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The Vines at Oakley (Subdivision 9507)
Initial Study/Mitigated Negative Declaration
City of Oakley, Contra Costa County, California

Prepared for:
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Date: July 16, 2019

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SECTION 1: INTRODUCTION

The purpose of this Initial Study/Mitigated Negative Declaration (IS/MND) is to identify any potential environmental impacts from implementation of The Vines at Oakley Project in the City of Oakley, California. Pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15367, the City of Oakley (City) is the lead agency in the preparation of this IS/MND and any additional environmental documentation required for the project. The City has discretionary authority over the proposed project. The intended use of this document is to determine the level of environmental analysis required to adequately prepare the project IS/MND and to provide the basis for input from public agencies, organizations, and interested members of the public.

The remainder of this section provides a brief description of the project location and the characteristics of the project. Section 2 includes an environmental checklist giving an overview of the potential impacts that may result from project implementation. Section 3 elaborates on the information contained in the environmental checklist, along with justification for the responses provided in the environmental checklist.

1.1 - Project Location

The project site is located at 2371 Oakley Road in the City of Oakley, Contra Costa County, California (Exhibit 1). The 9.87-acre project site is bounded by large-parcel residential uses (west), Oakley Road (north), an existing single-family neighborhood (east), and Holly Oak Park and a single-family residential neighborhood (south) (Exhibit 2). The project site is located on the Brentwood, California United States Geological Survey (USGS) 7.5-Minute Quadrangle, Township 2 North, Range 2 East, Section 22 (Latitude 38° 59’ 49” North; Longitude 121° 44’ 20” West).

1.2 - Environmental Setting

1.2.1 - Land Use Activities

The project site contains gently sloping relief and is at an elevation of 28 to 43 feet above mean sea level. The project site is planted with vineyards and is mapped as ‘Farmland of Statewide Importance’ by the California Department of Conservation. Three existing structures are located near the Oakley Road frontage and consist of a single-family residence, a garage, and a shed. The structures are surrounded with a chain link fence. A large mature evergreen tree is located next to the structures. An existing 54-inch diameter underground storm drain line is present along the eastern project boundary.

The project frontage with Oakley Road is unimproved. Mature trees and overhead utilities are present along the roadway frontage. Fences are present along the property lines with the adjoining residential uses. Exhibit 3 provides a photograph of the project site.

1.2.2 - General Plan and Zoning

The site is designated 'Single-Family Residential—High' by the City of Oakley General Plan and zoned 'R-6' by the Oakley Zoning Ordinance.

1.3 - Project Description

1.3.1 - Project Summary

The project applicant (MLC Holdings) is proposing to rezone and subdivide the site to allow the development of 63 residential lots, streets, and a bioretention area. Table 1 summarizes the project. Exhibit 4 depicts the vesting tentative map.

Table 1: Project Summary

End Use	Characteristics
Single-family Residential	63 dwelling units; 4,000-square-foot minimum lot size; Floor plans range from 1,583 square feet to 2,050 square feet
Streets	Streets A and B; Street A provides gated connection to Oakley Road; Street B connects to Street A on both ends
Bioretention Basin	14,116-square-foot parcel
Source: MLC Holdings 2019.	

1.3.2 - Circulation

The proposed project would be accessed from a gated point on Oakley Road. The privately owned and maintained internal circulation system would consist of two 28-foot-wide streets (Street A and Street B). An Emergency Vehicle Access (EVA) would be located at the point where Street A would connect to the existing stub of Thomas Drive to the south. Bollards would restrict EVA access to emergency vehicles only, but would allow for bicycle and pedestrian access to and from Holly Creek Park to the south.

1.3.3 - Storm Drainage

A storm drainage system consisting of inlets and underground piping ranging from 15 to 24 inches in diameter would convey runoff to the bioretention basin located along the Oakley Road frontage. The basin would detain runoff during peak storm events and meter its release into the existing 54-inch diameter storm drain line. The storm drainage system would be privately owned and maintained.

1.3.4 - Utilities

Wet Utilities

The project would be served with potable water provided by the Diablo Water District and sewer service provided by the Ironhouse Sanitary District.

Source: Census 2000 Data, The CaSIL

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5 2.5 0 5 Miles

Exhibit 1
Regional Location Map

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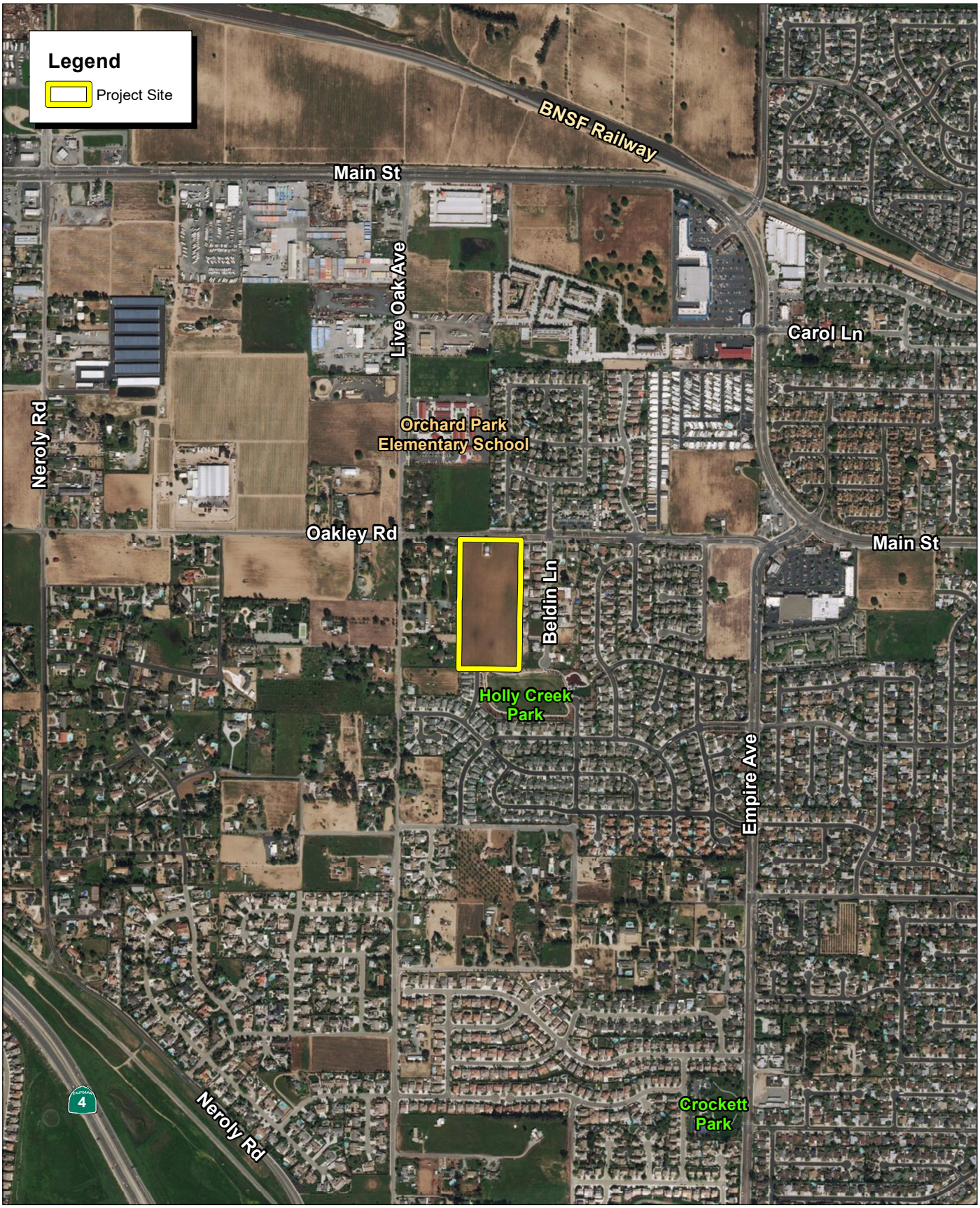

Source: ESRI Aerial Imagery.

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1,000 500 0 1,000
Feet

Exhibit 2
Local Vicinity Map
Aerial Base

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Exhibit 3
Site Photograph

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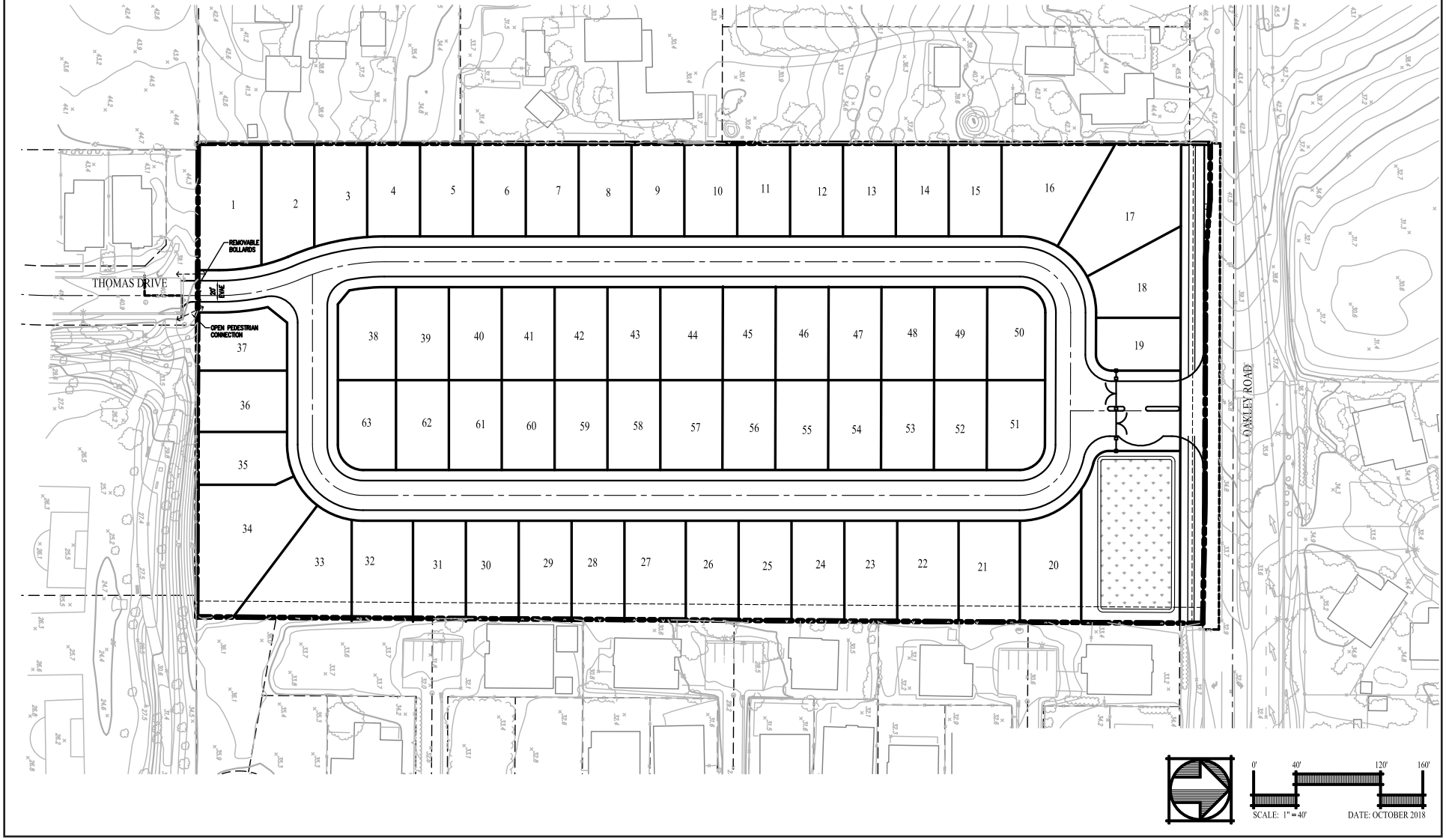

Source: Carlson, Barbee & Gibson, Inc., December 2018.

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Exhibit 4
Site Plan

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Dry Utilities

Marin Clean Energy (MCE) or Pacific Gas and Electricity Company (PG&E) would provide electricity to the proposed project.[1] PG&E would provide natural gas to the project. All utility connections would be underground.

1.3.5 - Structure and Vegetation Removal

The project includes demolition of the three existing structures, as well as the existing vineyard and trees.

1.3.6 - General Plan Amendment and Rezone

General Plan Amendment

The project applicant proposes to change the General Plan land use designation for a 2.20-acre portion of the project site from 'Single-Family Residential—High' to 'Multi-Family Residential—Low.' The remaining 7.67 acres would remain 'Single-Family Residential—High.' The purpose of designating only a portion of the site to 'Multi-Family Residential—Low' is to achieve a maximum density that results in the number of units proposed.

Rezone

The project applicant proposes to rezone the entire 9.87-acre project site from 'R-6' to 'Planned Development.'

1.3.7 - Construction

For the purposes of this IS/MND, the entire project would be constructed concurrently over a 21-month schedule between March 2020 and December 2022.

In terms of grading, the project site would balance; no import or export of soils would be required.

1.4 - Required Discretionary Approvals

The proposed project would require the following discretionary approvals:

- General Plan Amendment
- Rezone
- Vesting Tentative Map (Subdivision 9507)
- Design Review

1.5 - Intended Uses of this Document

This IS/MND has been prepared to determine the appropriate scope and level of detail required in completing the environmental analysis for the proposed project. This document will also serve as a basis for soliciting comments and input from members of the public and public agencies regarding

[1] MCE is the default electricity provider. However, residents would have the option of 'opting out' and being served by PG&E.

the proposed project. The Draft IS/MND will be circulated for a minimum of 30 days, during which period comments concerning the analysis contained in the IS/MND should be sent to:

Ken Strelo, Principal Planner
Planning and Zoning Department
3231 Main Street
Oakley, CA 94561
Phone: 925.625.7000
Email: strelo@ci.oakley.ca.us

SECTION 2: ENVIRONMENTAL CHECKLIST AND ENVIRONMENTAL EVALUATION

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/Soils	☐	Greenhouse Gas Emissions	☐	Hazards/Hazardous Materials
☐	Hydrology/Water Quality	☐	Land Use/Planning	☐	Mineral Resources
☐	Noise	☐	Population/Housing	☐	Public Services
☐	Recreation	☐	Transportation	☐	Tribal Cultural Resources
☐	Utilities/Services Systems	☐	Wildfire	☐	Mandatory Findings of Significance

Environmental Determination

On the basis of this initial evaluation:

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

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

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

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measure 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.

Date: July 16, 2019 Signed: Kenneth W. Strelo

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

Environmental Evaluation

a) Have a substantial adverse effect on a scenic vista?

Less than significant impact. The City of Oakley General Plan identifies natural landscape features such as the Delta, Dutch Slough, Marsh Creek, agricultural and other open space lands, as well as views of Mount Diablo as scenic resources. Of the aforementioned features, only Mount Diablo is visible from the project site when looking to the southwest (Exhibit 3). Thus, land uses located south and west of the project site would not have their views of Mount Diablo obstructed by the project. The single-family residential neighborhood to the east has an existing fence along the property line. Additionally, all of these dwelling units are 2-story structures. Thus, ground level views of Mount Diablo from the backyards are currently obstructed, while second floor views are mostly unobstructed. Project structures would be setback a minimum of 10 feet from the eastern property line, with minimum 5-foot side yard setbacks. Thus, project structures would be setback sufficiently far enough away to provide view corridors between structures. Land uses to the north consist of single-family residential uses. The nearest dwelling unit is more than 150 feet from the nearest project structure, which would avoid obstruction of views of Mount Diablo. The impact would be less than significant.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?

No impact. State Route 160 (SR-160) is located 0.83-mile west of the project site. SR-160 is classified as an 'Eligible' State Scenic Highway. The project site is not visible from SR-160 because of the intervening topography, vegetation, and structures. This condition precludes the potential for substantial damage to scenic resources within view of a State Scenic Highway. No impact would occur.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less than significant impact. The project site contains vineyards, three structures, and mature trees. The project frontage with Oakley Road is unimproved. The property is bounded by single-family residential uses to the west and east, Oakley Road to the north, and a park and single-family residential uses to the south.

The proposed project would develop 63 single-family residences on the project site, along with a bioretention basin, and an internal roadway network. The residences would consist of 1- and 2-story units with a contemporary appearance, similar to surrounding development.

The City of Oakley General Plan contemplates low-density residential use on the project site. The proposed project involves a General Plan Amendment to re-designate 2.2 acres of the project site to multi-family residential use for the purpose of allowing a slightly higher average gross density (no multi-family residential dwelling units are proposed). From a visual character perspective, the General Plan Amendment has no significant implications as the project site would support higher-density residential uses instead of lower-density residential uses and, thus, under either scenario, would still be developed.

In sum, the proposed project would develop residential uses on an infill site within the Oakley city limits that is designated for urban residential development by the General Plan. The project would be similar in visual character with surrounding land uses and would not substantially degrade the visual character of the project site or its surroundings. Impacts would be less than significant.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less than significant impact. The project proposes to develop 63 residential units on a site containing vineyards, three structures, and mature trees. As a result, the project would increase the amount of light and glare from the project site compared with existing conditions. The new sources of light would come from interior and exterior lighting, as well as some glare reflecting off building surfaces. The proposed project would be compliant with the Residential Design Guidelines, including lighting standards that require the use of the City's standard for residential street lights and limits residential lighting for security purpose. Compliance with the City's standards would ensure the

project would not adversely affect day or nighttime views in the area. The impacts would be less than significant.

Mitigation Measures

None.

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

Environmental Evaluation

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California 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. The Land Evaluation and Site Assessment Model (LESA) Model is provided in Appendix A.

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?

Less than significant impact. The Farmland Mapping and Monitoring Program maps 9.53 acres of the project site as 'Farmland of Statewide Importance.' As such, FirstCarbon Solutions (FCS) prepared a LESA Model to evaluate the significance of the proposed conversion of Important Farmland to non-agricultural use. The LESA Model scoring summary is provided in Table 2.

Table 2: Land Evaluation and Site Assessment Model Scoring Summary

Category	Factor	Points	Factor Wight	Weighted Points	Remarks
Land Evaluation	Land Capability Class	—	0.25	15	The project site contains Class 3s soils, which are fair in terms of agricultural value.
	Storie Index	—	0.25	12.25	The Storie Index reflects the "fair" agricultural value of the soils.
	Subtotal	—	0.50	27.25	—
Site Assessment	Project Site	0	0.15	12.75	The project size rating is 0 because of the small amount of Important Farmland.
	Water Resources Availability	—	0.15	12.75	Groundwater and irrigation district water are presumed to be available. During drought years, there are physical restrictions for both water sources.
	Surrounding Agricultural Lands	—	0.15	0	Farmland accounts for approximately 25 percent of the surrounding land uses. LESA model assigns 0 points when surrounding agricultural uses are less than 40 percent.
	Surrounding Protected Resources Lands	—	0.05	0	There are no protected resource lands surrounding the project site. LESA model assigns 0 points when surrounding resource lands are less than 40 percent.
	Subtotal	—	0.50	12.75	—
		Grand Total		**40.00**	—

Note:
LESA Model workbook provided in Appendix A. The workbook provides a complete explanation of each criterion used in assessing Farmland conversion impacts.
Source: FCS, 2019.

As shown in Table 2, the project site achieves a total score of 40.0. The LESA model indicates that scores between 40 and 59 are significant if the Land Evaluation and Site Assessment subscores are each greater than or equal to 20 points. Although the Land Evaluation subscore is greater than 20 points, the Site Assessment subscore is less than 20 points. Therefore, the conversion of Important Farmland to non-agricultural use would be less than significant.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No impact. The project site is zoned 'R-6' by the Oakley Zoning Ordinance, a non-agricultural zoning designation. The proposed project's discretionary approvals include rezoning the site to 'Planned Development,' which is also a non-agricultural zoning designation. Additionally, the project site is not encumbered by an active Williamson Act contract. Thus, no conflicts with agricultural zoning or Williamson Act contracts would occur. No impact would occur.

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))?

No impact. The project site is zoned 'R-6' by the Oakley Zoning Ordinance, a non-forest zoning designation. The proposed project's discretionary approvals include rezoning the site to 'Planned Development,' which is also a non-forest zoning designation. Thus, no conflicts with forest zoning would occur. No impact would occur.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No impact. Although the project site supports a handful of mature trees, the project site does not meet the State definition of forest land because of the low density of the trees. As such, project implementation would not result in the loss of forest land or conversion of forest land to non-forest use. No impact would occur.

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?

Less than significant impact. The project site is one of a number of agricultural properties within the Oakley city limits that are envisioned to support urban land uses in the future. To the extent that the development of the proposed project creates pressures to convert other agricultural properties to urban, this conversion is contemplated by the City of Oakley General Plan. Moreover, the inclusion of these lands within the Oakley city limits indicates that their highest and best use is urban development. Thus, the conversion of these lands to non-agricultural use represents planned growth and not the premature conversion of viable agricultural land. Impacts would be less than significant.

Mitigation Measures

None.

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

Environmental Evaluation

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.

Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less than significant impact with mitigation incorporated. The project is located in the San Francisco Bay Area Air Basin (Air Basin), where air quality is regulated by the Bay Area Air Quality Management District (BAAQMD). The United States Environmental Protection Agency (EPA) is responsible for identifying non-attainment and attainment areas for each criteria pollutant within the Air Basin. The Air Basin is designated non-attainment for the federal and State ozone standards, the State PM_{10} standards, and the federal and State $PM_{2.5}$ standards.

To address regional air quality standards, the BAAQMD has adopted several air quality policies and plans, the most recent of which is the 2017 Clean Air Plan. The 2017 Clean Air Plan was adopted in April of 2017 and serves as the regional air quality plan (AQP) for the Air Basin for attaining federal ambient air quality standards. The primary goals of the 2017 Clean Air Plan include protecting public health and protecting the climate. The 2017 Clean Air Plan acknowledges that the BAAQMD's two stated goals of protection are closely related. As such, the 2017 Clean Air Plan identifies a wide range

of control measures intended to decrease both criteria pollutants[2] and greenhouse gases (GHGs).[3] The 2017 Clean Air Plan updates the BAAQMD's 2010 Clean Air Plan, pursuant to air quality planning requirements defined in the California Health and Safety Code.

The 2017 Clean Air Plan also accounts for projections of population growth provided by Association of Bay Area Governments and vehicle miles traveled provided by the Metropolitan Transportation Commission, and identifies strategies to bring regional emissions into compliance with federal and State air quality standards. A project would be judged to conflict with or obstruct implementation of the 2017 Clean Air Plan if it would result in substantial new regional emissions not foreseen in the air quality planning process.

The BAAQMD does not provide a numerical threshold of significance for project-level consistency analysis with AQPs. Therefore, the following criteria will be used for determining a project's consistency with the AQP.

- **Criterion 1:** Does the project support the primary goals of the AQP?
- **Criterion 2:** Does the project include applicable control measures from the AQP?
- **Criterion 3:** Does the project disrupt or hinder implementation of any AQP control measures?

Criterion 1

The primary goals of the 2017 Clean Air Plan, the current AQP to date, are to:

- Attain air quality standards; and
- Reduce population exposure to unhealthy air and protecting public health in the Bay Area.

A measure for determining if the project supports the primary goals of the AQP is if the project would not result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the air quality plans. The development of the AQP is based in part on the land use general plan determinations of the various cities and counties that constitute the Air Basin. A project that is consistent with the general plan is considered to be accounted for in the AQP. In this case, the site is designated 'Single-Family Residential—High' by the City of Oakley General Plan and zoned 'R-6' by the Oakley Zoning Ordinance. Therefore, emissions related to development of the project site would have been included in growth forecasts for the current AQP as residential development. The project includes a General Plan Amendment that proposes to change a portion of the project site designation from 'Single-Family Residential—High' to 'Medium Density Residential.' The project proposes to rezone the entire project site from 'R-6' to 'Planned Development.' As discussed in Section 14-Population and Housing, the addition of 218 new residents associated with the proposed project would represent planned growth consistent with the existing residential land

[2] The EPA has established National Ambient Air Quality Standards (NAAQS) for six of the most common air pollutants—carbon monoxide, lead, ground-level ozone, particulate matter, nitrogen dioxide, and sulfur dioxide—known as "criteria" air pollutants (or simply "criteria pollutants").

[3] A GHG is any gaseous compound in the atmosphere that is capable of absorbing infrared radiation, thereby trapping and holding heat in the atmosphere. By increasing the heat in the atmosphere, greenhouse gases are responsible for the greenhouse effect, which ultimately leads to global warming.

use designation. Considering this information, vehicle miles traveled (VMT) generated by the project site has been reasonably accounted for in the AQP. Because the project does not represent unplanned growth compared to the assumptions used in the AQP, it is reasonable to conclude that the project would not adversely affect the AQP. Furthermore, as discussed in Impact 3(b), the project's long-term construction and operational-related emissions would not exceed BAAQMD regional thresholds of significance on an average daily or annual basis. Because VMT generated by the project site has been reasonably accounted for in the AQP and because the project would not exceed BAAQMD regional thresholds of significance on an average daily or annual basis, the project would be consistent with the first criterion.

Criterion 2

The 2017 Clean Air Plan contains 85 control measures aimed at reducing air pollutants and GHGs at the local, regional, and global levels. Along with the traditional stationary, area, mobile source, and transportation control measures, the 2017 Clean Air Plan contains a number of control measures designed to protect the climate and promote mixed use, compact development to reduce vehicle emissions and exposure to pollutants from stationary and mobile sources. The 2017 Clean Air Plan also includes an account of the implementation status of control measures identified in the 2010 Clean Air Plan.

Table 3 lists the relevant Clean Air Plan policies to the project and evaluates the project's consistency with the policies. As shown below, the project would be consistent with applicable measures and would not hinder the implementation of any AQP control measures.

Table 3: Project Consistency with Applicable Clean Air Plan Control Measures

Control Measure	Project Consistency
Stationary Control Measures	
SS29: Asphaltic Concrete	**Consistent.** Paving activities associated with the proposed project would be required to utilize asphalt that does not exceed BAAQMD emission standards.
SS36: Particulate Matter from Trackout	**Consistent with Mitigation.** Mud and dirt that may be tracked out onto the nearby public roads during construction activities shall be removed promptly by the contractor based on BAAQMD's requirements. Mitigation Measure (MM) AIR-1, identified under Impact 3b, would implement Best Management Practices (BMPs) recommended by BAAQMD for fugitive dust emissions during construction.
SS37: Particulate Matter from Asphalt Operations	**Consistent.** Paving and roofing activities associated with the proposed project would be required to utilize best management practices to minimize the particulate matter created from the transport and application of road and roofing asphalt.

Table 3 (cont.): Project Consistency with Applicable Clean Air Plan Control Measures

Control Measure	Project Consistency
SS38: Fugitive Dust	**Consistent with Mitigation.** Material stockpiling and track out during grading activities, as well as smoke and fumes from paving and roofing asphalt operations, shall utilize BMPs to minimize the creation of fugitive dust. MM AIR-1, identified under Impact 3b, would implement BMPs recommended by BAAQMD for fugitive dust emissions during construction.
Transportation Control Measures	
TR9: Bicycle and Pedestrian Access Facilities	**Consistent.** The proposed project would comply with TR9 by providing pedestrian connectivity within the project site and from the project site to surrounding land uses.
Buildings Control Measures	
BL1: Green Buildings	**Consistent.** The project would not conflict with implementation of this measure. At minimum, the project would comply with the California Energy Code and thus incorporate applicable energy efficiency features designed to reduce project energy consumption.
BL2: Decarbonize Buildings	**Consistent.** The project would not conflict with implementation of this measure. The project would comply with the latest energy efficiency standards and incorporate applicable energy efficiency features designed to reduce project energy consumption. For instance, each proposed home would include solar panels and spray foam insulation.
BL4: Urban Heat Island Mitigation	**Consistent.** The project proposes to remove several mature trees within the project boundaries, most of which are near the existing building on the project site. As described in Section 4-Biological Resources, the project would be required to adhere to all policies regarding tree removal and replacement. Any project developments that require the removal of adult trees will have to abide by the City of Oakley Tree Care Requirements. In addition, the project would incorporate landscaping throughout the site. The project would provide landscaping in accordance with City standards that would serve to reduce the urban heat island effect and would include the planting of shade trees.

Table 3 (cont.): Project Consistency with Applicable Clean Air Plan Control Measures

Control Measure	Project Consistency
Energy Control Measures	
EN2: Decrease Energy Use	**Consistent.** The project applicant would be required to conform to the energy efficiency requirements of the California Building Standards Code, also known as Title 24, which was adopted in order to meet an Executive order in the Green Building Initiative to improve the energy efficiency of buildings through aggressive standards. Specifically, new development must implement the requirements of the most recent Building Energy Efficiency Standards, which is the current version of Title 24. The 2019 Building Efficiency Standards go into effect on January 1, 2020. As part of the project, each proposed home would include solar panels and spray foam insulation.
Natural and Working Lands Control Measures	
NW2: Urban Tree Planting	**Consistent.** The project would incorporate landscaping throughout the site. The project would provide landscaping in accordance with City standards that would serve to reduce the urban heat island effect and would include the planting of shade trees.
Waste Management Control Measures	
WA3: Green Waste Diversion	**Consistent:** The waste service provider for the project will be required to meet the Assembly Bill 341 (AB 341) and Senate Bill 939 (SB 939) and SB 1374 requirements that require waste service providers to divert green waste.
WA4: Recycling and Waste Reduction	**Consistent:** Mount Diablo Resource Recovery is the City of Oakley's franchise solid waste provider. Residential customers are provided separate containers for curbside solid waste, recycling, and green waste pick-up. The project would promote compliance with State mandates for recycling and waste reduction by being served with curbside recycling and green waste collection.
Source: BAAQMD 2019.	

In summary, the project would not conflict with any applicable measures under the 2017 Clean Air Plan after the implementation of MM AIR-1. MM AIR-1 requires the use of BAAQMD-recommended BMPs to reduce fugitive dust emissions during construction of the project. The project would be consistent with Criterion 2 after incorporation of mitigation.

Criterion 3

The project will not preclude extension of a transit line or bike path, propose excessive parking beyond parking requirements, or otherwise create an impediment or disruption to implementation of any AQP control measures. As shown in Table 3 above, the project would incorporate several AQP control measures as project design features. The project is therefore consistent with Criterion 3.

Summary

As addressed above, the project would be consistent with all three criteria after the incorporation of MM AIR-1. Thus, the project would not conflict with the 2017 Clean Air Plan. Therefore, impacts associated with conflicting with or obstructing implementation of the 2017 Clean Air Plan would be less than significant with mitigation.

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?

Less than significant impact with mitigation incorporated. This impact is related to the cumulative effect of a project's regional criteria pollutant emissions. As discussed in Impact 3(a), the region is non-attainment for the federal and State ozone standards, the State PM_{10} standards, and the federal and State $PM_{2.5}$ standards. Potential impacts would result in exceedances of State or federal standards for oxides of nitrogen (NO_X) or particulate matter (PM_{10} and $PM_{2.5}$). NO_X emissions are of concern because of potential health impacts from exposure to NO_X emissions during both construction and operation and as a precursor in the formation of airborne ozone. PM_{10} and $PM_{2.5}$ are of concern during construction because of the potential to emit exhaust emissions from the operation of off-road construction equipment and fugitive dust during earth-disturbing activities (construction fugitive dust).

Reactive Organic Gas (ROG) emissions are also important because of their participation in the formation of airborne ozone. Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and that can cause substantial damage to vegetation and other materials. Elevated ozone concentrations result in reduced lung function, particularly during vigorous physical activity. This health problem is particularly acute in sensitive receptors such as the sick, elderly, and young children.

By its nature, air pollution is largely a cumulative impact resulting from emissions generated over a large geographic region. The nonattainment status of regional pollutants is a result of past and present development within the air basin, and this regional impact is a cumulative impact. In other words, new development projects (such as the proposed project) within the air basin would contribute to this impact only on a cumulative basis. No single project would be sufficient in size, by itself, to result in nonattainment of regional air quality standards. Instead, a project's emissions may be individually limited, but cumulatively considerable when taken in combination with past, present, and future development projects.

The cumulative analysis focuses on whether a specific project would result in cumulatively considerable emissions. According to Section 15064(h)(4) of the CEQA Guidelines, the existence of

significant cumulative impacts caused by other projects alone does not constitute substantial evidence that the project's incremental effects would be cumulatively considerable. Rather, the determination of cumulative air quality impacts for construction and operational emissions is based on whether the project would result in regional emissions that exceed the BAAQMD regional thresholds of significance for construction and operations on a project level. The thresholds of significance represent the allowable amount of emissions each project can generate without generating a cumulatively considerable contribution to regional air quality impacts. Therefore, a project that would not exceed the BAAQMD thresholds of significance on the project level also would not be considered to result in a cumulatively considerable contribution to these regional air quality impacts.

The project's construction and operational emissions, which include both on- and off-site emissions, are evaluated separately below. Construction and operational emissions from the project were estimated using the CalEEMod version 2016.3.2. A detailed description of the assumptions used to estimate emissions and the complete CalEEMod output files are contained in Appendix B.

Construction Emissions

During construction, fugitive dust would be generated from site grading and other earth-moving activities. The majority of this fugitive dust would remain localized and would be deposited near the project site. However, the potential for impacts from fugitive dust exists unless control measures are implemented to reduce the emissions from this source. Exhaust emissions would also be generated from the operation of the off-road construction equipment and vehicles traveling to and from the project site.

Construction Fugitive Dust

The BAAQMD does not recommend a numerical threshold for fugitive dust particulate matter emissions. Instead, the BAAQMD bases the determination of significance for fugitive dust on a consideration of the control measures to be implemented. If all appropriate emissions control measures are implemented for a project as recommended by the BAAQMD, then fugitive dust emissions during construction are not considered significant. During construction activities, the air pollution control measures, as outlined in MM AIR-1, shall be implemented to reduce fugitive dust during construction of the project. With incorporation of this condition, short-term construction impacts associated with the generation of fugitive dust would be less than significant.

Construction Air Pollutant Emissions: ROG, NO_X, PM_{10}, $PM_{2.5}$

As previously discussed, CalEEMod version 2016.3.2 was used to estimate the project's construction emissions. CalEEMod provides a consistent platform for estimating construction and operational emissions from a wide variety of land use projects and is the model recommended by the BAAQMD for estimating project emissions. Estimated construction emissions are compared with the applicable thresholds of significance established by the BAAQMD to assess ROG, NO_X, exhaust PM_{10}, and exhaust $PM_{2.5}$ construction emissions to determine significance for this criterion.

For the purpose of this analysis, construction of the project was assumed to begin in March 2020 and conclude in December 2022. The project is anticipated to be built in a single phase, with earth-moving activities occurring for the entire site at once. If the construction schedule moves to later years,

construction emissions would likely decrease because of improvements in technology and more stringent regulatory requirements. The preliminary construction schedule is provided in Table 4.

Table 4: Conceptual Construction Schedule

Construction Activity	Conceptual Construction Schedule		Working Days Per Week	Total Working Days
	Start Date	End Date		
Demolition	5/1/2020	5/28/2020	5	20
Site Preparation	5/29/2020	6/11/2020	5	10
Grading	6/12/2020	7/9/2020	5	20
Paving	7/10/2020	8/6/2020	5	20
Building Construction	8/7/2020	11/3/2022	5	585
Architectural Coating	11/4/2022	12/1/2022	5	20

Note:
The Conceptual Construction Schedule was developed using default assumptions from CalEEMod. If construction occurred more than 5 days per week (i.e., 6 days), it would not change the values shown in Table 5 or Table 6, as these tables present maximum annual or daily emissions, respectively.
Source: Appendix B.

The CalEEMod default schedule was extended by 355 days to match the anticipated construction schedule provided by the project applicant. Because the expected schedule and the default schedule differ, the equipment in the building construction phase was adjusted to retain the default horsepower-hours. The duration of construction activity and associated equipment represent a reasonable approximation of the expected construction fleet as required by CEQA Guidelines.

The calculations of pollutant emissions from the construction equipment account for the type of equipment, horsepower and load factors of the equipment, along with the duration of use. Annual exhaust emissions are shown in Table 5. Average daily construction emissions are compared with the significance thresholds in Table 6.

Table 5: Annual Construction Emissions (Unmitigated)

Construction Year	Tons/Year			
	ROG	NO_X	PM_{10} (Exhaust)	$PM_{2.5}$ (Exhaust)
2020 Total Construction Emissions	0.17	2.11	0.07	0.07
2021 Total Construction Emissions	0.12	1.10	0.05	0.05
2022 Total Construction Emissions	1.01	0.85	0.04	0.03
Total Construction Emissions	**1.30**	**4.05**	**0.16**	**0.15**

Notes:
ROG = reactive organic gases NO_X = oxides of nitrogen
PM_{10} = particulate matter 10 microns in diameter
$PM_{2.5}$ = particulate matter 2.5 microns in diameter
Calculations use unrounded numbers.
Source: CalEEMod Output (see Appendix B).

Table 6: Construction Emissions (Unmitigated Average Daily Rate)

Parameter	Air Pollutants			
	ROG	NO_X	PM_{10} (Exhaust)	$PM_{2.5}$ (Exhaust)
Total Emissions (tons/year)	1.30	4.05	0.16	0.15
Total Emissions (lbs/year)	2,595	8,110	323	302
Average Daily Emissions (lbs/day)[1]	3.84	12.01	0.48	0.45
Significance Threshold (lbs/day)	**54**	**54**	**82**	**54**
Exceeds Significance Threshold?	No	No	No	No

Notes:
[1] Calculated by dividing the total number of pounds by the total 675 working days of construction for the duration of construction (2020-2022).
Calculations use unrounded totals.
lbs = pounds ROG = reactive organic gases NO_X = oxides of nitrogen
PM_{10} = particulate matter 10 microns in diameter
$PM_{2.5}$ = particulate matter 2.5 microns in diameter
Source of thresholds: BAAQMD 2017
Source of emissions: CalEEMod Output (see Appendix B).

As shown in Table 6, the construction emissions from all construction activities are below the recommended thresholds of significance; therefore, the construction of the project would have less than significant impact in regards to emissions of ROG, NO_X, exhaust PM_{10}, and exhaust $PM_{2.5}$. As previously discussed, the project would implement MM AIR-1 with BMPs recommended by the BAAQMD to reduce potential impacts related to fugitive dust emissions from use of the construction equipment. Therefore, project construction would have a less than significant cumulative impact after implementation of mitigation.

Operational Emissions

Operational Air Pollutant Emissions: ROG, NO_X, PM_{10}, $PM_{2.5}$

As previously discussed, the pollutants of concern include ROG, NO_X, PM_{10}, and $PM_{2.5}$. The project operational emissions for the respective pollutants were calculated using CalEEMod version 2016.3.2. As previously discussed, construction and operation of the project is anticipated to overlap. Earliest occupancy is expected to begin in 2021, while full buildout is expected to occur in 2022. Operational emissions were estimated for the year 2022, which is the earliest year when all home could be occupied. For reasons previously discussed, the BAAQMD Criteria Air Pollutant Significance thresholds were used. The estimated annual emissions from project operations are presented in Table 7and maximum daily emissions are presented in Table 8.

Table 7: Annual Operational Emissions (Unmitigated)

Emissions Source	Tons per Year			
	ROG	NO_X	PM_{10}	$PM_{2.5}$
Area	0.61	0.01	0.00	0.00
Energy	0.01	0.08	0.01	0.01
Mobile (Motor Vehicles)	0.15	0.67	0.51	0.14
Estimated Annual Emissions	**0.77**	**0.76**	**0.52**	**0.15**
Thresholds of Significance	**10**	**10**	**15**	**10**
Exceeds Significance Threshold?	No	No	No	No

Notes:
ROG = reactive organic gases NO_X = oxides of nitrogen
PM_{10} = particulate matter 10 microns or less in diameter
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter
Source: CalEEMod output (see Appendix B).

Table 8: Daily Operational Emissions (Unmitigated)

Emissions Source	Pounds per Day			
	ROG	NO_X	PM_{10}	$PM_{2.5}$
Area	3.47	0.37	0.05	0.05
Energy	0.05	0.46	0.04	0.04
Mobile (Motor Vehicles)	0.98	3.84	2.98	0.81
Estimated Daily Emissions	**4.51**	**4.67**	**3.07**	**0.91**
Thresholds of Significance	**54**	**54**	**82**	**54**
Exceeds Significance Threshold?	No	No	No	No

Notes:
ROG = reactive organic gases NO_X = nitrous oxides
PM_{10} = particulate matter 10 microns or less in diameter
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter
The highest daily project emissions occurred in the winter run for NO_X, PM_{10}, and $PM_{2.5}$. The highest ROG emissions occurred in the summer run.
Calculations use unrounded results.
Source: CalEEMod output (see Appendix B).

As shown in Table 7 and Table 8, the project would not result in operational-related air pollutants or precursors that would exceed BAAQMD's thresholds of significance, indicating that ongoing project operations would not be considered to have the potential to generate a significant quantity of air pollutants. Therefore, project operations would have a less than significant cumulative impact.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less than significant impact with mitigation incorporated. A sensitive receptor is defined by the BAAQMD as the following: "Facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples include schools, hospitals, and residential areas."

As a residential development project, the project itself would be considered a sensitive receptor once operational. The project grading activities and site preparation activities that would generate the greatest amount of emissions during construction would not overlap with project operation. Most emissions during construction are generated during the site preparation and grading phases when heavy equipment is used to prepare the land for construction. Earliest home occupancy is expected to occur in July 2021. Therefore, operations of the proposed single-family homes could overlap with construction activities that would occur from July 2021 to December 2022, when little or no grading would occur. Construction activities during this time would primarily include home building, paving, and landscaping. Limited amounts of diesel equipment are used during home construction, which would not contribute substantially to the health risk during construction. Therefore, for the purposes of the health risk assessment, sensitive receptors associated with proposed residences and park were not included as part of the construction health risk assessment. The closest non-project sensitive receptors in the vicinity of the project site include single-family residential buildings located to north, east, south, and west of the project site. The closest existing residence is located approximately 20 feet east of the project site.

The following five criteria were applied to determine the significance of project emissions to sensitive receptors:

- **Criterion 1:** Construction of the project would not result in an exceedance of asbestos exposure.
- **Criterion 2:** Construction of the project would not result in an exceedance of the health risk significance thresholds.
- **Criterion 3:** A carbon monoxide (CO) hotspot assessment must demonstrate that the project would not result in the development of a CO hotspot that would cause an exceedance of the CO ambient air quality standards.
- **Criterion 4:** Operation of the project would not result in an exceedance of the health risk significance thresholds.
- **Criterion 5:** The cumulative health impact would not result in an exceedance of the cumulative health risk significance thresholds.

Criterion 1: Naturally Occurring Asbestos

Construction in areas of rock formations that contain naturally occurring asbestos could release asbestos in to the air and pose a health hazard. A review of the map containing areas more likely to have rock formations containing naturally occurring asbestos in California indicates that there are no

areas likely containing naturally occurring asbestos within 1 mile of the project site (USGS 2011). Therefore, it can be reasonably concluded that the project would not expose sensitive receptors to naturally occurring asbestos during project construction. Impacts would be less than significant.

Criterion 2: Project Construction Toxic Air Pollutants

An assessment was made of the potential health impacts to surrounding sensitive receptors resulting from the emissions of Toxic Air Contaminants (TACs) during construction. A summary of the assessment is provided below, while the detailed assessment is provided in Appendix B of this IS/MND.

Diesel particulate matter (DPM) has been identified by the California Air Resources Board (ARB) as a carcinogenic substance. Major sources of DPM include off-road construction equipment and heavy-duty delivery truck and worker activities. For purposes of this analysis, DPM is represented as exhaust emissions of $PM_{2.5}$.

Estimation of Construction DPM Emissions

Construction DPM emissions (as $PM_{2.5}$ exhaust) were estimated using CalEEMod version 2016.3.2, as described under the discussion for Impact 3b. Construction was assumed to occur last for approximately 2.6 years. The construction DPM emissions were assumed to be distributed over the project area with a working schedule of 8 hours per day and 5 days per week.

Based on the analysis presented in this section, emissions were estimated for the unmitigated scenario (CalEEMod default offroad fleet mix) and a scenario with clean engines (Tier IV Interim mitigated). Equipment tiers refer to a generation of emission standards established by the EPA and ARB that apply to diesel engines in off-road equipment. The "tier" of an engine depends on the model year and horsepower rating; generally, the newer a piece of equipment is, the greater the tier it is likely to have. Excluding engines greater than 750 horsepower, Tier 1 engines were manufactured generally between 1996 and 2003. Since Tier 1 emission standards were established by the EPA in 1994, increasingly more stringent Tier 2, Tier 3, and Tier 4 (interim and final) standards were adopted by EPA, as well as by ARB. Construction exhaust emissions of DPM, both unmitigated and Tier IV Interim mitigated, are shown in Table 9.

Table 9: Project DPM Construction Emissions

Construction Scenario and Construction Year	Area-source DPM as $PM_{2.5}$ Exhaust (tons/year)	Off-site DPM as $PM_{2.5}$ Exhaust (tons/year)
Annual Construction Emissions (Unmitigated)		
2020	6.623E-02	1.055E-04
2021	4.710E-02	4.592E-05
2022	3.412E-02	3.374E-05
Annual Construction Emissions (Tier IV Interim Mitigated)		
2020	4.400E-03	1.055E-04
2021	5.850E-03	4.592E-05

Table 9 (cont.): Project DPM Construction Emissions

Construction Scenario and Construction Year	Area-source DPM as $PM_{2.5}$ Exhaust (tons/year)	Off-site DPM as $PM_{2.5}$ Exhaust (tons/year)
2022	4.500E-03	3.374E-05
Source: CalEEMod Output and FCS (see Appendix B)		

Estimation of Cancer Risks

The BAAQMD has developed a set of guidelines for estimating cancer risks that provide adjustment factors that emphasize the increased sensitivities and susceptibility of young children to exposures to TACs (BAAQMD 2016). These adjustment factors include age-sensitivity weighting factors, age-specific daily breathing rates, and age-specific time-at-home factors. The recommended method for the estimation of cancer risk is shown in the equations below with the cancer risk adjustment factors provided in Table 10 for several types of sensitive/residential receptors (infant, child, and adult).

$$\text{Cancer Risk} = C_{DPM} \times \text{Inhalation Exposure Factor} \qquad \text{(EQ-1)}$$

Where:

Cancer Risk = Total individual excess cancer risk defined as the cancer risk a hypothetical individual faces if exposed to carcinogenic emissions from a particular source for specified exposure durations; this risk is defined as an excess risk because it is above and beyond the background cancer risk to the population; cancer risk is expressed in terms of risk per million exposed individuals.

C_{DPM} = Period average DPM air concentration calculated from the air dispersion model in micrograms per cubic meter (micrograms per cubic meter [$\mu g/m^3$])

Inhalation is the most important exposure pathway to impact human health from DPM and the inhalation exposure factor is defined as follows:

$$\text{Inhalation Exposure Factor} = CPF \times EF \times ED \times DBR \times AAF/AT \qquad \text{(EQ-2)}$$

Where:

CPF = Inhalation cancer potency factor for the TAC: 1.1 (mg/kg-day)-1 for DPM
EF = Exposure frequency (days/year)
ED = Exposure duration (years of construction)
AAF = set of age-specific adjustment factors that include age sensitivity factors (ASF), daily breathing rates (DBR), and time at home factors (TAH)—see Table 10.
AT = Averaging time period over which exposure is averaged (days)

The California Office of Environmental Health Hazards Assessment (OEHHA)-recommended values for the various cancer risk parameters, shown in EQ 2, above, are provided in Table 10.

Table 10: Exposure Assumptions for Cancer Risk

Receptor Type	Exposure Frequency		Exposure Duration (years)	Age Sensitivity Factors (ASF)	Time at Home Factor (TAH) (%)	Daily Breathing Rate (DBR)[1] (L/kg-day)
	Hours/day	Days/year				
Sensitive/Residential—Infant						
3rd Trimester	24	350	0.25	10	85	361
0 to <2 years	24	350	2	10	85	1,090
2 to <3 years	24	350	0.34	3	72	572
Sensitive Receptor—Child						
3 to 16 years	24	350	2.59	3	72	572
Sensitive Receptor—Adult						
> 16 years	24	350	2.59	1	73	261

Notes:
[1] The daily breathing rates recommended by the BAAQMD for sensitive/residential receptors assume the 95th percentile breathing rates for all individuals less than 2 years of age and 80th percentile breathing rates for all older individuals.
(L/kg-day) = liters per kilogram body weight per day
Source: BAAQMD 2016. Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines. Website: http://www.baaqmd.gov/~/media/files/planning-and-research/rules-and-regs/workshops/2016/reg-2-5/hra-guidelines_clean_jan_2016-pdf.pdf?la=en.

Estimation of Non-Cancer Chronic Hazards

An evaluation of the potential non-cancer effects of chronic chemical exposures was also conducted. Adverse health effects are evaluated by comparing the annual receptor concentration of each chemical compound with the appropriate reference exposure level (REL). Available RELs promulgated by the OEHHA were considered in the assessment.

Risk characterization for non-cancer health hazards from TACs is expressed as a hazard index (HI). The HI is a ratio of the predicted concentration of the project's emissions to a concentration considered acceptable to public health professionals, termed the REL.

To quantify non-carcinogenic impacts, the hazard index approach was used.

$$HI = C_{ann}/REL \qquad (EQ\text{-}3)$$

Where:

HI = chronic hazard index
C_{ann} = annual average concentration of TAC as derived from the air dispersion model ($\mu g/m^3$)
REL = reference exposure level above which a significant impact is assumed to occur ($\mu g/m^3$)

The HI assumes that chronic sub-threshold exposures adversely affect a specific organ or organ system (toxicological endpoint). For each discrete chemical exposure, target organs presented in regulatory guidance were used. To calculate the HI, each chemical concentration or dose is divided

by the appropriate toxicity reference exposure level. For compounds affecting the same toxicological endpoint, this ratio is summed. Where the total equals or exceeds 1, a health hazard is presumed to exist. For purposes of this assessment, the TAC of concern is DPM for which the OEHHA has defined a REL for DPM of 5 µg/m^3. The principal toxicological endpoint assumed in this assessment was through inhalation.

Estimation of Health Risks and Hazards from Project Construction

The estimated health and hazard impacts at the maximum impacted sensitive receptor (MIR) from the project's construction emissions are provided in Table 11. The MIR was determined to be an existing single-family home located approximately 20 feet east of the project site.

Table 11: Estimated Health Risks and Hazards during Project Construction

Health Impact Metric	Cancer Risk (risk per million)	Chronic Non-Cancer Hazard Index[(2)]	Annual $PM_{2.5}$ Concentration (µg/m^3)
Risks and Hazards at the MIR[(1)]			
Risks and Hazards at the MIR: Infant	16.8	0.01	0.07
Risks and Hazards at the MIR: Child	2.7	0.01	0.07
Risks and Hazards at the MIR: Adult	0.4	0.01	0.07
BAAQMD Thresholds of Significance	**10**	**1**	**0.30**
Exceeds Individual Source Threshold?	**Yes**	**No**	**No**

Notes:
MIR = Maximum Impacted Sensitive Receptor
1 The MIR was found at an existing single-family home located approximately 20 feet east of the project site.
2 Chronic non-cancer hazard index was estimated by dividing the annual DPM concentration (as $PM_{2.5}$ exhaust) by the REL of 5 µg/m^3.
Source: Appendix B.

As shown above in Table 11, the non-cancer hazard index and $PM_{2.5}$ impacts at the MIR would not exceed the BAAQMD's recommended thresholds of significance; however, cancer risks for infants at the MIR would exceed the BAAQMD's recommended threshold of significance for cancer risk. Therefore, mitigation is required to reduce potential impacts to nearby sensitive receptors from project construction.

MM AIR-2 would require that all off-road construction equipment in excess of 50 horsepower used on-site by the developer or contractors be equipped with engines meeting the EPA Tier IV Interim off-road engine emission standards. This would reduce cancer risks and hazards associated with construction emissions. Table 12 summarizes the project's estimated cancer risks and hazard impacts at the MIR from the project's construction emissions with the application of Tier IV Interim mitigation.

Table 12: Estimated Health Risks and Hazards During Construction—Tier IV Interim Mitigation

Health Impact Metric	Cancer Risk (risk per million)	Chronic Non-Cancer Hazard Index[2]	Annual $PM_{2.5}$ Concentration ($\mu g/m^3$)
Risks and Hazards at the MIR[1]			
Risks and Hazards at the MIR: Infants	1.7	0.001	0.02
Risks and Hazards at the MIR: Child	0.3	0.001	0.02
Risks and Hazards at the MIR: Adult	0.04	0.001	0.02
BAAQMD Thresholds of Significance	**10**	**1**	**0.30**
Exceeds Individual Source Threshold?	**No**	**No**	**No**

Notes:
MIR = Maximum Impacted Sensitive Receptor
[1] The MIR was found at an existing single-family home located approximately 20 feet east of the project site.
[2] Chronic non-cancer hazard index was estimated by dividing the annual DPM concentration (as $PM_{2.5}$ exhaust) by the REL of 5 µg/m3.
Source: Appendix B.

As noted in Table 12, the project's construction emissions would not exceed the BAAQMD's significance threshold at the MIR after implementation of MM AIR-2. Therefore, with implementation of Tier IV Interim mitigation, the project's construction emissions would not result in significant health impacts to nearby sensitive receptors during the construction period.

Criterion 3: Operational CO Hotspot

The CO emissions from traffic generated by the project are a concern at the local level. Congested intersections can result in high, localized concentrations of CO.

The BAAQMD recommends a screening analysis to determine if a project has the potential to contribute to a CO hotspot. The screening criteria identify when site-specific CO dispersion modeling is necessary. The project would result in a less than significant impact to air quality for local CO if any of the following screening criteria are met:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans; or
- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; or
- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

As indicated in Section 17, Transportation, the project would not conflict with any program plan, including the applicable congestion management plan. No intersections impacted by the project would experience traffic volumes of 44,000 vehicles per hour. According to the traffic impact analysis prepared for the project by TJKM (2019), the intersection of Live Oak Avenue and Main Street would experience the highest peak-hour traffic volumes among the intersections impacted by the project with 2,965 vehicles per hour during the PM peak-hour for the Background Plus Project Scenario (Appendix F). Furthermore, the adjacent roadways are not located in an area where vertical or horizontal atmospheric mixing is substantially limited. Therefore, based on the above criteria, the project would not exceed the CO screening criteria and would have a less than significant impact related to CO.

Criterion 4: Project-Specific Operation Toxic Air Pollutants

The project proposes to develop 63 single-family residential units on the project site and would not have on-site sources of TACs during operation. As described in the project-specific traffic impact analysis (TJKM 2019), the project is expected to generate an increase of 595 daily vehicle trips. The proposed project would primarily generate trips for residents and visitors traveling to and from the project site. The daily travel trips to and from the project site would primarily be generated by passenger vehicles. Because nearly all passenger vehicles are gasoline-combusted, the project would not generate a significant amount of DPM emissions during operation. Therefore, the project would not result in significant health impacts to nearby sensitive receptors during operation.

Criterion 5: Cumulative Health Risk Assessment

The BAAQMD recommends assessing the potential cumulative impacts from sources of TACs within 1,000 feet of a project. As a result, a cumulative health risk assessment was performed that examined the cumulative impacts of the project's construction emissions and sources of TAC emissions within 1,000 feet of the project. Based on proximity to the project site and the results of the construction health risk assessment, the MIR was determined to be an existing single-family home located approximately 20 feet east of the project site. For a project-level analysis, BAAQMD provides three tools for use in screening potential sources of TACs. These tools are:

- **Surface Street Screening Tables.** BAAQMD pre-calculated potential cancer risks and $PM_{2.5}$ concentration increases for each county within their jurisdiction for roadways that meet BAAQMD's "major roadway" criteria of 10,000 vehicles or 1,000 trucks per day. Risks are assessed by roadway volume, roadway direction, and distance to sensitive receptors. Oakley Road bounds the project site to the north and is estimated to support approximately 39,600 vehicle trips per day.
- **Freeway Screening Analysis Tool**. BAAQMD prepared a Google Earth file that contains pre-estimated cancer risk, hazard index, and $PM_{2.5}$ concentration increases for highways within the Bay Area. Risks are provided by roadway link and are estimated based on direction and distance to the sensitive receptor. There are no major freeways located within 1,000 feet of the project site.
- **Stationary Source Risk and Hazard Screening Tool**. BAAQMD prepared a Google Earth file that contains the locations of all stationary sources within the Bay Area that have BAAQMD

permits. For each emissions source, BAAQMD provides conservative estimates of cancer risk, non-cancer hazards, and $PM_{2.5}$ concentrations. Applying this screening tool indicated that there are no stationary sources located within the 1,000 feet radius from the project site.

The cumulative health risk results are summarized in Table 13 during project construction at the MIR.

Table 13: Summary of the Cumulative Health Impacts at the MIR during Construction

Source	Source Type	Distance from MIR[1] (feet)	Cancer Risk (per million)	Chronic HI	$PM_{2.5}$ Concentration ($\mu g/m^3$)
Project					
Construction	Diesel Construction Equipment (Unmitigated)	20	16.8	0.01	0.07
Major Roadways					
Main Street	Local Roads	373	2.93	NA	0.074
Cumulative Health Risks					
Cumulative Total with Project Construction **BAAQMD's Cumulative Thresholds of Significance** **Threshold Exceedance?**			**19.73** **100** **No**	**0.01** **10** **No**	**0.144** **0.8** **No**

Notes:
MIR = Maximum Impacted Sensitive Receptor
NA = no data available
[1] The MIR was found at an existing single-family home located approximately 20 feet east of the project site.
Source: Appendix B.

As noted in Table 13, the cumulative impacts from the project construction and existing sources of TACs would be less than the BAAQMD's cumulative thresholds of significance at the MIR. Thus, the cumulative health risk impacts from project construction would be less than significant.

d) Result in other emission (such as those leading to odors) adversely affecting a substantial number of people?

Less than significant impact. As stated in the BAAQMD 2017 CEQA Air Quality Guidelines, odors are generally regarded as an annoyance rather than a health hazard and the ability to detect odors varies considerably among the populations and overall is subjective.

The BAAQMD does not have a recommended odor threshold for construction activities. However, BAAQMD recommends screening criteria that are based on distance between types of sources known to generate odor and the receptor. For projects within the screening distances, the BAAQMD has the following threshold for project operations:

> An odor source with five (5) or more confirmed complaints per year averaged over three years is considered to have a significant impact on receptors within the screening distance shown in Table 3-3 [of the BAAQMD's guidance].

Two circumstances have the potential to cause odor impacts:

1) A source of odors is proposed to be located near existing or planned sensitive receptors, or
2) A sensitive receptor land use is proposed near an existing or planned source of odor.

Projects that would site an odor source or a receptor farther than the applicable screening distance, shown in Table 14 below, would not likely result in a significant odor impact.

Table 14: Odor Screening Distances

Land Use/Type of Operation	Project Screening Distance
Wastewater Treatment Plant	2 miles
Wastewater Pumping Facilities	1 mile
Sanitary Landfill	2 miles
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	2 miles
Chemical Manufacturing	2 miles
Fiberglass Manufacturing	1 mile
Painting/Coating Operations	1 mile
Rendering Plant	2 miles
Coffee Roaster	1 mile
Food Processing Facility	1 mile
Confined Animal Facility/Feed Lot/Dairy	1 mile
Green Waste and Recycling Operations	1 mile
Source: BAAQMD 2017.	

Project Construction

Odors from diesel exhaust, architectural coatings, and asphalt paving, which are objectionable to some, would be emitted during construction of the project; however, emissions would be temporary and would disperse rapidly from the project site. Therefore, construction of the proposed project would not create objectionable odors affecting a substantial number of people. As such, impacts would be less than significant.

Project Operation

Operational-related Odors

The proposed project would develop 63 single-family residences, a bioretention basin, and an internal roadway network. None of the proposed uses are major odor-generating land uses. Land uses typically

associated with odors include wastewater treatment facilities, waste-disposal facilities, agricultural operations, and other sources shown above in Table 14. Minor sources of odors, such as exhaust from mobile sources, are not typically associated with numerous odor complaints, but are known to have temporary and less concentrated odors. During long-term operation of the project, odors would primarily consist of passenger vehicles traveling to and from the site. These occurrences would not produce objectionable odors affecting a substantial number of people; therefore, operational impacts associated with the project's potential to create odors would be less than significant.

The Project as a Sensitive Receptor

As a residential project, the project has the potential to place sensitive receptors near existing odor sources. The project site is located within the project screening distances for several potential source of odor, as defined in Table 14. Public record requests were filed with the BAAQMD to obtain the most recent 3-year odor compliant history for the potential odor generators within the vicinity of the project site; the information obtained from the public record requests is summarized in Table 15.

Table 15: Summary of Odor Compliant Records

Name of Facility	Location	Land Use/Type of Operation	Number of Complaints Over Most Recent 3-year Period[1]	Average Number of Complaints per Year	Distance From the Project Site
Ironhouse Sanitary District	450 Walnut Meadows Drive, Oakley, CA 94561	Wastewater Treatment Plant	1	<1	1.8 miles east of the project site
Oakley Collision Center	5289 Neroly Road, Oakley, CA 94561	Painting/Coating Operations	0	0	0.7 mile northwest of the project site
Oakley Disposal Services	85 Carol Lane, Oakley, CA 94561	Green Waste and Recycling Operations	0	0	0.3 mile northeast of the project site
G E Sales & Rentals	1371 Main Street, Oakley, CA 94561	Green Waste and Recycling Operations	0	0	0.4 mile northwest of the project site
Delta Scrap and Salvage	1371 Main Street, Oakley, CA 94561	Green Waste and Recycling Operations	0	0	0.4 mile northwest of the project site
Severed Metal Fabrication and Powder Coating	1315 Main Street, Oakley, CA 94561	Metal Smelting Plants	0	0	0.5 mile northwest of the project site
A-1 Metal Fabrication	3275 East 18th Street, Antioch, CA 94509	Metal Smelting Plants	0	0	0.7 mile west of the project site

Note:
[1] December 2015–December 2018

Based on the responses from the BAAQMD Public Records Section, none of the potential sources of odor creates odors affecting a substantial number of people. The Ironhouse Sanitary District received one odor compliant during the most recent 3-year period, while the other facilities within the project distances had not received any complaints during the same period. In summary, there was less than one compliant per year based on the odor complaints filed for facilities within the screening distances of the project site average over the most recent 3-year period. This does not exceed the applicable threshold of five confirmed complaints averaged over a 3-year period. Furthermore, there are existing residential uses located between the project site and the Ironhouse Sanitary District. For all facilities outlined in Table 15, there are existing residential uses located closer to each facility than the proposed project. Considering all of the information, the uses in the vicinity of the project would not cause substantial odor impacts to the project.

Mitigation Measures

MM AIR-1 During construction activities, the following air pollution control measures shall be implemented:

- Exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered 2 times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All roadways, driveways, and sidewalks shall be paved as soon as possible.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.
- A publicly visible sign shall be posted with the telephone number and person to contact at the City regarding dust complaints. This person shall respond and take corrective action within 48 hours of a complaint or issue notification. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

MM AIR-2 During construction activities, all off-road equipment with engines greater than 50 horsepower shall meet either the EPA or ARB Tier IV Interim off-road emission standards. The construction contractor shall maintain records concerning its efforts to comply with this requirement, including equipment lists. Off-road equipment descriptions and information may include but are not limited to equipment type,

equipment manufacturer, equipment identification number, engine model year, engine certification (Tier rating), horsepower, and engine serial number.

If engines that comply with Tier IV Interim off-road emission standards are not commercially available, then the construction contractor shall use the next cleanest piece of off-road equipment (e.g., Tier III) available. For purposes of this mitigation measure, "commercially available" shall mean the availability of Tier IV Interim engines taking into consideration factors such as critical-path timing of construction and geographic proximity to the project site of equipment. The contractor can maintain records for equipment that is not commercial available by providing letters from at least two rental companies for each piece of off-road equipment where the Tier IV Interim engine is not available.

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

The section provided below evaluates potential effects on biological resources that may result from project implementation. The analysis is based on a site visit by FCS Biologist, Robert Carroll, on December 20, 2018. In addition, descriptions and analysis in this section are based on results from the California Department of Fish and Wildlife' (CDFW') California Natural Diversity Database (CNDDB) and the United States Fish and Wildlife Service (USFWS) database searches. The studies are provided in their entirety in Appendix C.

The approximately 9.87-acre site contains relatively flat topography with slightly rolling hills throughout. The vast majority of the project site consists of vineyards and ruderal grasses. There is a small building on-site that is surrounded by several mature ornamental trees and a mature pine tree (*Pinus* spp.). The majority of the property is bound by fencing except for a small portion on the

northern border of the site. Various species of ruderal grasses, such as yellow star thistle (*Centaurea solstitialis*), wild oat (*Avena fatua*), and dandelion (*Taraxacum* spp.) are present along the borders of the project site. The entire project site displays signs of high disturbance and development and lacks any natural or sensitive habitats. The species observed on-site were all species of birds commonly found in urban areas, such as California scrub jay (*Aphelocoma californica*), rock pigeon (*Columba livia*), and mourning dove (*Zenaida macroura*). There are four man-made bird boxes on the site. There are no jurisdictional features or riparian areas on-site. The site is within the East Contra Costa County Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) and as such, will have to abide by all necessary regulations set forth by the Plan.

Environmental Evaluation

Would the project:

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?

Less than significant impact with mitigation incorporated. For the purpose of this analysis, special-status species refers to all species formally listed as threatened and/or endangered under the Federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA); California Species of Special Concern; designated as Fully Protected by the CDFW; given a rank of 1A (plants presumed extinct in California), 1B (plants rare, threatened, or endangered in California and elsewhere), 2 (plants rare, threatened, or endangered in California, but more numerous elsewhere), 3 (plants about which more information is needed, "a review list") or 4 (plants of limited distribution, "a watch list") by the California Native Plant Society (CNPS);[4] or designated as special-status by city, county, or other regional planning documents. Federal and State listed threatened and/or endangered species are legally protected under FESA/CESA. The designated special-status species listed by the CNPS have no direct legal protection, but require an analysis of the significance of potential impacts under CEQA Guidelines.

Special-status plant and wildlife species typically occur in undeveloped areas. Although it is less likely, it is also possible for them to occur within developed areas. The project site contains characteristics of land that has been developed or disturbed, including disturbed soils, planted vineyards, and buildings present on-site. Thirteen special-status plant species and 10 special-status wildlife species were evaluated for their potential to occur on the project site, based on their ecology and regional occurrences within USGS Brentwood, California 7.5 minute quadrangle. Potential impacts occurring to special-status species, if they were found on-site, would likely be significant.

Special-Status Plant Species Potentially Occurring within the Project Site

Thirteen special status plant species have been recorded with the potential to occur within the project site based on CNDDB and CNPS database searches, but due to the high level of grading and

[4] All plants appearing on CNPS List 1 or 2 are considered to meet the CEQA Guidelines Section 15830 criteria. While only some of the plants ranked 3 and 4 meet the definitions of threatened or endangered species. The CNPS recommends that all Rank 3 and Rank 4 plants be evaluated for consideration under CEQA.

disturbance experienced at the project site, none are expected to occur on-site and no mitigation measures are recommended. A plant's potential to occur on the project site was based on the presence of suitable habitats, soil types, and occurrences recorded by the USFWS, CNPS or CNDDB within the Brentwood quadrangle, and field observations made during the December 20, 2018, site survey by FCS Biologist, Robert Carroll. Based on the high level of disturbance and lack of suitable soil types within project boundaries, it was determined that all 13 special-status plant species are considered unlikely to occur on the project site. The vast majority of the site is planted vineyards and appears to be annually maintained, which greatly reduces the chance of any special-status plants to occur on-site. Additionally, the site lacks riparian areas, undisturbed land, and marshes or swamps, all of which are ideal habitat for the listed special status plants species.

Special-Status Wildlife Species Potentially Occurring within the Project Site

Ten special-status wildlife species were evaluated for their potential to occur on the project site. Because of the highly disturbed nature of the project site, as well as previous development efforts coupled with an overall lack of suitable habitat, few special-status wildlife species have the potential to occur within the project boundaries. While the burrowing owl (*Athene cunicularia*) prefers dry, open habitats dominated by annual or perennial grasslands, the planted vineyards and active maintenance of the site preclude the presence of the species. The lack of riparian areas and marshes preclude the presence of the California tiger salamander (*Ambystoma californiense*), tricolored blackbird (*Agelaius tricolor*), vernal pool fairy shrimp (*Branchinecta lynchi*), and western pond turtle (*Actinemys marmorata*). The project site does provide foraging habitat, albeit marginal, for several species of raptors, such as white tailed kite (*Elanus leucurus*), Swainson's hawk (*Buteo swainsoni*), and loggerhead shrike (*Lanius ludovicianus*). Additionally, the project site and its adjacent areas contain mature trees that support potential habitat for bird species protected under the Migratory Bird Treaty Act (MBTA).

Construction activities could disturb nesting and breeding birds in trees within and around the construction site. Potential impacts include the destruction of eggs or occupied nests, mortality of young, and the abandonment of nests with eggs or young birds prior to fledging. If these species were found to be present, impacts to these species would be potentially significant.

MM BIO-1, which includes pre-construction surveys and implementation of protective measures if active nests are identified, would reduce impacts to Swainson's hawk to a less then significant level. MM BIO-2 provides similar protection for nesting birds and raptors as well as birds protected under the MBTA.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

No impact. The project site consists mainly of disturbed land with invasive species of vegetation. The vegetation that is present on-site is ruderal and actively maintained. There are no critical or sensitive habitats found within the project site. Any impacts will be less than significant due to the high level of disturbance at and surrounding the site. No further studies or regulatory permitting would be required, as no impacts to any sensitive natural communities are expected from the project design.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No impact. The project site does not contain any wetlands or other areas designated as waters of the United States and no further studies or regulatory permitting would be required. Therefore, the project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act.

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 wildlife nursery sites?

No impact. The project site was evaluated for evidence of a wildlife movement corridor during the reconnaissance-level survey. No wildlife movement corridors are within the project boundaries. The project site is surrounded by a highly traffic road, residential buildings, and a public. Additionally, the majority of the project site is bordered by a chain link fence, further precluding the movement of species onto and out of the project site. As such, the project would not have a significant impact on wildlife corridors or nursery sites and no mitigation is necessary

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less than significant impact. As previously mentioned, there are mature adult trees near the building on the project site. As the project proposes to remove several mature trees within the project boundaries, the project will be required to adhere to all policies regarding tree removal and replacement. Any project development that requires the removal of adult trees will have to abide by the City of Oakley Tree Care Requirements.

Chapter 13 of the City of Oakley Municipal Code covers Tree Maintenance and Protection and will have to be followed accordingly. Sections 6.13.002 to 6.13.032 cover these areas. Adherence to the City's Tree Protection Ordinance will not result in any conflicts with local ordinances protecting biological resources.

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?

Less than significant impact with mitigation incorporated. The proposed project would comply with the City's Ordinance (19-07), which covers the East Contra Costa County HCP implementation program. Pursuant to East Contra Costa County HCP/NCCP requirements regarding special-status species, the project applicant would be required to pay the associated Development Fee to the HCP, as applicable. The proposed project occurs in Zone 1 of the East Contra Costa County HCP and as such, has a $12,457 per acre development cost.

The 'Swainson's hawk is the East Contra Costa County HCP/NCCP covered species that is applicable to the project site include. Implementation of MM BIO-1 would mitigate any project' impacts on this

species, thereby facilitating compliance with the East Contra Costa County HCP/NCCP. With the implementation of mitigation, impacts would be less than significant.

Mitigation Measures

MM-BIO-1 To avoid or minimize impacts on the Swainson's Hawk, the following measures shall be implemented.

- **Preconstruction Survey:** Prior to any ground disturbance related to covered activities that occurs during the nesting season (March 15–September 15), a qualified biologist will conduct a preconstruction survey no more than 1 month prior to construction to establish whether Swainson's hawk nests within 1,000 feet of the project site are occupied. If potentially occupied nests within 1,000 feet are off the project site, then their occupancy will be determined by observation from public roads or by observations of Swainson's hawk activity (e.g., foraging) near the project site. If nests are occupied, minimization measures and construction monitoring are required.
- **Avoidance and Minimization and Construction Monitoring:** During the nesting season (March 15–September 15), covered activities within 1,000 feet of occupied nests or nests under construction will be prohibited to prevent nest abandonment. If site-specific conditions or the nature of the covered activity (e.g., steep topography, dense vegetation, limited activities) indicate that a smaller buffer could be used, the project applicant will coordinate with the CDFW/USFWS to determine the appropriate buffer size.
  - If young fledge prior to September 15, covered activities can proceed normally. If the active nest site is shielded from view and noise from the project site by other development, topography, or other features, the project applicant can apply to the lead agency for a waiver of this avoidance measure. Any waiver must also be approved by the USFWS and CDFW. While the nest is occupied, activities outside the buffer can take place.
  - All active nest trees will be preserved on-site, if feasible. Nest trees, including non-native trees, lost to covered activities will be mitigated by the project applicant according to the requirements below.
- **Mitigation for Loss of Nest Trees:** The loss of non-riparian Swainson's hawk nest trees will be mitigated by the project applicant by:
- If feasible on-site, planting 15 saplings for every tree lost with the objective of having at least 5 mature trees established for every tree lost according to the requirements listed below.

AND either

1) Pay the lead agency an additional fee to purchase, plant, maintain, and monitor 15 saplings on the HCP/NCCP Preserve System for every tree lost according to the requirements listed below, OR

2) The project applicant will plant, maintain, and monitor 15 saplings for every tree lost at a site to be approved by the Implementing Entity (e.g., within an HCP/NCCP preserve or existing open space linked to HCP/NCCP preserves), according to the requirements listed below.

The following requirements will be met for all planting options:

- Tree survival shall be monitored at least annually for 5 years, then every other year until year 12. All trees lost during the first 5 years will be replaced. Success will be reached at the end of 12 years if at least 5 trees per tree lost survive without supplemental irrigation or protection from herbivory. Trees must also survive for at least 3 years without irrigation.
- Irrigation and fencing to protect from deer and other herbivores may be needed for the first several years to ensure maximum tree survival.
- Native trees suitable for this site should be planted. When site conditions permit, a variety of native trees will be planted for each tree lost to provide trees with different growth rates, maturation, and life span, and to provide a variety of tree canopy structures for Swainson's hawk. This variety will help to ensure that nest trees will be available in the short term (5-10 years for cottonwoods and willows) and in the long term (e.g., valley oak, sycamore). This will also minimize the temporal loss of nest trees.
- Whenever feasible and when site conditions permit, trees should be planted in clumps together or with existing trees to provide larger areas of suitable nesting habitat and to create a natural buffer between nest trees and adjacent development (if plantings occur on the development site).
- Whenever feasible, plantings on the site should occur closest to suitable foraging habitat outside the Urban Development Area.
- Trees planted in the HCP/NCCP preserves or other approved off-site location will occur within the known range of Swainson's hawk in the inventory area and as close as possible to high-quality foraging habitat.

MM-BIO-2 To mitigate impacts on nesting birds, the following measures shall be implemented for construction work during the nesting season (February 15 through August 31):

- If construction or tree removal is proposed during the breeding/nesting season for migratory birds (typically February 15 through August 31), a qualified biologist shall conduct pre-construction surveys for northern harrier, grasshopper sparrow, pallid bat, Townsend's big-ear bat, and other migratory birds within the construction area, including a 300-foot survey buffer, no more than 3 days prior to the start of ground disturbing activities in the construction area.
- If an active nest is located during pre-construction surveys, the USFWS and/or CDFW (as appropriate) shall be notified regarding the status of the nest. Furthermore, construction activities shall be restricted as necessary to avoid disturbance of the nest until it is abandoned or a qualified biologist deems disturbance potential to be minimal. Restrictions may include establishment of

exclusion zones (no ingress of personnel or equipment at a minimum radius of 300 feet around an active raptor nest and 50-foot radius around an active migratory bird nest) or alteration of the construction schedule.

- A qualified biologist shall delineate the buffer using nest buffer signs, environmentally sensitive area fencing, pin flags, and or flagging tape. The buffer zone shall be maintained around the active nest site(s) until the young have fledged and are foraging independently.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
5. Cultural and Tribal Cultural Resources *Would the project:*				
a) Cause a substantial adverse change in the significance of a historical resource as pursuant to Section 15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐
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:				
d) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	☐	☐	☒	☐
e) 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.	☐	☐	☒	☐

This section describes the existing cultural resources setting and potential effects from project implementation on the project site and its surrounding area. Descriptions and analysis in this section are based on information provided by the California Native American Heritage Commission (NAHC), Northwest Information Center (NWIC), National Register of Historic Places (NRHR), California Register of Historic Resources (CRHR), California Historical Landmarks list, California Points of Historical Interest list, California State Historic Resources Inventory, the University of California Museum of Paleontology Paleontological Database, and a pedestrian survey of the site conducted by FCS on November 2, 2018. The records search map, NAHC correspondence, historic and paleontological reports and pedestrian survey photographs are provided in Appendix D.

Environmental Evaluation

Cultural Resources

Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as pursuant to Section 15064.5?

Less than significant impact with mitigation incorporated. The results of the NWIC records search show that one historic resource has been recorded within 0.5 mile of the project site, and the resources are not located within the site itself. Review of historical aerial photographs and topographic maps dating as early as 1949 show evidence of one residential structure at the site. Furthermore, the intensive survey of the site conducted by FCS on January 9, 2019, did identify a residential structure (2371 Oakley Road) that is over 45 years old. However, the structure did not meet the eligibility criteria for the CRHR. For this reason, the potential for the proposed project to have an adverse effect on historic resources is considered low.

While unlikely, subsurface construction activities always have the potential to damage or destroy previously undiscovered historic resources. Historic resources can include wood, stone, foundations, and other structural remains; debris-filled wells or privies; and deposits of wood, glass, ceramics, and other refuse. Accordingly, implementation of MM CUL-1 will be required to reduce potential impacts to historic resources that may be discovered during project construction. With the incorporation of mitigation, impacts associated with historic resources would be less than significant.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Less than significant impact with mitigation incorporated. Records search results from the NWIC indicate that one historic resource has been recorded within 0.5 mile of the project site. Of these resources, one contains both historic and prehistoric archaeological resources. An intensive pedestrian survey of the project site conducted by FCS on January 9, 2019, also failed to identify additional archaeological resources within the project site. The project site is therefore considered to have low sensitivity for undiscovered archaeological resources.

While the records search and survey data indicate the likelihood of encountering archaeological resources during project construction is low, there is always a possibility that subsurface excavation may encounter previously undiscovered prehistoric archaeological resources. Such resources could consist of but are not limited to stone, bone, wood, or shell artifacts or features, including hearths and structural elements. Accordingly, this is a potentially significant impact. Implementation of MM CUL-1 would ensure that this potential impact is reduced to a less-than-significant level.

c) Disturb any human remains, including those interred outside of formal cemeteries?

Less than significant impact with mitigation incorporated. No human remains or cemeteries are known to exist within or near the project area. However, there is always the possibility that subsurface construction activities associated with the proposed project, such as trenching and

grading, could potentially damage or destroy previously undiscovered human remains. Accordingly, this is a potentially significant impact. In the event of the accidental discovery or recognition of any human remains, CEQA Guidelines Section 15064.5; Health and Safety Code Section 7050.5; Public Resources Code Section 5097.94 and Section 5097.98 must be followed. In the unlikely event human remains are discovered, implementation of MM CUL-2 would reduce this potential impact to a less than significant level.

Tribal Cultural Resources

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:

d) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or

Less than significant impact. A review of the CRHR, local registers of historic resources, a records search conducted at the NWIC, an NAHC sacred lands file failed to identify any listed Tribal Cultural Resources (TCRs) that may be adversely affected by the proposed project. As such, no known eligible or potentially eligible TCRs will adversely affected by the proposed project.

e) 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.

Less than significant impact. On November 27, 2018, a response was received from the NAHC indicating that no sacred sites were listed as present in the project area. On November 15, 2018, letters including a map and project details were sent to seven Tribal Representatives identified by the NAHC as potentially having interest or information about the project area. To date, no responses have been received, and the lead agency has not identified additional significant TCRs meeting the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. As such, no known significant TCRs will be adversely affected by the proposed project.

Mitigation Measures

MM CUL-1 In the event a potentially significant cultural resource is encountered during subsurface earthwork activities, all construction activities within a 100-foot radius of the find shall cease and workers should avoid altering the materials until an archaeologist who meets the Secretary of Interior's Professional Qualification Standards for archaeology has evaluated the situation. The project applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. Potentially significant cultural resources consist of but are not limited to stone, bone, glass, ceramics, fossils, wood, or shell

artifacts, or features including hearths, structural remains, or historic dumpsites. The archaeologist shall make recommendations concerning appropriate measures that will be implemented to protect the resource, including but not limited to excavation and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines. Any previously undiscovered resources found during construction within the project Site shall be recorded on appropriate Department of Parks and Recreation (DPR) 523 forms and will be submitted to the City of Oakley, the Northwest Information Center, and the State Historic Preservation Office, as required.

MM CUL-2 In the event of the accidental discovery or recognition of any human remains, CEQA Guidelines Section 15064.5; Health and Safety Code Section 7050.5; Public Resources Code Section 5097.94, and Section 5097.98 must be followed. If during the course of project development there is accidental discovery or recognition of any human remains, the following steps shall be taken:

1. There shall be no further excavation or disturbance within 100 feet of the remains until the Contra Costa County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, the coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the most likely descendant of the deceased Native American. The most likely descendant may make recommendations to the landowner or the person responsible for the excavation work within 48 hours, 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.
2. Where the following conditions occur, the landowner or his or her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendant or on the project site in a location not subject to further subsurface disturbance:
   - The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission.
   - The descendant identified fails to make a recommendation.
   - The landowner or his authorized representative rejects the recommendation of the descendant, and mediation by the NAHC fails to provide measures acceptable to the landowner.

Additionally, California Public Resources Code Section 15064.5 requires the following relative to Native American Remains:

- When an initial study identifies the existence of, or the probable likelihood of, Native American Remains within a project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage

Commission as provided in Public Resources Code Section 5097.98. The project applicant may develop a plan for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American Burials with the appropriate Native Americans as identified by the Native American Heritage Commission.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
6. Energy *Would the project:*				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

Environmental Evaluation

Would the project:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less than significant impact. The proposed project would consume energy through building electricity and natural gas consumption and transportation fuel consumption.

Using average residential electricity and natural gas consumption rates provided by PG&E, the 63 dwelling units would consume 392,553 kilowatt hours[5] of electricity annually and 2.3 million cubic feet[6] of natural gas annually. The proposed project structures would be designed and constructed in accordance with the latest adopted edition of the State's Building Energy Efficiency standards, which are widely regarded as the most stringent energy efficiency standard in the United States. Impacts would be less than significant.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less than significant impact. The proposed project would be served with electricity provided by MCE. In 2017, MCE obtained between 94 and 100 percent of its electricity (depending on the program selected by the customer) from non-carbon energy sources.[7] This exceeds the State's current objective of 33 percent. Furthermore, the proposed project's buildings would be designed and constructed in accordance with the latest adopted edition of the State's building energy efficiency standards. As such, the proposed project would not conflict with State or local renewable or energy efficiency objectives. Impacts would be less than significant

[5] 63 dwelling units x 6,231 kilowatt hours/dwelling unit
[6] 63 dwelling units x 38,000 cubic-feet/dwelling unit
[7] Non-carbon sources include renewable (biomass, biowaste, geothermal, small hydroelectric, solar, and wind) and other categories (large hydroelectric and nuclear)

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
7. Geology and Soils *Would the project:*				
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.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Environmental Evaluation

Would the project:

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.

No impact. According to the California Department of Conservation, the project site is not located within an Alquist-Priolo Earthquake Fault Zone and no surface evidence of faulting has been observed. This condition precludes the possibility of the proposed project being exposed to fault rupture. No impact would occur.

ii) Strong seismic ground shaking?

Less than significant impact. Moderate to severe earthquakes can cause strong ground shaking, which is the case for most locations within the San Francisco Bay Area. The proposed project's structures would be designed in accordance with all applicable provisions of the California Building Standards Code that pertain to seismic design. Therefore, impacts associated with strong seismic ground shaking would be less than significant.

iii) Seismic-related ground failure, including liquefaction?

Less than significant impact. Soil liquefaction results from loss of strength during cyclic loading, such as imposed by earthquakes. Soils most susceptible to liquefaction are clean, loose, saturated, uniformly graded, fine-grained sands. According to Figure 8-2 of the City of Oakley General Plan, most of the City of Oakley, including the project site, is located within an area designated as having a "Generally High" liquefaction potential. The proposed project would be designed and constructed in accordance with the latest adopted edition of the California Building Standards Code, which establishes seismic safety standards for new construction. This would serve to minimize the risk of injury or property losses from the effects of ground failure and liquefaction. The impacts would be less than significant.

iv) Landslides?

No impact. The project site contains flat relief and is not near any significant slopes. For these reasons, no impact would occur.

b) Result in substantial soil erosion or the loss of topsoil?

Less than significant impact. Construction of the project would require earthwork activities that could potentially allow surface runoff to convey on-site sediments and pollutants off-site, thereby potentially affecting local downstream waterways by degrading water quality. Since the project would disturb one

or more acres of land, the project would be required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity. Construction activities subject to the General Permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation. The General Permit requires implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP would contain a site map(s) showing the construction perimeter, existing and proposed buildings, stormwater collection and discharge points, general pre- and post-construction topography, drainage patterns across the site, and adjacent roadways.

The SWPPP must also include project construction features (i.e., BMPs) designed to prevent erosion and protect the quality of stormwater runoff. Construction BMPs may include but are not limited to stabilized construction entrances, straw wattles on embankments, and sediment filters on existing inlets. Additionally, the SWPPP must contain a visual monitoring program and a chemical monitoring program for "non-visible" pollutants, should the BMPs fail. Section A of the Construction General Permit lists all elements that must be contained in a SWPPP. The preparation, implementation, and participation with both the National Pollutant Discharge Elimination System (NPDES) General Permit and the Construction General Permit, including the SWPPP and BMPs, would reduce project construction effects on erosion to acceptable levels. Therefore, short-term construction impacts associated with erosion would be less than significant.

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?

Less than significant impact. The project site contains flat relief and is not near any significant slopes. According to Figure 8-2 of the City of Oakley General Plan, most of the City of Oakley, including the project site, is located within an area designated as having a "Generally High" liquefaction potential. The proposed project would be designed and constructed in accordance with the latest adopted edition of the California Building Standards Code, which establishes seismic safety standards for new construction. This would serve to minimize the risk of injury or property losses from the effects of unstable geologic units or soils. The impacts would be less than significant.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less than significant impact. The United States Department of Agriculture—Natural Resources Conservation Service indicates that the project site is underlain by Delhi sand with 2 to 9 percent slopes (DaC), which possess expansive properties. Expansive soils change in volume with changes in moisture. These soils can shrink or swell and cause heaving and cracking of slabs-on-grade, pavements, and structures founded on shallow foundations. The proposed project's structures would be designed in accordance with all applicable provisions of the California Building Standards Code that pertain to seismic design. Furthermore, compliance with General Plan policies related to geology and seismic hazards would ensure that impacts associated with expansive soils would be less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No impact. The proposed project's residences would connect with the municipal sewer system and would not require septic tanks or similar alternative wastewater disposal system. Therefore, no impacts associated with septic tanks or similar alternative wastewater systems would occur.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than significant impact with mitigation incorporated. The entire project site is underlain by Holocene-Pleistocene dune sand deposits (Qds). Holocene alluvium is too young to be considered fossiliferous, therefore, the potential for the proposed project to have an adverse effect on paleontological resources is considered low.

Although not anticipated, sub-surface construction activities associated with the proposed project, such as grading and trenching, could result in a significant impact to paleontological resources in the unlikely event late Pleistocene alluvium is encountered below the Holocene alluvium. Paleontological resources may include, but are not limited to, fossils from mammoths, saber-toothed cats, rodents, reptiles, fish, and birds. Accordingly, implementation of MM GEO-1 will be required to reduce potential impacts to paleontological resources that may be discovered during project construction. With the incorporation of mitigation, impacts associated with paleontological resources would be less than significant.

Mitigation Measures

MM GEO-1 In the event that fossils or fossil-bearing deposits are discovered during construction activities, excavations within a 100-foot radius of the find shall be temporarily halted or diverted. The project contractor shall notify a qualified paleontologist to examine the discovery. The project applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The paleontologist shall document the discovery as needed in accordance with Society of Vertebrate Paleontology standards and assess the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction activities are allowed to resume at the location of the find. If the project applicant determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of construction activities on the discovery. The plan shall be submitted to the City of Oakley for review and approval prior to implementation, and the project applicant shall adhere to the recommendations in the plan.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
8. Greenhouse Gas Emissions *Would the project:*				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Environmental Evaluation

Where available, the significance criteria established by the applicable air quality management or air pollution control district (in this case, the BAAQMD) may be relied upon to make the following determinations. Supporting information, including detailed GHG emission estimates, is provided in Appendix B.

Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less than significant impact. Both construction period and operational period activities have the potential to generate GHG emissions. The project would generate GHG emissions during temporary (short-term) construction activities such as site grading, construction equipment engines, on-site heavy-duty construction vehicles, vehicles hauling materials to and from the project site, asphalt paving, and motor vehicles used by the construction workers. On-site construction activities would vary depending on the level of construction activity.

Long-term, operational GHG emissions would result from project generated vehicular traffic, on-site combustion of natural gas, operation of any landscaping equipment, off-site generation of electrical power over the life of the project, the energy required to convey water to and wastewater from the project site, the emissions associated with the hauling and disposal of solid waste from the project site, and any fugitive refrigerants from air conditioning or refrigerators.

The 2017 BAAQMD Thresholds contain the following for GHGs:

> For land use development projects (including residential, commercial, industrial, and public land uses and facilities), the threshold is compliance with a qualified GHG Reduction Strategy; or annual emissions less than 1,100 metric tons per year of carbon dioxide equivalent (CO_2e); or 4.6 metric tons CO_2e/service population/year (residents plus employees).

In a November 30, 2015, ruling, the California Supreme Court in *Center for Biological Diversity v. California Department of Fish and Wildlife* Case No. S217763 ("Newhall Ranch Case") concluded that whether the project was consistent with meeting statewide emission reduction goals is a legally permissible criterion of significance, but the significance finding for the project was not supported by a reasoned explanation based on substantial evidence. The 2017 BAAQMD CEQA Guidelines provide a GHG emission operational threshold based on a 2020 GHG target. In light of California's Supreme Court decision (Newhall Ranch Case), a threshold that fully accounts for the 2030 target was formulated to assess project emissions in the year 2030. For developments that would occur beyond 2020, the mass emissions or bright-line threshold of significance (1,100 MT CO_2e/year) was adjusted to a "substantial progress" threshold that was calculated based on the SB 32 target of 40 percent below 1990 levels (AEP 2016). Since the 2020 GHG targets set forth in the AB 32 Scoping Plan are to meet 1990 levels, it follows that the threshold of 1,100 MT CO_2e/year must decrease by 40 percent by 2030 to meet statewide 2030 GHG targets. To determine significance for criterion, the proposed project's GHG emissions are assessed against the threshold of 1,100 MT CO_2e/year for the operational year of 2022 and are compared to the adjusted threshold of 660 MT CO_2e/year for the operational year of 2030.

This estimated 2030 efficiency threshold is a surrogate threshold while the BAAQMD, ARB, or other regulatory agencies develop formally adopted threshold to comply with SB 32. It is acknowledged that this estimated threshold is based the best available on published information at the time of this analysis; a more detailed and up-to-date threshold will likely be developed in the future. Nevertheless, in order to fulfill the mandates of the Newhall Ranch Case decision and to make an effort to address 2030 emission reduction targets, the 660 MT CO_2e/year is used to evaluate project emissions in the year 2030.

Construction

The project would emit GHG emissions during construction from the off-road equipment, worker vehicles, and any hauling that may occur. BAAQMD does not presently provide a construction-related GHG emission threshold, but recommends that construction-generated GHG emissions be quantified and disclosed. The BAAQMD also recommends that lead agencies (in this case, the City of Oakley) make a determination of the level of significance of construction-generated GHG emissions in relation to meeting Assembly Bill 32 (AB 32) GHG reduction goals. Total GHG emissions generated throughout construction were combined and are presented in Table 16. As shown in Table 16, construction of the project is estimated to generate approximately 727 MT CO_2e over the entire project construction duration. In order to account for the construction emissions, the total emissions generated during construction were amortized based on the life of the development (residential—30 years) and added to the operational emissions. The amortized emissions from construction were added to the operational emissions to determine the total emissions of the project. These total project emissions were analyzed against the applicable BAAQMD significance threshold standard of 1,100 MT CO_2e/year in Table 17.

Table 16: Construction GHG Emissions

Construction Activities	On-site MT CO_2e per year	Off-site MT CO_2e per year	MT CO_2e per year
2020			
Demolition	34.2	1.2	35
Site Preparation	16.9	0.6	17
Grading	26.3	178.0	204
Paving	20.2	1.0	21
Building Construction—2020	48.9	31.7	81
Total 2020 Construction Emissions	*146.5*	*212.5*	*359*
2021			
Building Construction—2021	121.6	77.2	199
Total 2021 Construction Emissions	*121.6*	*77.2*	*199*
2022			
Building Construction—2022	102.1	63.4	165
Architectural Coating	2.6	0.5	3
Total 2022 Construction Emissions	*104.7*	*63.9*	*169*
2020-2022			
		Total Construction Emissions	**727**
		Amortized over 30 years	**24**

Note:
MT CO_2e = metric tons of carbon dioxide equivalent.
Source: CalEEMod Output (see Appendix B)

Operation

Operational or long-term emissions occur over the life of the project. The major sources for operational GHG emissions include:

- **Motor Vehicles:** These emissions refer to GHG emissions contained in the exhaust from the cars and trucks that would travel to and from the project site. Trip generation rates used in estimating mobile-source emissions were consistent with those presented in traffic impact analysis prepared for the project by TJKM (2019). The trip generation potential is estimated to result in an average of 595 average weekday trips (TJKM 2019). The project would incorporate design features and would obtain benefits from its location and infrastructure that would reduce project vehicle miles traveled compared with default values.

- **Natural Gas:** These emissions refer to the GHG emissions that occur when natural gas is burned on the project site. Natural gas uses could include heating water, space heating, dryers, stoves, or other uses.
- **Indirect Electricity:** These emissions refer to those generated by off-site power plants to supply electricity required for the project. All electricity at the project site would be supplied by Marin Clean Energy and delivered to the project site by PG&E. In addition, the project would generate on-site renewable energy through the inclusion of solar panels on each proposed home. To decrease energy demand, the each proposed home is also anticipated to include spray foam insulation.
- **Water Transport:** These emissions refer to those generated by the electricity required to transport and treat the water to be used on the project site.
- **Waste:** These emissions refer to the GHG emissions produced by decomposing waste generated by the project.

Project Operations in the Year 2022

Operational GHG emissions by source are shown in Table 17. Operational emissions at project buildout, in the year 2022, were estimated at 704 MT CO_2e. The analysis includes construction emissions amortized over the life of the project (see Table 16), for a total of 729 MT CO_2e in the year 2022.

Table 17: Operational GHG Emissions (2022)

Emission Source	Project Total MT CO_2e per year
Area	3
Energy	130
Mobile (Vehicles)	527
Waste	36
Water	8
Total Project Operational Emissions	704
Annualized Construction Emissions	24
Total Project Emissions	**729**
BAAQMD Threshold (MT CO_2e/year)	**1,100**
Does project exceed threshold?	**No**
Notes: MT CO_2e = metric tons of carbon dioxide equivalent. Unrounded results used to calculate totals. Source of Emissions: CalEEMod Output (see Appendix B)	

As shown in Table 17, the project has combined long-term operational emissions and amortized construction emissions would not exceed the BAAQMD's threshold of 1,100 MT CO_2e/year for project-level GHG emissions. Therefore, the impact would be less than significant.

Project Operations in the Year 2030

GHG emissions from project operations in the year 2030 are compared with the 2030 GHG bright-line threshold, as shown in Table 18.

Table 18: Operational GHG Emissions (2030)

Emission Source	Project Total MT CO_2e per year
Area	3
Energy	130
Mobile (Vehicles)	418
Waste	36
Water	8
Total Project Operational Emissions	596
Annualized Construction Emissions	24
Total Project Emissions	**620**
BAAQMD SB 32 GHG Threshold (MT CO_2e/year)	**660**
Does project exceed threshold?	**No**
Notes: MT CO_2e = metric tons of carbon dioxide equivalent. Unrounded results used to calculate totals. Source of Emissions: CalEEMod Output (see Appendix B)	

As shown above in Table 18, the project has combined long-term operational emissions and amortized construction emissions would not exceed the 2030 GHG bright-line threshold of 660 MT CO_2e/year. The impact would be less than significant.

b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

Less than significant impact. The City of Oakley has not adopted a Climate Action Plan (CAP) or GHG reduction strategy. The City completed community-wide and local government GHG inventories for a 2005 baseline in 2011, and a 2010 update for the inventories was completed in 2013. The inventories could be used for completing a CAP in the future, but do not constitute a plan, policy, or regulation. Additionally, the 'Oakley Strategic Energy Plan' was completed in 2015. The Strategic Energy Plan outlines actions for the City to take to achieve the City's Vision for energy efficiency and sustainability, but does not provide policies or regulations that would apply to individual development projects. Since a CAP or GHG reduction strategy have not been developed for the City,

the project is assessed for its consistency with the ARB adopted Scoping Plan and the ARB 2017 Climate Change Scoping Plan Update.

AB 32 Scoping Plan

The California State Legislature adopted AB 32 in 2006. AB 32 focuses on reducing GHG emissions to 1990 levels by the year 2020. Pursuant to the requirements in AB 32, the ARB adopted the Climate Change Scoping Plan (Scoping Plan) in 2008, which outlines actions recommended to obtain that goal. The Scoping Plan calls for an "ambitious but achievable" reduction in California's GHG emissions, cutting approximately 30 percent from business-as-usual emission levels projected for 2020, or about 10 percent from 2008 levels. The Scoping Plan contains a variety of strategies to reduce the State's emissions. As shown in Table 19, the project is consistent with most of the strategies, while others are not applicable to the project.

Table 19: AB 32 Scoping Plan Measures Consistency Analysis

Scoping Plan Reduction Measure	Project Consistency
California Cap-and-Trade Program Linked to Western Climate Initiative. Implement a broad-based California Cap-and-Trade program to provide a firm limit on emissions. Link the California Cap-and-Trade Program with other Western Climate Initiative Partner programs to create a regional market system to achieve greater environmental and economic benefits for California. Ensure California's program meets all applicable AB 32 requirements for market-based mechanisms.	**Not applicable.** Although the cap-and-trade system has begun, the project is not one targeted by the cap-and-trade system regulations and therefore this measure does not apply to the project.
California Light-Duty Vehicle GHG Standards. Implement adopted standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.	**Not applicable.** This is a Statewide measure that cannot be implemented by a project applicant or lead agency. However, the standards would be applicable to the light-duty vehicles that access the project site.
Energy Efficiency. Maximize energy efficiency building and appliance standards; pursue additional efficiency including new technologies, policy, and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California.	**Consistent.** This is a measure for the State to increase its energy efficiency standards in new buildings. The project is required to build to the latest energy efficiency standards and incorporate applicable energy efficiency features designed to reduce project energy consumption. Specifically, project buildings will be constructed to meet the latest version of Title 24. Each proposed home would include solar panels and spray foam insulation.
Renewable Portfolio Standard. Achieve 33 percent renewable energy mix Statewide. Renewable energy sources include (but are not limited to) wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas.	**Not applicable.** This is a Statewide measure that cannot be implemented by a project applicant or lead agency. Specifically, Marin Clean Energy would procure electricity and PG&E would deliver it to the project. Marin Clean Energy already meets or exceeds the proposed renewable standards. In addition, the project would include solar panels on all residential units.

Table 19 (cont.): AB 32 Scoping Plan Measures Consistency Analysis

Scoping Plan Reduction Measure	Project Consistency
Low Carbon Fuel Standard. Develop and adopt the Low Carbon Fuel Standard.	**Not applicable.** This is a Statewide measure that cannot be implemented by a project applicant or lead agency. All fuel consumption associated with the project's construction and operational activities would use fuel that meets these standards.
Regional Transportation-Related GHG Targets. Develop regional GHG emissions reduction targets for passenger vehicles. This measure refers to SB 375.	**Not applicable.** The project is not related to developing GHG emission reduction targets.
Vehicle Efficiency Measures. Implement light-duty vehicle efficiency measures.	**Not applicable.** When this measure is initiated, the standards would be applicable to the light-duty vehicles that would access the project site.
Goods Movement. Implement adopted regulations for the use of shore power for ships at berth. Improve efficiency in goods movement activities.	**Not applicable.** The project does not propose any changes to maritime, rail, or intermodal facilities or forms of transportation.
Million Solar Roofs Program. Install 3,000 megawatt of solar-electric capacity under California's existing solar programs.	**Consistent.** This measure is to increase solar throughout California, which is being done by various electricity providers and existing solar programs. The project would not preclude the implementation of this strategy. If building permits are obtained after January 1, 2020, the project would be required to include solar panels on all new single-family homes to meet the 2019 Title 24 requirements. The project is anticipated to begin construction in May 2020 and would likely be subject to the 2019 Title 24 standards. In addition, the project applicant has confirmed that all proposed single-family homes would include active solar.
Medium/Heavy-Duty Vehicles. Adopt medium and heavy-duty vehicle efficiency measures.	**Not applicable.** This is a Statewide measure that cannot be implemented by a project applicant or lead agency.
Industrial Emissions. Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce GHG emissions and provide other pollution reduction co-benefits. Reduce GHG emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive CH_4 emissions and reduce flaring at refineries.	**Not applicable.** This measure would apply to the direct GHG emissions at major industrial facilities emitting more than 500,000 MT CO_2e per year. The project is a residential land use development project that would generate less than 1,100 MT CO_2e per year at project buildout (see Table 17).
High Speed Rail. Support implementation of a high-speed rail system.	**Not applicable.** This is a Statewide measure that cannot be implemented by a project applicant or lead agency. The proposed project would not preclude the implementation of this strategy.

Table 19 (cont.): AB 32 Scoping Plan Measures Consistency Analysis

Scoping Plan Reduction Measure	Project Consistency
Green Building Strategy. Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.	**Consistent.** The project would comply with the California Energy Code and thus incorporate applicable energy efficiency features designed to reduce project energy consumption.
High Global Warming Potential Gases. Adopt measures to reduce high global warming potential gases.	**Not applicable.** This measure is applicable to the high global warming potential gases that would be used by sources with large equipment (such as in air conditioning and commercial refrigerators). It is not anticipated that a residential development project consisting of 63 single-family dwelling units would include refrigeration subject to refrigerant management regulations adopted by ARB.
Recycling and Waste. Reduce CH_4 emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero waste.	**Not applicable**. The project would not conflict with implementation of this measure. The project is required to achieve the recycling mandates via compliance with California Green Building Standards Code (CALGreen). Furthermore, the project would utilize City of Oakley recycling services. Specifically, the project would be served with curbside green waste and recyclable pick-up during operations.
Sustainable Forests. Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation.	**Not applicable.** The project site is in a built-up urban area. No forested lands exist on-site; therefore, no on-site preservation is possible.
Water. Continue efficiency programs and use cleaner energy sources to move and treat water.	**Consistent.** The project would comply with the California Energy Code and the California Updated Model Landscape Ordinance. With adherence to these regulations, the project will consume energy and water in an efficient manner.
Agriculture. In the near-term, encourage investment in manure digesters and at the 5-year Scoping Plan update determine if the program should be made mandatory by 2020.	**Not applicable.** The project site is not designated or in use for agriculture purposes. No grazing, feedlot, or other agricultural activities that generate manure occur on-site or are proposed to be implemented by the project.
Source of ARB Scoping Plan Reduction Measure: ARB 2008.	

As shown in Table 19 the project is consistent with the applicable strategies and would not conflict with the recommendations of AB 32 in achieving a Statewide reduction in GHG emissions. Considering this information, the project would not significantly hinder or delay the State's ability to meet the reduction targets contained in AB 32 or conflict with implementation of the Scoping Plan.

SB 32 2017 Scoping Plan Update

The 2017 Climate Change Scoping Plan Update addressing the SB 32 targets was adopted on December 14, 2017. Table 20 provides an analysis of the project's consistency with the 2017 Scoping Plan Update measures. As shown in Table 20, many of the measures are not applicable to the project, while the project is consistent with strategies that are applicable.

Table 20: Consistency with SB 32 2017 Scoping Plan Update

2017 Scoping Plan Update Reduction Measure	Project Consistency
SB 350 50 Percent Renewable Mandate. Utilities subject to the legislation will be required to increase their renewable energy mix from 33 percent in 2020 to 50 percent in 2030.	**Not applicable.** This measure would apply to utilities and not to individual development projects. The project would purchase electricity from a utility subject to the SB 350 Renewable Mandate. Specifically, Marin Clean Energy would procure electricity and PG&E would deliver it to the project. Marin Clean Energy already meets or exceeds the proposed renewable standards. In addition, the project would include solar panels on all residential units.
SB 350 Double Building Energy Efficiency by 2030. This is equivalent to a 20 percent reduction from 2014 building energy usage compared to current projected 2030 levels.	**Not applicable**. This measure applies to existing buildings. New structures are required to comply with Title 24 Energy Efficiency Standards that are expected to increase in stringency over time. The project would comply with the applicable Title 24 Energy Efficiency Standards in effect at the time building permits are received. If building permits are obtained after January 1, 2020, the project would be subject to the 2019 Title 24 standards. One notable feature of the 2019 Title 24 standards is the requirement for developers to include solar panels on all new single-family homes. As part of the proposed project, each home would include solar panels and spray foam insulation.
Low Carbon Fuel Standard. This measure requires fuel providers to meet an 18 percent reduction in carbon content by 2030.	**Not applicable.** This is a Statewide measure that cannot be implemented by a project applicant or lead agency. However, vehicles accessing the proposed residential buildings at the project site would benefit from the standards.
Mobile Source Strategy (Cleaner Technology and Fuels Scenario). Vehicle manufacturers will be required to meet existing regulations mandated by the LEV III and Heavy-Duty Vehicle programs. The strategy includes a goal of having 4.2 million zero-emission vehicles (ZEVs) on the road by 2030 and increasing numbers of ZEV trucks and buses.	**Not applicable.** This measure is not applicable to the project; however, vehicles accessing the future single-family homes at the project site would be benefit from the increased availability of cleaner technology and fuels. Future residents and visitors can be expected to purchase increasing numbers of more fuel-efficient and zero emission cars and trucks each year. Furthermore, delivery trucks and buses that would serve future residents will be made by increasing numbers of ZEV delivery trucks.

Table 20 (cont.): Consistency with SB 32 2017 Scoping Plan Update

2017 Scoping Plan Update Reduction Measure	Project Consistency
Sustainable Freight Action Plan. The plan's target is to improve freight system efficiency 25 percent by increasing the value of goods and services produced from the freight sector, relative to the amount of carbon that it produces by 2030. This would be achieved by deploying over 100,000 freight vehicles and equipment capable of zero emission operation and maximize near-zero emission freight vehicles and equipment powered by renewable energy by 2030.	**Not applicable.** This measure applies to owners and operators of trucks and freight operations. The project is residential in nature and would not support truck and freight operations. It is expected that deliveries throughout the State would be made with an increasing number of ZEV delivery trucks, including deliveries that would be made to future residents.
Short-Lived Climate Pollutant (SLCP) Reduction Strategy. The strategy requires the reduction of SLCPs by 40 percent from 2013 levels by 2030 and the reduction of black carbon by 50 percent from 2013 levels by 2030.	**Consistent.** Consistent with BAAQMD Regulation 6, Rule 3, no wood-burning devices are proposed as part of the project. Natural gas hearths produce very little black carbon compared to wood-burning fireplace; therefore, the project would not include major sources of black carbon.
SB 375 Sustainable Communities Strategies. Requires Regional Transportation Plans to include a Sustainable Communities Strategy (SCS) for reduction of per capita vehicle miles traveled.	**Not applicable.** The project does not include the development of a Regional Transportation Plan. Furthermore, the project is not within an SCS priority area.
Post-2020 Cap-and-Trade Program. The Post 2020 Cap-and-Trade Program continues the existing program for another 10 years. The Cap-and-Trade Program applies to large industrial sources such as power plants, refineries, and cement manufacturers.	**Not applicable.** The project is not one targeted by the cap-and-trade system regulations, and, therefore, this measure does not apply to the project. However, the post-2020 Cap-and-Trade Program indirectly affects people and entities who use the products and services produced by the regulated industrial sources when increased cost of products or services (such as electricity and fuel) are transferred to the consumers.
Natural and Working Lands Action Plan. The ARB is working in coordination with several other agencies at the federal, State, and local levels, stakeholders, and with the public, to develop measures as outlined in the Scoping Plan Update and the governor's Executive Order B-30-15 to reduce GHG emissions and to cultivate net carbon sequestration potential for California's natural and working land.	**Not applicable**. The project is residential development in a built-up urban area and would not be considered natural or working lands.
Source of ARB 2017 Scoping Plan Update Reduction Measures: ARB 2017.	

Summary

As presented in Table 19, the project is consistent with the applicable strategies and would not conflict with the recommendations of AB 32 in achieving a Statewide reduction in GHG emissions. Considering this information, the proposed plan would not significantly hinder or delay the State's ability to meet the reduction targets contained in AB 32 or conflict with implementation of the

Scoping Plan. Furthermore, as shown in Table 20, implementation of the project would not conflict with the reduction measures proposed in SB 32. Considering this information, the proposed project would not conflict with any applicable plan, policy or regulation of an agency adopted to reduce the emissions of GHGs. The impact would be less than significant.

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
9. Hazards and Hazardous Materials *Would the project:*				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65963.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

Environmental Evaluation

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than significant impact. The project applicant is proposing to develop 63 residential lots on a 9.87-acre project site. Residential developments do not involve the routine use, storage, transport, or disposal of significant amounts of hazardous materials. Project construction would involve the

routine transport and handling of small quantities of hazardous substances such as diesel fuels, lubricants, and mechanical fluids. Handling of hazardous materials is governed by applicable federal, State, and local laws pertaining to the safe handling and transport of hazardous materials and would serve to minimize potential spill occurrences. Impacts would be less than significant.

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?

Less than significant impact. As described previously, the proposed project would involve the use of small amounts of hazardous materials typically required during construction, such as diesel fuel and other mechanical fluids. Handling of hazardous materials is governed by applicable federal, State, and local laws pertaining to the safe handling and transport of hazardous materials and would serve to minimize potential spill occurrences. Impacts would be less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less than significant impact. The project site is 0.11 mile south of Orchard Park School. The proposed project consists of residential uses and would not routinely handle hazardous materials or emit hazardous air pollutants. This precludes the possibility of creating a significant hazard to the public or environment through reasonably foreseeable upsell or accident conditions. Impacts would be less than significant.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65963.5 and, as a result, would it create a significant hazard to the public or the environment?

Less than significant impact. The California State Water Resources Control Board GeoTracker Database indicates that the project site is not listed on a hazardous materials site database compiled pursuant to Government Code Section 65963.5. The nearest hazardous materials site is located approximately 750 feet northwest of the project site at 5301 Live Oak Avenue. This site contained a leaking underground storage tank that was removed in 2001. Following remediation, the site was classified as 'Closed' in 2008 signifying that it was remediated to the satisfaction of Contra Costa County Environmental Health Services. For these reasons, this site does pose a significant hazard to the proposed project. Impacts would be less than significant.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No impact. The proposed project is 13.5 miles from Byron Airport, the nearest airport. This distance precludes the possibility of the project creating aviation safety risks for persons residing or working in the project vicinity. No impact would occur.

No impact. The proposed project is 6.1 miles from Funny Farm Airstrip, the nearest private airstrip. This distance precludes the possibility of the project creating aviation safety risks for persons residing or working in the project vicinity. No impact would occur.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than significant impact. The proposed project would be accessed from a gated point on Oakley Road. The privately owned and maintained internal circulation system would consist of two 28-foot wide streets (Street A and Street B). An EVA would be located at the point where Street A would connect to the existing stub of Thomas Drive to the south. The EVA would employ bollards to restrict access to authorized vehicles during non-emergency conditions; however, this point may also be used for access or evacuation purposes during an emergency. This would comply with the Fire Code's standards for emergency access. Furthermore, the project frontage with Oakley Road would be improved to provide an additional eastbound travel lane, along with curb, gutter, and sidewalk. This would serve to enhance emergency response and evacuation. Impacts would be less than significant.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Less than significant impact. The project site is within an urbanized portion of the City of Oakley and surrounded by urban development and infrastructure. There are no wildlands near the project site. As such, the proposed project would not be exposed to wildland fires. Impacts would be less than significant.

Mitigation Measures

None.

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

Environmental Evaluation

Would the project:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Less than significant impact. Construction activity such as grading would reduce the project site's vegetation cover and increase the potential for soil erosion creating water quality impacts. As a

result, the project would be required to prepare and implement a SWPPP in accordance with federal and state requirements. The SWPPP would identify BMPs that are intended to prevent erosion during construction activity.

At operation, the project would create impervious surfaces that could cause pollutants, such as motor oil from parked cars, to enter water bodies during storm events further degrading water quality. However, the project would install an on-site storm drainage system consisting of inlets, underground piping, and a bioretention basin. This stormwater system would be designed according to State and local regulations (including Provision C.3) in order to reduce peak runoff volume, prevent inundating downstream waterways, and reduce pollutant loads. These construction and operational features would ensure the proposed project would not violate applicable water quality standards. Impacts would be less than significant.

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

Less than significant impact. The proposed project would be served with potable water service provided by the Diablo Water District. The Diablo Water District's primary water supply is surface water. Thus, the proposed project would not increase groundwater pumpage. Additionally, the proposed project's storm drainage system includes a bioretention basin area that would facilitate groundwater recharge. Thus, the development of the proposed project would not have the potential to substantially deplete groundwater supplies or interfere with groundwater recharge. Impacts would be less than significant.

c) Substantially alter the existing drainage pattern of area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

(i) result in substantial erosion or siltation on- or off-site;

Less than significant impact. The project site contains vineyards and pervious surfaces. Following development of the proposed project, most of the project site would be hardscaped, except for the bioretention basin and landscaped areas. The proposed project would install a storm drainage system consisting of inlets and underground piping ranging from 15 to 24 inches in diameter that would convey runoff to the bioretention basin located along the Oakley Road frontage. The basin would detain runoff during peak storm events and meter its release into the existing 54-inch diameter storm drain line to avoid inundating downstream waterways in a manner that creates substantial erosion or siltation. Collectively, these features would ensure that the proposed project would not substantially alter existing drainage patterns such that substantial erosion or siltation occurs downstream. Impacts would be less than significant.

(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

Less than significant impact. The project site contains vineyards and pervious surfaces. Following development of the proposed project, most of the project site would be hardscaped, except for the

bioretention basin and landscaped areas. The proposed project would install a storm drainage system consisting of inlets and underground piping ranging from 15 to 24 inches in diameter that would convey runoff to the bioretention basin located along the Oakley Road frontage. The basin would detain runoff during peak storm events and meter its release into the existing 54-inch diameter storm drain line to avoid inundating downstream waterways in a manner that creates flooding. Collectively, these features would ensure that the proposed project would not substantially increase the rate of surface runoff such that downstream flooding would occur. Impacts would be less than significant.

(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

Less than significant impact. The project site contains vineyards and pervious surfaces. Following development of the proposed project, most of the project site would be hardscaped, except for the bioretention basin and landscaped areas. The proposed project would install a storm drainage system consisting of inlets and underground piping ranging from 15 to 24 inches in diameter that would convey runoff to the bioretention basin located along the Oakley Road frontage. The basin would detain runoff during peak storm events and meter its release into the existing 54-inch diameter storm drain line to avoid inundating downstream waterways in a manner that contributes substantial sources polluted runoff. Collectively, these features would ensure that the proposed project would not substantially contribute runoff that could exceed the capacity of downstream storm drainage systems or provide substantial sources of pollutants. Impacts would be less than significant.

(iv) impede or redirect flood flows?

No impact. As determined by the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) No. 06013C0355G, the project site is located within Zone X, which is defined as area outside the with 0.2 percent annual chance floodplain (i.e., 500-year flood hazard area). As such, the project site is not located within a flood hazard area and, thus, the proposed project would not impede or redirect 100-year flood flows. No impact would occur.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Less than significant impact. As previously indicated, the project site is not located within a 100-year flood hazard area and, thus, is not susceptible to flooding during a 100-year storm event. The project site is 45 miles from the Pacific Ocean and, thus, is not susceptible to tsunami inundation. The project site is not near any inland bodies of water that are susceptible to a seiche. No impact would occur.

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

Less than significant impact. The project site contains vineyards and pervious surfaces. Following development of the proposed project, most of the project site would be hardscaped, except for the bioretention basin and landscaped areas. The proposed project would install a storm drainage system consisting of inlets, underground piping, and a bioretention basin. Runoff from the basin would discharge into an existing 56-inch-diameter storm drain, which runs parallel to the eastern

boundary of the project site. The storm drainage system would be designed to detain and meter the release of peak runoff in order to avoid inundating downstream waterways in a manner that creates substantial erosion or siltation. Collectively, these features would ensure that the proposed project would not conflict with a water quality control plan.

The proposed project would be served with potable water service provided by the Diablo Water District. The Diablo Water District's primary water supply is surface water. Thus, the proposed project would not increase groundwater pumpage. Thus, it would not conflict with a sustainable groundwater management plan. Impacts would be less than significant.

Mitigation Measures

No impact.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
11. Land Use and Planning *Would the project:*				
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Environmental Evaluation

Would the project:

a) Physically divide an established community?

No impact. The project site contains vineyards, three structures (including a single-family residence) and mature trees. The existing structures and vegetation would be removed. The removal of one single-family residence would not be considered a division of an established community. Additionally, the project site does not serve as a linkage between neighboring land uses. This condition precludes the division of an established community. No impact would occur.

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?

Less than significant impact. The proposed project's discretionary approvals include a General Plan Amendment and Rezone. The General Plan Amendment proposes to change 2.2 acres of the project site from 'Single-Family Residential—High' to 'Multi-Family Residential—Low'. The project proposes to rezone the project site from 'R-6' to 'Planned Development.' The current designations and zoning would be amended to reflect the characteristics of the proposed project. These discretionary approvals are part of the proposed project and intended to achieve conformance with the applicable provisions of the General Plan and Oakley Zoning Ordinance. In this sense, they are considered 'self-mitigating.' Impacts would be less than significant.

Noise Land Use Compatibility

For a summary of the characteristics of noise and other noise impacts discussions, see Section 13, Noise, of this document.

A significant impact would occur if implementation of the project would expose persons residing, visiting, or working at the project site or in the project vicinity to noise levels in excess of the land use compatibility standards established in the Noise Element of the City of Oakley's General Plan. According to these standards, noise environments up to 60 A-weighted decibel (dBA) day/night

average sound level (L_{dn}) are considered "normally acceptable" for new single-family residential land use developments. Environments with ambient noise levels from 60 dBA to 70 dBA L_{dn} are considered "conditionally acceptable" for new single-family residential land use developments; as such, development may be permitted only after detailed analysis of the noise reduction requirements and needed noise insulation features are included in the project design. Conventional construction, but with closed windows and a fresh air supply system or air conditioning, will normally suffice as a noise insulation feature for these "'conditionally acceptable" environments. Additionally, the City's Noise Element establishes noise level performance standards for new projects affected by or including new transportation noise sources. For transportation noise sources, noise levels must not exceed 65 dBA L_{dn} in outdoor activity areas, and 45 dBA L_{dn} in interior spaces of residential homes.

The Federal Highway Administration (FHWA) highway traffic noise prediction model (FHWA RD-77-108) was used to evaluate existing and cumulative traffic noise conditions in the vicinity of the project site. The projected traffic noise levels along roadways adjacent to the project site were analyzed to determine compliance with the City's noise and land use compatibility standards. The daily traffic volumes were obtained from the traffic analysis prepared for the project by TJKM (2019). The resultant noise levels were weighed and summed over a 24-hour period in order to determine the L_{dn} values. The traffic noise modeling input and output files are included in Appendix E of this document. Table 21 shows a summary of the traffic noise levels for existing, existing plus project, background, and background plus project conditions as measured at 50 feet from the centerline of the outermost travel lane.

Table 21: Traffic Noise Model Results Summary

Roadway Segment	Existing (dBA) L_{dn}	Existing Plus Project (dBA) L_{dn}	Increase Over Existing (dBA)	Background (dBA) L_{dn}	Background Plus Project (dBA) L_{dn}	Increase Over Background (dBA)
Oakley Road—Live Oak Avenue to Project Driveway	59.3	59.8	0.5	60.8	61.2	0.4
Oakley Road—Project Driveway to Empire Avenue	58.5	58.7	0.2	59.8	60.1	0.3
Source: FCS 2019.						

The projected traffic noise levels along Oakley Road between Live Oak Avenue and the Project Driveway would range up to 61.2 dBA L_{dn} as measured at 50 feet from the centerline of the outermost travel lane under background plus project conditions. The façade of the proposed residence closest to this roadway would be setback approximately 70 feet from the centerline of Oakley Road. At this distance, traffic noise levels would range up to approximately 59 dBA L_{dn} under background plus project conditions. Therefore, the traffic noise level at the nearest proposed

residence would not exceed the City's normally acceptable threshold for new single-family residential land use developments.

A long-term (24-hour) noise measurement was also conducted in the northeast corner of the project site, from January 9, 2019, at approximately 3:00 p.m., to approximately 4:00 p.m. on January 10, 2019. The noise measurement data is contained in Appendix E. This long-term noise measurement shows that ambient noise levels (including traffic and stationary noise sources in the project vicinity) at this location range up to approximately 64 dBA L_{dn}. This noise measurement was taken approximately 15 feet from the edge of Oakley Road. This measurement result shows that ambient noise levels on the project site do not exceed the City's conditionally acceptable range for new single-family residential land use development.

Therefore, implementation of the project would not cause a conflict with the City's land use compatibility plan and policies. Traffic noise impacts to the project would be less than significant, and no mitigation would be required.

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
12. Mineral Resources *Would the project:*				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Environmental Evaluation

Would the project:

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?

No impact. The project site contains agricultural land and does not support mineral extraction activities. According to the Oakley 2020 General Plan Draft Environmental Impact Report (Draft EIR), the only mineral resource mined in the City of Oakley is sand. Thus, the project would have no impact regarding the loss of availability of a known mineral resource. No impact would occur.

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?

No impact. The project site contains agricultural land and does not support mineral extraction activities. According to the Oakley 2020 General Plan Draft EIR, the only mineral resource mined in the City of Oakley is sand. The Plan does not identify the project site as a source of locally important mineral resources. No impact would occur.

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
13. Noise *Would the project result in:*				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Environmental Evaluation

This section is based on noise modeling performed by FCS. The modeling output is provided in Appendix E.

Would the project result in:

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

Based on the 2019 CEQA Appendix G checklist questions, the noise land use compatibility discussion is now contained within the Land Use and Planning discussion of this document.

Characteristics of Noise

Noise is defined as unwanted sound. Sound levels are usually measured and expressed in decibels (dB), with 0 dB corresponding roughly to the threshold of hearing. Most of the sounds that we hear in the environment do not consist of a single frequency, but rather a broad band of frequencies, with each frequency differing in sound level. The intensities of each frequency add together to generate a sound. Noise is typically generated by transportation, specific land uses, and ongoing human activity.

The standard unit of measurement of the loudness of sound is the decibel (dB). The 0 point on the dB scale is based on the lowest sound level that the healthy, unimpaired human ear can detect.

Changes of less than 3 dBA are only perceptible in laboratory environments. A change of 3 dB is the lowest change that can be perceptible to the average human ear in outdoor environments.[8] While a change of 5 dBA is considered to be the minimum readily perceptible change to the human ear in outdoor environments.

Since the human ear is not equally sensitive to sound at all frequencies, the A-weighted decibel scale (dBA) was derived to relate noise to the sensitivity of humans, it gives greater weight to the frequencies of sound to which the human ear is most sensitive. The A-weighted sound level is the basis for a number of various sound level metrics, including the day/night sound level (L_{dn}) and the Community Noise Equivalent Level (CNEL), both of which represent how humans are more sensitive to sound at night. In addition, the equivalent continuous sound level (L_{eq}) is the average sound energy of time-varying noise over a sample period and the maximum noise/sound level (L_{max}) is the maximum instantaneous noise level occurring over a sample period.

Would the project result in:

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

Short Term Construction Impacts

Less than significant impact with mitigation incorporated. A significant impact would occur if construction activities would result in generation of a substantial temporary increase in ambient noise levels that would result in annoyance or sleep disturbance of nearby sensitive receptors.

Noise impacts from construction activities associated with the project would be a function of the noise generated by construction equipment, equipment location, sensitivity of nearby land uses, and the timing and duration of the construction activities. Two types of short-term noise impacts would occur during site preparation and project construction. The first type would result from the increase in traffic flow on local streets, associated with the transport of workers, equipment, and materials to and from the project site. The transport of workers and construction equipment and materials to the project site would incrementally increase noise levels on access roads leading to the site. Because workers and construction equipment would use existing routes, noise from passing trucks would be similar to existing vehicle-generated noise on these local roadways. Typically, a doubling of the average daily trip (ADT) hourly volumes on a roadway segment is required in order to result in an increase of 3 dBA in traffic noise levels; which, as discussed in the characteristics of nose discussion above, is the lowest change that can be perceptible to the average human ear in outdoor environments. Project-related construction trips would not be expected to double the hourly traffic volumes along any roadway segment in the project vicinity. For these reasons, short-term intermittent noise from trucks would be minor when averaged over an hour or longer time-period. Therefore, short-term construction-related noise impacts associated with worker commute and

[8] California Department of Transportation (Caltrans) 2013. Technical Noise Supplement to the Traffic Noise Analysis Protocol. September.

equipment transport to the project site would not exceed applicable significance thresholds and would be less than significant.

The second type of short-term noise impact is related to noise generated during construction on the project site. Construction noise levels are rarely steady in nature and often fluctuate depending on the type and number of equipment being used at any given time. In addition, there could be times where large equipment is not operating and noise would be at or near normal ambient levels. Construction is completed in discrete steps, each of which has its own mix of equipment and its own noise characteristics. These various sequential phases would change the character of the noise generated on the site and, therefore, the noise levels surrounding the site as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction related noise ranges to be categorized by work phase.

The site preparation phase, which includes excavation and grading activities, tend to generate the highest noise levels because the noisiest construction equipment is earthmoving equipment. Earthmoving equipment includes excavating machinery and compacting equipment, such as bulldozers, draglines, backhoes, front loaders, roller compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 or 4 minutes at lower power settings. Operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 or 4 minutes at lower power settings.

The highest noise levels would be generated during site preparation, ground clearing, excavation, and foundation construction, as these phases require the use of the heaviest, and loudest, pieces of construction equipment. Large pieces of earthmoving equipment, such as graders, excavators, and bulldozers, generate maximum noise levels of 80 dBA to 85 dBA L_{max} at a distance of 50 feet. These noise levels drop off, or attenuate, at a rate of about 6 dBA per doubling of distance between the noise source and receptor. This equipment would move linearly over the project site as they perform their earth moving operations, spending a relatively short amount of time adjacent to any one receptor. A characteristic of noise is that each doubling of the sound sources with equal strength increases the noise level by 3 dBA. Assuming that each piece of construction equipment operates at some distance from the other equipment, combined noise levels during this phase of construction would range up to 90 dBA L_{max}, with a worst-case hourly average of up to 86 dBA L_{eq}, at a distance of 50 feet from the acoustical center of an active construction area. The acoustical center reference is used because construction equipment must operate at some distance from one another on a project site, and the combined noise level as measured at a point equidistant from the sources would be the worst-case maximum noise level.

The closest existing noise-sensitive land uses to the proposed project site are the single-family residential homes directly east of the project site. The closest residence would be located approximately 60 feet from the acoustic center of construction activity where multiple pieces of heavy construction equipment would potentially operate at the project site. At this distance, worst-case construction noise levels could range up to approximately 88 dBA L_{max} intermittently, and could have a worst-case hourly average of up to 84 dBA L_{eq}, at the façade of the nearest sensitive receptor.

Although there could be a relatively high single event noise exposure potential causing an intermittent noise nuisance, the effect of construction activities on longer-term (hourly or daily) ambient noise levels would be small but could result in a temporary increase in ambient noise levels in the project vicinity that could result in annoyance or sleep disturbance of nearby sensitive receptors. The City of Oakley establishes permissible hours of construction in Section 4.2.208 of its Municipal Code. This ordinance restricts noise producing construction activities to weekday hours between 7:30 a.m. and 5:30 p.m., with no work allowed on weekends unless otherwise authorized by the City in writing. Therefore, compliance with the City's permissible hours of construction, as well as implementing the best management noise reduction techniques and practices (both outlined in MM NOI-1), would ensure that construction noise would not result in a substantial temporary increase in ambient noise levels that would result in annoyance or sleep disturbance of nearby sensitive receptors. Therefore, with implementation of MM NOI-1, temporary construction noise impacts would be reduced to less than significant.

Operational/Stationary Source Noise Impacts

Less than significant impact. A significant impact would occur if operational noise levels generated by stationary noise sources at the proposed project site would result in a substantial permanent increase in ambient noise levels in excess of any of the noise performance thresholds established in the City's Municipal Code. The City's noise performance standards restrict non-transportation noise sources noise levels to 55 dBA L_{eq} between the daytime hours of 7:00 a.m. and 10:00 p.m., and 45 dBA L_{eq} between the nighttime hours of 10:00 p.m. and 7:00 a.m., as measured immediately within the property line of lands designated for noise-sensitive uses.

As noted in the characteristics of noise discussion, audible increases in noise levels generally refer to a change of 3 dBA or more, as this level has been found to be barely perceptible to the human ear in outdoor environments. A change of 5 dBA is considered the minimum readily perceptible change to the human ear in outdoor environments. Therefore, for purposes of this analysis, an increase of greater than 3 dBA above the City's established noise performance standards would be considered a substantial permanent increase in ambient noise levels.

The proposed project would include new stationary noise sources such as mechanical ventilation equipment. These sources could affect noise-sensitive receptors in the project vicinity.

Mechanical Equipment Operations

At the time of preparation of this analysis, details were not available pertaining to proposed mechanical ventilation systems for the project; therefore, a reference noise level for typical residential mechanical ventilation systems was used for this part of the analysis. Noise levels from typical mechanical ventilation equipment range up to approximately 60 dBA L_{eq} at a distance of 25 feet. Mechanical ventilation systems could be located as close as 35 feet from the nearest off-site single-family residences located east of the project site. However, the project proposes to construct a minimum 6-foot high concrete wall along the property lines bordering neighboring residential land uses. This soundwall would provide a minimum of 8 dBA in noise reduction of the proposed mechanical ventilation systems. Therefore, due to distance attenuation and shielding provided by the proposed concrete wall, noise generated by mechanical ventilation equipment would attenuate to

below 49 dBA L_{eq} at the nearest off-site sensitive receptor. However, residential ventilation systems cycle on and off over an hour, resulting in conservative worst-case hourly average noise levels of 45 dBA L_{eq} as measured at the nearest off-site sensitive receptor. These noise levels would not exceed the City's maximum noise limit standard of 55 dBA L_{eq} during the daytime hours of 7:00 a.m. to 10:00 p.m.; and would not exceed the nighttime noise standard of 45 dBA L_{eq}. Therefore, implementation of the project would not result in noise levels from mechanical ventilation equipment in excess of standards established in the local general plan, and the impact of mechanical ventilation equipment operational noise levels on sensitive off-site receptors would be less than significant.

Operational/Mobile Source Noise Impacts

Less than significant impact. A significant impact would occur if implementation of the proposed project would result in a substantial increase in traffic noise levels compared with traffic noise levels existing without the project. As noted in the characteristics of noise discussion, audible increases in noise levels generally refer to a change of 3 dBA or more, as this level has been found to be barely perceptible to the human ear in outdoor environments. A change of 5 dBA is considered the minimum readily perceptible change to the human ear in outdoor environments. Therefore, for purposes of this analysis, an increase of greater than 3 dBA above existing traffic noise levels would be considered a substantial permanent increase in traffic noise levels.

The FHWA highway traffic noise prediction model (FHWA RD-77-108) was used to evaluate existing and cumulative traffic noise conditions in the vicinity of the project site. The projected traffic noise levels along roadways adjacent to the project site were analyzed to determine compliance with the City's noise and land use compatibility standards. The daily traffic volumes were obtained from the traffic analysis prepared for the project by TJKM (2019). The resultant noise levels were weighed and summed over a 24-hour period in order to determine the L_{dn} values. The traffic noise modeling input and output files are included in Appendix E of this document. Table 21 shows a summary of the traffic noise levels for existing, existing plus project, background, and background plus project conditions as measured at 50 feet from the centerline of the outermost travel lane.

The highest traffic noise level increase with implementation of the project would occur along Oakley Road between Live Oak Avenue and the Project Driveway under existing plus project conditions. The project would result in traffic noise levels ranging up to 59.8 dBA L_{dn}, an increase of 0.5 dBA along this roadway segment compared to noise levels existing without the project. This increase would not be perceptible and would be well below the threshold of a 5 dBA increase that would be considered a substantial permanent increase. Therefore, project-related traffic noise impacts on existing ambient noise levels would be less than significant.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less than significant impact. A significant impact would occur if the project would generate groundborne vibration or groundborne noise levels in excess of established standards. The City of Oakley has not adopted criteria for groundborne vibration impacts. Therefore, for purposes of this analysis, the Federal Transit Administration's (FTA) vibration impact criteria are utilized. The FTA has

established industry accepted standards for vibration impact criteria and impact assessment. These guidelines are published in its Transit Noise and Vibration Impact Assessment Manual.[9]

Although groundborne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects such as the shaking of a building can be notable. When assessing annoyance from groundborne vibration, vibration is typically expressed as root mean square (rms) velocity in units of decibels of 1 micro-inch per second. To distinguish these vibration levels referenced in decibels from noise levels referenced in decibels, the unit is written as "VdB."

In extreme cases, excessive groundborne vibration has the potential to cause structural damage to buildings. Common sources of groundborne vibration include construction activities such as blasting, pile driving and operating heavy earthmoving equipment. However, construction vibration impacts on building structures are generally assessed in terms of peak particle velocity (PPV). For purposes of this analysis, project related impacts are expressed in terms of PPV.

Short-term Construction Vibration Impacts

Of the variety of equipment that would be used during construction, small vibratory rollers would produce the greatest groundborne vibration levels. Impact equipment such as pile drivers is not expected to be used during construction of this project. Small vibratory rollers produce groundborne vibration levels ranging up to 0.101 inch per second (in/sec) PPV at 25 feet from the operating equipment.

The off-site structure nearest to the proposed construction areas where heavy construction equipment would operate is the single-family home to the east of the project site. The closest facade of this structure would be located approximately 35 feet from the footprint of the nearest proposed structure. At this distance, groundborne vibration levels would attenuate to 0.06 in/sec PPV from the operation of a small vibratory roller. This is below the FTA's construction vibration impact criteria of 0.2 in/sec PPV for this type of structure, a building of non-engineered timber and masonry construction. Therefore, construction-related groundborne vibration impacts to off-site receptors would be less than significant.

Operational Vibration Impacts

Implementation of the project would not include any new permanent sources that would expose persons in the project vicinity to groundborne vibration levels that could be perceptible without instruments at any existing sensitive land use in the project vicinity. Therefore, project operational groundborne vibration level impacts would be considered less than significant.

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?

No impact. There are no airports within 2 miles of the project site. The nearest public airport is the Byron Airport, located 13.5 miles south of the project site. Because of the distance from this airport,

[9] Federal Transit Administration (FTA). 2018. Transit Noise and Vibration Impact Assessment Manual. September.

the project site is located outside of the 55 dBA CNEL airport noise contours. The nearest private airstrip is Funny Farm Airport, located 6.1 miles southeast of the project site. This distance precludes the possibility of the proposed project exposing persons residing or working in the project vicinity to excessive aviation noise associated with a private airstrip. Therefore, implementation of the project would not expose persons residing or working in the project site to excessive noise levels associated with private airstrip or public airport noise. No impacts would occur.

Mitigation Measures

MM NOI-1 To reduce potential construction noise impacts during project construction, the following multi-part mitigation measure shall be implemented for the project:

- All construction equipment powered by internal combustion engines shall be properly muffled and maintained.
- Quiet construction equipment, particularly air compressors, are to be selected whenever possible.
- All stationery noise-generating construction equipment such as tree grinders and air compressors are to be located as far as is practical from existing residences. In addition, the project contractor shall place such stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site.
- Unnecessary idling of internal combustion engines is prohibited.
- The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas so as to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.
- Use of pile drivers, sources of impulsive sound and jack hammers shall be prohibited on Sundays and holidays, except for emergencies or as approved in advance by the Building Official.
- The construction contractor shall limit noise producing construction activity to weekday hours between 7:30 a.m. and 5:30 p.m., with no work allowed on weekends unless otherwise authorized by the City in writing.

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

Environmental Evaluation

Would the project:

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less than significant impact. The proposed project would develop 63 dwelling units. Using the California Department of Finance's 2018 estimate of 3.45 persons per household for the City of Oakley, the project would add 218 residents to the City's population. This represents an increase of 0.5 percent relative to the City's 2018 population estimate of 41,116. The City of Oakley General Plan contemplates residential development on the project site and, thus, the addition of 218 new residents would represent planned growth. Furthermore, the project site is within an urbanized portion of Oakley served with urban infrastructure and services. Thus, the development of the proposed project would not remove a barrier to growth. Impacts would be less than significant.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Less than significant impact. The project site contains an existing dwelling unit that would be removed. The voluntary removal of one dwelling unit would not constitute displacement of substantial numbers of people. Moreover, the project would result in the development of 63 dwelling units, a net increase of 62 dwelling units. Impacts would be less than significant.

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
15. Public Services *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*				
a) Fire protection?	☐	☐	☒	☐
b) Police protection?	☐	☐	☒	☐
c) Schools?	☐	☐	☒	☐
d) Parks?	☐	☐	☒	☐
e) Other public facilities?	☐	☐	☒	☐

Environmental Evaluation

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

a) Fire protection?

Less than significant impact. The East Contra Costa Fire Protection District provides fire protection services to the City of Oakley. The proposed project would add 218 residents to the City's population and, thus, increase demand for fire protection. The project site is located 2.4 miles from Station 53 (530 O'Hara Avenue). Using an average speed of 35 miles per hour, a fire engine would be able to reach the project site in 4 minutes, 7 seconds, which would be considered an acceptable response time. The proposed project would be accessed from a gated point on Oakley Road. The privately owned and maintained internal circulation system would consist of two 28-foot wide streets (Street A and Street B). An EVA would be located at the point where Street A would connect to the existing stub of Thomas Drive to the south, and bollards would be installed to restrict access to emergency vehicles. The Oakley Road gate would include an emergency override (knock box) for emergency vehicles. As such, the project would comply with the Fire Code's emergency access requirements for two points of emergency access. The proposed project would pay development fees for capital improvements to fire facilities. Additionally, all new dwelling units would be required to meet Fire Code requirements for fire detection and suppression. For these reasons, the proposed project would not create a need for new or expanded fire facilities. Impacts would be less than significant.

b) Police protection?

Less than significant impact. The Oakley Police Department provides law enforcement within the Oakley city limits. The proposed project would add 218 residents to the City's population and, thus, increase demand for police protection. The project site is located within an urbanized portion of Oakley that is routinely patrolled by the Oakley Police Department. Furthermore, the proposed project includes design features such as street lighting, fencing, and siting the parking area in a manner such that it and the adjoining Holly Creek Park have high visibility, which would deter criminal activity. In addition, the proposed project would be subject to development impact fees for police facilities. For these reasons, the proposed project would not create a need for new or expanded police facilities. Impacts would be less than significant.

c) Schools?

Less than significant impact. The project site is within the Oakley Union Elementary School District, which provides K-8 education, and the Liberty Union High School District, which provides 9-12 education. The proposed project would develop 63 dwelling units. Using a standard student generation rate of 0.5 student/dwelling unit, the proposed project would add 109 students to local K-12 schools. The project applicant would pay development fees to the school districts to fund capital improvements to school facilities. Pursuant to Government Code Section 65995, payment of development fees is "full and complete mitigation" for impacts on schools. Impacts would be less than significant.

d) Parks?

Less than significant impact. The proposed project would add 218 residents to the City of Oakley's population. The project site is adjacent to Holly Creek Park and the project would provide a direct bicycle/pedestrian connection to the park. The project applicant would also provide in lieu of park fees to the City of Oakley for the development of park facilities elsewhere. As such, the project would offset its demand for new parks. Impacts would be less than significant.

e) Other public facilities?

Less than significant impact. The proposed project would add 218 residents to the City of Oakley's population. These residents would increase demand for library services and community facilities. The project applicant would provide development fees in accordance with the City of Oakley's development fee schedule. Impacts would be less than significant.

Mitigation Measures

None.

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

Environmental Evaluation

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?

Less than significant impact. The proposed project would add 218 residents to the City of Oakley's population. The project site is adjacent to Holly Creek Park and the project would provide a direct bicycle/pedestrian connection to the park. The project applicant would also provide in lieu of park fees to the City of Oakley for the development of park facilities elsewhere. As such, the project would offset its physical deterioration of existing neighborhood or regional parks. Impacts would be less than significant.

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?

No impact. The proposed project does not involve the construction of any recreational facilities, which precludes the possibility of impacts in this regard. No impacts would occur.

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
17. Transportation *Would the project:*				
a) Conflict with a program plan, ordinance or policy of 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)?	☐	☒	☐	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☒	☐	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐

The analysis in this section is based on the Traffic Impact Analysis prepared by TJKM Transportation Consultants. The report is provided in Appendix F.

Environmental Evaluation

Would the project:

a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less than significant with mitigation incorporated. TJKM Transportation Consultants prepared a study to evaluate the transportation impacts of the project.

Trip Generation

Trip generation associated with the proposed project is summarized in Table 22. The project is expected to generate 595 daily vehicle trips, including 47 AM peak-hour and 62 PM peak-hour trips.

Table 22: Project Trip Generation Estimates

Land Use	Size	Daily Vehicle Trips		AM Peak-hour Vehicle Trips				PM Peak-hour Vehicle Trips			
		Rate	Trips	Rate	In	Out	Total	Rate	In	Out	Total
Single-Family Detached Housing (ITE land use code 210)	63 du[1]	9.44	595	0.74	12	35	47	0.99	39	23	62
		Total:	**595**				**47**				**62**

Note:
[1] du = dwelling units.
Source: TJKM Transportation Consultants 2019.

Existing Plus Project Conditions

The potential impacts were evaluated relative to the level of service (LOS) policies and methodologies applicable in the City of Oakley. Table 23 summarizes peak-hour LOS of intersection with project traffic volume added to the existing traffic volume.

Table 23: Existing Plus Project Conditions Traffic Level of Service Summary

Intersection	Control	Peak-hour	Existing Conditions		Existing Plus Project Conditions		
			Delay[1]	LOS[2]	Delay	LOS	Significant LOS Impact?
Live Oak Avenue/Main Street	Signalized	AM	18.8	B	19.6	B	No
		PM	7.2	A	7.5	A	No
Empire Avenue/Oakley Road	Signalized	AM	21.6	C	21.9	C	No
		PM	27.7	C	27.9	C	No
Neroly Road/Oakley Road	All-way Stop	AM	10.2	B	10.2	B	No
		PM	9.6	A	9.6	A	No
Neroly Road/Live Oak Avenue	All-way Stop	AM	12.2	B	12.4	B	No
		PM	10.3	B	10.3	B	No
Live Oak Avenue/Oakley Road	All-way Stop	AM	18.4	C	20.3	C	No
		PM	9.0	A	9.3	A	No
Live Oak Avenue/El Lago Drive	One-way Stop	AM	11.8	B	11.8	B	No
		PM	9.7	A	9.8	A	No
Proposed Project Access/Oakley Road	One-way Stop	AM	–	–	11.8	B	No
		PM	–	–	11.4	B	No

Notes:
Bold text indicates unacceptable intersection operations.
[1] Delay: Average control delay in seconds per vehicle, reported values are overall for signalized and all-way-stop-control intersections; and critical minor approaches for two-way-stop-control intersections.
[2] LOS: Level of Service.
Source: TJKM Transportation Consultants 2019.

The results of the intersection LOS analysis show that the proposed project would not result in a significant impact at any of the study intersections under Existing and Existing Plus Project conditions. The impact would be less than significant.

Cumulative Conditions

Table 24 summarizes peak-hour LOS of intersection under Cumulative traffic conditions. As shown, the project would contribute to increased delay at three study intersections that would operate unacceptably without the proposed project.

Table 24: Cumulative Traffic Level of Service Summary

Intersection	Control	Peak-hour	Cumulative Conditions		Cumulative Plus Project Conditions		
			Delay[1]	LOS[2]	Delay	LOS	Significant LOS Impact?
Live Oak Avenue/Main Street	Signalized	AM	18.6	B	19.7	B	No
		PM	8.2	A	8.5	A	No
Empire Avenue/Oakley Road	Signalized	AM	24.2	C	24.6	C	No
		PM	33.5	C	34.0	C	No
Neroly Road/Oakley Road	All-way Stop	AM	11.5	B	11.5	B	No
		PM	11.8	B	11.8	B	No
Neroly Road/Live Oak Avenue	All-way Stop	AM	16.8	B	17.1	B	No
		PM	12.8	B	12.9	B	No
Live Oak Avenue/Oakley Road	All-way Stop	AM	31.6	D	**38.8**	**E**	**Yes**
		PM	10.3	B	10.7	B	No
Live Oak Avenue/El Lago Drive	One-way Stop	AM	13.9	B	14.1	B	No
		PM	10.7	B	10.8	B	No
Proposed Project Access/Oakley Road	One-way Stop	AM	–	–	13.4	B	No
		PM	–	–	12.9	B	No

Notes:
Bold text indicates unacceptable intersection operations.
[1] Delay: Average control delay in seconds per vehicle, reported values are overall for signalized and all-way-stop-control intersections; and critical minor approaches for two-way-stop-control intersections.
[2] LOS: Level of Service.
Source: TJKM Transportation Consultants 2019.

The stop-sign controlled intersection of Live Oak Avenue/Oakley Road is forecasted to operate at LOS E during the AM peak-hour under Background Plus Project Conditions. The recommended cumulative mitigation is for the project to contribute towards the cost of installing a future traffic signal at the Live Oak Avenue/Oakley Road intersection. With this mitigation, the intersection would operate at acceptable LOS B (11.4 seconds of average delay). This recommendation is reflected in MM TRANS-1. With the implementation of mitigation, impacts would be less than significant.

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

Less than significant impact. The proposed project's vehicle trips would generate 1,357,148 VMT in an annual basis. As of the date of publication of this IS/MND, no adopted VMT threshold had been established. From a qualitative perspective, the proposed project represents planned infill residential growth with the Oakley city limits. The project site is within 0.5-mile of two shopping centers, an elementary school, and park. The project site is walking distance of public transit and is accessible to bicycles and pedestrians. As such, project residents would not make longer-than-average trips for

daily activities, and would have the option of making such trips using non-passenger vehicle modes of transportation. Impacts would be less than significant.

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

Less than significant impact with mitigation incorporated. The new Oakley Road/Project Access intersection would be more than 500 feet from the existing Oakley Road/Live Oak Road intersection (west) and Oakley Road/Beldin Lane-Kelsey Lane intersection (east). The new intersection would be gated and controlled by a side street stop. TJKM evaluated the functionality of the new intersection and recommended that the Oakley Road median be modified to allow left-in and left-out turning movements. This recommendation is reflected in MM TRANS-2. With the implementation of mitigation, impacts would be less than significant.

d) Result in inadequate emergency access?

Less than significant impact. The proposed project would be accessed from a gated point on Oakley Road. The privately owned and maintained internal circulation system would consist of two 28-foot wide streets (Street A and Street B). An EVA would be located at the point where Street A would connect to the existing stub of Thomas Drive to the south. The EVA would employ bollards to restrict access to authorized vehicles during non-emergency conditions; however, this point may also be used for access or evacuation purposes during an emergency. As such, two points of emergency access to the project would be available. Impacts would be less than significant.

Mitigation Measures

MM TRANS-1 Prior to issuance of the first building permit, the project applicant shall provide the fair share cost to the City of Oakley of the future installation of a signal at the intersection of Live Oak Road/Oakley Road. Payment of traffic impact fees in accordance with the City's adopted fee schedule would satisfy the applicant's fair share responsibility for this improvement if it is programmed into the fee program.

MM TRANS-2 Prior to issuance of the first building permit, the project applicant shall prepare and submit improvement plans to the City of Oakley depicting modifications to the existing median within Oakley Road to permit left-in, left-out access.

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

Environmental Evaluation

Would the project:

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less than significant impact. The proposed project would develop 63 dwelling units. The project would connect to existing utility lines located within Oakley Road.

As discussed in Impact 18(b), the proposed project is estimated to demand 38,586 gallons of water per day, which would represent less than 1 percent of the Diablo Water District available supply under all planning scenarios. Thus, no new or expanded water facilities would be required.

As discussed in Impact 18(c), the proposed project is estimated to generate 13,891 gallons of effluent on a daily basis. The Ironhouse Sanitary District Water Recycling Facility has a dry weather treatment capacity of approximately 4.3 million gallons per day (mgd) and treats a daily flow of 2.3 mgd. The addition of 13,891 gallons of wastewater (0.14 mgd) would represent less than 1 percent of the available capacity. Thus, no new or expanded wastewater facilities would be required.

As discussed in Impact 18(d), the proposed project would install a storm drainage system consisting of inlets, underground piping ranging from 15-inch and 24-inch-diameter pipes, and a bioretention basin. The basin would be designed to detain runoff during peak storm events and meter the release into the existing 54-inch diameter municipal storm drainage line to avoid inundating it with excess flows. As such, no new or expanded downstream storm drainage facilities would be required.

Impacts would be less than significant.

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

Less than significant impact. The proposed project would be served with potable water service provided by the Diablo Water District. The 2015 Urban Water Management Plan sets a revised baseline per capita water demand rate of 177 gallons per day. The proposed project would develop 63 dwelling units. Using the City of Oakley's 2018 persons per household estimate of 3.45 persons, the project would add 218 residents. Multiplying that value by 177 gallons per day yields a daily water consumption value of 38,586. On annual basis, that equates to 43.2 acre-feet.

The 2015 Urban Water Management Plan indicates that total supply would increase from 16,839-acre-feet in 2020 to 20,411-acre-feet in 2040. The Urban Water Management Plan water supply projections account for planned growth within the Oakley city limits, including on the project site. Thus, the project's annual water demand of 43.2 acre-feet is accounted for in the Urban Water Management Plan and adequate long-term water supply exists. Impacts would be less than significant.

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less than significant impact. The proposed project would generate 33,899 gallons of effluent on a daily basis. The Water Recycling Facility had an average daily flow of 2.3 mgd. The facility has treatment has a dry weather treatment capacity of approximately 4.3 mgd. Thus, the addition of 13,891 gallons of wastewater would represent less than 1 percent of the available capacity. As such, the Water Recycling Facility would have adequate capacity to serve the project. Impacts would be less than significant.

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?

Less than significant impact. The proposed project would develop 63 single-family residences. Using a standard residential waste generation rate of 3,650 pounds per dwelling unit/year, development

contemplated by the proposed project would generate 161 cubic yards of solid waste on an annual basis. Solid waste from Oakley is landfilled at the Keller Canyon Landfill, which has 63.4 million cubic yards of remaining capacity. Thus, the proposed project's annual waste generation would represent less than 0.001 percent of the remaining capacity. Impacts would be less than significant.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less than significant impact. The proposed project would be served with curbside green waste and recyclable pick-up serve, thereby furthering State and local policies associated with waste diversion and recycling. Impacts would be less than significant.

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
19. Wildfire *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?	☐	☐	☒	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

Environmental Evaluation

Would the project:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Less than significant impact. The proposed project would be accessed from a gated point on Oakley Road. The privately owned and maintained internal circulation system would consist of two 28-foot wide streets (Street A and Street B). An EVA would be located at the point where Street A would connect to the existing stub of Thomas Drive to the south. The EVA would employ bollards to restrict access to authorized vehicles during non-emergency conditions; however, this point may also be used for access or evacuation purposes during an emergency. As such, two points of emergency access/evacuation would be available. Impacts would be less than significant.

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?

Less than significant impact. The project site is located within a mostly urbanized portion of the City of Oakley. The nearby areas that are non-urban support agricultural land use activities (e.g.,

vineyards) and, thus, are not susceptible to wildland fires. Furthermore, the project site is not near wildlands or other areas susceptible to wildland fires. Impacts would be less than significant.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Less than significant impact. The project site is located within a mostly urbanized portion of the City of Oakley. The nearby areas that are non-urban support agricultural land use activities (e.g., vineyards) and, thus, are not susceptible to wildland fires. As such, the proposed project would not require the installation of wildfire suppression infrastructure such as a fire roads, fuel breaks, or water tanks. Impacts would be less than significant.

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?

Less than significant impact. The project site is located within a mostly urbanized portion of the City of Oakley. The nearby areas that are non-urban support agricultural land use activities (e.g., vineyards) and, thus, are not susceptible to wildland fires. Furthermore, the project site is not near areas with substantial slopes that may be susceptible to post-fire landslides. Impacts would be less than significant.

Mitigation Measures

None.

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

Environmental Evaluation

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

Less than significant impact with mitigation incorporated. The proposed project may result in several impacts associated with biological resources and cultural resources that would be significant if left unmitigated. MM BIO-1, MM BIO-2, MM CUL-1, and MM CUL-2 would fully mitigate all potential impacts to levels of less than significant. With the implementation of these mitigation measures, the proposed project would have less than significant impacts.

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)?

Less than significant impact with mitigation incorporated. All cumulative impacts related to air quality and noise are either less than significant after mitigation or less than significant and do not require mitigation. Given the scope of the project and its impacts and mitigation measures, the incremental effects of this project are not considerable relative to the effects of past, current, and probably future projects. As discussed previously, the project does have potential significant cumulative traffic impacts. However, MM TRANS-1 and MM TRANS-2 would fully mitigate all potential cumulative impacts to a level of less than significant. With the implementation of these mitigation measures, the proposed project would not result in cumulatively significant impacts on these areas. Impacts would be less than significant.

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

Less than significant impact. All impacts identified in this IS/MND are either less than significant after mitigation, or less than significant and do not require mitigation. Therefore, the proposed project would not result in environmental effects that cause substantial adverse effects on human beings either directly or indirectly. Impacts would be less than significant.

Mitigation Measures

Implement MM BIO-1, MM BIO-2, MM CUL-1, MM CUL-2, MM CUL-3, MM TRANS-1, and MM TRANS-2.

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