SR 120. The project could increase the daily volume on Old Stockton Road south of the project by roughly 300 to 350 vehicle trips per day (½ inbound and ½ outbound). This traffic increase would not be appreciable with regards to the General Plan EIR's identified capacity for two lane roads (i.e., 11,300 vpd).

While not a traffic operational effect it is possible that current residents living along Old Stockton Road will perceive an increase in traffic as a result of the project. Many communities have identified planning level traffic volumes at which fronting residents report "quality of life" issues associated with driveway access, pedestrian circulation, etc. While we are not aware of an applicable City of Oakdale policy, that volume level is typically 2,500 to 4,000 vpd, depending on the agency. In this case, the daily traffic volume on Old Stockton Road south of the site could increase from about 1,400 vpd today to 1,750 vpd as a result of the project. This volume would remain within the level that is acceptable in most communities that have identified a planning level maximum volume.

Similarly, the project will increase the daily traffic volume on A Street and on SR 120 (N. Yosemite Ave), and the project will increase peak hour traffic through the SR 120 / A Street intersection. However, the volume of traffic added would not be sufficient to alter the current Level of Service reported in the GPEIR, and the project's effect would not be considered significant within the context of General Plan polices. It is possible that the project would exacerbate existing peak hour queuing on the westbound A Street approach to the N. Yosemite Avenue intersection, but this issue would likely be addressed by Caltrans as part of traffic signal timing that accompanies their regular maintenance.

Conclusions

- The proposed project includes 37 new residential lots, which is slightly more than the number permitted under existing RA zoning (i.e., 31) but less than the number of lots permitted under the maximum GP density (65) or assumed in the GPEIR (50).
- Based on standard trip generation rates published by the Institute of Transportation Engineers (ITE) the 6 additional dwelling units resulting in an increase in lots beyond RA density would result in 4 and 5 more one-way trips in the a.m. and p.m. peak hours, respectively. However, the project would generate less traffic than is assumed for the site under the LDR designation assumed in the GPEIR.

KDA

- The project would not change the GPEIR's conclusions regarding future traffic conditions or mitigation, nor will the project alter the nature of improvements already included in the City's traffic impacts fee program.

- The design of project access to Old Stockton Road is adequate with regards to available sight distance, and no improvements beyond those already identified in the tentative map are required.

- The project will increase the volume of traffic currently occurring on the streets providing access to the site. However, the increase on A Street and N. Yosemite Avenue (SR120) would be too small to cause an appreciable effect on the Level of Service on those roadways, and the peak hour volume added at the SR120 / A Street intersection would be too small to affect the Level of Service at that location.

- The project will add traffic to Old Stockton Road, but the resulting daily traffic volume would remain well within the capacity of a two-lane street. It is possible that current residents along Old Stockton Road will perceive an increase in traffic volume. But the projected daily traffic volumes remain within the level that has been found to be acceptable for streets with driveway loading and fronting residences based on "quality of life".

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

Sincerely,

KD Anderson & Associates, Inc.

Kenneth D. Anderson, P.E.
President

Attachments

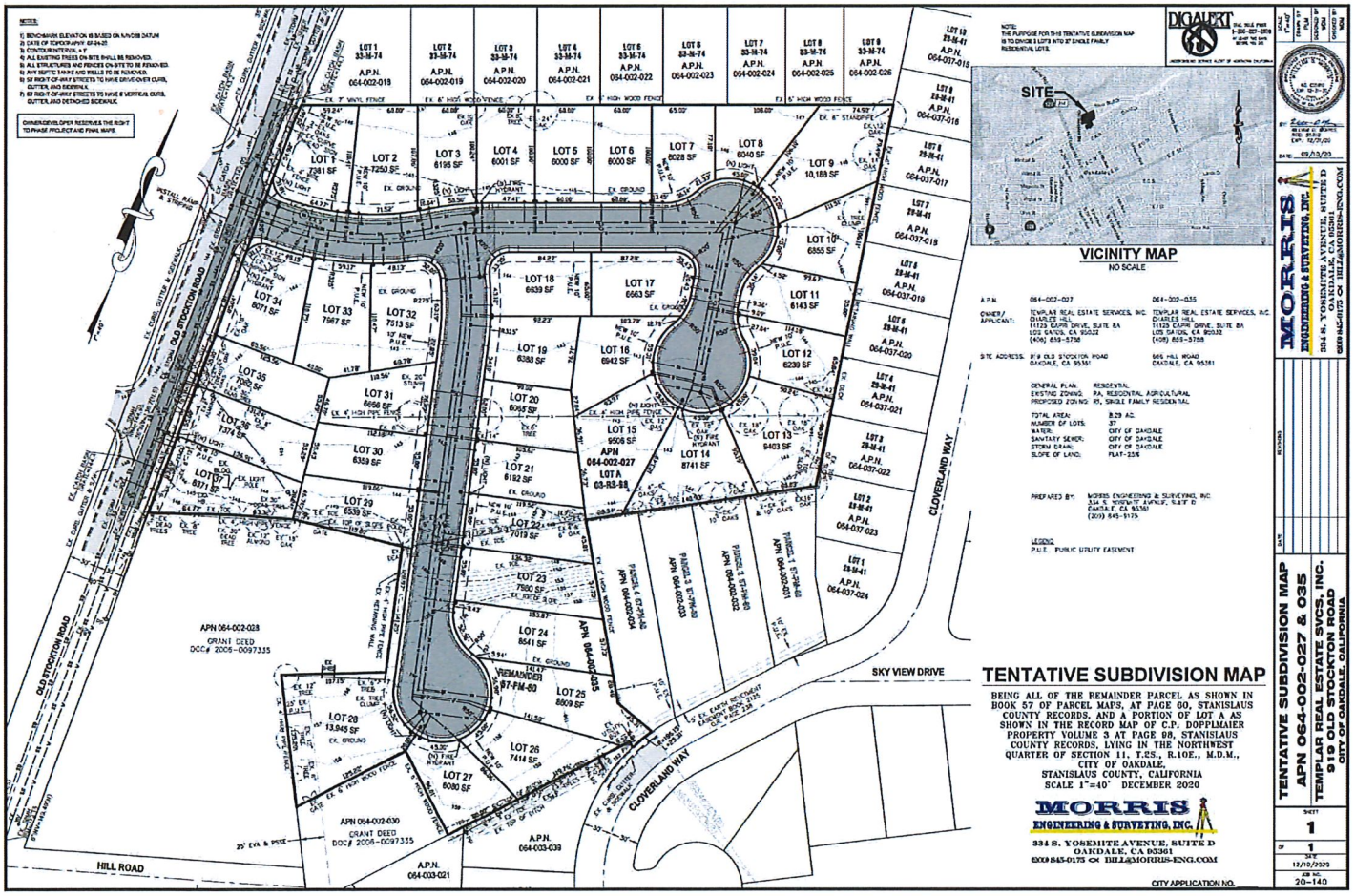
KDA

VICINITY MAP

KD Anderson & Associates, Inc.
Transportation Engineers

1166-01 RA 3/5/2021

figure 1



SITE PLAN

KD Anderson & Associates, Inc.
Transportation Engineers

1166-01 RA 3/5/2021

figure 2

Appendix D
Elderberry Shrub Review: Hill Road Subdivision prepared by Moore Biological Consultants, dated November 9, 2021

MOORE BIOLOGICAL CONSULTANTS

November 9, 2021

Ms. Elizabeth Brown
Oakdale Development LLC
14125 Capri Drive, Suite 5
Los Gatos, CA 95032

Subject: ELDERBERRY SHRUB REVIEW: "HILL ROAD SUBDIVISION", OAKDALE, STANISLAUS COUNTY, CALIFORNIA

Dear Elizabeth:

Thank you for asking Moore Biological Consultants to conduct a review of the blue elderberry (*Sambucus nigra ssp. caerulea*) shrubs at the "Hill Road Subdivision" site in Oakdale, Stanislaus County, California (Figures 1 and 2 and Tentative Map in Attachment A). The purpose of our work was to search for and map elderberry shrubs in the site and inspect the shrubs for evidence of valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) occupancy.

Methods

A field survey was conducted during the morning of September 2, 2021. The field survey consisted of walking throughout the site, searching for and locating blue elderberry shrubs, and mapping the locations of the shrubs. The stems of the shrubs were inspected for bore holes indicative of valley elderberry longhorn beetle occupancy. Representative photographs of a few of the shrubs in the site were also taken.

Results

The project site is located in Oakdale, in Stanislaus County, California (Figure 1). The site is within an unnumbered Section, within Township 2 South, Range 10.

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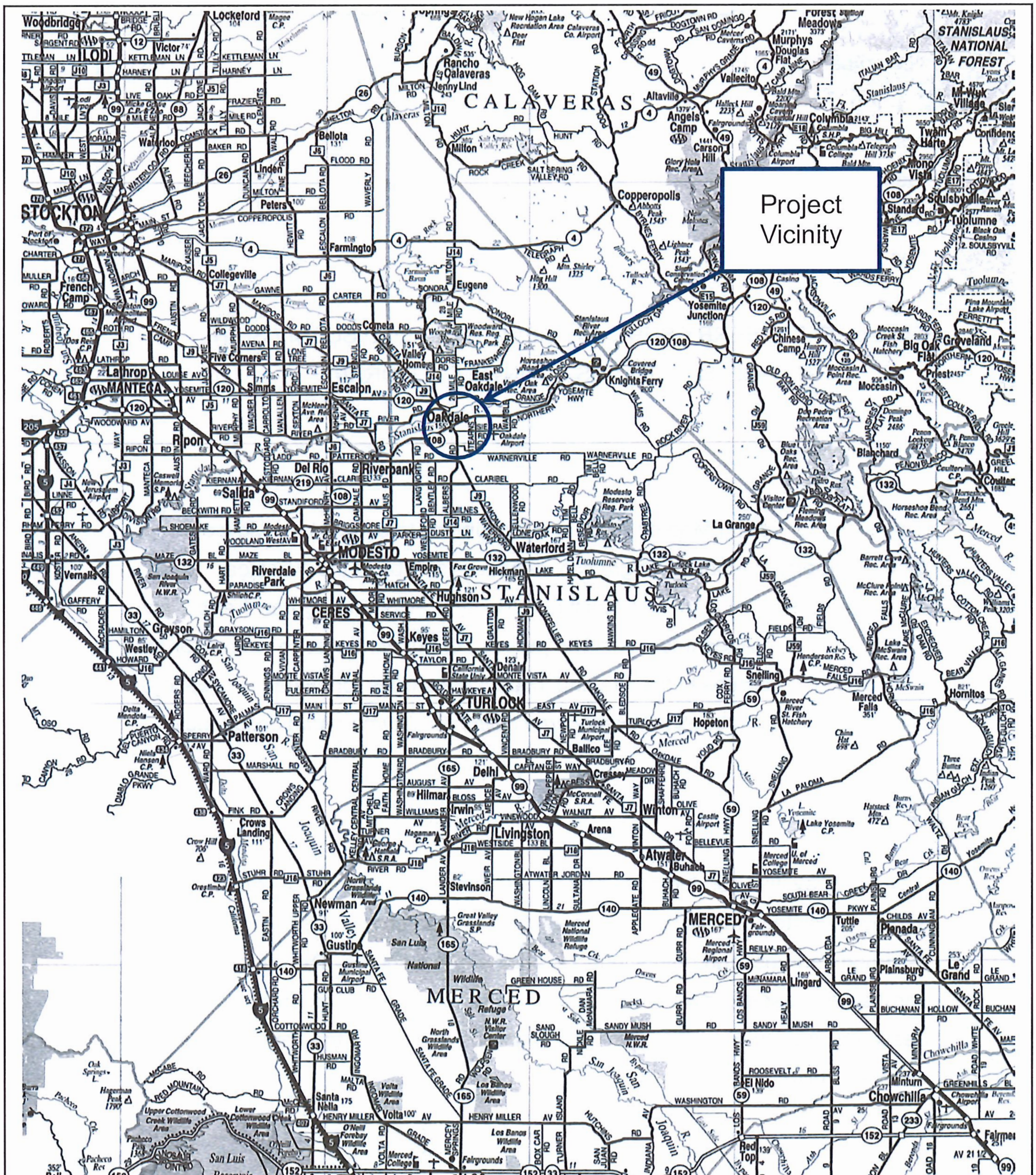

Source: California State Automobile Association

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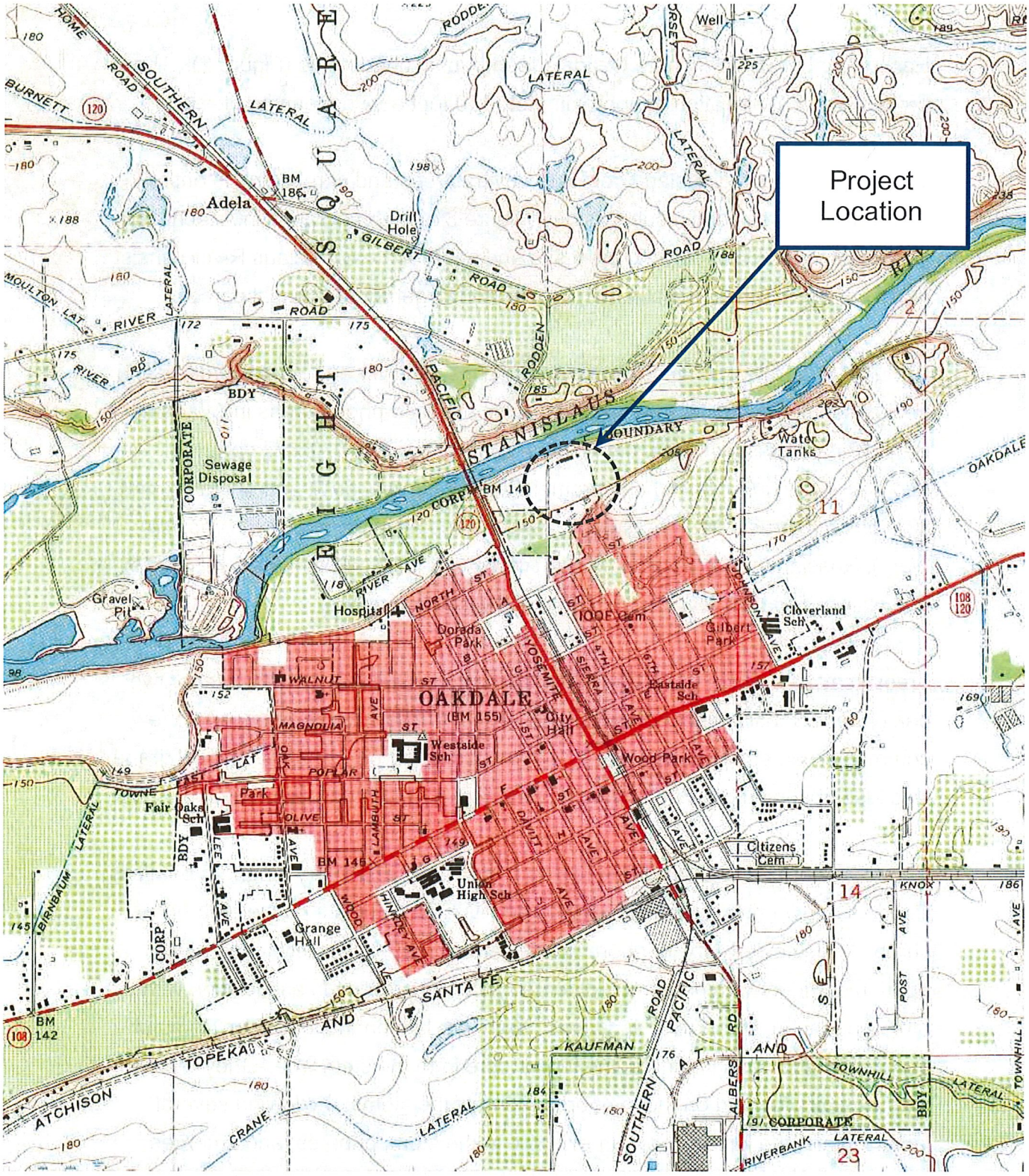
0 9 18 Miles

FIGURE 1

PROJECT VICINITY



Source: USGS 7.5-minute Oakdale topographic quadrangle

N W E S

0 2000 4000 Feet

FIGURE 2

PROJECT LOCATION

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East of the USGS 7.5-minute Oakdale topographic quadrangle (Figure 2). The project site is at elevation of approximately 150 feet above mean sea level.

The site is an open grassland field with several trees and shrubs and is entirely surrounded by residential subdivisions (Figure 3 and photographs in Attachment B). Lands to the north of the project site and north of the Stanislaus River consist mostly of open space, agricultural parcels, and larger-lot residential parcels.

VEGETATION: California annual grassland series (Sawyer and Keeler-Wolf, 1995) best describe the habitat types in the project site (see photographs in Attachment B). Dominant grasses in the site include oats (*Avena fatua*), foxtail barley (*Hordeum murinum*), soft chess brome (*Bromus hordeaceus*), and ripgut brome (*Bromus diandrus*). Other grassland species such as black mustard (*Brassica nigra*), Russian thistle (*Salsola tragus*), yellow star thistle (*Centaurea solstitialis*), and filaree (*Erodium botrys*) are intermixed with the grasses.

Trees scattered within the site include valley oaks (*Quercus lobata*), interior live oak (*Quercus wislizeni*), California black walnut (*Juglans californica*), and a few common ornamental species used for landscaping purposes. Areas of wild grape was also observed growing in the understory of a few of the trees.

VALLEY ELDERBERRY LONGHORN BEETLE: The valley elderberry longhorn beetle is listed as a federally threatened species and its host plant is the blue elderberry shrub. Valley elderberry longhorn beetles are almost exclusively found along riparian corridors with numerous elderberry shrubs growing in association with other riparian trees, shrubs, and vines. Eggs are laid on the leaves or stems of the shrubs and upon hatching, the larvae bore in to the stem where they remain for 2+/- years feeding on the interior portions of the stems. Following several larval instars, the larvae chew an exit hole in the stem, pupates, and emerges after approximately a month as an adult. The adults live only 4 to 5 days, mates, lays eggs, and dies. In almost all cases, numerous exit holes are readily apparent on the stems of occupied elderberry shrubs.

Source (Basemap): Google Earth

Scale: 1 inch = 150+/- feet

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FIGURE 3

AERIAL PHOTOGRAPH

Eleven (11) blue elderberry shrubs and/or shrub clusters were located in the site (Figure 4 and photographs in Attachment B). The shrubs are primarily located along fence lines in the west and southwest parts of the site (Figure 4 and photographs in Attachment B). The shrubs in the site vary in size, and several are mature and arborescent in nature.

All of the stems of the blue elderberry shrubs were comprehensively inspected for bore holes indicative of past valley elderberry longhorn beetle occupancy and none were observed. The blue elderberry shrubs are also located in a non-riparian setting, greatly reducing the suitability of the shrubs for valley elderberry longhorn beetle and the associated potential for occurrence.

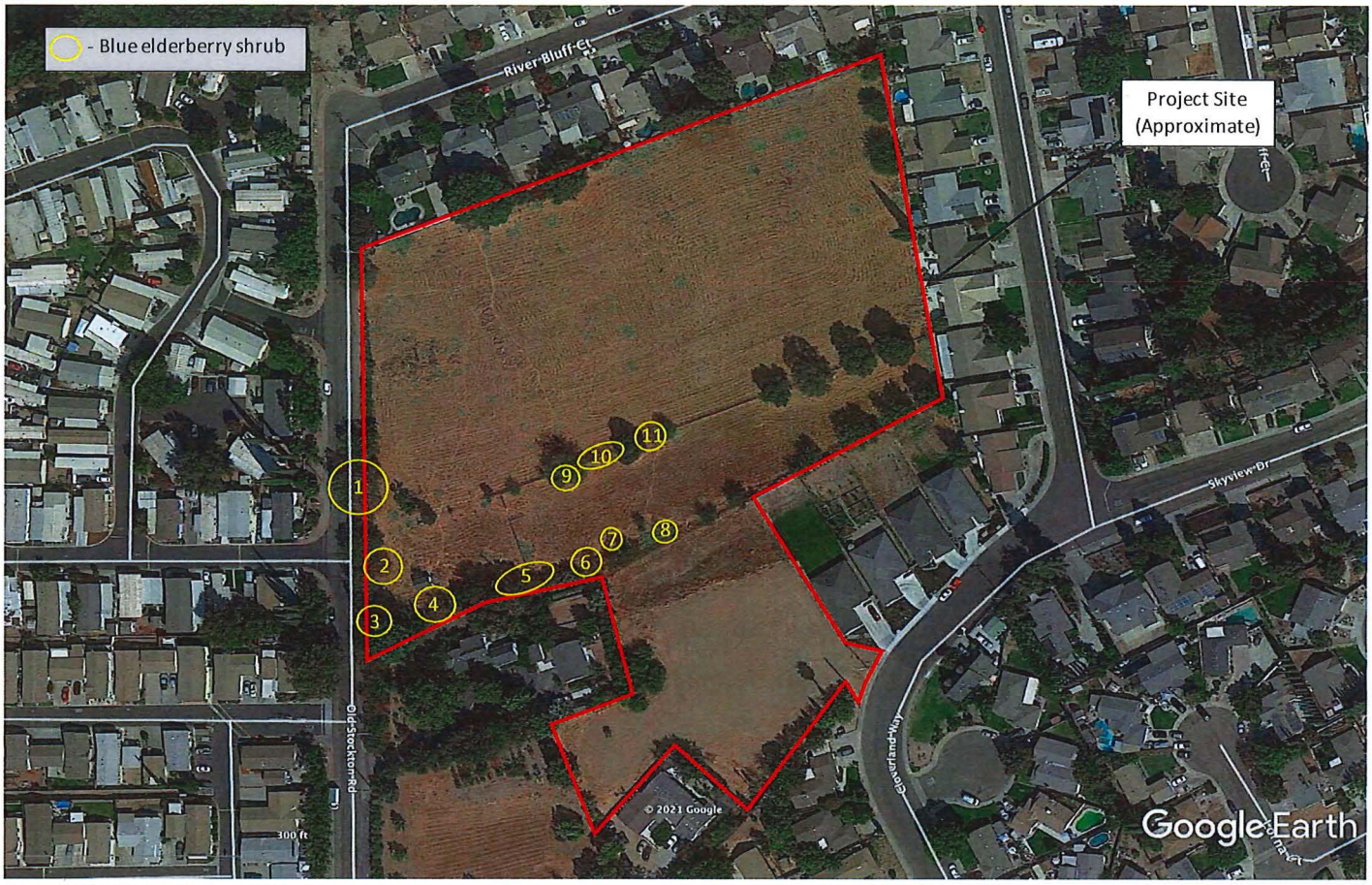
The on-site elderberry shrubs do not contain evidence of valley elderberry longhorn beetle occupancy. Occupied habitat is protected under the federal Endangered Species Act; ***potential habitat*** for listed species is not protected. Blue elderberry shrubs are not protected unless they are ***occupied*** by valley elderberry longhorn beetle. We have concluded it is highly unlikely the shrubs on the site are occupied by valley elderberry longhorn beetle due to their location in an upland (i.e., non-riparian) setting and absence of exit holes that are typically obvious on occupied shrubs.

Discussion, Conclusions and Recommendations

- 11 blue elderberry shrubs and/or shrub clusters were observed in the site. These shrubs are growing in a non-riparian setting.

- A close inspection of the stems of each shrub did not reveal any bore holes indicative of valley elderberry longhorn beetle occupancy.

- It is highly unlikely the shrubs on the site are occupied by valley elderberry longhorn beetle due to their location in an upland setting lack of exit holes that are typically obvious on occupied shrubs.



Source (Basemap): Google Earth

Scale: 1 inch = 150+/- feet

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Blue Elderberry Shrub Locations

- Removing the blue elderberry shrubs in the site is expected to have no effect on valley elderberry longhorn beetle.

We hope this information is helpful. Please call me at (209) 745-1159 with any questions.

Sincerely,

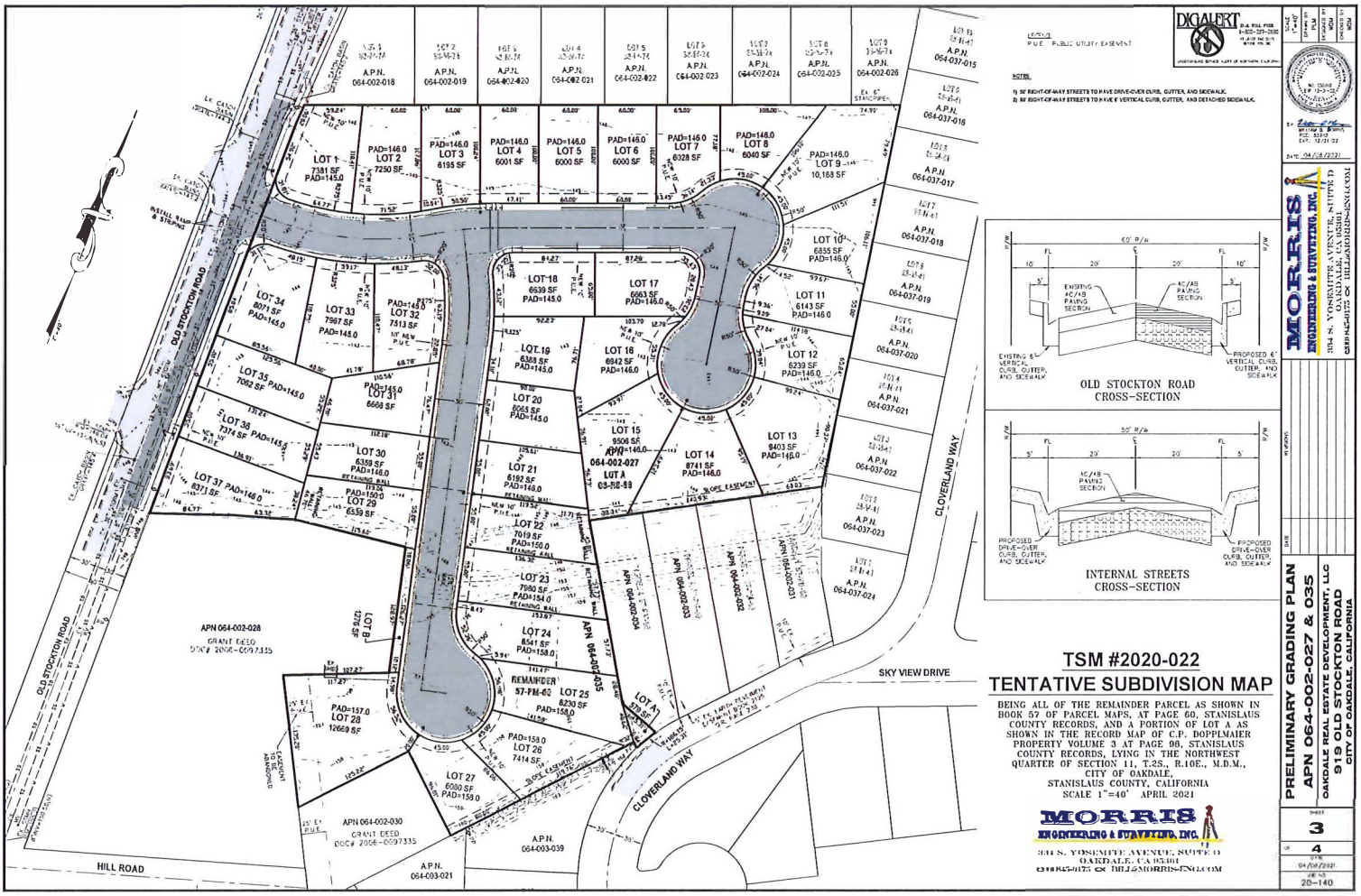
Diane S. Moore, M.S.
Principal Biologist

References and Literature Consulted

USFWS (U.S. Fish and Wildlife Service). 2017. Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*). U.S. Fish and Wildlife Service; Sacramento, California. 28pp.

Attachment A

Tentative Map



TSM #2020-022
TENTATIVE SUBDIVISION MAP

BEING ALL OF THE REMAINDER PARCEL AS SHOWN IN BOOK 57 OF PARCEL MAPS, AT PAGE 60, STANISLAUS COUNTY RECORDS, AND A PORTION OF LOT A AS SHOWN IN THE RECORD MAP OF C.P. DOPPLMAIER PROPERTY VOLUME 3 AT PAGE 98, STANISLAUS COUNTY RECORDS, LYING IN THE NORTHWEST QUARTER OF SECTION 11, T.2S., R.10E., M.D.M., CITY OF OAKDALE, STANISLAUS COUNTY, CALIFORNIA
SCALE 1"=40' APRIL 2021

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PRELIMINARY GRADING PLAN
APN 064-002-027 & 035
OAKDALE REAL ESTATE DEVELOPMENT, LLC
919 OLD STOCKTON ROAD
CITY OF OAKDALE, CALIFORNIA

SHEET 3 OF 4
DATE 04/08/2021
JOB NO. 20-140

Attachment B

Photographs

Disked grassland field in the northeast part of the site, looking southwest from the northeast corner of the site; 09/02/21.

Grassland in the south part of the site, looking northwest from the southeast corner of the site; 09/02/21.

Elderberry shrub #1 along the west fence line, looking north along Old Stockton Road from the west edge of the site; 09/02/21.

Close up of Elderberry Shrub #1, looking west from the west edge of the site; 09/02/21. All of the stems of the shrubs in the site were carefully inspected for bore holes indicitive of VELB occupancy and none were observed.

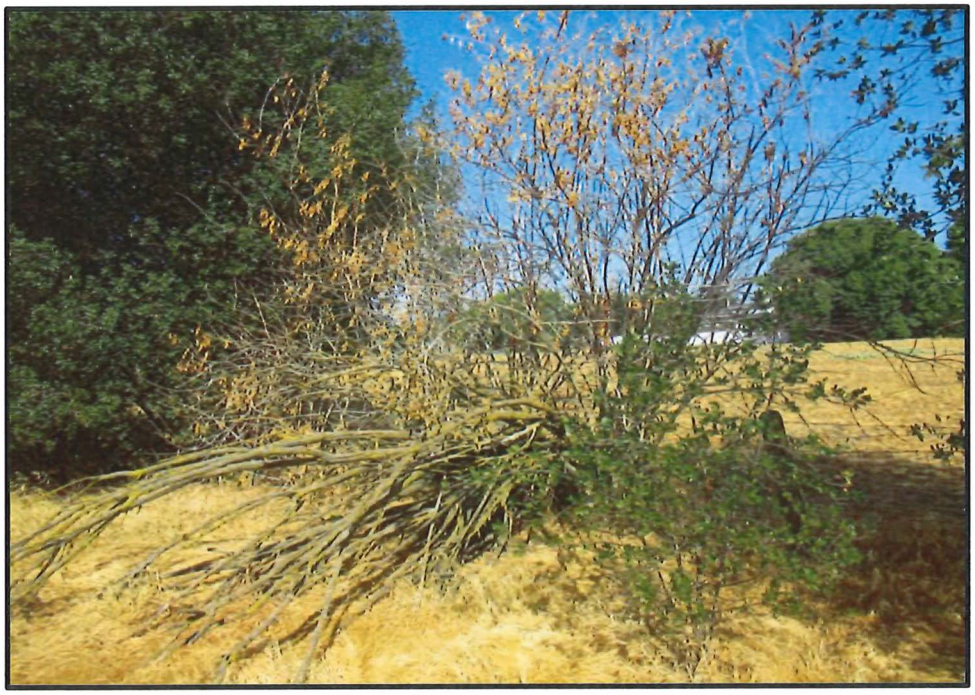
Elderberry Shrub #2 (noted), looking north from the southwest corner of the site; 09/02/21.

Elderberry Shrub #4, looking southwest from the southwest part of the site; 09/02/21.

Elderberry Shrub #6, looking southwest from the south part of the site; 09/02/21.

Elderberry Shrub #8, looking southwest from the south part of the site; 09/02/21. The base of this shrub is growing out from under a small tractor.

Elderberry Shrub #9, looking southwest from the southwest part of the site; 09/02/21. No VELB bore holes were observed in any of the shrubs in the site.



Elderberry Shrub #11, looking northwest from the approximate central part of the site; 09/02/21.